

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2019

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☐ SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report \_\_\_\_\_

For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

Commission file number: 001-14966

CNOOC LIMITED  
中國海洋石油有限公司  
(Exact name of Registrant as specified in its charter)  
  
N/A  
(Translation of Registrant’s name into English)

Hong Kong  
(Jurisdiction of incorporation or organization)

65<sup>th</sup> Floor, Bank of China Tower  
One Garden Road, Central  
Hong Kong  
(Address of principal executive offices)

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(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
American depositary shares, each representing 100 shares Shares with no par value*	CEO N/A	New York Stock Exchange, Inc. New York Stock Exchange, Inc.

\* Not for trading, but only in connection with the listing of the American depositary shares on the New York Stock Exchange.

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

**(Title of Class)**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

**None**  
**(Title of Class)**

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

The number of outstanding shares as of December 31, 2019 was 44,647,455,984 shares.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

☒ Yes      ☐ No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

☐ Yes      ☒ No

**Note** – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☒ Yes      ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

☒ Yes      ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐  
Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

☐ Item 17      ☐ Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

☐ Yes      ☒ No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

☐ Yes      ☐ No

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TERMS AND CONVENTIONS

Definitions

Unless the context otherwise requires, references in this annual report to:

- “CNOOC” are to our controlling shareholder, China National Offshore Oil Corporation, a PRC state-owned enterprise, or China National Offshore Oil Corporation and its subsidiaries (excluding us and our subsidiaries), as the case may be;
- “CNOOC Limited” are to CNOOC Limited, a Hong Kong limited liability company and the registrant of this annual report;
- “Company”, “Group”, “we”, “our” or “us” are to CNOOC Limited and its subsidiaries;
- “ADRs” are to the American depositary receipts that evidence our ADSs;
- “ADSs” are to our American depositary shares, each of which represents 100 shares;
- “China” or “PRC” are to the People’s Republic of China, excluding for purposes of geographical reference in this annual report, the Hong Kong Special Administrative Region, the Macau Special Administrative Region and Taiwan;
- “Hong Kong” are to the Hong Kong Special Administrative Region of the People’s Republic of China;
- “Hong Kong Stock Exchange” or “HKSE” are to The Stock Exchange of Hong Kong Limited;
- “HK\$” are to Hong Kong dollar, the legal currency of the Hong Kong Special Administrative Region;
- “HKICPA” are to the Hong Kong Institute of Certified Public Accountants;
- “HKFRSs” are to all Hong Kong Financial Reporting Standards and Hong Kong Accounting Standards and Interpretations approved by the Council of the HKICPA;
- “IASB” are to the International Accounting Standards Board;
- “IFRSs” are to all International Financial Reporting Standards, including International Accounting Standards and Interpretations, as issued by the International Accounting Standards Board;
- “NYSE” are to the New York Stock Exchange;
- “Rmb” are to Renminbi, the legal currency of the PRC;
- “U.K.” are to the United Kingdom of Great Britain and Northern Ireland;
- “U.S.” are to the United States of America; and
- “US\$” are to U.S. dollar, the legal currency of the United States of America.

Conventions

We publish our financial statements in Renminbi. Unless otherwise indicated, we have translated amounts from Renminbi into U.S. dollars solely for the convenience of the reader at the noon buying rate for cable transfers of Renminbi per U.S. dollar certified for customs purposes by the Federal Reserve Bank of New York, as set forth in the H.10 weekly statistical release of the Federal Reserve Board on December 31, 2019 of US\$1.00=Rmb 6.9618. We have translated amounts in Hong Kong dollars solely for the convenience of the reader at the noon buying rate for cable transfers of Hong Kong dollars per U.S. dollar certified for customs purposes by the Federal Reserve Bank of New York, as set forth in the H.10 weekly statistical release of the Federal Reserve Board on December 31, 2019 of US\$1.00=HK\$ 7.7894. We make no representation that the Renminbi amounts or Hong Kong dollar amounts could have been, or could be, converted into U.S. dollars at those rates on December 31, 2019, or at all. For further information on exchange rates, see “Item 3—Key Information—Selected Financial Data.”

Totals presented in this annual report may not add correctly due to rounding of numbers.

For the years 2017, 2018 and 2019, approximately 65%,69% and 66% respectively, of our reserves were evaluated by our internal reserve evaluation staff, and the remaining were based upon estimates prepared by independent petroleum engineering consulting companies and reviewed by us. Our reserve data for 2017, 2018 and 2019 were prepared in accordance with the SEC’s final rules on “Modernization of Oil and Gas Reporting”, which became effective for accounting periods ended on or after December 31, 2009. Except as otherwise stated, all amounts of reserve and production in this report include our interests in equity method investees.

In calculating barrels-of-oil equivalent amounts, we have assumed that 6,000 cubic feet of natural gas equals one BOE, with the exception of natural gas from South America, Oceania, Madura and Tangguh projects in Indonesia in Asia, and Dongfang 13-2, Wenchang 9-2/9-3/10-3 and Yacheng 13-1/13-4 gas fields in China, which we have used actual thermal unit for such conversion purpose.

Glossary of Technical Terms

Unless otherwise indicated in the context, references to:

- “API gravity” means the American Petroleum Institute’s scale for specific gravity for liquid hydrocarbons, measured in degrees;
- “appraisal well” means an exploratory well drilled after a successful wildcat well to gain more information on a newly discovered oil or gas reserve;
- “developed oil and gas reserves” are reserves of any category that can be expected to be recovered:
  - (i) through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
  - (ii) through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving any well;
- “exploratory well” means a well drilled to find either a new field or a new reservoir in a field previously found to be productive of oil or gas in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, a service well, or a stratigraphic test well;

- “LNG” means liquefied natural gas;
- “net wells” means a party’s working interests in wells;
- “proved oil and gas reserves” means those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time. In addition,
  - (i) the area of the reservoir considered as proved includes: (A) The area identified by drilling and limited by fluid contacts, if any, and (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geosciences and engineering data;
  - (ii) in the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geosciences, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty;
  - (iii) where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geosciences, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty;
  - (iv) reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when: (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and (B) The project has been approved for development by all necessary parties and entities, including governmental entities;
  - (v) existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions;
- “PSC” means production sharing contract. For more information about PSC, see “Item 4—Information on the Company—Business Overview—Regulatory Framework in the PRC”;

- “share oil” means the portion of production that must be allocated to the relevant government entity under our PSCs in the PRC;
- “undeveloped oil and gas reserves” means reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion. In addition,
  - (i) reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances;
  - (ii) undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time; and
  - (iii) under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, or by other evidence using reliable technology establishing reasonable certainty.

For further definitions relating to reserves:

- “reserve replacement ratio” means, for a given year, total additions to proved reserves, which consist of additions from purchases, discoveries and extensions and revisions of prior reserve estimates, divided by production during the year. Reserve additions used in this calculation are proved developed and proved undeveloped reserves; unproved reserve additions are not used. Data used in the calculation of reserve replacement ratio is derived directly from the reserve quantity reconciliation prepared in accordance with U.S. Accounting Standards Codification 932-235-50, which reconciliation is included in “Supplementary Information on Oil and Gas Producing Activities” beginning on page F-81 of this annual report.

Our reserve replacement ratio reflects our ability to replace proved reserves. A rate higher than 100% indicates that more reserves were added than produced in the period. However, this measure has limitations, including its predictive and comparative value. Reserve replacement ratio measures past performance only and fluctuates from year to year due to differences in the extent and timing of new discoveries and acquisitions. It is also not an indicator of profitability because it does not reflect the cost or timing of future production of reserve additions. It does not distinguish between reserve additions that are developed and those that will require additional time and funding to develop. As such, reserve replacement ratio is only one of the indices used by our management in formulating our acquisition, exploration and development plans.
- “reserve life” means the ratio of proved reserves to annual production of crude oil or, with respect to natural gas, to wellhead production excluding flared gas, also known as reserve-to-production ratio;
- “seismic data” means data recorded in either two-dimensional (2D) or three-dimensional (3D) form from sound wave reflections off of subsurface geology;

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- “success” means a discovery of oil or gas by an exploratory well. Such an exploratory well is a successful well and is also known as a discovery. A successful well is commercial, which means there are enough hydrocarbon deposits discovered for economic recovery;
- “wildcat well” means an exploratory well drilled on any rock formation for the purpose of searching for petroleum accumulations in an area or rock formation that has no known reserves or previous discoveries;

References to:

- “bbls” means barrels, which is equivalent to approximately 0.134 tons of oil (33 degrees API);
- “mmbbls” means million barrels;
- “BOE” means barrels-of-oil equivalent;
- “mcf” means thousand cubic feet;
- “mmcf” means million cubic feet;
- “bcf” means billion cubic feet, which is equivalent to approximately 28.32 million cubic meters; and
- “BTU” means British Thermal Unit, a universal measurement of energy.

**FORWARD-LOOKING STATEMENTS**

This annual report includes “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, including statements regarding expected future events, business prospects or financial results. The words “expect”, “anticipate”, “continue”, “estimate”, “objective”, “ongoing”, “may”, “will”, “project”, “should”, “believe”, “plans”, “intends” and similar expressions are intended to identify such forward-looking statements.

These forward-looking statements address, among others, such issues as:

- the amount and nature of future exploration, development and other capital expenditures,
- wells to be drilled or reworked,
- development projects,
- exploration prospects,
- estimates of proved oil and gas reserves,
- development and drilling potential,
- expansion and other development trends of the oil and gas industry,
- business strategy,
- production of oil and gas,
- development of undeveloped reserves,
- expansion and growth of our business and operations,
- oil and gas prices and demand,
- future earnings and cash flow, and
- our estimated financial information.

These statements are based on assumptions and analysis made by us in light of our experience and our perception of historical trends, current conditions and expected future developments, as well as other factors we believe are appropriate under the circumstances. However, whether actual results and developments will meet our expectations and predictions depend on a number of risks and uncertainties which could cause our actual results, performance and financial condition to differ materially from our expectations, including but not limited to those associated with fluctuations in crude oil and natural gas prices, macro-political and economic factors, changes in the tax and fiscal regimes of the host countries in which we operate, the highly competitive nature of the oil and natural gas industry, the exploration and development activities, mergers, acquisitions and divestments activities, environmental responsibility and compliance requirements, foreign operations and cyber system attacks. For a description of these and other risks and uncertainties, see “Item 3—Key Information—Risk Factors.”

Consequently, all of the forward-looking statements made in this annual report are qualified by these cautionary statements. We cannot assure that the results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected effect on us, our business or our operations.

**SPECIAL NOTE ON THE FINANCIAL INFORMATION AND CERTAIN STATISTICAL INFORMATION PRESENTED IN THIS ANNUAL REPORT**

Our consolidated financial statements for the years ended December 31, 2017, 2018 and 2019 included in this annual report on Form 20-F have been prepared in accordance with International Financial Reporting Standards, or IFRSs, as issued by the International Accounting Standards Board.

In accordance with rule amendments adopted by the U.S. Securities and Exchange Commission, or the SEC, which became effective on March 4, 2008, we are not required to provide reconciliation to Generally Accepted Accounting Principles in the United States.

The statistical information set forth in this annual report on Form 20-F relating to China is taken or derived from various publicly available government publications that have not been prepared or independently verified by us. This statistical information may not be consistent with other statistical information from other sources within or outside China.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable, but see “Item 6—Directors, Senior Management and Employees—Directors and Senior Management.”

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. SELECTED FINANCIAL DATA

The following tables present selected historical financial data of our Company as of and for the years ended December 31, 2015, 2016, 2017, 2018 and 2019. Except for amounts presented in U.S. dollars, the selected historical consolidated statement of financial position data as of December 31, 2018 and 2019 and consolidated statement of profit or loss and other comprehensive income data for the years ended December 31, 2017, 2018 and 2019 set forth below are derived from, should be read in conjunction with, and are qualified in their entirety by reference to, our consolidated financial statements and their notes under “Item 18—Financial Statements” and “Item 5—Operating and Financial Review and Prospects” in this annual report. The selected historical consolidated statement of financial position data as of December 31, 2015, 2016 and 2017 and consolidated statement of profit or loss and other comprehensive income data for the years ended December 31, 2015 and 2016 set forth below are derived from our audited consolidated financial statements not included in this annual report. As disclosed above under “Special Note on the Financial Information and Certain Statistical Information Presented in This Annual Report”, our consolidated financial statements have been prepared and presented in accordance with IFRSs.

	Year ended December 31,					
	2015 <sup>(3)</sup>	2016 <sup>(3)</sup>	2017	2018	2019	2019
			(restated)	(restated)		
	Rmb	Rmb	Rmb	Rmb	Rmb	US\$
(in millions, except per share and per ADS data)						
<b>Statement of profit or loss and other comprehensive income data:</b>						
Operating revenues:						
Oil and gas sales	146,597	121,325	152,412	186,557	197,173	28,322
Marketing revenues	21,422	20,310	28,907	35,830	30,867	4,434
Other revenues	3,418	4,855	5,652	5,324	5,159	741
Total operating revenues	171,437	146,490	186,971	227,711	233,199	33,497
Expenses:						
Operating expenses	(28,372)	(23,211)	(24,410)	(24,388)	(24,735)	(3,553)
Taxes other than income tax	(10,770)	(6,941)	(7,221)	(9,141)	(9,156)	(1,315)
Exploration expenses	(9,900)	(7,359)	(6,966)	(13,135)	(12,342)	(1,773)
Depreciation, depletion and amortization	(73,439)	(68,907)	(61,442)	(50,838)	(57,699)	(8,288)
Special oil gain levy	(59)	—	(55)	(2,599)	(894)	(128)

	Year ended December 31,					
	2015 <sup>(3)</sup>	2016 <sup>(3)</sup>	2017	2018	2019	2019
			(restated)	(restated)		
	Rmb	Rmb	Rmb	Rmb	Rmb	US\$
	(in millions, except per share and per ADS data)					
Impairment and provision	(2,746)	(12,171)	(9,185)	(666)	(2,094)	(301)
Crude oil and product purchases	(19,840)	(19,018)	(27,643)	(33,558)	(29,040)	(4,171)
Selling and administrative expenses	(5,705)	(6,493)	(7,010)	(7,429)	(8,062)	(1,158)
Others	(3,150)	(4,802)	(6,042)	(5,790)	(4,982)	(716)
Total expenses	<u>(153,981)</u>	<u>(148,902)</u>	<u>(149,974)</u>	<u>(147,544)</u>	<u>(149,004)</u>	<u>(21,403)</u>
Profit/(loss) from operating activities	17,456	(2,412)	36,997	80,167	84,195	12,094
Interest income	873	901	655	798	1,067	153
Finance costs	(6,118)	(6,246)	(5,121)	(5,162)	(5,865)	(842)
Exchange (losses)/gains, net	(143)	(790)	356	(141)	(213)	(31)
Investment income	2,398	2,774	2,409	3,685	4,632	665
Share of profits/(losses) of associates	256	(609)	302	406	459	66
Profit/(loss) attributable to a joint venture	1,647	533	553	(5,593)	543	78
Other income, net	<u>761</u>	<u>574</u>	<u>236</u>	<u>997</u>	<u>831</u>	<u>120</u>
Profit/(loss) before tax	<u>17,130</u>	<u>(5,275)</u>	<u>36,387</u>	<u>75,157</u>	<u>85,649</u>	<u>12,303</u>
Income tax credit/(expense)	<u>3,116</u>	<u>5,912</u>	<u>(11,668)</u>	<u>(22,482)</u>	<u>(24,604)</u>	<u>(3,534)</u>
Profit for the year	<u><u>20,246</u></u>	<u><u>637</u></u>	<u><u>24,719</u></u>	<u><u>52,675</u></u>	<u><u>61,045</u></u>	<u><u>8,769</u></u>
Earnings per share (basic) <sup>(1)</sup>	0.45	0.01	0.55	1.18	1.37	0.20
Earnings per share (diluted) <sup>(2)</sup>	0.45	0.01	0.55	1.18	1.37	0.20
Earnings per ADS (basic) <sup>(1)</sup>	45.35	1.43	55.37	117.98	136.73	19.64
Earnings per ADS (diluted) <sup>(2)</sup>	45.31	1.43	55.36	117.96	136.72	19.64
Dividend per share						
Interim	0.205	0.105	0.170	0.266	0.297	0.043
Proposed final	0.210	0.204	0.243	0.341	0.404	0.058

	As of December 31,					
	2015 <sup>(3)</sup>	2016 <sup>(3)</sup>	2017	2018	2019	2019
			(restated)	(restated)		
	Rmb	Rmb	Rmb	Rmb	Rmb	US\$
(in millions)						
<b>Statement of Financial Position Data:</b>						
Cash and cash equivalents	11,867	13,735	12,949	14,995	33,679	4,838
Other financial assets	71,806	52,889	74,344	125,283	114,513	16,449
Current assets	140,211	122,045	139,564	191,151	205,945	29,582
Property, plant and equipment, net	454,141	432,465	401,544	413,383	440,554	63,282
Investments in associates	4,324	3,695	4,067	4,433	24,513	3,521
Investments in a joint venture	24,089	26,300	25,079	20,268	20,977	3,013
Intangible assets	16,423	16,644	15,430	16,073	16,306	2,342
Right-of-use assets	—	—	—	—	9,179	1,318
Equity investments	3,771	4,266	3,558	4,066	2,936	422
Total assets	664,362	637,681	624,089	686,381	757,731	108,841
Current loans and borrowings	33,585	19,678	14,092	8,991	12,590	1,809
Current liabilities	84,380	67,090	63,223	74,157	91,249	13,107
Non-current loans and borrowings	131,060	130,798	120,777	133,479	136,152	19,557
Total non-current liabilities	193,941	188,220	178,295	192,314	218,256	31,350
Total liabilities	278,321	255,310	241,518	266,471	309,505	44,457
Capital stock	43,081	43,081	43,081	43,081	43,081	6,188
Shareholders’ equity	386,041	382,371	382,571	419,910	448,226	64,384

- (1) Earnings per share (basic) and earnings per ADS (basic) for each year from 2015 to 2019 have been computed, without considering the dilutive effect of the shares underlying our share option schemes by dividing profit by the weighted average number of shares and the weighted average number of ADSs of 44,647,455,984 and 446,474,560, respectively, for each year from 2015 to 2019, in each case based on a ratio of 100 shares to one ADS.
- (2) Earnings per share (diluted) and earnings per ADS (diluted) for each year from 2015 to 2019 have been computed, after considering the dilutive effect of the shares underlying our share option schemes by using 44,684,819,053 shares and 446,848,191 ADSs for 2015, 44,659,140,488 shares and 446,591,405 ADSs for 2016, 44,651,557,953 shares and 446,515,580 ADSs for 2017, 44,656,022,966 shares and 446,560,230 ADSs for 2018, and 44,651,110,742 shares and 446,511,107 ADSs for 2019.
- (3) We completed the acquisition of China United Coalbed Methane Corporation Limited (“CUCBM”) from CNOOC in 2019. The consolidated financial information as of and for the years ended December 31, 2018 and 2017 has been restated as a result of the acquisition under common control. The consolidated financial information as of and for the years ended December 31, 2016 and 2015 was not restated as the impacts would be immaterial and the restated financial information cannot be provided without unreasonable effort or expense.

	Year ended December 31,					
	2015 <sup>(3)</sup>	2016 <sup>(3)</sup>	2017	2018	2019	2019
			(restated)	(restated)		
	Rmb	Rmb	Rmb	Rmb	Rmb	US\$
(in millions, except percentages and ratios)						
Other Financial Data:						
Capital expenditures paid <sup>(1)</sup>	67,674	51,347	48,068	51,002	66,395	9,537
Cash provided by/(used for):						
Operating activities	80,095	72,863	95,051	124,398	123,521	17,743
Investing activities	(76,495)	(27,953)	(64,745)	(95,452)	(67,457)	(9,690)
Financing activities	(6,893)	(43,240)	(31,276)	(27,108)	(37,691)	(5,414)
Gearing ratio <sup>(2)</sup>	29.9%	28.2%	26.1%	25.3%	26.0%	26.0%

- (1)Capital expenditures paid exclude those relating to acquisition of oil and gas properties.
- (2)Interest bearing debt divided by the sum of interest bearing debt and equity.
- (3)We completed the acquisition of CUCBM from CNOOC in 2019. The consolidated financial information as of and for the years ended December 31, 2018 and 2017 has been restated as a result of the acquisition under common control. The consolidated financial information as of and for the years ended December 31, 2016 and 2015 was not restated as the impacts would be immaterial and the restated financial information cannot be provided without unreasonable effort or expense.

**B. CAPITALIZATION AND INDEBTEDNESS**

Not applicable.

**C. REASONS FOR THE OFFER AND USE OF PROCEEDS**

Not applicable.

**D. RISK FACTORS**

Although we have established the risk management system to identify, analyze, evaluate and respond to risks, our business activities may be subject to the following risks, which could have material effects on our strategies, operations, compliance and financial condition. We urge you to carefully consider the risks described below.

*Our business, cash flows and profits fluctuate with volatility in oil and gas prices.*

Prices for crude oil, natural gas and oil products may fluctuate widely in response to relative changes in the supply and demand for crude oil and natural gas, market uncertainty and various other factors beyond our control, including but not limited to overall economic conditions, political instability, armed conflict and acts of terrorism, economic conditions and actions of major oil-producing countries, the prices and accessibility of other energy sources, domestic and foreign government regulations, natural disasters, weather conditions and major public health emergencies (e.g., the novel coronavirus (COVID-19) outbreak at the beginning of 2020). Changes in oil and gas prices could have a material effect on our business, cash flows and earnings.

Oil and gas prices are volatile. A downward trend in oil and gas prices which lasts for a long period may adversely affect our business, revenue and profits, and may also result in write-off of higher-cost reserves and other assets, reduction in the amount of oil and natural gas we can produce economically and termination of existing contracts that have become uneconomic. The prolonged slump in oil and gas prices may also impact our long-term investment strategies and operation capability for our projects.

*Our business and strategies may be substantially affected by complex macro economy, political instability, war and terrorism and changes in policies, laws and fiscal and tax regimes.*

Some of the countries in which we operate may be considered politically and economically unstable. As a result, our financial condition and operating results could be adversely affected by associated international actions, domestic civil unrest and general strikes, political instability, war and acts of terrorism. Any changes in regime or social instability, or other political, economic or diplomatic developments, or changes in policies, laws, fiscal and tax regimes are not within our control. Our operations, existing assets or future investments may be materially and adversely affected by these changes as well as potential trade and economic sanctions due to deteriorated relations between different countries.

For example, in the wake of the U.K.’s exit from the European Union on January 31, 2020 (“Brexit”), it is unclear how Brexit would affect the fiscal, monetary and regulatory landscape within the United Kingdom, the European Union and globally before further negotiations are concluded. Furthermore, new laws and regulations relating to data privacy, including the European Union General Data Protection Regulation and recent legislation and regulations adopted in various jurisdictions, pose complex compliance challenges and may result in increased costs. The ongoing oil and gas system reform in China may have certain impacts on the Company’s business in China. In terms of foreign investment access policies, the Foreign Investment Law, the Regulation on Implementing the Foreign Investment Law and the Special Management Measures (Negative List) for Foreign Investment Access (2019 Edition) have been promulgated and implemented. Among them, the Special Management Measures (Negative List) for Foreign Investment Access (2019 Edition) no longer restricts foreign investment to enter the oil and gas exploration and production industry in China through joint venture and cooperation only. At the end of 2019, China’s ministry of natural resources management published the Opinions on Several Matters Concerning Promoting Reform of Mineral Resources Administration (for Trial Implementation), which imposed challenges for the Company to obtain and retain business in the oil and gas fields in the future. The above law and regulations and the ongoing oil and gas system reform in China may have certain impacts on the Company’s existing business model.

Our financial performance is affected by the tax and fiscal regimes of host countries in which we operate. Any changes in these regimes may result in increased costs, including imposing additional or double taxation on our company in some circumstances. For example, in November 2019, the Nigerian President assented to the Deep Offshore and Inland Basin Production Sharing Contract (Amendment) Bill 2019 following its passage by the National Assembly of Nigeria. Furthermore, the Organization for Economic Co-operation and Development (OECD) initiated the “Base Erosion and Profit Shifting Project” (BEPS Project) to enhance multilateral cooperation and strengthen supervision on global corporate taxation and transfer pricing activities. Numerous countries have responded to the BEPS Project by implementing tax law changes and amending tax treaties at a rapid pace.

***Oil and gas industry is highly competitive.***

We compete in the PRC and other countries in which we operate with national oil companies, major integrated oil and gas companies and various other independent oil and gas companies for access to oil and gas resources, products, alternative energy, customers, capital financing, technology and equipment, talents and business opportunities. Competition may result in shortage of these resources or over-supply of oil and gas, which could increase our cost or reduce our earnings, and adversely impact our business, financial condition and results of operations.

In addition to competition, as we need to obtain various approvals from governmental and other regulatory authorities in order to maintain our operations, we may face unfavorable results such as project delays and cost overruns, which may further impact the realization of our strategies and adversely impact our financial condition.

*Our ability to deliver competitive returns and pursue commercial opportunities depends in part on the robustness and the long-lasting accuracy of our price predictions.*

We review the oil and natural gas price predictions on a periodic basis when evaluating project decisions and business opportunities. We generally assess projects and other business opportunities based on a long-term price range. While we believe our current long-term price predictions are prudent, if such predictions proved to be incorrect, it could have a material adverse effect on us. For short-term planning purposes, we assess the project feasibility by using a wider price range.

*Rising climate change concerns could lead to additional regulatory measures that may result in higher costs.*

It is expected that the CO<sub>2</sub> emissions will increase as our production grows. CO<sub>2</sub> emissions from combustion will continue to increase without a mature and reliable gas collection system in place. With the coming into force of the Paris Agreement and the continuing growth of the public’s awareness of climate change problems, the carbon emission policies of different countries have been enacted one after another. The Company expects to be supervised by relevant agencies and organizations in the future. If we are unable to find economically viable and publicly acceptable solutions that could reduce our CO<sub>2</sub> emissions from our new and existing projects, we may experience additional costs, and our reputation may be adversely affected.

*Mergers, acquisitions and disposals may expose us to additional risks and uncertainties, and we may not be able to realize the anticipated benefits from acquisitions and disposals.*

Mergers and acquisitions may not succeed due to various reasons, such as difficulties in integrating activities and realizing synergies, outcomes differing from key assumptions, host countries’ governments reacting or responding in a different manner from that envisaged, or liabilities and costs being underestimated. Any of these reasons would reduce our ability to realize the anticipated benefits. We may not be able to successfully dispose of non-core assets at acceptable prices, resulting in increased pressure on our cash position. In the case of asset disposals, we may be held liable for past acts, or failures to act or perform obligations, we may also be subject to liabilities if a purchaser fails to fulfill its commitments. These risks may result in an increase in our costs and inability to achieve our business goals.

*The nature of our operations exposes us and the communities in which we operate to a wide range of health, safety, security and environment risks.*

Every aspect of our daily operations exposes us to health, safety, security and environment (HSSE) risks given the geographical area, operational diversity and technical complexity of our operations. Part of our oil and gas operations are located in environmentally sensitive regions or politically unstable regions, such as Iraq, Nigeria, etc.; or operating in offshore environment, especially in new deepwater areas such as Mexico, etc. Our operations expose us and the areas in which we operate to a number of risks, including major process safety incidents, natural disasters, social unrest, personal health and safety mistakes and potential consequences from unforeseeable external destruction, for instance, typhoons, sea ice, etc. may damage platform structure, and submarine pipelines may lead to oil spills and gas leaks due to damage from external force. If a major HSSE risk materialises, such as an explosion or hydrocarbon spill, it could result in casualties, environmental damage, disruption to business activities and, material impact on our reputation, exclusion from bidding and eventually loss of our licence to operate. In certain circumstances, liabilities imposed may be disproportionate to our fault in the matter. Regulatory regimes for HSSE in host countries in which we operate change constantly and may become more stringent over time. In the future, we may incur significant additional costs in complying with such requirements or bear liabilities such as fines, penalties, clean-up costs and third-party claims, as a result of breach of laws and regulations relating to HSSE matter.

We maintain various insurance policies for our operations against potential losses. However, our ability to insure against our risks is subject to the availability of relevant insurance products in the market. In addition, we cannot assure you that our insurance coverage is sufficient enough to cover all losses that we may incur, or that we will be able to successfully claim our losses under our existing insurance policies on a timely basis, or at all. If any of our losses are not covered by our insurance coverage, or if the insurance compensation is less than our losses or the claim is not paid on a timely basis, our business, financial condition and results of operations could be materially and adversely affected.

***Violations of anti-fraud, anti-corruption and corporate governance laws may expose us to various risks.***

Laws and regulations of the host countries or regions in which we operate, such as laws on anti-corruption, anti-fraud and corporate governance, are constantly changing and becoming more comprehensive, especially in the U.S., the U.K., Canada, Australia, Guyana and China. The compliance with these laws and regulations may increase our cost. If the Company, our directors, executives or employees fail to comply with any of such laws and regulations, it may expose us to prosecution or punishment, damage to our reputation and image, and our ability to obtain new resources and/or access to the capital markets, and it may even expose us to civil or criminal liabilities.

***Potential changes in the U.S. sanctions regime could result in negative media and investor attention and possible sanctions imposed on the Company due to the Company’s or its affiliates’ activities in certain countries or regions, which could materially and adversely affect our shareholders.***

Different levels of the U.S. government - federal, state or local - impose economic sanctions of varying severity against certain geographical areas and their populations or against designated governments, organizations, individuals and entities wherever located. Our controlling shareholder, CNOOC, non-controlling affiliates and the Group currently do not carry out any sanctioned activities in the countries that are the subject of comprehensive U.S. sanctions (Iran, Cuba, North Korea, Syria and the Crimea region). However, it is impossible to predict whether the operation or business of the Company or its affiliates or the countries or regions in which the Company or its affiliates have operations or business will become the subject of such U.S. sanctions in the future due to changes in the U.S. sanctions regime. For example, in July 2019, one of our wholly-owned subsidiaries acquired 10% equity interest in Arctic LNG 2 LLC held by Ekropromstroy Limited Liability Company, and Arctic LNG 2 LLC is a limited liability company incorporated in the Russian Federation engaging in developing the second large onshore conventional natural gas project led by Joint Stock Company Novatek on the Gydan Peninsula in Russia. If there is any change in the U.S. sanctions regime targeting Russia or any other country where we engage in business, our ability to continue that business, or to conduct business with U.S. persons might be affected. We could be prohibited from engaging in business activities in the U.S. or with U.S. individuals or entities, and U.S.-related transactions in our securities and distributions to U.S. individuals and entities with respect to our securities could also be prohibited. Pension or endowment funds of certain U.S. state and local governments or universities may sell our securities due to certain restrictions on investments in companies that engage in activities in sanctioned countries, such as Iran and Sudan. We may also be subject to negative media or investor attention, which may distract management, consume internal resources and affect investors’ perception of our Company and investment in our Company.

***Any failure to replace reserves and develop our proved undeveloped reserves could adversely affect our business and our financial position.***

Our exploration and development activities involve inherent risks, including the risk of failing to discover commercially productive oil or gas reservoirs and that the wells we drill may not be able to commence production or may not be sufficiently productive to generate a return of our partial or full investments. In addition, approximately 57.2% of our proved reserves were undeveloped as of December 31, 2019. Our future success depends on our ability to develop these reserves in a timely and cost-effective manner. There are various risks in developing reserves, mainly including construction, operational, geophysical, geological and regulatory risks.

The reliability of reserve estimates depends on a number of factors, including the quality and quantity of technical and economic data, the market prices of our oil and gas products, the production dynamics of oil reservoirs, extensive engineering judgments, comprehensive judgement of engineers and the fiscal and tax regimes in the countries where we have operations or assets.

Many of the factors, assumptions and variables involved in estimating reserves are beyond our control and may be proved to be incorrect over time. Consequently, the results of drilling, testing, production and changes in the price of oil and gas may require substantial upward or downward revisions to our initial reserve data.

*If we fail to develop or gain access to appropriate technologies, or to deploy them effectively, the realization of our strategies as well as our competitiveness and ability to operate may be adversely affected.*

Technology and innovation are vital for us in meeting the global energy demands in a competitive environment and exploration and development challenges. For example, we strive to rely on technologies and innovations to enhance our competitiveness in the development of unconventional oil and gas resources, including heavy oil, oil sands, shale oil and gas and coalbed methane, and deep water exploration and development, offshore enhanced oil recovery. In an operating environment with stricter environmental protection standards and requirements, although current knowledge recognise these newly developed technologies as safe to the environment, there still exist unknown or unpredictable elements that may have an impact on the environment. This may in turn harm our reputation and operation, increase our costs or even result in litigations and sanctions.

*Breach of our cyber security or break down of our IT infrastructure could damage our operations and our reputation.*

Malicious attacks on our cyber system, negligence in management of our cyber security and IT system and other factors may cause damage or breakdown to our IT infrastructure, which may disrupt our operations, result in loss or misuse of data or sensitive information, cause injuries, environmental harm or damages in assets, violate laws or regulations and result in potential legal liability. These actions could result in significant increase in costs or damage to our reputation.

*CNOOC largely controls us and we regularly enter into connected transactions with CNOOC and its affiliates.*

Currently, CNOOC indirectly owns or controls approximately 64.44% of our shares. As a result, CNOOC is able to control our Board composition or our Board, determine the timing and amount of our dividend payments, and control us in various aspects. Under current PRC laws, CNOOC has the exclusive right to enter into PSCs with foreign enterprises for petroleum resources exploitation in offshore China. Although CNOOC has undertaken to transfer all of its rights and obligations (except for those relating to administrative functions as a state-owned company) under any new PSCs that it enters into to us, our strategies, results of operations and financial position may be adversely affected in the event CNOOC takes actions that favor its own interests over ours.

In addition, we regularly enter into connected transactions with CNOOC and its affiliates. Certain connected transactions require a review by the Hong Kong Stock Exchange and are subject to prior approvals by our independent shareholders. If these transactions are not approved, the Company may not be able to proceed with these transactions as planned and it may adversely affect our business and financial condition.

***Oil and natural gas transportation may expose us to financial loss and reputational harm.***

Our oil and gas transportation involves marine, land and pipeline transportation, which are subject to hazards such as capsizing, collision, acts of piracy and damage or loss from severe weather conditions, explosions and oil and gas spills and leakages. These hazards could result in serious personal injury or loss of human life, significant damage to property and equipment, environmental pollution, operating loss, risk of financial loss and reputational harm. We may not be able to arrange insurance coverage for all of these risks and uninsured losses and liabilities arising from these hazards could reduce the funds available to us for financing, exploration and investment, which may have a material adverse effect on our business, financial condition and results of operations.

***We face various risks with regard to our business and operations in Canada.***

Transportation and export infrastructure in Canada is limited, and without the construction of new transportation and export infrastructure, realization of our full oil and natural gas production capability may be affected. In addition, we may be required to sell our products into the North American markets at lower prices than in other (global) markets, which could materially and adversely affect our financial performance.

Furthermore, First Nation in Canada have aboriginal land claims, including claims to certain mineral resources, in a substantial portion of western Canada. As a result, negotiations with First Nations prior to commencing future projects (including surface activities necessary to conduct mineral extraction) are prudent. Failure to successfully complete a negotiation with affected First Nations may result in timing uncertainties or delays of future development activities.

***We may have limited control over our investments in joint ventures and our joint operations with partners.***

A portion of our operations are conducted in the form of partnership or joint venture over which we may have limited capability to influence and control their operation or future development. Our limited ability to influence and control the operation or future development of such joint ventures could materially and adversely affect the realization of our target returns on capital investment and lead to unexpected future costs.

***If we depend heavily on key customers or suppliers, our business, results of operations and financial condition could be adversely affected.***

Key sales customers – If any of our key customers reduces its crude oil or natural gas purchases from us significantly, our results of operation could be adversely affected. In crude oil sales, we adopt measures including confirming the annual sales plan and participating in market competition so as to maintain a stable cooperation with customers and to reduce reliance on a single customer. In natural gas sales, we adopt measures including signing long-term GSA with take-or-pay clause so as to minimize the risk of impact on our financial condition.

Key suppliers – We have strengthened our communication in business with our key suppliers in order to maintain a good working relationship. We have also established strategic partnerships through communications and reached a consensus in corporate cultures and win-win cooperation. Furthermore, we actively explore new suppliers to ensure supply adequacy and foster competition.

*We face currency risks and liquidity risks.*

Currency risks – The Company’s oil and gas sales are substantially denominated in Renminbi and the U.S. dollar. The depreciation of Renminbi against the U.S. dollar may have double effects. The appreciation of the U.S. dollar against Renminbi may increase the Company’s revenue from the sales of oil and gas, but may increase our import costs of equipment and raw materials in the meantime.

Liquidity risks – Certain restrictions on dividend distribution imposed by the laws of the host countries in which we operate may adversely and materially affect our cash flows. For instance, the dividend of our wholly-owned subsidiaries in the PRC shall be distributed pursuant to the laws of the PRC and the articles and association of such subsidiaries, and we may face risks of not obtaining adequate cash flows from such subsidiaries.

***The audit reports included in this annual report filed with the SEC have been prepared by our auditor, an independent registered public accounting firm, whose work is not inspected by the U.S. Public Company Accounting Oversight Board (the “PCAOB”) and, as such, it is unlikely for the PCAOB to evaluate the effectiveness of our independent registered public accounting firm’s audit procedures and quality control procedures.***

Our independent registered public accounting firm that issues the audit reports included in our annual report filed with the SEC, as a firm registered with the PCAOB, is required by the laws of the United States to undergo regular inspections by the PCAOB to assess its compliance with the laws of the United States and professional standards.

Because we have substantial operations within China and, without the approval of PRC authorities, the PCAOB is currently unable to conduct inspections of the work of our independent registered public accounting firm as it relates to those operations, our independent registered public accounting firm is not currently inspected by the PCAOB. Therefore, it is unlikely for the PCAOB to evaluate the effectiveness of our independent registered public accounting firm’s audit procedures or quality control procedures as compared to auditors outside of China that are subject to the PCAOB inspections.

Furthermore, on December 7, 2018, the PCAOB published a list of companies, including us, whose auditors are located in jurisdictions where there are obstacles to the PCAOB inspections. However, it remains unclear what further actions the SEC and the PCAOB will take to address the problem.

***Risks Related to SEC Litigation Against the “Big Four” PRC-based Accounting Firms***

In December 2012, the SEC brought administrative proceedings against the PRC affiliates of the “big four” accounting firms, including our independent registered public accounting firm, alleging that these firms had refused to produce audit work papers and other documents related to certain China-based companies whose securities are publicly traded in the United States. In February 2015, each of the “big four” PRC-based accounting firms reached a settlement with the SEC, which required the firms to provide the SEC with access to Chinese firms’ audit documents via the China Securities Regulatory Commission (CSRC) in response to future document requests by the SEC made through the CSRC. Under the terms of the settlement, the underlying proceeding against the four PRC-based accounting firms was deemed dismissed with prejudice for four years after entry of the settlement. The four-year mark occurred on February 6, 2019.

We cannot predict if the SEC will further challenge the “big four” PRC-based accounting firms’ compliance with U.S. law in connection with U.S. regulatory requests for audit work papers or if the results of such a challenge would result in the SEC imposing penalties such as suspensions. If our independent registered public accounting firm was denied, even temporarily, the ability to practice before the SEC and we were unable to timely find another registered public accounting firm to audit and issue an opinion on our financial statements, our financial statements could be determined not to be in compliance with the requirements of the Securities Exchange Act of 1934. Such a determination could ultimately lead to delisting of our ADSs from the NYSE or deregistration from the SEC, or both, which would substantially reduce or effectively terminate the trading of our ADSs in the United States.

ITEM 4. INFORMATION ON THE COMPANY

A. HISTORY AND DEVELOPMENT

We were incorporated with limited liability on August 20, 1999 in Hong Kong under the Companies Ordinance (Chapter 32 of the Laws of Hong Kong, the predecessor to Chapter 622 of the Laws of Hong Kong, or the Hong Kong Companies Ordinance, which came into effect on March 3, 2014). Our Company registration number in Hong Kong is 685974. Under the Hong Kong Companies Ordinance, we have the capacity, rights, powers and privileges of a natural person of full age and may do anything which we are permitted or required to do by our articles of association or any enactment or rule of law. Our registered office is located at 65<sup>th</sup> Floor, Bank of China Tower, One Garden Road, Central, Hong Kong, and our telephone number is 852-2213-2500.

The PRC government established CNOOC, our controlling shareholder, as a state-owned offshore petroleum company in 1982 under the Regulation of the PRC on the Exploitation of Offshore Petroleum Resources in Cooperation with Foreign Enterprises. CNOOC assumed certain responsibility for the administration and development of PRC offshore petroleum operations with foreign oil and gas companies.

Prior to CNOOC’s reorganization in 1999, CNOOC and its various subsidiaries performed both commercial and administrative functions relating to oil and natural gas exploration and development in offshore China.

In 1999, CNOOC transferred all of its then current operational and commercial interests in its offshore petroleum business, including the related assets and liabilities, to us. As a result and subject to the undertakings below, we and our subsidiaries are the only vehicles through which CNOOC engages in oil and gas exploration, development, production and sales activities both in and outside the PRC.

CNOOC retained its commercial interests in operations and projects not related to oil and gas exploration and production, as well as all of the administrative functions it performed prior to the reorganization.

CNOOC has undertaken to us that:

- we will enjoy the exclusive right to exercise all of CNOOC’s commercial and operational rights under PRC laws and regulations relating to the exploration, development, production and sales of oil and natural gas in offshore China;
- it will transfer to us all of its rights and obligations under any new PSCs and geophysical exploration operations, except those relating to its administrative functions;
- it will not engage or be interested, directly or indirectly, in oil and natural gas exploration, development, production and sales in or outside the PRC;

- we will be able to participate jointly with CNOOC in negotiating new PSCs and to set out our views to CNOOC on the proposed terms of new PSCs;
- we will have unlimited and unrestricted access to all data, records, samples and other original data owned by CNOOC relating to oil and natural gas resources;
- we will have an option to invest in LNG projects in which CNOOC invested or proposed to invest, and CNOOC will at its own expense help us to procure all necessary government approvals needed for our participation in these projects; and
- we will have an option to participate in other businesses related to natural gas in which CNOOC invested or proposed to invest, and CNOOC will procure all necessary government approvals needed for our participation in such business.

The undertakings from CNOOC will cease to have any effect:

- if we become a wholly owned subsidiary of CNOOC;
- if our securities cease to be listed on any stock exchange or automated trading system; or
- 12 months after CNOOC or any other PRC government-controlled entity ceases to be our controlling shareholder.

For information on our capital expenditures, see “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Cash Used in Investing Activities.”

**B. BUSINESS OVERVIEW**

**Overview**

We are an upstream company specializing in oil and natural gas exploration, development and production. We are the dominant oil and natural gas producer in offshore China and in terms of reserves and production, one of the largest independent oil and natural gas exploration and production companies in the world. As of the end of 2019, we had net proved reserves of approximately 5.18 billion BOE (including approximately 0.38 billion BOE in our equity method investees). In 2019, we achieved a net production of 1,387,564 BOE/day (including net production of approximately 56,824 BOE/day in its equity method investees).

**Competitive Strengths**

We believe that our historical success and future prospects are directly related to a combination of our strengths, including the following:

- large and diversified asset base with significant exploitation opportunities;
- sizable operating areas in offshore China with demonstrated exploration potential;
- successful independent exploration and development track record;
- access to capital and technology and reduced risks through PSCs in offshore China; and
- experienced management team and a high level of corporate governance standard.

*Large and diversified asset base with significant exploitation opportunities*

We have a large net proved reserve base spread across China and globally. As of December 31, 2019, we had approximately 5.18 billion BOE of net proved reserves. Our core operating area, offshore and onshore China, contributed to approximately 57.2% of our net proved reserves, while overseas contributed to the balance of 42.8%.

In addition to China, we have a diversified global portfolio which provides us with further exploration and exploitation potential. We have a strong track record of successfully acquiring and operating many quality overseas upstream assets worldwide. Currently, we have assets in Indonesia, Australia, Nigeria, Iraq, Uganda, Argentina, the United States, Canada, the United Kingdom, Brazil, Guyana, Russia and various other countries.

As of December 31, 2019, approximately 57.2% of our net proved reserves were classified as net proved undeveloped. Our large proved reserve base gives us the opportunity to achieve substantial production growth.

***Sizable operating areas in offshore China with demonstrated exploration potential***

We are the dominant oil and gas producer in offshore China, a region that we believe has substantial exploration upside. As of December 31, 2019, our total major exploration areas acreage in offshore China was approximately 248 thousand square kilometers. We believe that offshore China is relatively underexplored, compared to other prolific offshore exploration areas such as the shallow water of the U.S. Gulf of Mexico, providing us with substantial exploration upside.

We have maintained an active drilling exploration program, which continues to demonstrate the exploration potential of offshore China. During 2019, we and our foreign partners have together drilled a total of 225 exploratory wells in offshore China, of which 84 were wildcat wells. During the same year, we and our foreign partners made 17 new discoveries in offshore China.

***Successful independent exploration and development track record***

We have a strong record of growing our reserves base for oil and natural gas, both independently and with our foreign partners through PSCs. In recent years, we have been adding reserves and production mainly through independent exploration and development. As of the end of 2019, in offshore and onshore China, approximately 87.5% of our net proved reserves were independent and approximately 79.1% of our production generated from independent projects.

In 2019, in offshore China, our independent exploration resulted in 17 new discoveries, we also successfully appraised 27 oil and gas bearing structures. On the development front, our major new development projects progressed smoothly with two new projects on stream in offshore China.

***Access to capital and technology and reduced risks through PSCs in offshore China***

CNOOC holds exclusive right from the PRC government to enter into PSCs with foreign enterprises relating to the petroleum resources exploitation in offshore China which are open to foreign operation. CNOOC assigned us all of its rights and obligations under then-existing PSCs in 1999 and has undertaken to assign to us its future PSCs except for those relating to its administrative functions. PSCs help us minimize our offshore China finding costs, exploration risks and capital requirements because our foreign partners are responsible for all costs associated with exploration under the usual case. Our foreign partners recover their exploration costs only when a commercially viable discovery is made and production begins.

For more information about PSC, see “Item 4—Information on the Company—Business Overview—Regulatory Framework in the PRC.”

*Experienced management team and a high level of corporate governance standard*

Our senior management team has extensive experience in the oil and gas industry. Most of our executives have extensive experience in the oil and gas industry. Many of our management team and staff members have worked closely with international partners both within and outside China through numerous joint operations.

We have always upheld and attained high standard of business ethics, for which our transparency and standard of governance have been recognized by the public and our shareholders. In 2019, we were awarded as the “Most Honored Company (Oil & Gas)”, “Best Corporate Governance” and “Best IR Programs” in Institutional Investor’s 2019 All-Asia Executive Team Awards, “Gold Award”, “Best Environmental Stewardship Initiative” and “Best Social Responsibility Highly Commended Initiative” in the 2019 ESG Corporate Awards by The Asset, “2019 China Securities Golden Bauhinia Awards – Best Investment Value Award for Listed Companies” hosted by Ta Kung Wen Wei Media Group, “Best Investor Relations Company (China)”, “Asia’s Best CEO (Investor Relations)” and “Asia’s Best CFO (Investor Relations)” in the “Asian Excellence Award” hosted by Corporate Governance Asia.

**Business Strategy**

As one of the largest independent oil and gas exploration and production companies, we mainly engage in the exploration, development, production and sales of oil and natural gas. The principal components of our strategy are as follows:

- focus on reserve and production growth;
- develop natural gas business; and
- maintain a prudent financial policy.

*Focus on reserve and production growth*

As an upstream company specializing in the exploration, development, production and sales of oil and natural gas, we strive to increase our reserves and production through exploration and development and value-driven acquisitions. In China, we will continue to concentrate on our independent exploration efforts in major operating areas, while continuing to cooperate with our partners through production sharing contracts to lower capital expenditures and exploration risks. Overseas, we will strive to acquire more high-quality exploration blocks and improve exploration efficiency.

We increase our production primarily through the development of proved undeveloped reserves. As of 31 December 2019, approximately 57.2% of our proved reserves were classified as proved undeveloped reserves, which provide a solid resource base for the Company’s continued production growth in the future.

*Develop natural gas business*

The Company adopts the low-carbon development concept and actively expands the natural gas business. We will continue to develop the natural gas market, and strengthen exploration and development activities in natural gas fields. In the future, the proportion of natural gas in production and reserves will gradually increase as major projects such as Bozhong 19-6 condensate gas fields in Bohai, the large deep-water gas fields Lingling 17-2 in the Western South China Sea and the Arctic LNG 2 in Russia commence production.

*Maintain a prudent financial policy*

We will continue to maintain our prudent financial policy. As an essential part of our corporate culture, we will continue to raise cost awareness among all of our employees. At the same time, in our performance evaluation system, cost control has been one of the most important key performance indicators. In 2019, we continued to tap the potential of technological innovation and management innovation to lower costs and enhance efficiency. All-in cost per BOE decreased for the sixth consecutive year and our cost competitiveness was maintained.

We also attached great importance to cash flow management and maintained a healthy financial position.

Selected Operating and Reserves Data

The following table sets forth our operating data and our net proved reserves as of the date and for the periods indicated.

Our reserve data were prepared in accordance with the SEC’s final rules on Modernization of Oil and Gas Reporting.

	Year ended December 31,		
	2017	2018	2019
<b>Net Production<sup>(2)</sup>:</b>			
Oil (daily average bbls/day)	1,064,986	1,050,749	1,124,790
Gas (daily average mmcf/day)	1,300.6	1,462.5	1,537.9
Oil equivalent (BOE/day)	1,288,128	1,301,438	1,387,564
<b>Net Proved Reserves (as of the end of period):</b>			
Oil (mmbbls)	2,295.0	2,413.9	2,550.3
Gas (bcf)	7,543.3	7,626.8	7,827.1 <sup>(3)</sup>
Synthetic Oil (mmbbls)	785.9	796.3	779.6
Bitumen (mmbbls)	118.4	88.1	153.6
Total (million BOE)	4,474.1	4,590.0	4,807.9
Total with equity method investees (million BOE) <sup>(2)</sup>	4,840.8	4,962.1	5,184.6
Annual reserve replacement ratio <sup>(1)</sup>	297%	126%	145%
Annual reserve replacement ratio <sup>(2)</sup>	305%	126%	144%
Estimated reserve life (years)	9.9	10.1	9.9
Estimated reserve life (years) <sup>(2)</sup>	10.3	10.5	10.2
Standardized measure of discounted future net cash flow (million Rmb)	241,904	416,075	442,529

(1) For the calculation of reserve replacement ratio, see “Terms and Conventions—Glossary of Technical Terms”.

(2) Including our interest in equity method investees.

(3) Including 7.7 bcf of coalbed methane.

For further information regarding our reserves, see “Item 3—Key Information—Risk Factors—Any failure to replace reserves and develop our proved undeveloped reserves could adversely affect our business and our financial position” and “Item 4—Information on the Company—Business Overview—Exploration, Development and Production.”

Summary of Oil and Gas Reserves

The following table sets forth summary information with respect to our estimated net proved reserves of crude oil and natural gas as of the dates indicated.

	Net proved reserves as of December 31,		Net proved reserves as of December 31, 2019				
	2017	2018	Crude Oil	Natural Gas	Synthetic Oil	Bitumen	Total
	(mmboe)	(mmboe)	(mmbbls)	(bcf)	(mmbbls)	(mmbbls)	(mmboe)
<b>Developed</b>							
<b>China</b>							
Bohai	661.3	650.4	618.9	219.7	—	—	655.5
Western South China Sea	177.4	195.3	108.2	710.7	—	—	229.6
Eastern South China Sea	293.9	295.7	176.6	671.7	—	—	288.5
East China Sea	24.0	19.5	6.6	76.9	—	—	19.4
Onshore	—	—	—	51.3 <sup>(1)</sup>	—	—	8.5 <sup>(1)</sup>
<b>Subtotal</b>	<b>1,156.6</b>	<b>1,160.9</b>	<b>910.3</b>	<b>1,730.2</b>	<b>—</b>	<b>—</b>	<b>1,201.6</b>
<b>Overseas</b>							
Asia (excluding China)	133.4	118.9	30.5	472.9	—	—	113.8
Oceania	53.3	59.2	8.1	240.6	—	—	55.3
Africa	36.9	102.3	79.8	—	—	—	79.8
North America (excluding Canada)	169.2	188.9	165.7	277.9	—	—	212.0
Canada	192.0	136.2	—	—	122.3	95.2	217.5
South America	1.3	1.1	25.9	—	—	—	25.9
Europe	84.6	98.6	96.9	0.9	—	—	97.0
<b>Subtotal</b>	<b>670.7</b>	<b>705.3</b>	<b>406.9</b>	<b>992.3</b>	<b>122.3</b>	<b>95.2</b>	<b>801.4</b>
<b>Total Developed</b>	<b>1,827.3</b>	<b>1,866.2</b>	<b>1,317.3</b>	<b>2,722.5</b>	<b>122.3</b>	<b>95.2</b>	<b>2,003.0</b>
<b>Undeveloped</b>							
<b>China</b>							
Bohai	440.1	579.2	542.8	892.6	—	—	691.6
Western South China Sea	666.7	650.5	115.1	2,892.0	—	—	599.1
Eastern South China Sea	239.8	303.5	323.9	128.4	—	—	345.3
East China Sea	110.2	110.5	7.5	698.0	—	—	123.8
Onshore	—	—	—	17.1	—	—	2.8

	Net proved reserves as of December 31,		Net proved reserves as of December 31, 2019				
	2017	2018	Crude Oil	Natural Gas	Synthetic Oil	Bitumen	Total
	(mmboc)	(mmboc)	(mmbbls)	(bcf)	(mmbbls)	(mmbbls)	(mmboc)
Subtotal	1,456.8	1,643.7	989.4	4,628.2	—	—	1,762.7
Overseas							
Asia (excluding China)	92.1	84.4	25.6	325.7	—	—	82.8
Oceania	15.7	4.3	0.5	19.8	—	—	4.3
Africa	100.0	11.4	3.8	—	—	—	3.8
North America (excluding Canada)	183.2	139.7	84.1	127.4	—	—	105.3
Canada	716.2	748.2	—	—	657.4	58.3	715.7
South America	78.4	78.4	119.0	—	—	—	119.0
Europe	4.6	13.7	10.7	3.5	—	—	11.2
Subtotal	1,190.1	1,080.1	243.7	476.5	657.4	58.3	1,042.2
Total Undeveloped	2,646.8	2,723.7	1,233.1	5,104.6	657.4	58.3	2,804.9
TOTAL PROVED	4,474.1	4,590.0	2,550.3	7,827.1	779.6	153.6	4,807.9
Equity method investees	366.7	372.2	269.8	620.3	—	—	376.7
Total with equity method investees	4,840.8	4,962.1	2,820.1	8,447.5	779.6	153.6	5,184.6

(1) Including 7.7 bcf of coalbed methane.

The following tables set forth net proved crude oil reserves, net proved natural gas reserves and total net proved reserves as of the dates indicated for our independent and non-independent operations in each of our operating areas.

Total Net Proved Crude and Liquids Reserves (mmbbls)					
	As of December 31,		As of December 31, 2019		
	2017	2018	Developed	Undeveloped	Total
China					
Bohai	1,050.4	1,104.1	618.9	542.8	1,161.7
Western South China Sea	196.5	223.0	108.2	115.1	223.4
Eastern South China Sea	371.9	448.6	176.6	323.9	500.5
East China Sea	8.5	7.5	6.6	7.5	14.1
Onshore	—	—	—	—	—
Subtotal	1,627.3	1,783.2	910.3	989.4	1,899.7
Overseas					
Asia (excluding China)	69.9	54.1	30.5	25.6	56.1
Oceania	10.7	8.8	8.1	0.5	8.6
Africa	136.9	113.7	79.8	3.8	83.6
North America (excluding Canada)	282.1	263.4	165.7	84.1	249.8
Canada	904.3	884.4	217.5 <sup>(1)</sup>	715.7 <sup>(2)</sup>	933.2
South America	79.7	79.5	25.9	119.0	145.0
Europe	88.4	111.2	96.9	10.7	107.5
Subtotal	1,571.9	1,515.1	624.5	959.4	1,583.8
Total	3,199.3	3,298.3	1,534.8	1,948.7	3,483.5
Equity method entities	244.8	258.1	139.6	130.1	269.8
Total with equity method investees	3,444.1	3,556.4	1,674.4	2,078.9	3,753.2

(1) Including 122.3 mmbbls of synthetic oil and 95.2 mmbbls of bitumen.  
(2) Including 657.4 mmbbls of synthetic oil and 58.3 mmbbls of bitumen.

Total Net Proved Natural Gas Reserves  
(bcf)

	As of December 31,		As of December 31, 2019		
	2017	2018	Developed	Undeveloped	Total
China					
Bohai	305.7	753.4	219.7	892.6	1,112.3
Western South China Sea	3,880.1	3,715.6	710.7	2,892.0	3,602.8
Eastern South China Sea	970.5	903.7	671.7	128.4	800.1
East China Sea	754.4	735.1	76.9	698.0	774.9
Onshore	—	—	51.3 <sup>(1)</sup>	17.1	68.3 <sup>(1)</sup>
Subtotal	5,910.7	6,107.8	1,730.2	4,628.2	6,358.4
Overseas					
Asia (excluding China)	885.0	841.6	472.9	325.7	798.7
Oceania	297.2	279.5	240.6	19.8	260.5
Africa	—	—	—	—	—
North America (excluding Canada)	421.5	390.9	277.9	127.4	405.3
Canada	24.2	0.2	—	—	—
South America	—	—	—	—	—
Europe	4.8	6.7	0.9	3.5	4.4
Subtotal	1,632.6	1,519.0	992.3	476.5	1,468.8
Total	7,543.3	7,626.8	2722.5	5,104.6	7,827.1
Equity method investees	706.8	661.5	451.6	168.7	620.3
Total with equity method investees	8,250.1	8,288.2	3,174.1	5,273.3	8,447.5

(1) Including 7.7 bcf of coalbed methane.

Total Net Proved Reserves (million BOE)					
	As of December 31,		As of December 31, 2019		
	2017	2018	Developed	Undeveloped	Total
China					
Bohai	1,101.4	1,229.7	655.5	691.6	1,347.1
Western South China Sea	844.1	845.8	229.6	599.1	828.7
Eastern South China Sea	533.7	599.2	288.5	345.3	633.9
East China Sea	134.2	130.0	19.4	123.8	143.2
Onshore	—	—	8.5 <sup>(1)</sup>	2.8	11.4 <sup>(1)</sup>
Subtotal	2,613.3	2,804.6	1,201.6	1,762.7	2,964.3
Overseas					
Asia (excluding China)	225.4	203.3	113.8	82.8	196.6
Oceania	69.0	63.6	55.3	4.3	59.6
Africa	136.9	113.7	79.8	3.8	83.6
North America (excluding Canada)	352.3	328.6	212.0	105.3	317.3
Canada	908.3	884.4	217.5	715.7	933.2
South America	79.7	79.5	25.9	119.0	145.0
Europe	89.2	112.3	97.0	11.2	108.3
Subtotal	1,860.8	1,785.4	801.4	1,042.2	1,843.6
Total	4,474.1	4,590.0	2,003.0	2,804.9	4,807.9
Equity method investees	366.7	372.2	217.5	159.2	376.7
Total with equity method investees	4,840.8	4,962.1	2,220.5	2,964.1	5,184.6

(1) Including 7.7 bcf of coalbed methane.

*Proved Reserves*

As of December 31, 2019, we had proved reserves of 5,184.6 million BOE, including 2,820.1 million barrels of crude oil, 779.6 million barrels of synthetic oil, 153.6 million barrels of Bitumen and 8,447.5 bcf of natural gas, representing an increase of 222.5 million BOE as compared to proved reserves of 4,962.1 million BOE as of December 31, 2018.

The changes in our proved reserves mainly include:

- An increase of 442.4 million BOE due to new discoveries and extensions, details of which are described below:
  - Offshore China: the discoveries and extensions of oil and gas reserves in the amount of 283.3 million BOE, which are primarily attributable to fields such as Bozhong 19-6, Lingshui 25-1West, Enping 20-5, Enping 18-6 and Enping 20-4, etc.; and

- Overseas: the discoveries and extensions of oil and gas reserves in the amount of 159.1 million BOE, which are primarily attributable to fields such as Liza II in Guyana, Mero II in Brazil, OOGC in the United States as well as Long Lake and Syncrude in Canada, etc.;
- An increase of 265.4 million BOE due to revision of previous estimates, details of which are described below:
  - Offshore China: an increase of 187.2 million BOE mainly caused by technical factors, which were mainly due to better than expected production performance and increased reservoir recoveries from infill drilling. Among them, the proved reserves in Bohai increased from 1,229.7 million BOE as of December 31, 2018 to 1,347.1 million BOE as of December 31, 2019, representing an increase of 117.5 million BOE (production in 2019 was 168.6 million BOE) or 73.6% of the total offshore China revision, primarily attributable to fields such as Suizhong 36-1, Qinghuangdao 32-6 and Bozhong 19-4, etc.;
  - Overseas: an increase of 78.2 million BOE mainly caused by technical factors, which were mainly due to better than expected production performance and increased reservoir recoveries from infill drilling;
- An increase of 14.8 million BOE due to acquisition of CUCBM;
- The production of 506.5 million BOE in 2019.

As a result of above-mentioned changes in our proved reserves, annual reserve replacement ratio and estimated reserve life as of December 31, 2019 were 144% and 10.2 years, respectively.

***Proved Undeveloped Reserves (PUD)***

As of December 31, 2019, we had PUD of 2,964.1 million BOE, including 1,363.2 million barrels of crude oil, 657.4 million barrels of synthetic oil, 58.3 million barrels of Bitumen and 5,273.3 bcf of natural gas, representing an increase of 88.5 million BOE as compared to PUD of 2,875.6 million BOE as of December 31, 2018.

The changes in our PUD mainly include:

- An increase of 411.5 million BOE due to new discoveries and extensions, details of which are described below:
  - Offshore China: the discoveries and extensions of oil and gas reserves in the amount of 269.6 million BOE, which are primarily attributable to fields such as Bozhong 19-6, Lingshui25-1West, Enping 20-5, Enping 18-6 and Enping 20-4, etc.; and
  - Overseas: the discoveries and extensions of oil and gas reserves in the amount of 141.9 million BOE which are primarily attributable to Liza II in Guyana, Mero II in Brazil, OOGC in the United States as well as Long Lake and Syncrude in Canada, etc.;
- A decrease of 382.3 million BOE due to PUD converted to Proved Developed Reserves (“PD”);

- An increase of 56.4 million BOE due to revision of previous estimates, details of which are described below:
  - Offshore China: an increase of 54.4 million BOE mainly caused by technical factors, which were mainly due to better than expected production performance and increased reservoir recoveries from infill drilling;
  - Overseas: an increase of 2.0 million BOE mainly caused by technical factors, which were mainly due to better than expected production performance and increased reservoir recoveries from infill drilling.
- An increase of 2.8 million BOE due to acquisition of CUCBM.

In 2019, we had in total 382.3 million BOE PUD converted to PD and we spent approximately Rmb 32.9 billion on developing PUD into PD. Rmb 25.0 billion, or 76%, was spent on major development projects in Bohai, Eastern South China Sea, Western South China Sea in offshore China and Canada, Guyana, Iraq, Nigeria as well as the United States, etc. The remaining 24%, or Rmb 7.9 billion, was spent mainly on the infill drilling programs in offshore China and Argentina, Canada, Iraq, Nigeria as well as U.K. etc.

As of December 31, 2019, 399.4 million BOE of our PUD were first booked before 2014. These PUD were mainly located in offshore China, Canada and Indonesia, including 214.4 million BOE from fields located in offshore China which were either under construction, ready to be online or under development plan optimization, 132.0 million BOE from undeveloped open pit mines which are required as future sustaining areas to replace bitumen feedstock for Canada oil sand upgrader as the existing mines deplete, and 49.0 million BOE from gas contract related fields in Indonesia mainly due to supply contract. The development of PUD relating to the above projects was not completed within five years from initial booking due to the specific circumstances associated with the relevant development activities and delivery obligations. The Company books proved reserves for which development is scheduled to commence after more than five years only if these proved reserves satisfy the SEC’s standards for attribution of proved status and our management has reasonable certainty that these proved reserves will be produced.

***Qualifications of Reserve Technical Oversight Group and Internal Controls over Proved Reserves***

Reserve data contained in this annual report is based on the definitions and disclosure guidelines contained in the SEC Title 17: “Code of Federal Regulations–Modernization of Oil and Gas Reporting–Final Rule” in the Federal Register (SEC regulations), released on January 14, 2009 and related accounting standards. Our proved reserves estimates were prepared using standard geological and engineering methods generally accepted by the petroleum industry, and the definitions and standards of reserves required by the SEC. Generally accepted methods for estimating reserves include volumetric calculations, material balance techniques, production decline curves, pressure transient analysis, analogy with similar reservoirs, and reservoir simulation. The method or combination of methods used is based on professional judgment and experience.

For 2017, 2018 and 2019, approximately 65%, 69%, and 66%, respectively, of our reserves were evaluated by our internal reserves evaluation staff, and the remaining were based upon estimates prepared by independent petroleum engineering consulting companies and reviewed by us. Except as otherwise stated, all amounts of reserves in this report include our interests in equity method investees.

In 2019, we engaged Ryder Scott Company, L.P., Gaffney, Cline & Associates (Consultants) Pte Ltd. and RPS as independent third party consulting firms to perform annual estimates for our net proved oil and gas reserves. For each independent third party consulting firm, a report of third party letter has been prepared which summarizes the work undertaken, the assumptions, data, methods and procedures they used and provides their reserves estimate. These reports have been included as exhibits to this report on Form 20-F.

For China assets, approximately 61% of the total net proved oil and gas reserves were evaluated by our internal reserve evaluation staff, which accounted for 35% of our total net proved oil and gas reserves. The remaining 39% which accounted for 22% of our total net proved oil and gas reserves were evaluated by Ryder Scott Company, L.P..

For overseas assets, approximately 71% of the total net proved oil and gas reserves were evaluated by our internal reserve evaluation staff, which accounted for 30% of our total net proved oil and gas reserves. And we also engaged independent third party consulting firms Ryder Scott Company, L.P., McDaniel & Associates Consultants Ltd. and DeGolyer and MacNaughton to conduct audits for internally evaluated reserves to provide validation of our processes and estimates, which accounted for approximately 74% of overseas total internally evaluated net proved oil and gas reserves. For each independent third party consulting firm, a report of third party letter has been prepared which summarizes the work undertaken, the assumptions, data, methods and procedures they used and concludes with their opinion concerning the reasonableness of the estimated reserves quantities or reserves processes. These reports have been included as appendices to this annual report. The remaining 29% which accounted for 12% of our total net proved oil and gas reserves were evaluated by Ryder Scott Company, L.P., Gaffney, Cline & Associates (Consultants) Pte Ltd. and RPS.

Based on the extent and expertise of our internal reserves evaluation resources, our staff’s familiarity with our properties and the controls applied to the evaluation process, we believe that the reliability of our internally generated estimates of reserves and future net revenue is not materially less than that of reserves estimates conducted by an independent qualified reserves evaluator.

Besides engaging third parties to provide annual estimates and audits of our reserves, we also implement rigorous internal control system that monitors the entire reserves estimation process and certain key metrics in order to ensure that the process and results of reserves estimates fully comply with the relevant SEC rules. We established the Reserve Management Committee, or RMC, which is led by one of our Executive Vice Presidents and comprises the general managers of the relevant departments.

The RMC’s main responsibilities are to:

- review our reserve policies;
- review our proved reserves and other categories of reserves; and
- select our reserve estimators and auditors.

The RMC follows certain procedures to appoint our internal reserve estimators and reserve auditors, who are required to have undergraduate degrees and at least five years and ten years of experience related to reserves estimation, respectively.

The reserves estimators and auditors are required to be members of a professional society such as China Petroleum Society (CPS), and are required to take the professional training and examinations as required by the professional society and us.

The RMC delegates its daily operation to our Reserves Office, which is led by our Chief Reserves Supervisor. The Reserves Office is mainly responsible for supervising reserves estimates and auditing. It reports to the RMC periodically and is independent from operating divisions such as the exploration, development and production departments. Our Chief Reserve Supervisor has 25 years’ experience in the oil and gas industry.

Exploration, Development and Production

Summary

In China, we engage in oil and natural gas exploration, development and production in Bohai, Western South China Sea, Eastern South China Sea and East China Sea, either independently or through cooperation with foreign partners under production sharing contracts (“PSCs”). As of the end of 2019, approximately 57.2% of the Company’s net proved reserves and approximately 64.5% of its net production were derived from China.

For independent operations, the Company has been increasing its reserves and production mainly through independent exploration and development in China. As of the end of 2019, approximately 88% of the Company’s net proved reserves and approximately 79% of its net production in China were derived from independent oil and gas fields.

For PSC operations, China National Offshore Oil Corporation (“CNOOC”), the Company’s controlling shareholder, has the exclusive right to enter into PSCs with foreign oil companies to cooperate in the exploration, development and production of petroleum resources (including crude oil and natural gas) in offshore China which are open to foreign cooperation. CNOOC has transferred to the Company all its rights and obligations under the PSCs (except those relating to its management and regulatory functions as a state-owned company), including new PSCs that will be signed in the future.

In overseas, after years of hard work, we own assets in more than 20 countries and regions. Our overseas assets account for approximately 55% of the Company’s assets. With its diversified portfolio of high-quality assets, the Company is an active participant in a number of world-class oil and gas projects and has become a leading industry player. Currently, the Company holds interests in oil and gas assets in Indonesia, Australia, Nigeria, Iraq, Uganda, Argentina, the U.S., Canada, the U.K., Brazil, Guyana, Russia and various other countries. As of the end of 2019, approximately 42.8% of the Company’s net proved reserves and approximately 35.5% of its net production were derived from overseas.

In 2019, international trade disputes continued and global economic growth slowed down. The economic growth momentum of the U.S. has gradually weakened. The Eurozone was trapped by negative interest rates. The growth of emerging economies was weakened. The overall economy of China generally remained stable with increased downward pressure. The supply and demand imbalance in the international oil market was prevalent and international oil prices continued to fluctuate at a low level. The average price of Brent crude oil in 2019 has dropped significantly by approximately 10.6% year-over-year.

Facing the complex and ever-changing external environment, the Company focused on its own development and adhered to the operating strategies determined at the beginning of the year, which included: steadily increase oil and gas reserves and production levels; promote high-quality development of the Company; digital transformation helps improve core businesses; maintain prudent financial policies and investment decision-making; and pursue a green, low-carbon, and environment-friendly development model.

In 2019, the Company successfully achieved its various production and operation targets despite having faced with a number of challenges. The Company enhanced efforts in exploration, strengthened the value-driven exploration philosophy, focusing on exploration of mid-to-large sized oil and gas fields in China, and at the same time actively deployed overseas exploration. 23 new discoveries were made and 30 successful appraisals of oil and gas bearing structures were achieved throughout the year. Meanwhile, the Company also pushed ahead steadily with the construction of new projects. Huizhou 32-5 oilfield comprehensive adjustment/Huizhou 33-1 oilfield joint development project, Caofeidian 11-1/11-6 comprehensive adjustment project and Bozhong 34-9 oilfield in offshore China as well as Egina oilfield in Nigeria and Appomattox project in the U.S. Gulf of Mexico came on stream sequentially. More than 20 projects were under construction throughout the year to support future sustainable development. The Company has completed the acquisition of 100% equity interest in CUCBM, which will enable the Company to capitalise on its strengths in oil and gas exploration technology and management to coordinate the development of offshore and onshore, conventional and unconventional oil and gas businesses to further expand the development potential of the Company. The Company exceeded the annual oil and gas production target with a net production of 506.5 million BOE. The completion rate of capital expenditure for the whole year reached its best level in history. All-in cost decreased for the sixth consecutive year to US\$29.78/BOE. The Company maintained a healthy financial position and realized a net profit of Rmb61.05 billion for the year. Meanwhile, its performance in the areas of health, safety and environmental protection remained stable.

In early 2020, affected by the outbreak of the COVID-19 pandemic, demand for commodities decreased. In early March, international oil prices fell sharply. Looking ahead in 2020, with trade frictions, financial turmoil and the elevation of geopolitical tensions, etc., the downward risks of the global economy is expected to increase and international oil prices movement continue to be uncertain. To this end, the Company will closely monitor changes in the external environment and the movement of international oil prices. We will adjust our operation strategy in a timely manner, implement more stringent cost controls, maintain prudent investment decisions and strengthen cash flow management in an effort to ensure the Company’s steady operation.

*Exploration*

In 2019, the Company adhered to the value-driven exploration philosophy and continued to strengthen its oil and gas exploration efforts, and the workload reached a record high. In offshore China, focusing on exploration of mid-to-large sized oil and gas fields, several major discoveries were made. A number of breakthroughs were achieved with enhanced effort in exploration in new areas and frontiers. Risk exploration and rolling exploration achieved remarkable results as well. Overseas, the Company accelerated the progress of existing projects, actively acquired high-quality new projects and continued to expand and optimise the layout of oversea exploration assets. In 2019, the Company’s reserve replacement ratio reached 144%, and the reserve life remained stable at a level above 10 years.

In offshore China, the Company’s exploration activities exceeded the target set at the beginning of the year, and the activities in independent exploration wells and the acquisition of 3D seismic data reached a record high. Throughout the year, a total of 225 exploration wells were drilled, six of which were drilled under PSCs. A total of 9,013 kilometers of 2D seismic data and 24,234 square kilometers of 3D seismic data were acquired independently and under PSCs. The Company made 17 new discoveries and successfully appraised 28 oil and gas bearing structures in offshore China. The success rate for independent exploration wells in offshore China was 43%-67%.

In 2019, the Company continued to follow a value-driven exploration philosophy in offshore China and highlighted the scale of discovery and efficiency of reserve, which led to outstanding results. Notable achievements include:

- Firstly, the appraisal of Bozhong 19-6 condensate gas fields in Bohai achieved remarkable successes, adding proved in-place volume of nearly 200 million cubic meters of oil equivalent, and further strengthened the resource base for providing low-carbon and safe energy supply for Bohai Rim Region.
- Secondly, three mid-to-large sized oil and gas bearing structures, namely Kenli 6-1, Luda 25-1 and Enping 20-4, were discovered and successfully appraised, which expanded the reserve base.

Thirdly, breakthroughs were made in new areas and frontiers. Various buried hill structures in Western South China Sea and Bohai demonstrated promising exploration prospects.

Fourthly, exploration and development integration was promoted and the newly added proved in-place volume from rolling exploration equalled to a mid-to-large sized oil and gas field, which accelerated conversion from reserve to production.

Overseas, the Company drilled a total of 14 exploration wells, made six new discoveries and successfully appraised two oil and gas bearing structures. Major achievements include:

Firstly, five more new discoveries were made in the Stabroek block of Guyana. As of the end of 2019, a total of 15 discoveries have been made in the block. Currently, the recoverable resources were further expanded to more than 8.0 billion BOE.

Secondly, Glengorm condensate gas field discovered in the North Sea of the U.K. represents the largest oil and gas discovery in the area in the past decade. Further expansion in the exploration results is expected in the future.

Thirdly, the Company focused on its overseas strategic planning and obtained two new blocks in Mauritania and Gabon, which further expanded its scope of overseas exploration.

Our major exploration activities in 2019 are set out in the table below:

	Exploration Wells				New Discoveries		Successful Appraisal Wells		Seismic Data			
	Independent		PSC		Independ- dent	PSC	Independ- dent	PSC	2D (km)		3D (km <sup>2</sup> )	
	Wildcat	Appraisal	Wildcat	Appraisal					Independ- dent	PSC	Independ- dent	PSC
Offshore China												
Bohai	28	74	0	1	8	0	53	1	0	0	1,623	0
Eastern South China Sea	30	14	4	0	7	0	3	0	984	3,735	9,286	457
Western South China Sea	20	45	1	0	2	0	14	0	3,031	0	10,169	0
East China Sea	1	7	0	0	0	0	5	0	1,263	0	2,699	0
Subtotal	79	140	5	1	17	0	75	1	5,278	3,735	23,777	457
Overseas	3	1	7	3	1	5	0	3	0	0	0	0
Total	82	141	12	4	18	5	75	4	5,278	3,735	23,777	457

In 2020, the Company will continue to devote greater efforts in its oil and gas exploration, strengthen the value-driven exploration philosophy, ensure sustainable development in exploration, improve exploration efficiency and reduce exploration cost. In offshore China, the Company will target mid-to-large sized oil and gas fields and enhance efforts in exploration in new areas and frontiers. Overseas, the Company will strive to obtain high-quality blocks around oil and gas exploration hotspots.

Engineering Construction, Development and Production

In 2019, the Company successfully fulfilled its development and operational tasks, with oil and gas production exceeding targets set at the beginning of the year. Key projects progressed steadily.

In 2019, the Company achieved a net oil and gas production of approximately 506.5 million BOE, exceeding the production target of 480-490 million BOE set at the beginning of the year and reached a record high. Currently, among the new projects planned to come on stream in 2019, Huizhou 32-5 oilfield comprehensive adjustment/Huizhou 33-1 oilfield joint development project, Caofeidian 11-1/11-6 comprehensive adjustment project and Bozhong 34-9 oilfield in offshore China as well as Egina oilfield in Nigeria and Appomattox project in the U.S. Gulf of Mexico all came on stream. More than 20 projects were under construction throughout the year. The development and construction of key projects progressed smoothly. Among them, Lingshui 17-2 gas fields have fully entered the development and construction stage, the construction progress for Liuhua 16-2/Liuhua 20-2 oilfield joint development project accelerated significantly, and the construction of Bozhong 19-6 condensate gas field pilot development project achieved positive progress as well.

In 2019, the Company continued to focus on the increase of oil and gas production, promoted construction acceleration and efficiency, strictly controlled operating costs and drove sustainable development with technology innovations. The main measures include:

Firstly, the Company strengthened production organisation, and actively promoted acceleration and efficiency in construction. Works such as coordination between development and production as well as resource supply were carried out in advance to effectively unleash the potential of production, operation and management, and brought development wells on stream ahead of schedule that noticeably shortened the cycle of production capacity construction.

Secondly, the Company strengthened preliminary research to lay a solid foundation for development of oil and gas fields. Through various technological innovations, it efficiently and economically leveraged the development of heavy oilfields in Bohai; the breakthrough in deep water jacket structure model provided alternative development methods for deep water oil and gas fields of 300-metre water depth; and promoted standardised design of offshore engineering.

Thirdly, based on oil reservoir research, the Company explored the potential of producing oil and gas fields. With increased investment, both the workloads and production contribution of infill drillings reached record highs; further progress was made in the “Year of Water Injection” programme to significantly reduce the decline rate and enhance the recovery; the application of new oilfield process and new chemical flooding was promoted, and the workload of production increase activities reached a record high.

Fourthly, the Company strictly controlled costs and enhanced efficiency, and the operating cost decreased to the lowest level in recent years. In offshore China, we promoted unmanned and depopulated wellhead platforms and onshore power supply mode; overseas, the asset structure was optimised to strengthen cost advantage.

In 2020, we will continue to promote construction acceleration and efficiency, and strengthen the progress control of development projects and strive to bring new projects on stream ahead of schedule; carry out the “Year of Water Injection” programme, and lower the natural decline rate to ensure basic production; optimise the planning for infill drilling wells to enhance recovery rate of oilfields and increase new production contribution. Meanwhile, the Company will continue to explore and test the thermal recovery technology on heavy oil to drive the effective utilisation of heavy oil reserves.

In 2020, a total of ten new projects are planned to come on stream, including Penglai 19-3 oilfield block 4 adjustment/Penglai 19-9 oilfield phase II, Qinhuangdao 33-1 South oilfield phase I, Bozhong 19-6 gas field pilot development project, Luda 16-3/21-2 joint development project, Nanbao 35-2 oilfield S1 area, Jinzhou 25-1 oilfield 6/11 area, Liuhua 29-1 gas field development project and Liuhua 16-2/Liuhua 20-2 oilfield joint development project in offshore China, Liza oilfield phase 1 in Guyana and Buzzard oilfield phase II in the U.K. Among them, Liza oilfield Phase I in Guyana has already come on stream earlier than scheduled in December 2019.

Further, the Company will actively promote the appraisal and construction of new projects. It is expected that more than 20 projects will be under construction throughout the year, which will lay a solid foundation for mid- and long-term growth in production.

Overview by Region

Offshore China

Bohai

Bohai is the most important crude oil producing area for the Company. The crude oil produced in this region is mainly heavy oil. The operational area in Bohai is mainly shallow water with a depth of approximately 10 to 30 meters. As of the end of 2019, the reserve and production in Bohai reached 1,347.1 million BOE and 462,564 BOE/day, respectively, representing approximately 26.0% of the Company’s total reserves and approximately 33.3% of its production.

With rich oil and gas resources, Bohai has been one of the Company’s core areas for exploration and development. In 2019, the Company made eight successful discoveries in Bohai, namely Luda 19-2, Luda 25-1, Luda 27-1, Kenli 6-1, Kenli 10-1 North, Caofeidian 2-2, Suizhong 36-1 North and Jinzhou 31-2 South. In addition, the Company also successfully appraised 17 oil and gas bearing structures, including Bozhong 19-6, Bozhong 29-6, Bozhong 13-2, Bozhong 22-1, Bozhong 26-3 North, Bozhong 29-4, Bozhong 34-9, Kenli 6-1, Kenli 10-1 North, Luda 25-1, Luda 4-3, Luda 29-1, Jinzhou 31-2 South, Suizhong 36-1 North, Longkou 13-2, Caofeidian 21-1 and Caofeidian 1-2.

In 2019, we continued to appraise Bozhong 19-6 condensate gas fields and added proved in-place volume of nearly 200 million cubic meters of oil equivalent, bringing the total proved in-place volume to more than 300 million cubic meters of oil equivalent. Through cluster exploration, Kenli 6-1 oil bearing structure was efficiently appraised, with proved in-place volume exceeding 50 million tons of oil equivalent. It is expected to be developed as the first large-sized oilfield in the Laibei low uplift in Bohai. In addition, Luda 25-1 oil and gas bearing structure obtained a high-volume oil flow and is expected to be constructed as a mid-sized oilfield.

For development and production, on the basis of ensuring the stable production of 30 million tons of Bohai oilfields for another ten years, the major scientific and technological breakthroughs in Bohai oilfields have achieved initial results, which has provided a safeguard for the Company to achieve its medium- to long-term production growth targets. Among the new projects that were planned to commence production in 2019, Caofeidian 11-1/11-6 oilfield comprehensive adjustment project and Bozhong 34-9 oilfield came on stream. In 2020, it is expected that Luda 16-3/21-2 joint development project, Jinzhou 25-1 oilfield 6/11 area, Penglai 19-3 oilfield block 4 adjustment/Penglai 19-9 oilfield phase II, Bozhong 19-6 condensate gas field pilot development project, Qinhuangdao 33-1 South oilfield phase I and Nanbao 35-2 oilfield S-1 area will commence production.

Western South China Sea

Western South China Sea is one of the Company’s important crude oil and natural gas production areas. The typical operating water depth in the region ranges from 40 to 1,500 meters. The crude oil produced here is mostly of light to medium gravity. As of the end of 2019, the reserves and production in Western South China Sea reached 828.7 million BOE and 164,352 BOE/day, respectively, representing approximately 16.0% of the Company’s total reserves and approximately 11.8% of its production.

In 2019, the Company made two successful discoveries in Western South China Sea, namely Weizhou 11-1 Central and Weizhou 11-2 South. The Company also achieved eight successful appraisals, namely Weizhou 12-1, Weizhou 11-1, Weizhou 11-2 East, Ledong 10-1, Lingshui 25-1 West, Wushi 16-1, Wushi 16-1 West and Wenchang 19-6. Among them, Ledong 10-1 is expected to become a mid-to-large sized gas field. In addition, the Company obtained high-volume natural gas in the tests of Mesozoic granite buried hills, which represented a major breakthrough in deepwater exploration in the eastern area of the Qiongdongnan Basin.

In December 2019, the drilling of development wells of Lingshui 17-2, the first large-sized deepwater independent gas field in offshore China, officially commenced and fully entered the development stage. It created the world’s first development model of deepwater 10,000-ton of oil equivalent semi-submersible platform. The field will provide stable gas supply of more than 3 billion cubic meters to Guangdong, Hong Kong and Hainan every year after commissioning.

***Eastern South China Sea***

Eastern South China Sea is the Company’s another important crude oil and natural gas producing area. The typical operating water depth in the region ranges from 100 to 1,500 meters. The crude oil produced here is mostly of light to medium gravity. As of the end of 2019, the reserves and production in Eastern South China Sea reached 633.9 million BOE and 242,026 BOE/day, respectively, representing approximately 12.2% of the Company’s total reserves and approximately 17.4% of its production.

In 2019, the Company made seven new discoveries in Eastern South China Sea, namely Enping 20-5, Panyu 10-1, Panyu 19-1, Xijiang 24-6, Xijiang 24-7, Lufeng 7-10 and Lufeng 9-4. Furthermore, two oil and gas bearing structures, namely Enping 20-5 and Enping 20-4, were successfully appraised. The successful appraisal of Enping 20-5 and Enping 20-4 and the continued discovery of reserves from explorations of surrounding areas proved that the Yangjiang Sag already has the reserve foundation of a mid-to-large sized oilfields.

As for development and production, Huizhou 32-5 oilfield comprehensive adjustment/Huizhou 33-1 oilfield joint development project commenced production in January 2019. Liuhua 16-2/Liuhua 20-2 oilfield joint development project and Liuhua 29-1 gas field development project are expected to come on stream in 2020.

***East China Sea***

The typical operating water depth in the East China Sea region is approximately 90 meters. As of the end of 2019, reserves and production in the region represented approximately 2.8% and approximately 0.9% of the Company’s total reserves and production, respectively.

In 2019, the Company continued to promote innovation and refined management in the East China Sea, explored and improved the unmanned management system and achieved safe and efficient operation of unmanned offshore platforms, which significantly reduced production costs.

***Onshore***

In October 2019, the Company completed the acquisition of 100% equity interest in CUCBM. Currently, CUCBM mainly engaged in the exploration, development, production and foreign cooperation of onshore unconventional natural gas resources in China. CUCBM has completed the construction of two major production bases in the Qinshui Basin and the eastern edge of the Erdos Basin. In the future, the Company will capitalise on the strengths in technology and management of oil and gas development to coordinate the development of offshore and onshore, conventional and unconventional oil and gas businesses. As of the end of 2019, reserves and production of onshore China represented approximately 0.2% and approximately 0.9% of the Company’s total reserves and production, respectively.

***Others***

Following the general trend of low-carbon development in the global energy industry, CNOOC Limited has actively explored the development of renewable clean energy of offshore wind power by leveraging on its rich offshore engineering resources and production experience. In 2019, the Company established CNOOC Renewable Energy Co., Ltd., which is committed to the development of offshore wind power business. The construction of the first offshore wind power project was officially commenced, and the installation of offshore booster station and the main construction of the onshore centralised control centre were completed. By the end of 2020, full-capacity generating units will be connected to the grid for power generation.

**Overseas**

**Asia (excluding China)**

Asia (excluding China) is the first overseas region entered into by the Company, and has become one of the major overseas oil and gas producing areas of the Company. Currently, the Company owns oil and gas assets mainly in Indonesia and Iraq. As of the end of 2019, reserves and production derived from Asia (excluding China) reached 196.6 million BOE and 70,715 BOE/day, respectively, representing approximately 3.8% of the Company’s total reserves and approximately 5.1% of its production.

**Indonesia**

As of the end of 2019, the Company’s asset portfolio in Indonesia comprised mainly two development and production blocks, namely the Madura Strait and Tangguh. Among them, the Madura Strait block is a joint operation block, in which the production of BD gas field remained stable, and other gas fields are under appraisal and construction.

The Company owns approximately 13.9% interest in the Tangguh LNG Project in Indonesia. In 2019, production of the first phase of the project remained stable with a daily net production of approximately 21,000 BOE. The construction of the third LNG production line in the second phase is in progress as planned, and is expected to reach completion and commence production in 2021.

In 2019, the transfer of the operating interest in the Malacca block was completed.

**Iraq**

The Company owns a 63.75% participating interest in the technical service contract of Misan oilfields in Iraq and acts as the lead contractor for the technical service of the oilfields.

In 2019, the Company continued to drill development wells in Misan oilfields, and the production of the project has steadily increased. Affected by the contract recovery model, the daily net production slightly decreased to approximately 42,000 BOE.

**Oceania**

Currently, the Company’s oil and gas assets in Oceania are mainly located in Australia and Papua New Guinea. As of the end of 2019, reserves and production derived from Oceania reached 59.6 million BOE and 21,987 BOE/day, respectively, representing approximately 1.2% of the Company’s total reserves and approximately 1.6% of its production.

**Australia**

The Company owns a 5.3% interest in the North West Shelf LNG Project (“NWS Project”) in Australia. The project has commenced production and is currently supplying gas to end-users including the Dapeng LNG Terminal in Guangdong, China.

In 2019, NWS Project maintained stable production and achieved favorable economic returns.

**Other Regions in Oceania**

The Company owns interests in three blocks which are still under exploration in Papua New Guinea.

**Africa**

Africa is one of the regions where the Company has a relatively large oil and gas reserve and production. The Company’s assets in Africa are primarily located in Nigeria and Uganda. As of the end of 2019, reserves and production in Africa reached 83.6 million BOE and 120,925 BOE/day, respectively, representing approximately 1.6% of the Company’s total reserves and approximately 8.7% of its production.

*Nigeria*

The Company owns a 45% interest in the OML130 block in Nigeria. The OML130 block is a deepwater block comprising four oilfields, namely Akpo, Egina, Egina South and Preowei.

In 2019, Akpo oilfield maintained stable production, with daily net production reaching approximately 44,000 BOE. Egina oilfield commenced production in January 2019, with daily net production reaching approximately 68,000 BOE. Egina oilfield production growth was faster than planned and reached its peak production of 200,000 BOE/day in May 2019.

In addition, the Company also holds a 20% non-operating interest in Usan oilfield in the OML138 block in offshore Nigeria, and an 18% non-operating interest in the OPL223 and OML139 PSC, respectively.

We will continue to further integrate the OML130, OML138, OML139 and OPL223 projects to establish an oil and gas production base in West Africa centred in Nigeria.

*Uganda*

The Company owns one-third interest in each of EA 1, EA 2 and EA 3A blocks in Uganda. EA 1, EA 2 and EA 3A blocks are located at the Lake Albert Basin in Uganda, which is one of the most promising basins in terms of oil and gas resources in onshore Africa.

In 2019, the Company effectively promoted the optimisation of the project development plan. In the future, the Company will adhere to the win-win cooperation philosophy and continue to actively cooperate with project partners and the Ugandan government.

*Other Regions in Africa*

Apart from Nigeria and Uganda, the Company also owns interests in several blocks in Senegal, the Republic of the Congo, Algeria and the Gabonese Republic.

*North America*

North America has become the Company’s largest overseas oil and gas reserves and production region. The Company holds interests in oil and gas blocks in the U.S., Canada, Mexico and Trinidad and Tobago in North America. As of the end of 2019, the Company’s reserves and production in North America reached 1,250.5 million BOE and 156,222 BOE/day, respectively, representing approximately 24.1% of the Company’s total reserves and approximately 11.3% of its production.

*The U.S.*

Currently, the Company owns interests in two onshore shale oil and gas projects in the U.S. and two offshore deepwater projects in the Gulf of Mexico.

The onshore shale oil and gas projects in the U.S. are Eagle Ford and Rokies (formerly Niobrara). CNOOC Limited holds 27% and 12% interests in the two projects, respectively. In 2019, the daily net production of Eagle Ford project remained stable at approximately 55,000 BOE.

The Company owns interests in two important deepwater projects, namely Stampede and Appomattox, and a number of other exploration blocks in the U.S. Gulf of Mexico. In 2019, the production of Stampede project remained stable with a daily net production of approximately 7,000 BOE. Appomattox project commenced production in May 2019 with steady production growth and its daily net production was approximately 5,100 BOE.

*Canada*

Canada is one of the world’s major enrichment areas for oil sands. The Company owns 100% working interest in Long Lake and three other oil sands projects in the Athabasca region of northeastern Alberta. In 2019, overcoming the impact of production limitation by the government, the Company devoted greater management effort in Long Lake project, ramping up the daily net production to approximately 45,000 BOE, which was a record high. The steam/oil ratio (SOR) was further improved and the economic returns were enhanced significantly.

The Company holds a 7.23% interest in the Syncrude project and its daily net production in 2019 was approximately 19,000 BOE. The Company also holds a 25% interest in the Hangingstone oil sands project and non-operator interests under several other exploration and development licences.

The Company holds 100% exploration interest in two exploration blocks in offshore East Canada. The drilling of one wildcat is expected to be completed in 2020.

In addition, the Company holds approximately 9.585% of shares in MEG Energy Corporation, a listed company in Canada.

*Other Regions in North America*

The Company owns a 12.5% interest in the 2C block and a 17.12% interest in the 3A block in Trinidad and Tobago, respectively, of which the 2C block is in production with stable production and favorable economic returns.

The Company also owns 100% exploration operator interest in block 1 and a 70% exploration operator interest in block 4 of the Cinturon Plegado Perdido deepwater exploration blocks in Mexico, respectively. The drilling of two wildcats in block 1 and block 4 are planned to be completed in 2020.

*South America*

South America is one of the Company’s important sources of future reserve and production growth. The Company holds interests in oil and gas blocks in Brazil, Guyana and Colombia, as well as a 50% interest in BC ENERGY INVESTMENTS CORP. (“BC”) in Argentina. The Company’s 50% interest in BC is accounted for by equity method. As of the end of 2019, the Company’s reserves and production derived from South America reached 519.5 million BOE and 59,368 BOE/day, respectively, representing approximately 10.0% of the Company’s total reserves and approximately 4.3% of its production.

*Brazil*

Brazil is one of the world’s most important deepwater oil and gas development regions. The Company holds a 10% interest in Libra PSC, a deepwater pre-salt project in Brazil. The oilfield is located in the Santos Basin, with a block area of approximately 1,550 square kilometers and a water depth of approximately 2,000 meters.

The Mero oilfield in the northwest area of the block includes four production units, namely Mero 1, Mero 2, Mero 3 and Mero 4. The daily net production of the extended well trial project in 2019 remained stable. The final investment decisions for Mero 1 and Mero 2 oilfields have been made and the projects are expected to commence production in 2021 and 2023, respectively. The development plan of Mero 3 has been completed.

In 2019, the Company successfully won the bid for a 5% interest in Búzios Surplus project in Brazil, which represents another big step in the development of the deepwater pre-salt region in Brazil with the world’s largest growth potential. Currently, negotiations on relevant agreements for the project are in progress.

In the future, the Company will fully leverage on the development opportunities of the Libra project and Búzios Surplus project to seek new drivers for production growth.

The Company also holds 100% interest in the 592 block in offshore Brazil, a 20% interest in the ACF Oeste block and a 30% interest in the Pau Brasil block.

*Guyana*

The Company holds a 25% interest in the Stabroek block in offshore Guyana. The Stabroek block covers an area of approximately 26,800 square kilometers and a water depth of approximately 1,600 to 1,900 meters.

The Phase I of Liza oilfield commenced production ahead of schedule in December 2019, and is expected to achieve a peak production of 120,000 BOE/day after few months of production.

The final investment decision for the Phase II of Liza oilfield has been made and the oilfield is expected to commence production in 2022. The field development design proposal of Payara oilfield has been completed and is currently awaiting government approval and final investment decision.

In 2019, the Stabroek block was further appraised successfully. Five new successful discoveries, including Haimara, Tilapia, Yellowtail, Tripletail and Mako, were made. Currently, a total of 16 new discoveries have been made in the block and the recoverable resources have been further expanded to more than 8.0 billion BOE.

*Argentina*

CNOOC Limited holds a 50% interest in BC and makes joint decisions on its management. BC holds a 50% interest in Pan American Energy Group in Argentina.

In 2019, the Company optimised its operation plans and carried out innovative development plans. The daily net production of BC reached approximately 55,000 BOE.

*Other Regions in South America*

The Company also holds interests in several exploration and production blocks in Colombia.

***Europe***

The Company holds interests in oil and gas fields such as Buzzard and Golden Eagle in the U.K. North Sea, owns various exploration blocks in offshore Ireland and holds a 10% equity interest in Arctic LNG 2 LLC in Russia. Among them, the Company’s 10% interest in the Arctic LNG 2 LLC is accounted for by equity method. As of the end of 2019, the Company’s reserves and production derived from Europe reached 108.3 million BOE and 64,027 BOE/day, respectively, representing approximately 2.1% of the Company’s total reserves and approximately 4.6% of its production.

*The U.K.*

The U.K. is one of the Company’s key overseas development areas. The Company’s asset portfolio in the North Sea includes projects under production, development and exploration, which mainly include: holding a 43.2% interest in the Buzzard oilfield, one of the largest oilfields in the North Sea, and a 36.5% interest in the Golden Eagle oilfield.

Buzzard and Golden Eagle oilfields are making considerable contributions to the Company’s production. In 2019, the Buzzard oilfield’s daily net production reached approximately 46,000 BOE.

In 2019, the Company made a new discovery Glengorm in the U.K. North Sea, which represents the largest oil and gas discovery in the area in the last decade. Further expansion in the exploration results is expected in the future, which will facilitate the stable and sustainable growth of reserves and production in the region.

*Russia*

In 2019, the Company acquired a 10% equity interest in the Arctic LNG 2 LLC in Russia and the acquisition was completed. Through this acquisition, the Company can increase the proportion of natural gas production, which is in line with its low-carbon and environmental-friendly development model.

*Other Regions in Europe*

The Company owns a 50% interest in the FEL 3/18 block, an 80% interest in the FEL 3/19 block and exploration interests in five other blocks in offshore Ireland.

**Other Oil and Gas Data**

*Oil and Gas Production, Production Prices and Production Costs*

The following table sets forth our net production, average sales price and average production cost (excluding ad valorem and severance taxes) in the years of 2017, 2018 and 2019.

	Net Production			Average Sales Price		Average
	Total	Crude and	Gas	Crude and	Gas	Production Cost
	(BOE/day)	Liquids	(Mmcf/day)	Liquids	(US\$/ Mmcf)	(US\$/BOE)
2019						
China						
Bohai	462,564	436,173	158.3	—	—	—
Western South China Sea	164,352	109,906	318.2	—	—	—
Eastern South China Sea	242,026	176,884	390.9	—	—	—
East China Sea	11,389	3,902	44.9	—	—	—
Onshore	12,596	—	75.6	—	—	—
Subtotal	892,928	726,866	987.9	66.15	6,922	6.88
Overseas						
Asia (excluding China)	70,715	45,020	145.7	61.71	7,467	5.81
Oceania	21,987	3,764	93.0	60.53	3,227	9.18
Africa	120,925	120,925	—	66.08	—	5.56
North America (excluding Canada)	85,595	62,749	137.1	51.86	2,618	6.55
Canada	70,627	69,947	4.1	40.50	2,089	17.06
South America	3,937	3,937	—	57.95	—	17.98
Europe	64,027	62,544	8.9	63.67	3,545	7.40
Subtotal	437,812	368,886	388.7	57.71	4,603	8.21
Total	1,330,740	1,095,751	1,376.6	63.34	6,269	7.32
Equity method investees	56,824	29,039	161.3	—	—	—
2018						
China						
Bohai	460,822	433,325	165.0	—	—	—
Western South China Sea	154,248	109,381	265.2	—	—	—
Eastern South China Sea	216,877	159,312	345.4	—	—	—
East China Sea	11,580	3,347	49.4	—	—	—
Onshore	1,644	—	9.9	—	—	—
Subtotal	845,171 <sup>(1)</sup>	705,366	834.8	70.79	7,176	7.02
Overseas						
Asia (excluding China)	88,662	59,240	164.2	65.60	8,067	9.37
Oceania	26,034	4,251	111.1	73.31	3,245	6.74
Africa	59,844	59,844	—	69.44	—	6.22
North America (excluding Canada)	74,184	53,120	126.4	59.39	3,080	6.55
Canada	69,783	64,026	34.5	29.98	1,222	18.20
South America	3,066	3,066	—	62.22	—	24.81
Europe	76,615	73,678	17.6	70.37	6,700	6.89
Subtotal	398,187	317,224	453.9	59.30	4,934	9.39
Total	1,243,357	1,022,589	1,278.9	67.22	6,414	7.77
Equity method investees	58,080	28,159	173.7	—	—	—

	Net Production			Average Sales Price		Average
	Total	Crude and	Gas	Crude and	Gas	Production Cost
	(BOE/day)	(Bbls/day)	(Mmcf/day)	(US\$/bbl)	(US\$/ Mmcf)	(US\$/BOE)
2017						
China						
Bohai	458,473	433,591	149.3	—	—	—
Western South China Sea	142,870	96,543	273.5	—	—	—
Eastern South China Sea	212,895	173,192	238.2	—	—	—
East China Sea	13,016	3,629	56.3	—	—	—
Onshore	688	—	4.1	—	—	—
Subtotal	827,941	706,955	721.4	55.04	6,729	7.57
Overseas						
Asia (excluding China)	82,958	57,395	141.4	47.83	6,658	12.19
Oceania	22,598	3,691	96.5	58.39	3,167	8.61
Africa	73,625	73,625	—	53.32	—	5.90
North America (excluding Canada)	68,507	46,785	130.3	45.99	2,995	6.27
Canada	64,167	57,711	38.7	32.56	1,702	20.08
South America	929	929	—	43.70	—	10.63
Europe	100,046	95,750	25.8	52.57	4,757	5.89
Subtotal	412,832	335,887	432.8	47.63	4,220	9.59
Total	1,240,773	1,042,842	1,154.2	52.65	5,819	8.24
Equity method investees	47,355	22,144	146.4	—	—	—

Drilling and Other Exploratory and Development Activities

The following table sets forth our net exploratory wells and development wells drilled in the years of 2017, 2018 and 2019.

	Net Exploratory Wells Drilled			Net Development Wells Drilled		
	Total	Productive	Dry	Total	Productive	Dry
2019						
Offshore China						
Independent						
Bohai	102	63	39	81	81	—
Western South China Sea	65	16	49	21	21	—
Eastern South China Sea	44	10	34	18	18	—
East China Sea	8	5	3	—	—	—
Subtotal	219	94	125	120	120	—
PSCs						
Bohai	1	1	—	42.8	42.8	—
Western South China Sea	—	—	—	—	—	—
Eastern South China Sea	5	—	5	0.8	0.8	—
East China Sea	—	—	—	—	—	—
Subtotal	6	1	5	43.5	43.5	—
Overseas						
Asia (excluding China)	0.1	—	0.1	29.0	29.0	—
Oceania	—	—	—	—	—	—
Africa	0.4	—	0.4	1.4	1.4	—
North America	—	—	—	133.3	133.3	—
South America	2.0	1.8	0.2	0.9	0.9	—
Europe	2.7	0.5	2.2	0.4	0.4	—
Subtotal	5.2	2.3	2.9	164.9	164.9	—
2018						
China						
Independent						
Bohai	80	54	26	36	36	—
Western South China Sea	40	22	18	36	36	—
Eastern South China Sea	30	7	23	9	9	—
East China Sea	6	—	6	—	—	—
Subtotal	156	83	73	81	81	—
PSCs						
Bohai	1	—	1	13.8	13.8	—
Western South China Sea	1	—	1	—	—	—
Eastern South China Sea	8	3	5	—	—	—
East China Sea	—	—	—	—	—	—
Subtotal	10	3	7	13.8	13.8	—
Overseas						
Asia (excluding China)	—	—	—	23.8	23.8	—
Oceania	—	—	—	—	—	—
Africa	—	—	—	1.4	1.4	—
North America	—	—	—	63.0	63.0	—
South America	1.9	1.6	0.3	2.3	2.3	—
Europe	—	—	—	—	—	—
Subtotal	1.9	1.6	0.3	90.5	90.5	—

	Net Exploratory Wells Drilled			Net Development Wells Drilled		
	Total	Productive	Dry	Total	Productive	Dry
2017						
Offshore China						
Independent						
Bohai	60	37	21	33	33	—
Western South China Sea	28	13	11	22	22	—
Eastern South China Sea	23	5	18	12	12	—
East China Sea	3	—	3	—	—	—
Subtotal	114	55	53	67	67	—
PSCs						
Bohai	1	—	1	8.7	8.7	—
Western South China Sea	—	—	—	—	—	—
Eastern South China Sea	1	—	1	—	—	—
East China Sea	—	—	—	0.5	0.5	—
Subtotal	2	—	2	9.2	9.2	—
Overseas						
Asia (excluding China)	—	—	—	16.5	16.5	—
Oceania	—	—	—	—	—	—

	Net Exploratory Wells Drilled			Net Development Wells Drilled		
	Total	Productive	Dry	Total	Productive	Dry
Africa	0.5	0.5	—	3.6	3.6	—
North America	0.2	—	0.2	67.3	67.3	—
South America	1.6	1.6	0.1	—	—	—
Europe	0.6	—	0.6	—	—	—
Subtotal	2.9	2.1	0.9	87.4	87.4	—

Present Activities

The following tables set forth our present activities as of December 31, 2019.

	Wells Being Drilled		Waterfloods Being Installed	
	Gross	Net	Gross	Net
Offshore China				
Bohai	38	32.5	857	759.5
Western South China Sea	39	39	56	56
Eastern South China Sea	21	21	—	—
East China Sea	—	—	—	—
Subtotal	98	92.5	913	815.5
Overseas				
Asia (excluding China)	5	3.5	3	3
Oceania	—	—	—	—
Africa	—	—	1	0.5
North America	13	1.9	1	0.2
South America	5	1.0	37	9.5
Europe	5	2.2	—	—
Subtotal	28	8.6	42	13.2

*Oil and Gas Properties, Wells, Operations, and Acreage*

The following table sets forth our productive wells, developed acreage and undeveloped acreage as of December 31, 2019.

	Productive Wells				Developed Acreage (km <sup>2</sup> )		Undeveloped Acreage (km <sup>2</sup> )	
	Crude and Liquids		Natural Gas		Gross	Net	Gross	Net
	Gross	Net	Gross	Net				
Offshore China								
Bohai	2,324	2,013.3	30	30	2,636	2,636	40,331	40,331
Western South China Sea	367	347.2	112	98.5	1,946	1,946	72,142	72,142
Eastern South China Sea	462	444.4	43	38.1	2,652	2,652	51,379	51,379
East China Sea	22	8.6	73	33.6	85	85	84,577	84,577
Subtotal	3,175	2,813.4	258	200.2	7,319	7,319	248,429	248,429
Overseas								
Asia (excluding China)	153	153	19	3.4	869	619	2,516	1,006
Africa	63	23	—	—	888	398	29,113	21,402
Oceania	—	—	66	3	3,240	172	12,685	1,919
North America	3,422	985.9	364	108.3	728	203	6,882	6,319
South America	5,068	1,246.8	599	150	3,226	723	31,805	8,381
Europe	61	25.8	2	0.8	89	38	2,841	1,591
Subtotal	8,767	2,434.4	1,050	265.6	9,039	2,153	85,842	40,618
Total	11,942	5,247.8	1,308	465.8	16,358	9,472	334,271	289,047

The gross acreage disclosed above includes the total number of acres in major blocks that we own an interest. The net acreage includes our wholly owned interests and the sum of our fractional interests in gross acreage.

**Delivery Commitment**

We have certain delivery commitments under the take-or-pay contracts for sales of natural gas. In 2019, the annual sales from our largest gas contract contributed to only approximately 2.2% of our total oil and gas sales and the total revenues from gas sales accounted for approximately 9.3% of our total revenues in 2019. Moreover, the total gas quantities that are subject to delivery commitments under the existing contracts or agreements are not significant to us. Therefore, we believe that we did not have any material delivery commitment as of the end of 2019.

**Sales and Marketing**

*Sales of Crude Oil*

We sell crude oil produced in offshore China in domestic market mainly through CNOOC China Limited, our wholly-owned subsidiary. We sell crude oil produced overseas in international and domestic markets mainly through China Offshore Oil (Singapore) International Pte Ltd, its wholly-owned subsidiary, and CNOOC Marketing Canada and CNOOC Marketing U.S.A. Inc under CNOOC International Limited, another wholly-owned subsidiary.

Our crude oil sales prices are mainly determined by reference to the prices of international benchmark crude oil of similar quality, with certain premiums or discounts subject to the prevailing market conditions. Although the prices are denominated in the U.S. dollar, customers in China settle in Renminbi. The Company currently sells three types of crude oil in China, i.e., heavy crude oil, medium crude oil and light crude oil. The benchmark oil price is Brent. The Company’s major customers in China are CNOOC, CNPC and Sinopec Group. Crude oil produced overseas is benchmarked at the Brent, Dubai, Oman and WTI prices and regularly updated official oil prices of national oil companies in oil producing countries and sold in international markets.

In 2019, the Company’s realized oil prices dropped as a result of the decrease in international oil prices. The Company’s average realized oil price was US\$63.34/barrel, representing a year-on-year decrease of approximately 5.8%, less than the decrease of the Brent oil price. The discount rate of the Company’s realized crude oil price to the Brent benchmark oil price narrowed, which was mainly due to: on the one hand, the demand for low-sulfur heavy crude oil increased and the tightened supply of heavy crude oil drove the increase of price of heavy crude oil; on the other hand, the change in the structure of overseas production increased the average selling price of oversea crude oil.

The table below sets forth the sales and marketing volumes in offshore China for each of these types of crude oil for the periods indicated.

	Year ended December 31,		
	2017	2018	2019
Sales and Marketing Volumes (mmbbbls) <sup>(1)</sup>			
Light Crude	26.3	23.6	22.6
Medium Crude	147.4	148.4	155.2
Heavy Crude	112.3	106.8	111.1

(1) Includes the sales volumes of us and our foreign partners under production sharing contracts.

*Sales of Natural Gas*

Our natural gas sales prices are mainly determined through negotiation with customers. Generally, natural gas sales agreements are long-term contracts, and the contract terms normally include a price review mechanism. The Company’s natural gas customers are primarily located in the southeast coastal areas of China, and the major customers include CNOOC Gas and Power Group, China BlueChemical Ltd, Hong Kong Castle Peak Power Company Limited, etc.

Sales of LNG from NWS Project in Australia and the Tangguh LNG Project in Indonesia are mainly based on long-term supply contracts to various customers in the Asia-Pacific region, including the Dapeng LNG Terminal in Guangdong Province and the LNG terminal in Putian, Fujian Province in China.

In 2019, the Company’s average realized natural gas price was US\$6.27/mcf, representing a year-on-year decrease of approximately 2.2%, which was mainly due to the decrease of natural gas price denominated in USD in China as a result of Renminbi depreciation, as well as the decreases of Tangguh spot market prices and NYMEX prices in the U.S. market.

In China, thanks to policy support, the consumption of natural gas based on metre reading has maintained rapid growth. However, due to the initial effects of increased domestic exploration and development efforts, coupled with the rapid growth of imported LNG and imported pipeline natural gas, the overall supply of the natural gas market was relatively abundant and the supply and demand were generally balanced. Based on market conditions, the Company raised certain contract prices during peak demand season through negotiations.

The table below sets forth the average realized prices for our crude oil and natural gas for the periods indicated.

	Year ended December 31,		
	2017	2018	2019
Average Realized Prices			
Crude and Liquids (US\$/bbl)	52.65	67.22	63.34
Natural Gas (US\$/mcf)	5.82	6.41	6.27
Brent (US\$/bbl)	54.75	71.69	64.16

The Brent crude oil price was US\$64.16 per barrel as of December 31, 2019 and US\$22.74 per barrel as of March 31, 2020.

The following table presents, for the periods indicated, our revenues sourced in and outside the PRC:

	Year ended December 31,		
	2017	2018	2019
	(restated)	(restated)	
	(Rmb in millions, except percentages)		
Revenues sourced in the PRC	122,321	154,929	153,884
Revenues sourced outside the PRC	64,650	72,782	79,315
Total revenues	186,971	227,711	233,199
% of revenues sourced outside the PRC	34.6%	32.0%	34.0%

**Procurement of Services**

We usually outsource work in connection with the acquisition and processing of seismic data, well drilling, well logging and perforating services and well control and completion service to independent third parties, or CNOOC and its affiliates.

Besides building floating production storage and offloading, or FPSO, with our partners, we employ independent third parties or CNOOC and/or its affiliates for FPSO services and other services.

We conduct a bidding process to determine who we employ to construct platforms, terminals and pipelines, to drill production wells and to install offshore production facilities. Both independent third parties and CNOOC affiliates participate in the bidding process. We are closely involved in the design and management of services by contractors and exercise extensive control over their performance, including their costs, schedule, quality, staff health and safety, and environment protection measures.

**Research and Development**

In 2019, the Company proactively implemented its “innovation-driven” strategy and further increased the investment in science and technology. The Company also devoted greater efforts to the development of major scientific and technological breakthroughs in science and technology projects and strived to ensure reserve and production growth with the help of technological innovation. The Company promoted the building of scientific research platforms and made new progress in core technological research projects. The Company accelerated the construction of smart oilfields and promoted cost reduction and efficiency enhancement through digital transformation. Researches on natural gas hydrate, geothermal energy and ocean energy technologies were actively carried out to facilitate the Company’s sustainable development.

*Major Scientific and Technological Project Development*

In 2019, the Company focused on the core business needs and continued to research on critical core technologies such as the development of deepwater oil and gas fields, offshore heavy oil, oil and gas fields with high temperature and high pressure and fields with low porosity and permeability. Breakthroughs were made in key technologies such as high water content and high recovery oilfield water injection tapping technology, medium and deep formation exploration and development technology and integrated technology for injection and production of heavy oil thermal recovery jet pump, which would provide technological support for reserve and production growth. The Company won the “First Prize” of China’s National Science and Technology Progress Award in 2019 for its “Theory and major discoveries for large-scale integrated condensate gas field exploration in the deep layer of Bohai Bay Basin” project.

*Progress of Major Technological Innovation*

In 2019, new progress was made in the building of scientific research platforms, and experimental researches such as heavy oil chemical flooding and natural gas hydrate production simulation were commenced. Significant progress has also been made in projects such as “Marine natural gas hydrate test recovery technology and process”, “Research on and application of unconventional oil and gas seismic exploration and development technology” and “Research on completeness detection and plugging technology for offshore gas wells”.

**Health, Safety and Environmental Protection (“HSE”)**

As always, the Company adheres to the core HSE values of “Safety First, Environment Paramount, People-oriented and Equipment Integrated”. Focusing on “improving the system, consolidating the foundation, and enhancing the safety production responsibility system for all employees”, the Company constantly improves the systematic management of HSE, and strives to provide a safe working environment for the Company and its contractors and establish first-class management capability in safe production.

In 2019, the Company further improved the management framework of the HSE system, identified ten core elements and 70 specific management requirements to lead its subsidiaries to adhere to a safety management orientation based on risks and continuous improvements. By including the implementation of the safe production responsibility system into performance review for supervision, the Company guided its subsidiaries to establish a responsibility system based on job risks.

During the year, the Company continued to strengthen major investigations, checks and controls, formulated and adopted corresponding control measures for works such as major projects under construction, underground operation safety, high-risk well control and production facilities and typhoon prevention, etc. The Company strengthened the well control safety management, improved the well control management mechanism of the Company and its subsidiaries, formulated and revised policies such as the “Management Measures for Engineering Incidents in Drilling Wells” and commenced regular well control inspections to enhance the management capability of well control.

CNOOC Limited continued to promote the cultivation of safety culture featuring “People-oriented, Execution and Intervention”, conducted research and diagnosis of safety culture cultivation, and organised and mobilised its employees to actively participate in safety culture activities such as the “My Opinion on Safety” essay writing activity and the “Safety and Environmental Protection TikTok” micro-video shooting activity, and received positive feedbacks. To promote the continuous enhancement of safety leadership, the Company continued to hold the “Safety Lessons” event by safety management personnel.

The Company paid great attention to the safety risk of overseas operations, and shared global security warning information in a time manner; strengthened the safety supervision and management of overseas projects, improved the security training and management of dispatched employees, strengthened the key responsibilities of overseas operation safety, and conducted the security management audit of contractors for overseas projects to ensure the compliant, safe and smooth operation of overseas projects.

CNOOC Limited actively implemented the Green Development Action Plan, promoted environmental protection management in key areas. Guided by the Green Development Action Plan, CNOOC Limited implemented the green and low-carbon development strategy, actively cultivated and established green factories and green manufacturing integration projects. CNOOC Deepwater Development Limited and CNOOC China Limited Zhanjiang (Hainan) Branch Dongfang Operations Co., were rated as national green factories by the Ministry of Industry and Information Technology; and the Dongying Terminal of Tianjin Branch and Zhanjiang Branch were named as “Green Factory” model enterprises in the petroleum and petrochemical industry.

In 2019, we once again maintained our good performance in safety management and adhered to consistently high HSE standards. OSHA (Occupational Safety and Health Administration) statistics for the year are set out below.

Scope	Total Man-hours (million)	Number of Recordable Cases	Rate of Recordable Cases	Number of Lost Workday Cases	Rate of Lost Workday Cases	Fatalities
Staff of the Company	41	16	0.08	5	0.02	0
Staff of the Company and direct contractors	143	46	0.07	20	0.03	1

**Operating Hazards and Uninsured Risks**

Our operations are subject to hazards and risks inherent in the exploration, production and transportation of crude oil and natural gas, including pipeline ruptures and spills, fires, explosions, encountering formations with abnormal pressures, blowouts, cratering and natural disasters, any of which can result in loss of hydrocarbons, environmental pollution and other damage to our properties and the properties of operators under PSCs. In addition, certain of our crude oil and natural gas operations are located in areas that are subject to tropical weather disturbances such as typhoons, some of which can be severe enough to cause substantial damage to facilities and interrupt production.

In 2019 we established CNOOC HSE management system framework, in order to demonstrate CNOOC HSE strategic policy and management concept, clarify CNOOC HSE management orientation and core requirements. We further strengthened safety in our operations, such as intensifying our efforts to identify and eliminate potential risks, and giving special attention to preventing accidents in key and high-risk operations. We also improved the implementation of safety standards and deepened safety awareness across all levels of the organization. In 2019, we completed full system safety inspections, including the special safety supervision, a special safety check on storage tank fields and a year-end major safety inspection. For HSE risks in particular operating units, we organized safety audits. Through audits and inspections, we effectively met our management requirements, urged affiliated units to act in accordance with the regulations, and promoted the continuous improvement of HSE management.

Based on an in-depth analysis of the causes for major accidents and the key links in offshore operation, we implemented risk-level-based management of offshore production facilities in accordance with relevant laws and regulations. We also promoted the construction of risk-level-based management information systems in downstream enterprises and established and improved risk monitoring indicators, including, among others, well-control event monitoring, major operation risk monitoring in engineering constructions. Moreover, we established a list of post responsibilities, improved the site tour inspection system, and improved onsite safety management capabilities.

To better handle the major risks involved in our daily operations, we continued to improve our crisis management mechanisms according to the updated requirements from reorganized authorities. In 2019, we have successfully combined the international incident management system into our incident management plan, which could keep the same pace with international companies while fulfill all the requirements of the local authorities.

As part of the protection against operating hazards, we maintain insurance coverage against some, but not all, potential losses, including the loss of wells, blowouts, pipeline leakage or other damage, certain costs of pollution control and physical damages on certain assets. Our insurance coverage includes offshore oil and gas field properties all risks insurance and construction insurance, protection and indemnity insurance, operator extra expenses insurance, marine cargo insurance and third party liabilities and comprehensive general liability insurance. The operators of the projects in which we participate overseas are required by local law to purchase insurance policies customarily taken out by international oil and gas companies.

We also carry third-party liability insurance policies to cover (i) claims made against us by or on behalf of individuals who are not our employees in the event of personal injury or death and (ii) legal liabilities for environmental damages resulting from our onshore and offshore activities, including oil spills. In addition, we impose contractual requirements upon our contractors to purchase insurance policies that cover their liabilities for the personal injuries of their own employees. Our contractors are obligated to indemnify us against such claims.

As of December 31, 2019, we have purchased a number of insurance policies with varying policy coverage and limits to meet our risk management requirements and cover our potential liabilities arising from accidents at any of our offshore and onshore locations. We maintain insurance for costs relating to property damage to our facilities, control of well including drilling relief wells, removal of wreck, pollution clean-up, liability for bodily injury and property damage to third parties. The policy limits and other terms and conditions of these insurance policies comply with all applicable laws and regulations in the PRC and other relevant jurisdictions. However, we may not have sufficient coverage for some of the risks we face, either because insurance is not available or because of high premium costs. See “Item 3—Key Information—Risk Factors—Oil and natural gas transportation may expose us to financial loss and reputation harm” and See “Item 3—Key Information—Risk Factors—The nature of our operations exposes us and the communities in which we operate to a wide range of health, safety, security and environment risks.”

We have maintained insurance policies for our domestic assets and operational insurance policies and construction insurance policies, with various policy limits and deductibles. We also purchase operator’s extra expense insurance up to US\$100 million and third-party liabilities insurance up to US\$200 million. As for deep-water wells, we are insured up to US\$250 million for costs related to control of the well. The deductible for each insurance policy mainly ranges from US\$2 million to US\$5 million for different types of insurance policies. For overseas operations and assets, we are insured for amounts mainly up to the replacement cost value of our assets for property damage and up to US\$600 million in 2019 for operators extra expense. Additionally, we purchase insurance covering liability for bodily injury and property damage to third parties with limits of up to US\$1,032 million in 2019. This cover protects against liability that arises from sudden and accidental pollution or from other causes.

For all of our offshore operations, we have conducted comprehensive environmental impact evaluations and adopted emergency plans to deal with potential oil spills. Pursuant to the requirements of the PRC government, the evaluations and plans for our offshore operations in the PRC have been reviewed and approved by the industry experts and have been filed with the PRC government. The evaluations and plans for our offshore operations overseas have complied with the legal and regulatory requirements of the relevant local jurisdictions.

In addition, we currently have seven oil spill emergency response bases, to which we have contributed land and funds for construction, separately located in six cities in the PRC, namely Suizhong, Tanggu, Longkou, Huizhou, Zhuhai and Weizhou Island. All the oil spill emergency response bases are close to our workplaces of operations, and in the event of any oil spill, explosion or other similar events, they can react promptly and assist us in coping with such accidents effectively. We have developed and established a “four-in-one” emergency management framework to support our worldwide business, which covers crisis management plans, emergency commanding systems, emergency information systems and an emergency rescue teams. Through constant trainings and exercises, we have comprehensively enhanced our ability to defend risks, minimize the impact of emergency events and maintain our sustainable development.

**Competition**

*Domestic Competition*

The oil and gas industry is very competitive. We compete in the PRC and in international markets for customers as well as capital to finance our exploration, development and production activities. Our principal competitors in the PRC are PetroChina and Sinopec.

We price our crude oil on the basis of comparable crude oil prices in the international market. The majority of our customers for crude oil are refineries affiliated with CNOOC, PetroChina and Sinopec to which we have been selling crude oil, from time to time. Based on our past experiences with these refineries, we believe that we have established stable business relationships with them.

We are the dominant player in the oil and gas industry offshore China and, through CNOOC, are the only company permitted to engage in oil and gas exploration and production in offshore China with foreign parties under PSCs. We may face increasing competition in the future from other oil and gas companies in obtaining new PRC offshore oil and gas properties, or, as a result of changes in current PRC laws or regulations permitting an expansion of existing companies’ activities or new entrants into the industry.

As part of our business strategy, we intend to expand our natural gas business to meet rapidly increasing domestic demand. Our principal competitors in the PRC natural gas market are PetroChina and Sinopec.

*Foreign Competition*

Imports of crude oil are subject to import licenses and handling fees. The PRC government also restricts the availability of foreign exchange with which the imports must be purchased. The combination of licenses and restrictions on foreign exchange has, to some extent, limited the competition from imported crude oil.

As a result of China joining the World Trade Organization as a full member on December 11, 2001, it is required to further reduce its import tariffs and other trade barriers over time, including with respect to certain categories of petroleum and crude oil. At present, CNOOC, Sinopec, PetroChina and several other domestic state-owned enterprises have received permission to import crude oil on their own. Foreign owned or foreign invested entities and other non-state-owned enterprises are subject to certain import quotas.

**Segment Information**

The following table shows the breakdown of our total consolidated operating revenues for each of the periods indicated and the percentage contribution of each revenue component to our total operating revenues:

	Year ended December 31,					
	2017		2018		2019	
	(restated)		(restated)			
	<u>Rmb in millions</u>	<u>%</u>	<u>Rmb in millions</u>	<u>%</u>	<u>Rmb in millions</u>	<u>%</u>
Exploration and production	157,747	84.4	191,476	84.1	201,910	86.6
Trading businesses	28,881	15.4	35,805	15.7	30,837	13.2
Corporate and elimination	343	0.2	430	0.2	452	0.2
<b>Total operating revenues</b>	<u><b>186,971</b></u>	<u><b>100.0</b></u>	<u><b>227,711</b></u>	<u><b>100.0</b></u>	<u><b>233,199</b></u>	<u><b>100.0</b></u>

We mainly engage in the exploration, development, production and sale of crude oil and natural gas in China and overseas including Canada, the United States of America, the United Kingdom, Nigeria, Argentina, Indonesia, Uganda, Iraq, Brazil, Guyana, Russia, and Australia etc. For the year ended December 31, 2019, approximately 66.0% of our total revenue was sourced in the PRC.

**Regulatory Framework in the PRC**

*Government Control*

All of China’s petroleum resources are owned by the PRC government which exercises regulatory control over oil exploration and production activities in China. We are required to obtain various governmental approvals, including (but not limited to) those from the Ministry of Natural Resources, the Ministry of Ecology and Environment, the National Development and Reform Commission, the Ministry of Transport and the Ministry of Emergency Management before we are permitted to conduct production activities. Our sales are coordinated by the National Development and Reform Commission. For independent operations and joint exploration and production with foreign enterprises, we are required to obtain various governmental approvals, through CNOOC, including permits for exploration blocks, approval of a reserve report, environmental impact reports submitted through CNOOC, extraction permits and work safety permits. Moreover, for joint exploration and production, we are required, through CNOOC, to file overall development plan with the National Development and Reform Commission, and to report the circumstances and situation of the PSCs or other cooperation contracts between CNOOC and the foreign enterprises to the Ministry of Commerce.

We explore and develop our offshore China reserves under exploration and production licenses granted by the PRC government. Exploration licenses, which are generally granted for individual blocks, require holders to make an annual minimum exploration investment and pay an annual exploration license fee. The annual minimum investment and license fees are based on the area under license and increase over the life of the exploration license. Production licenses, which are generally granted for individual fields, require holders to pay an annual production right usage fee based on the area under license. All of our proved reserves in offshore China are under production licenses granted by the PRC government.

Since the early 1980s, the PRC government has adopted policies and measures to encourage the development of the offshore petroleum industry. These policies and measures, which were applicable to CNOOC’s operations prior to the reorganization, became applicable to our operations in accordance with an undertaking agreement between us and CNOOC. As approved by the PRC government, these policies and measures have provided us with benefits mainly including the exclusive right to explore for, develop and produce petroleum in designated areas in offshore China in cooperation with foreign enterprises and to sell petroleum in China, and the flexibility to set our prices in accordance with international market prices and determine where to sell our crude oil.

Although we historically have benefited from the foregoing special policies, we cannot assure that such policies will continue in the future.

*Fiscal Regimes for Independent Operations*

*Taxation*

We are subject to income taxes on an entity basis on profits arising in or derived from the tax jurisdictions in which we and each of our subsidiaries are domiciled and operate. Our profits arising in or derived from Hong Kong are subject to profits tax at a rate of 16.5%.

We received a formal approval from the State Administration of Taxation of the PRC on October 19, 2010, confirming that we are regarded as a Chinese Resident Enterprise, or CRE. According to the formal approval, we are subject to the PRC corporate income tax at a rate of 25% starting from January 1, 2008. The corporate income tax we pay in Hong Kong can be credited against our PRC corporate income tax liability.

We are required to withhold 10% corporate income tax when we make dividend distributions to our non-Chinese resident enterprise shareholders.

Our PRC subsidiary, CNOOC China Limited, as a wholly foreign-owned enterprise, is subject to an enterprise income tax rate of 25% under the prevailing tax rules and regulations. Our indirect wholly-owned PRC subsidiary, CNOOC Deepwater Development Limited, is subject to corporate income tax at the rate of 15% from 2018 to 2020 after being re-assessed as a high and new technology enterprise.

The PRC corporate income tax is levied based on taxable income, including income from both operations and other components of earnings, as determined in accordance with the generally accepted accounting principles in the PRC, or PRC GAAP.

Besides income taxes, our PRC subsidiary also pays certain other taxes, including:

- production tax at the rate of 5% on production under production sharing contracts;
- Value added tax ("VAT") at the rates from 11% to 17% on taxable sales under independent oil and gas fields before 1 May 2018. VAT rates of 17% and 11% have been adjusted to 16% and 10% respectively since 1 May 2018 according to "Notice on Adjustment on Value-added Tax Rates" (Cai Shui [2018] No.32). VAT rates of 16% and 10% have been adjusted to 13% and 9% respectively since 1 April 2019 according to "Announcement on Policies for Deepening the VAT Reform" (Announcement [2019] No. 39 of the Ministry of Finance, the State Taxation Administration and the General Administration of Customs). The VAT payable is calculated using the taxable sales amount multiplied by the applicable tax rate less relevant deductible input VAT;
- Resource tax at the rate of 6% (reduced tax rates may apply to specific products and fields) on the oil and gas sales revenue (excluding production tax) derived by oil and gas fields under production sharing contracts signed after November 1,2011 and independent offshore oil and gas fields, except for those under production sharing contracts signed before November 1, 2011 which will be subject to related resource tax requirement after the expiration of such production sharing contracts;
- city construction tax at the rates of 1% or 7% on the production tax and VAT paid;
- educational surcharge at the rate of 3% on the production tax and VAT paid; and
- local educational surcharge at the rate of 2% on the production tax and VAT paid.

We calculate our deferred tax to account for the losses available for offsetting against future taxable profit and the temporary differences between our tax base, which is used for income tax reporting and prepared in accordance with applicable tax guidelines, and our accounting base, which is prepared in accordance with applicable financial reporting requirements. The temporary differences include accelerated amortization allowances for oil and gas properties, which are partially offset by provisions for dismantlement and for impairment of property, plant and equipment and write-off of unsuccessful exploratory drilling. As of December 31, 2017, 2018 and 2019, we had Rmb 22,232 million, Rmb 24,285 million and Rmb 22,390 million (US\$3,216.1 million), respectively, in net deferred tax assets. See note 11 to our consolidated financial statements included elsewhere in this annual report.

*Royalty*

Royalties paid to the PRC government are based on our gross production from both independent operations and oil and gas fields under PSCs. The amount of the royalties varies up to 12.5% based on the annual production of the relevant property. The PRC government has provided us, among other companies, with a royalty exemption in each field for up to one million tons, or approximately seven million BOE, per year for our crude oil production and for up to two billion cubic meters (approximately 70.6 billion cubic feet or 11.8 million BOE) per year for our natural gas production. The limits in these exemptions apply to our total production from both independent properties and properties under PSCs.

In 2011, the State Council of the PRC amended the Provisional Regulation of PRC Resource Tax. As a result, since November 1, 2011, the royalties payable to the PRC government have been replaced by resource tax, currently at 6% (5% before December 1, 2014) of the sales revenues from crude oil and natural gas. The PSCs that were signed before November 1, 2011 are not affected by the amendment of the Provisional Regulation of PRC Resource Tax and we continue to pay royalties to the PRC government for these PSCs.

*Special Oil Gain Levy*

In March 2006, the PRC government imposed a special oil gain levy at progressive rates from 20% to 40% on the portion of the monthly weighted average sales price of the crude oil lifted in the PRC exceeding US\$40 per barrel. In December 2011, the PRC government increased the threshold of the special oil gain levy from US\$40 per barrel to US\$55 per barrel, with effect from November 1, 2011. In December 2014, the PRC government decided to increase the threshold of the special oil gain levy from US\$55 per barrel to US\$65 per barrel, with effect from January 1, 2015. The special oil gain levy is collected on a monthly basis. For the years ended December 31, 2017, 2018 and 2019 we incurred approximately Rmb 55 million, Rmb 2,599 million and Rmb 894 million for the Special Oil Gain Levy, respectively.

As international oil prices, the exchange rate of Renminbi and our crude oil production fluctuate, we cannot ascertain the full impact of the special oil gain levy in the future.

The current rates of the special oil gain levy are shown in the table below:

Realized Oil Price (US\$/bbl)	Rate of the Levy
65-70 (Include 70)	20%
70-75 (Include 75)	25%
75-80 (Include 80)	30%
80-85 (Include 85)	35%
Above 85	40%

*Fiscal Regimes for PSC Operations*

The PRC government encourages foreign participation in offshore oil and gas exploitation. Currently, foreign enterprises can only undertake offshore oil and gas exploitation activities in China after they have entered into a PSC with CNOOC.

Under our PSCs, production of crude oil and gas is allocated among us, the foreign partners and the PRC government according to a formula contained in the contracts. Under this formula, a percentage of production under our PSCs is allocated to the PRC government as its share oil.

When exploitation operations in offshore China are conducted through a PSC, the operator of the oil or gas fields must submit a detailed evaluation report and an overall development program to a joint management committee established under the PSC upon the discovery of commercially viable oil or gas reserves. The program must be subsequently confirmed by CNOOC and filed with the PRC regulatory authorities before the parties to the PSC begin the commercial development of the oil and gas fields.

Under PRC law, only a state-owned company, such as CNOOC, may negotiate a PSC with foreign enterprises. CNOOC assigned to us all of its rights and obligations under then-existing PSCs in 1999 and has undertaken to assign to us its future PSCs except for those relating to CNOOC’s administrative functions as a state-owned oil company.

*Bidding Process*

CNOOC and foreign enterprises enter into new PSCs primarily through bidding process organized by CNOOC and direct negotiation. During a typical bidding process, CNOOC determines which blocks are open for bidding and invites foreign enterprises to bid. Potential bidders are required to provide information, including minimum work commitments, exploration expenditures and percentages of share oil payable to the PRC government; and CNOOC evaluates each bid and negotiates a PSC with the successful bidder. CNOOC has agreed to allow us to participate in all negotiations for new PSCs.

*Terms of PSCs*

*Term of Length.* PSCs typically last for 30 years: (1) the *exploration* period is generally divided into three phases, with three years, two years and two years, respectively. During the *exploration* period, exploratory and appraisal work is conducted in order to discover petroleum and to enable the parties to determine the commercial viability of any petroleum discovery; (2) the *development* period begins on the date of approval of the environmental impact statements for any oilfield and/or gas field by the competent authorities of the Chinese government and ends when the design, construction, installation, drilling and related research work for the realization of petroleum production as planned have been completed; and (3) the *production* period begins when commercial production commences and usually lasts for 15 years for oil and 20 years for natural gas.

*Minimum Work Commitment.* The foreign partners must complete a minimum amount of work during the exploration period, generally including: drilling a minimum number of wildcat(s); acquiring a fixed amount of seismic data; and incurring a minimum amount of exploration expenditures. Foreign partners may be required to pay all exploration costs, which can be recovered according to the production sharing formula after commercial discoveries are made and production begins. Foreign partners are required to relinquish 25% of the contract area, excluding the development and production areas, to CNOOC at the end of each phase of the exploration period and to relinquish all areas, excluding the development areas, production areas and areas under evaluation, to CNOOC at the end of the exploration period.

*Participating Interests.* We have the right to take participating interests up to 51% in any oil or gas field discovered in the contract area and may exercise this right after the foreign partners have made commercially viable discoveries. The foreign partners retain the remaining participating interests.

*Production Sharing Formula.* A chart illustrating the production sharing formula under our PSCs is shown below.

Percentage of annual gross production	Allocation
5.0%	Production tax payable to the PRC government <sup>(1)</sup>
62.5%	For the payment of resource tax and recovery:  1. Resource tax <sup>(2)</sup> payable to the PRC government  2. Cost recovery oil allocated according to the following priority: (1) recovery of current year operating costs by us and foreign partner(s); (2) recovery of current year abandonment costs accrued by us and foreign partner(s) ; (3) recovery of earlier exploration costs by foreign partner(s) or us (if any); and (4) recovery of development costs and deemed interest by us and foreign partner(s) based on participating interests.  3. Any excess after the payment of resource tax and recovery of costs mentioned above allocated to the remainder oil.
32.5% <sup>(3)</sup>	Remainder oil allocated according to the following formula: 1. (1-X) multiplied by 32.5% represents share oil payable to the PRC government; and 2. X multiplied by 32.5% represents remainder oil distributed according to each partner’s participating interest.

(1) In this annual report and in our consolidated financial statements included elsewhere in this annual report, references to production tax on oil and gas produced offshore China are the value-added tax set out in our PSCs offshore China.

(2) For PSCs that came into effect prior to November 1, 2011, instead of resource tax, royalties (with the rate ranging from 0.0%-12.5% of the annual gross production, depending on the annual gross production of the oilfield) shall be paid to the PRC government.

(3) The ratio “X” is agreed in each PSC based on commercial considerations and ranges from 8% to 100%.

We calculate and pay oil and gas production tax and royalty (or resource tax) to the PRC government on a monthly basis and make adjustments for any overpayment or underpayment at the end of the year. The foreign partners have the right to either take possession of their allocable remainder oil for sale in the international market, or entrust us to sell such crude oil on their behalf in the PRC market.

*Management and Operator.* A party will be designated as the operator to undertake the execution work of the petroleum operations, including preparing work programs and budgets, procuring equipment and materials relating to operations, establishing insurance programs, and issuing cash-call notices to the parties to the PSC to raise funds.

A joint management committee will be set up to perform supervisory functions. Each of us and the foreign partners has the right to appoint an equal number of representatives to form the joint management committee. We designate the chairman of the committee and the foreign partners as a group designate the vice chairman. The joint management committee has the authority to make decisions on matters including reviewing and approving operational and budgetary plans, determining the commercial viability of each petroleum discovery, reviewing and adopting the overall development program, and approving significant procurements and expenditures as well as insurance coverage.

After the full recovery of the exploration and development costs under PSCs in accordance with the overall development plan of any oilfield and / or gas field within the contract area in which the foreign partner is the operator, we have the right to take over the operation of the particular oil and/ or gas field. With the consent of the foreign partner, we may also take over the operation before the full recovery of the exploration and development costs.

*Ownership of Data and Assets.* All data, records, samples, vouchers and other original information obtained by foreign partners in the process of exploring, developing and producing offshore petroleum become the property of CNOOC as a state-owned oil company under PRC law. Through CNOOC, we have unlimited and unrestricted access to such information.

We and our foreign partners have joint ownership in all of the assets purchased, installed or constructed under the PSCs until either the foreign partners have fully recovered their development costs, or upon the expiration of the production period under the PSCs. After that, CNOOC will assume ownership of all of the assets under the PSCs, and our foreign partners and we retain the exclusive right to use the assets during the production period.

*Abandonment Costs.* Any party to our PSCs shall monthly pay the abandonment cost to the designated bank accounts managed by the operator and jointly owned by the parties in proportion to their participating interests in the development of such oil field and/or gas field in accordance with relevant laws, decrees, and other rules and regulations then existing with respect to the abandonment of offshore facilities of the PRC.

**Regulatory Framework Overseas**

We are subject to other fiscal regimes in the foreign countries and regions where we conduct operations, including Indonesia, Iraq, Australia, Nigeria, Uganda, Argentina, the United States, Canada, United Kingdom, Brazil, Guyana, Russia and certain other countries. See “Item 4—Information on the Company—Business Overview—Regional Overview—Overseas.”

In countries including Indonesia, Nigeria, Guyana and certain other countries, we conduct our operations through PSCs. For example, the OML130 block in Nigeria involves a production sharing arrangement. We and other partners to overseas PSCs are required to bear all exploration, development and operating costs according to our respective participating interests. Exploration, development and operating costs which qualify for recovery can be recovered according to the production sharing formula after commercial discoveries are made and production begins.

Our net interest in the PSCs overseas consists of our participating interest in the properties covered under the relevant PSCs, less oil and gas distributed to the local government and/or the domestic market obligation, as applicable.

In Australia, the United States, Canada, United Kingdom, Argentina and certain other countries, we conduct our operations through exploration and production permits, licenses or leases. We, as one of the title owners under these permits, licenses or leases, are required to bear all exploration, development and operating costs together with other co-owners. Once production begins, a certain percentage of the annual production or revenue will first be distributed to the landowner, in most of cases in the form of royalty, severance tax and other payments, and the rest of the annual production or revenue will be allocated among the co-owners. Exploration, development and operating costs are deductible for the purpose of income tax calculation in accordance with local tax regulations.

In Iraq, we operate our project under a technical service contract. We provide technology of developing oil and gas and invest capital to assist the host country to achieve the production goals. According to the technical service contract, we have the rights to recover all the investments and receive remuneration fee as defined in the contract as a return from the incremental production.

**Taxation**

Taxes paid and payable by our non-PRC subsidiaries and jointly controlled entities include royalties, duties and export tariffs, as well as taxes levied on petroleum related income, profits and budgeted operating and capital expenditures.

Our subsidiaries domiciled outside of the PRC are subject to income tax rates ranging from 10% to 50%. The province income tax rate of Alberta, Canada reduced from 12% to 11% on July 1, 2019, and will decrease by one percentage point on January 1 of each year until it reaches 8% on January 1, 2022.

**Environmental Regulation**

Our operations are required to comply with various applicable environmental laws and regulations, including PRC laws and regulations administered by the Ministry of Ecology and Environment and national and local environmental protection agencies for our operations in China. The Marine Environment Protection Law of PRC was amended and came into effect on November 7, 2016. Such amended Marine Environment Protection Law strengthens the marine environment protection regulation system including but not limited to the regional restricted approval system of environmental impact assessment, provides marine ecological protection compensation system. We therefore face more stringent environmental supervision and law enforcement environment.

Government agencies set national or local environmental protection standards. The relevant State Oceanic Administration and/or environmental protection agencies must approve or review each stage of a project. We must file an environmental impact statement or, in some cases, an environmental impact assessment outline before an approval can be issued. The filing must demonstrate that the project conforms to applicable environmental standards. The Ministry of Ecology and Environment and/or relevant environmental protection agencies generally issue approvals and permits for projects using modern pollution control measurement technology.

Pursuant to the Environmental Protection Tax Law of PRC which came into effect on January 1, 2018, enterprises, public institutions and other producers/operators that discharge taxable pollutants directly to the environment within the territorial areas of PRC and other sea areas under the jurisdiction of PRC are required to pay environmental protection tax in accordance with the provisions of such law. The Ministry of Ecology and Environment or national and local environmental protection agencies may at their own discretion close or suspend any facility which fails to comply with orders requiring it to cease or cure operations causing environmental damage.

The PRC and overseas environmental laws require offshore petroleum investors to pay abandonment costs. Our financial statements include provisions for costs associated with the dismantlement of oil and gas fields as of December 31, 2017, 2018 and 2019 of approximately Rmb 54,114 million, Rmb 54,878 million and Rmb 65,602 million (US\$9,423 million), respectively.

According to the Notice of the National Development and Reform Commission, the National Energy Administration, the Ministry of Finance, the State Administration of Taxation, and the State Oceanic Administration on Issuing the Interim Provisions on Administration over the Abandonment and Disposal of Offshore Oil and Gas Production Facilities, investors of the offshore oil and gas fields are required to take responsibility for abandonment of the offshore oil and gas production facilities and perform the obligation in relation to environmental protection and ecological restoration, and must provide and allocate special fund for the aforesaid purpose in accordance with the relevant laws and regulations. The investors include us and the foreign parties to our PSCs.

Environmental protection and prevention costs and expenses in connection with the operation of offshore petroleum exploitation are covered either under PSCs, or by us for independent operations. Each platform has its own environmental protection and safety staff responsible for monitoring and operating the environmental protection equipment. However, no assurance can be given that the PRC government will not impose new or more stringent regulations which would require additional environmental protection expenditures.

We are also subject to the environmental laws and regulations in jurisdictions where our logistical support facilities are located.

We believe that our environmental protection systems and facilities comply with applicable national and local environmental protection laws and regulations.

**Patents and Trademarks**

We have licenses to use trademarks which are of value in the conduct of our business. CNOOC is the owner of relevant trademarks. Under the non-exclusive license agreement between CNOOC and us, we have obtained the right to use the trademarks for a nominal consideration.

**Employees and Employee Benefits**

As of December 31, 2017, 2018 and 2019, we had 19,030 employees, 18,312 employees and 18,703 employees, respectively. Among the 18,703 employees as of December 31, 2019, approximately 47% were involved in oil exploration, development and production activities, approximately 4% were involved in accounting and finance work and the remainder were senior management and others. A portion of the workers for the operation of the oil and gas fields, maintenance and ancillary service are hired on a contract basis.

We have a union that protects employees’ rights, organizes educational programs, encourages employee participation in management decisions, and assists in mediating disputes between us and individual employees.

We have not been subject to any strikes or other labor disturbances and believe that our relations with our employees are good.

The total remuneration for an employee includes salary, bonuses and allowances. Bonus for any given period is based primarily on individual and our performance. Employees also receive health benefits and other miscellaneous subsidies.

We have implemented an occupational health and safety program similar to that employed by other international oil and gas companies. Under this program, we closely monitor and record health and safety incidents and promptly report them to government agencies and organizations. We believe this program is broadly in line with the U.S. government’s Occupational Safety & Health Administration guidelines.

All full-time employees in the PRC are covered by a government-regulated pension plan and are entitled to an annual pension at their retirement dates. The actual pension payable to each retiree is subject to a formula based on the status of the individual pension account, general salary and inflation movements. We are required to make annual contributions to the government pension plan at rates ranging from 11% to 22% of our employees’ salaries, with each employee contributing 8% of his or her salary for retirement. The contributions vary based on the requirements of local governments.

For further details regarding retirement benefits, see note 33 to our consolidated financial statements included elsewhere in this annual report.

In 2019, the Company implemented major talent projects and vigorously cultivated strategic high-level talents. The development channel for technology series was opened up and the first selection of senior technical experts of the Company was organised. Meanwhile, the Company vigorously promoted professional skill certifications and increased the proportion of highly skilled personnel. In 2019, the total number of appraisals reached 2,600. Currently, there are 4,374 employees with titles of senior worker or above, accounting for approximately 74% of the total technical workforce, and 846 technicians and senior technicians, accounting for approximately 14% of the total technical workforce.

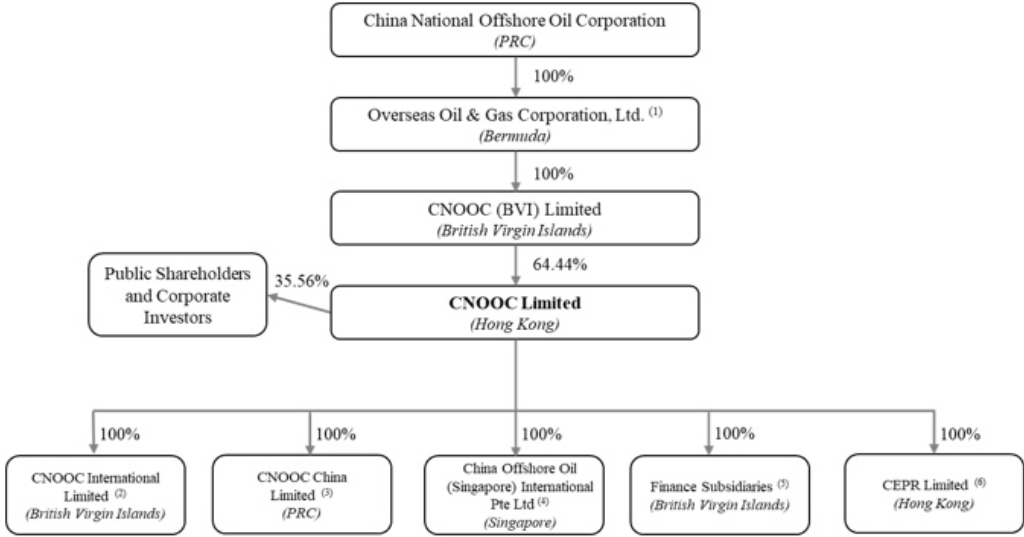
The Company’s strong focus on cultivating international talents is manifested in its established training system by hierarchy and level and intensified training of international talents through various means, which strengthen the establishment of an international talent team.

The Company continues to promote the training program of “International Leading Talents and Professional Talents”, and actively selects and cultivates core talents for international businesses and high-potential talents for its future development. The third batch of international leading talents selected in 2019 comprised 11 personnel. The second batch of international professional talents selected comprised 61 personnel for whom mixed online and offline trainings were organised.

**C. ORGANIZATIONAL STRUCTURE**

CNOOC indirectly owned or controlled an aggregate of approximately 64.44% of our shares as of March 31, 2020. Accordingly, CNOOC continues to be able to exercise all the rights of a controlling shareholder, including electing our directors and voting to amend our articles of association. Although CNOOC has retained a controlling interest in us, the management of our business will be our directors’ responsibility.

The following chart sets forth our controlling entities and our directly wholly-owned subsidiaries as of March 31, 2020 and notes our significant indirectly-held subsidiaries.



- (1) Overseas Oil & Gas Corporation, Ltd. also directly owns five shares of our Company.
- (2) Owner of our overseas interests in oil and gas exploration and production businesses and operations, including our indirect wholly-owned subsidiaries CNOOC Southeast Asia Limited, CNOOC SES Ltd. , CNOOC Muturi Limited, CNOOC NWS Private Limited, CNOOC Exploration & Production Nigeria Limited, CNOOC Iraq Limited, CNOOC Canada Energy Ltd., CNOOC Uganda Ltd, CNOOC Petroleum North America ULC, CNOOC Petroleum Europe Limited, Nexen Petroleum Nigeria Limited, CNOOC Energy U.S.A. LLC, CNOOC Petroleum Offshore U.S.A. Inc., CNOOC Oil Sands Canada , CNOOC PETROLEUM BRASIL LTDA, CNOOC Nexen Finance (2014) ULC, CNOOC Finance (2015) U.S.A. LLC and CNOOC Finance (2015) Australia Pty Ltd.
- (3) Owner of substantially all of our PRC oil and gas exploration and production businesses, operations and properties, including our indirect wholly-owned subsidiary CNOOC Deepwater Development Limited and China United Coalbed Methane Corporation.
- (4) Business vehicle through which we engage in sales and marketing activities in the international markets.
- (5) Includes CNOOC Finance (2003) Limited, CNOOC Finance (2011) Limited, CNOOC Finance (2012) Limited and CNOOC Finance (2013) Limited, all of which are our financing vehicles. These finance companies are our wholly owned subsidiaries with the Company as their sole corporate director.
- (6) CEPR Limited was incorporated on May 31, 2019.

D. PROPERTY, PLANTS AND EQUIPMENT

For our property, plants and equipment relating to our business activities, see “Item 4—Information on the Company—Business Overview.” We also have some other real properties, including land, buildings and facilities in our onshore processing plants for our oil and gas fields, oil and gas pipelines in both offshore China and overseas, and the upgrader facilities for our oil sands projects in Canada.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. OPERATING RESULTS

You should read the following discussion and analysis in conjunction with our consolidated financial statements, selected historical consolidated financial data and operating and reserves data, in each case together with the accompanying notes, contained in this annual report. Certain statements set forth below constitute “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995. See “Forward-Looking Statements.”

**Overview**

Our revenues and profitability are largely determined by our production volume and the prices we realize on our crude oil and natural gas, as well as the costs of our exploration and development activities. Although crude oil prices depend on various market factors and have been volatile historically, our total net production volume displayed a trend of growth in 2019.

**Factors Affecting Our Results of Operations**

There are many factors that affect our results of operations and financial condition, mainly including the following:

**Oil and Gas Prices**

Substantially all of our revenues are from the sales of oil and natural gas. Therefore, one of the primary factors affecting our revenues is the prices for crude oil and natural gas. Crude oil prices are subject to fluctuations due to market uncertainty and various other factors that are beyond our control, including, but not limited to overall economic conditions, supply and demand dynamics for crude oil and natural gas, political developments, the ability of petroleum producing nations to set and maintain production levels and prices, the price and availability of other energy sources and weather conditions.

In addition, our typical contracts with natural gas buyers include provisions for periodic resets and adjustment formulas which may result in selling price fluctuations.

In addition to directly affecting our revenues and earnings, declines in crude oil and/or natural gas prices may also result in the write-off of higher cost reserves and other assets. Furthermore, decreases in crude oil and natural gas prices may reduce the amount of crude oil and natural gas we can produce economically and make our performance of existing contracts that we have entered into uneconomical.

Sustained lower commodity prices may reduce revenue, earnings and liquidity, negatively impact the economics of estimated proved reserves quantities, and result in impairment. When the oil price forecasts of authoritative and independent institutions are revised to a significantly lower level than our projection, our oil and gas properties may face the risk of impairment. If oil and natural prices did not rise to the prices used in our internal price forecasts, there would be potential impact on the economics of the estimated proved reserves. Since the negative effect of lower oil price may be partially or completely offset by effective cost controls and efficiency enhancement, the estimated proved reserves quantities may not decrease proportionately with the decline in commodity prices. However, the price is not the sole or determining factor affecting our liquidity, capital resources and operating results. In particular, we believe that we have adequate resources of short- and long-term funding because (i) we have sufficient cash and cash equivalents, readily disposable financial assets and time deposits on hand, and (ii) we enjoy a sound credit rating and has the ability to access financing.

The following table sets forth our average net realized prices for crude oil and natural gas for the periods indicated:

	Year ended December 31,		
	2017	2018	2019
Average realized prices:			
Crude oil (US\$ per bbl)	52.65	67.22	63.34
Natural gas (US\$ per mcf)	5.82	6.41	6.27

Production and Sales Volumes

Our revenues are also greatly affected by our production and sales volume as well as our product mix. Our crude oil and natural gas production volumes depend primarily on our ability to keep a high reserve replacement ratio and to develop currently undeveloped reserves in a timely and cost-effective manner.

We produce and sell different mixes of crude oil and natural gas, each having different market prices. Therefore, in any given period, our product mix is subject to change, which will also affect our results of operations.

The following table sets forth our average daily net production of crude oil and natural gas for the periods indicated.

	Year ended December 31,		
	2017	2018	2019
Net production of crude oil (bbl/day) <sup>(1)</sup>	1,064,986	1,050,749	1,124,790
Net production of natural gas (mmcf/day) <sup>(1)</sup>	1,300.6	1,462.5	1,537.9

(1) Including our interest in equity method investees.

For a description of other factors affecting our results of operations, see “Item 3—Key Information—Risk Factors.”

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with IFRSs issued by the IASB and HKFRSs issued by the HKICPA. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of our assets and liabilities, the disclosure of our contingent assets and liabilities as of the date of our financial statements, if any, and the reported amounts of our revenues and expenses during the periods reported. Management makes these estimates and judgments based on historical experience and other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. We believe that the following significant accounting policies may involve a higher degree of judgment in the preparation of our consolidated financial statements. For additional discussion of our significant accounting policies, see note 3 to our consolidated financial statements included elsewhere in this annual report.

Oil and Gas Properties

For oil and gas exploration, we have adopted the successful efforts method of accounting. As a result, we capitalize initial acquisition costs of oil and gas properties. Impairment of initial acquisition costs is recognized as exploration expenses based on exploratory experience and management judgment which includes, but is not limited to, that any dry hole has been drilled on the property; that the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale; and that the period during which we have the right to explore in the specific area has expired or will expire in the near future and is not expected to be renewed. Upon discovery of commercial reserves, we transfer acquisition costs to proved properties and capitalize the costs of drilling and equipping successful exploratory wells, all development expenditure on construction, installation or completion of infrastructure facilities such as platforms, pipelines, processing plants and the drilling of development wells, and the building of enhanced recovery facilities, including those renewals and betterments that extend the economic lives of the assets, and the related borrowing costs.

The costs incurred in installing enhanced recovery facilities are capitalized together with the development costs of the relevant oil and gas properties. We treat the costs of unsuccessful exploratory wells and all other exploration costs as expenses when incurred. Productive oil and gas properties and other tangible and intangible costs of producing properties are depreciated using the unit-of-production method on a property-by-property basis under which the ratio of produced oil and gas to the estimated remaining proved developed reserves is used to determine the provision of depreciation, depletion and amortization. Common facilities that are built specifically to service production directly attributed to designated oil and gas properties are depreciated based on the proved developed reserves of the respective oil and gas properties on a pro-rata basis. Common facilities that are not built specifically to service identified oil and gas properties are depreciated using the straight-line method over their estimated useful lives. Costs associated with significant development projects are not depreciated until commercial production commences and the reserves related to those costs are excluded from the calculation of depreciation. We amortize capitalized acquisition costs of proved properties by the unit-of-production method on a property-by-property basis based on the total estimated proved reserves.

We recognized the amount of the estimated cost of dismantlement discounted to its present value using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Changes in the estimated timing of dismantlement or dismantlement cost estimates are dealt with prospectively by recording an adjustment to the provision, and a corresponding adjustment to property, plant and equipment. We included the unwinding of the discount on the dismantlement provision as a finance cost.

***Reserves Estimation***

Oil and gas properties are depreciated on a unit-of-production basis at a rate calculated by reference to proved reserves. Commercial reserves are determined using estimates of oil in place, recovery factors and future oil prices, the latter having an impact on the proportion of the gross reserves which are attributable to the host government under the terms of the production sharing contracts. The level of estimated commercial reserves is also a key determinant in assessing whether the carrying value of any of our oil and gas properties has been impaired.

Pursuant to the oil and gas reserve estimation requirements under U.S. SEC rules, we use the average, first-day-of-the-month oil price during the 12-month period before the ending date of the period covered by the consolidated financial statements to estimate our proved oil and gas reserves.

***Impairment of Non-Financial Assets other than Goodwill***

We make an assessment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, or when there is any indication that an impairment loss previously recognized for an asset in prior years may no longer exist or may have decreased. In any event, we would make an estimate of the asset’s recoverable amount, which is calculated as the higher of the asset’s value in use or our fair value less costs to sell. We recognize an impairment loss only if the carrying amount of an asset exceeds its recoverable amount. We charge an impairment loss to the consolidated statement of profit or loss and other comprehensive income in the period in which it arises. A reversal of an impairment loss is credited to the consolidated statement of profit or loss and other comprehensive income in the period in which it arises.

The calculations of the recoverable amount of assets require the use of estimates and assumptions. The key assumptions include, but are not limited to, future commodity prices, future production estimates, estimated future capital expenditures, estimated future operating expenses and the discount rate.

Changes in the key assumptions used, which could be significant, include updates to future pricing estimates, updates to future production estimates to align with our anticipated drilling plan, changes in our capital costs and operating expense assumptions, and the discount rate. There is a significant degree of uncertainty with the assumptions used to estimate future cash flows due to, but are not limited to, the risk factors referred to in “Item 3.D. Risk Factors.” The complex economic outlook may also materially and adversely affect our key assumptions. Changes in economic conditions can also affect the discount rates applied in assessments of impairment.

Although it is not reasonably practicable to quantify the impact of future impairment charges at this time, our results of operations could be materially and adversely affected for the period in which impairment charges are incurred.

The sensitivity analysis for the impairment testing involves estimates and judgments to consider numerous assumptions comprehensively. Those assumptions interact on each other and interrelate with each other complexly and do not have fixed patterns along with the changes in price. Accordingly, we believe that the preparation of the sensitivity analysis for the impairment testing will be impracticable. Changes in assumptions could affect impairment charges and reversals in income statement, and the carrying amounts of assets in balance sheet.

***Business Combinations and Goodwill***

Business combinations, other than business combinations under common control, are accounted for using the acquisition method. The consideration transferred is measured at acquisition date fair value which is the sum of the acquisition date fair values of assets transferred by us, liabilities assumed by us from the former owners of the acquiree and the equity interests issued by us in exchange for control of the acquiree. For each business combination, we elect whether we measure the non-controlling interests in the acquiree either at fair value or at the proportionate share of the acquiree’s identifiable net assets. All other components of non-controlling interests are measured at fair value. Acquisition costs incurred are included in profit or loss.

Goodwill is initially measured at cost, being the excess of the aggregate of the purchase consideration, the amount recognized for non-controlling interests and any fair value of our previously held equity interests in the acquiree over the identifiable net assets acquired and liabilities assumed. If the sum of this consideration and other items is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss as a gain on bargain purchase.

***Joint Arrangements***

Certain of our activities are conducted through joint arrangements. Joint arrangements are classified as either a joint operation or joint venture, based on the rights and obligations arising from the contractual obligations between the parties to the arrangement.

*Joint Operations*

Some arrangements have been assessed by us as joint operations as both parties to the contract are responsible for the assets and obligations in proportion to their respective interest, whether or not the arrangement is structured through a separate vehicle. This evaluation applies to both our interests in production sharing arrangements and certain jointly-controlled entities.

*Joint Venture*

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Our investments in joint ventures are stated in the consolidated statement of financial position at our share of net assets under the equity method of accounting, less any impairment losses.

*Fair Value*

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations, without any deduction for transaction costs.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm’s length market transactions; reference to the current fair value of another instrument that is substantially the same; a discounted cash flow analysis or other valuation models.

*Provisions*

We recognize a provision when a present obligation (legal or constructive) has arisen as a result of a past event and it is probable that a future outflow of resources will be required to settle the obligation provided that a reliable estimate can be made of the amount of the obligation. When the effect of discounting is material, the amount recognized for a provision is the present value at the reporting date of the future expenditures expected to be required to settle the obligation. The increase in the discounted present value amount arising from the passage of time is included in profit or loss.

We make provisions for dismantlement based on the present value of our future costs expected to be incurred, on a property-by-property basis, in respect of our expected dismantlement and abandonment costs at the end of the related oil exploration and recovery activities.

The ultimate dismantlement costs are uncertain and cost estimates can vary in response to many factors including changes to relevant legal requirements, the emergence of new restoration techniques or experience at other production sites. The expected timing and amount of expenditure can also change, for example, in response to changes in reserves or changes in laws and regulations or their interpretation. As a result, there could be significant adjustments to the provisions established which would affect future financial results.

*Deferred Tax*

Deferred tax is provided, using the liability method, on all temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither accounting profit or loss nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in a joint venture, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

A typical example of transactions that are not business combinations and, at the time of the transaction, affect neither accounting profit or loss nor taxable profit or loss is the acquisition of an asset, such as an exploration license or concession, where no previous activity has taken place, whereby the consideration paid is higher than its tax base.

***Recognition of Revenue from Oil and Gas Sales and Marketing***

Under IFRS 15/HKFRS 15, we recognize revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular obligation is transferred to the customer.

For oil and gas sales, our revenues represent the sales of oil and gas, net of royalties and obligations to governments and other mineral interest owners. Revenue from the sales of oil and gas is recognized at a point in time when oil and gas has been delivered to the customer, which is when the customer obtains the control of oil and gas and we have present right to payment and collection of the consideration is probable. Settlement will be in kind or in cash when the liftings are equalized or in cash when production ceases. We have entered into gas sales contracts with customers which often contain take-or-pay clauses. Under these contracts, we make a long term supply commitment in return for a commitment from the customer to pay for minimum quantities, whether or not the customer takes delivery. These commitments contain protective provisions, such as force majeure provision, and adjustment provisions. If a customer has a right to get a “make up” delivery at a later date, revenue recognition is deferred and payments received from the customers for natural gas not yet taken are recorded as contract liabilities. If no such option exists according to the contract terms, revenue is recognized when the take-or-pay penalty is triggered.

Our marketing revenues principally represent the sales of oil and gas belonging to the foreign partners under our PSCs and revenues from the trading of oil and gas through our subsidiaries, which is recognized at a point in time when oil and gas has been delivered to the customer, which is when the customer obtains the control of oil and gas, and we have present right to payment and collection of the consideration is probable. The cost of the oil and gas sold is included in crude oil and product purchases.

Results of Operations

Overview

The following table summarizes the components of our revenues and net production as percentages of our total revenues and total net production for the periods indicated:

	Year ended December 31,					
	2017		2018		2019	
	(restated)		(restated)			
	(Rmb in millions, except percentages and production data )					
<b>Revenues:</b>						
Oil and gas sales:						
Crude oil	135,256	72.3%	165,939	72.9%	175,495	75.3%
Natural gas	17,156	9.2%	20,618	9.1%	21,678	9.3%
Total oil and gas sales	152,412	81.5%	186,557	82.0%	197,173	84.6%
Marketing revenues	28,907	15.5%	35,830	15.7%	30,867	13.2%
Other revenue	5,652	3.0%	5,324	2.3%	5,159	2.2%
Total revenues	186,971	100.0%	227,711	100.0%	233,199	100.0%
<b>Sales volume (million BOE)<sup>(1)</sup>:</b>						
Crude oil	380.1	83.6%	372.9	81.8%	402.2	82.5%
Natural gas	74.7	16.4%	83.1	18.2%	85.6	17.5%
Total	454.8	100.0%	456.0	100.0%	487.8	100%

(1) Including our interest in equity method investees.

The following table sets forth, for the periods indicated, certain income and expense items in our consolidated statement of profit or loss and other comprehensive income as a percentage of total revenues:

	Year ended December 31,		
	2017	2018	2019
	(restated)	(restated)	
Operating Revenues:			
Oil and gas sales	81.5%	82.0%	84.6%
Marketing revenues	15.5%	15.7%	13.2%
Other revenue	3.0%	2.3%	2.2%
Total revenues	100.0%	100.0%	100.0%
Expenses:			
Operating expenses	(13.1)%	(10.7)%	(10.6)%
Taxes other than income tax	(3.9)%	(4.0)%	(3.9)%
Exploration expenses	(3.7)%	(5.8)%	(5.3)%
Depreciation, depletion and amortization	(32.9)%	(22.3)%	(24.7)%
Special oil gain levy	0.0%	(1.1)%	(0.4)%
Impairment and provision	(4.9)%	(0.3)%	(0.9)%
Crude oil and product purchases	(14.8)%	(14.7)%	(12.5)%
Selling and administrative expenses	(3.7)%	(3.3)%	(3.5)%
Others	(3.2)%	(2.5)%	(2.1)%
Total expenses	(80.2)%	(64.8)%	(63.9)%
Interest income	0.4%	0.4%	0.5%
Finance costs	(2.7)%	(2.3)%	(2.5)%
Exchange gain, net	0.2%	(0.1)%	(0.1)%
Investment income	1.3%	1.6%	2.0%
Share of profits of associates	0.2%	0.2%	0.2%
Profit/(loss) attributable to a joint venture	0.3%	(2.5)%	0.2%
Other income, net	0.1%	0.4%	0.4%
Profit before tax	19.5%	33.1%	36.7%
Income tax expense	(6.2)%	(9.9)%	(10.6)%
Profit for the year	13.2%	23.1%	26.2%

Calculation of Revenues

China

We report total revenues, which consist of oil and gas sales, marketing revenue and other revenue, in our consolidated financial statements included elsewhere in this annual report. With respect to revenues derived from our offshore China operations, oil and gas sales represent gross oil and gas sales less royalties and share oil payable to the PRC government.

Revenue from the sales of oil and gas is recognized at a point in time when oil and gas has been delivered to the customer, which is when the customer obtains the control of oil and gas, and we have present right to payment and collection of the consideration is probable.

Marketing revenues represent our sales of our foreign partners’ oil and gas produced under our PSCs. Our foreign partners have the right to either take possession of their oil and gas for sale in the international market or to sell their oil and gas to us for resale in the PRC market.

Other income mainly represents project management fees charged to foreign partners, handling fees charged to customers, the sales of diluents to third parties and gains from disposal of oil and gas properties and is recognized when the services have been rendered or the properties have been disposed of. Reimbursement of insurance claims is recognized when the compensation becomes receivable.

Indonesia

The oil and gas sales from our subsidiaries in Indonesia represent our sales of oil and gas derived from the relevant joint operation projects, less adjustments for oil and gas distributable to the Indonesian government under our Indonesian PSCs and for a domestic market obligation under which the contractor must sell a specified percentage of its crude oil to the local Indonesian market at a reduced price.

Iraq

The oil sales from Iraq represent our sales of oil derived from the Missan project.

Australia

The oil and gas sales from our subsidiaries in Australia represent our sales of oil and gas derived from the North West Shelf project.

Nigeria

The oil and gas sales from our subsidiaries in Nigeria represent our sales of oil and gas derived from relevant joint operation projects, net of the rental concession, royalty, and oil and gas distributable to the host country. The royalty rates applicable to deepwater properties are zero. We record revenue when oil and gas has been delivered to the customer.

Trinidad and Tobago

The oil and gas sales from our subsidiaries in Trinidad and Tobago represent our sales of oil and gas derived from relevant joint operation projects.

The United States and Canada

The oil and gas sales from the United States represent our sales of oil and gas derived from the Eagle Ford project, Rokies (formerly Niobrara) project and properties in the Gulf of Mexico.

The revenue is calculated net of royalties and is recognized when oil and gas has been delivered to the customer.

*United Kingdom*

The oil and gas sales from the United Kingdom represent our sales of oil and gas derived from the Buzzard, Scott/Telford/Rochelle, Golden Eagle and Farragon properties.

*Brazil*

The oil sales from Brazil represent our sales of oil derived from relevant joint operation projects.

*Guyana*

The oil sales from Guyana represent our sales of oil derived from relevant joint operation projects.

*Unconsolidated Investees*

Our share of the oil and gas sales of unconsolidated investees is not included in our revenues, but our share of the profits or losses of these investees is included as part of our share of profits or losses of associates and profit/loss attributable to a joint venture as shown in our consolidated statements of profit or loss and other comprehensive income.

**2019 versus 2018**

Comparative data for the year ended 31 December 2018 have been restated as a result of the acquisition of CUCBM in this section, please refer to Note 4 to the consolidated financial statements of the annual report.

*Consolidated net profit*

Our consolidated net profit increased by 15.9% to Rmb 61,045 million (US\$8,768.6 million) in 2019 from Rmb 52,675 million in 2018, primarily as a result of the increase in sales volume, the increase in profitability as we have taken effective measures to strictly control cost and the depreciation of Renminbi against the U.S. dollar.

*Revenues*

Our oil and gas sales, realized prices and sales volume in 2019 are as follows:

	2019	2018	Amount	Change (%)
Oil and gas sales (Rmb million)	197,173	186,557	10,616	5.7%
Crude and liquids	175,495	165,939	9,556	5.8%
Natural gas	21,678	20,618	1,060	5.1%
Sales volume (million BOE) <sup>(1)</sup>	487.8	456.0	31.8	7.0%
Crude and liquids (million barrels)	402.2	372.9	29.3	7.8%
Natural gas (bcf)	501.9	485.6	16.3	3.4%
Realized prices				
Crude and liquids (US\$/barrel)	63.34	67.22	(3.88)	(5.8)%
Natural gas (US\$/mcf)	6.27	6.41	(0.14)	(2.2)%

(1) Excluding our interest in equity-accounted investees.

In 2019, the increase in crude and liquids sales was primarily due to higher sales volume and the depreciation of Renminbi against the U.S. dollar. The increase in natural gas sales was primarily due to higher sales volume.

*Operating expenses*

Our operating expenses increased by 1.4% to Rmb 24,735 million (US\$3,553.0 million) in 2019 from Rmb 24,388 million in 2018. The operating expenses per BOE decreased by 4.7% to Rmb 50.9 (US\$7.32) per BOE in 2019 from Rmb 53.4 (US\$7.77) per BOE in 2018. Among them, operating expenses per BOE in offshore China decreased by 0.6% to Rmb 47.9 (US\$6.88) per BOE in 2019 from Rmb 48.2 (US\$7.02) per BOE in 2018. Overseas operating expenses per BOE decreased by 11.5% to Rmb 57.1 (US\$8.21) per BOE in 2019 from Rmb 64.5 (US\$9.39) per BOE in 2018. Through strict costs control and efficiency improvement, our operating expenses per BOE decreased compared with those in last year.

*Exploration expenses*

Our exploration expenses decreased by 6.0% to Rmb 12,342 million (US\$ 1,772.8 million) in 2019 from Rmb 13,135 million in 2018, mainly because of the combined impact of higher exploration expenses due to increased effort in oil and gas exploration this year and impairment provision related to certain exploration and evaluation assets in North America last year.

*Depreciation, depletion and amortization*

Our total depreciation, depletion and amortization increased by 13.5% to Rmb 57,699 million (US\$8, 287.9 million) in 2019 from Rmb 50,838 million in 2018.

Among them, the dismantlement-related depreciation, depletion and amortization costs decreased by 3.1% to Rmb 1,254 million (US\$180.1 million) in 2019 from Rmb 1,294 million in 2018. Our dismantling costs per BOE decreased by 9.2% to Rmb 2.58 (US\$0.37) per BOE in 2019 from Rmb 2.84 (US\$0.41) per BOE in 2018, primarily due to the decrease in the present value of asset retirement obligations brought by the increased interest rate of U.S. dollar bonds in the international market.

Our depreciation, depletion and amortization, excluding the dismantlement-related depreciation, depletion and amortization, increased by 13.9% to Rmb 56,445 million (US\$8,107.9 million) in 2019 from Rmb 49,544 million in 2018. Our depreciation, depletion and amortization per BOE, excluding the dismantlement-related depreciation, depletion and amortization, increased by 7.1% to Rmb 116.2 (US\$16.69) per BOE in 2019 from Rmb 108.5 (US\$15.79) per BOE in 2018, primarily as a result of the change in proportional distribution of production.

*Impairment and provision*

Our impairment and provision increased by 214.4% to Rmb 2,094 million (US\$300.8 million) in 2019 from Rmb 666 million in 2018, mainly due to the impairment of certain oil and gas properties located in North America and China because of the decrease of reserve. Please refer to Note 14 to the Consolidated Financial Statement of this annual report.

*Selling and administrative expenses*

Our selling and administrative expenses increased by 8.5% to Rmb 8,062 million (US\$1, 158.0 million) in 2019 from Rmb 7,429 million in 2018. Our selling and administrative expenses per BOE increased by 2.0% to Rmb 16.60 (US\$2.38) per BOE in 2019 from Rmb 16.28 (US\$2.37) per BOE in 2018, mainly due to the increase of scientific research expenses, arising from the active implementation of the “innovation-driven” strategy, which increased the science and technology investment.

*Finance costs/Interest income*

Our finance costs increased by 13.6% to Rmb 5,865 million (US\$842.5 million) in 2019 from Rmb 5,162 million in 2018, primarily due to the increase in interest expenses from new issuance of guaranteed notes and recognition of lease liabilities. Our interest income increased by 33.7% to Rmb 1,067 million (US\$153.3 million) in 2019 from Rmb 798 million in 2018, primarily due to the increase in our deposit.

*Exchange losses, net*

Our net exchange losses increased by 51.1% to Rmb 213 million (US\$30.6 million) in 2019 from Rmb 141 million in 2018, primarily due to the exchange rate fluctuation of Renminbi against the U.S. dollar and Hong Kong dollar.

*Investment income*

Our investment income increased by 25.7% to Rmb 4,632 million (US\$665.3 million) in 2019 from Rmb 3,685 million in 2018, primarily attributable to the increased average amount of corporate wealth management products.

*Share of profits/losses of associates and a joint venture*

Our share of profits of associates and a joint venture was Rmb 1,002 million (US\$143.9 million) in 2019, while in 2018 our shared losses were Rmb 5,187 million, mainly due to depreciation of the value of the assets in Argentina owned by the joint venture, BC ENERGY INVESTMENTS CORP. in 2018, as a result of the huge depreciation of the Argentina peso against the U.S. dollar and the sharp increase of interest rate.

*Income tax expense*

Our income tax expense increased by 9.4% to Rmb 24,604 million (US\$3,534.1 million) in 2019 from Rmb 22,482 million in 2018, mainly because of the increase in our overall profitability and the impact of change of the province income tax rate of Alberta, Canada. Please refer to note 11 to the consolidated financial statements of this annual report.

**2018 versus 2017**

Comparative data for the year ended 31 December 2018 and 31 December 2017 have been restated as a result of the acquisition of CUCBM in this section, please refer to Note 4 to the consolidated financial statements of the annual report.

*Consolidated net profit*

Our consolidated net profit increased 113.1% to Rmb 52,675 million (US\$ 7,661.3 million) in 2018 from Rmb 24,719 million in 2017, primarily as a result of the increase in profitability under the higher international oil price environment, at the same time, the cost control through taking efficient measures resulting in the increase in profitability.

*Revenues*

Our oil and gas sales, realized prices and sales volume in 2018 are as follows:

	2018	2017	Amount	Change (%)
Oil and gas sales (Rmb million)	186,557	152,412	34,145	22.4%
Crude and liquids	165,939	135,256	30,683	22.7%
Natural gas	20,618	17,156	3,462	20.2%
Sales volume (million BOE) <sup>(1)</sup>	456.0	454.8	1.2	0.3%
Crude and liquids (million barrels)	372.9	380.1	(7.2)	(1.9)%
Natural gas (bcf)	485.6	436.2	49.4	11.3%
Realized prices				
Crude and liquids (US\$/barrel)	67.22	52.65	14.57	27.7%
Natural gas (US\$/mcf)	6.41	5.82	0.59	10.2%

(1) Excluding our interest in equity-accounted investees.

In 2018, our net production was 477.7 million BOE (including our interest in equity-accounted investees), representing an increase of 1.1% from 472.6 million BOE in 2017. The increase in crude and liquids sales was primarily due to higher international oil price in 2018. The increase in natural gas sales was primarily due to the gradual release of production capacity of high-priced gas fields arising from natural gas demand growth in China, which pulled up the gas price and sales volume simultaneously.

*Operating expenses*

Our operating expenses decreased 0.1% to Rmb 24,388 million (US\$3,547.1 million) in 2018 from Rmb 24,410 million in 2017, the operating expenses per BOE decreased 0.3% to Rmb 53.4 (US\$7.77) per BOE in 2018 from Rmb 53.6 (US\$8.24) per BOE in 2017. Operating expenses per BOE offshore China decreased 2.1% to Rmb 48.2 (US\$7.02) per BOE in 2018 from Rmb 49.3 (US\$7.57) per BOE in 2017. Overseas operating expenses per BOE increased 3.5% to Rmb 64.5 (US\$ 9.39) per BOE in 2018 from Rmb 62.4 (US\$9.59) per BOE in 2017. Through refined management, strict costs control and enhancing conservation, our operating expenses per BOE remained stable.

*Taxes other than income tax*

Our taxes other than income tax increased 26.6% to Rmb 9,141 million (US\$1,329.5 million) in 2018 from Rmb 7,221 million in 2017, mainly due to the increase in oil and gas sales.

*Exploration expenses*

Our exploration expenses increased 88.6% to Rmb 13,135 million (US\$ 1,910.4 million) in 2018 from Rmb 6,966 million in 2017, mainly because of impairment provision of Rmb 5,387 million related to certain exploration and evaluation assets in North America, resulting from its further development uncertainty. Please refer to Note 13 to the Consolidated Financial Statement of this annual report.

*Depreciation, depletion and amortization*

Our total depreciation, depletion and amortization decreased 17.3% to Rmb 50,838 million (US\$7,394.1 million) in 2018 from Rmb 61,442 million in 2017.

The dismantlement-related depreciation, depletion and amortization costs increased 236.8% to Rmb 1,294 million (US\$188.3 million) in 2018 from Rmb 384 million in 2017. Our average dismantling costs per BOE increased 236.0% to Rmb 2.84 (US\$0.41) per BOE in 2018 from Rmb 0.84 (US\$0.13) per BOE in 2017, primarily due to the increase of the present value of asset retirement obligations brought by the decrease of U.S. bond interest rate in the international market.

Our depreciation, depletion and amortization, excluding the dismantlement-related depreciation, depletion and amortization, decreased 18.9% to Rmb49,544 million (US\$7,205.8 million) in 2018 from Rmb 61,058 million in 2017. Our average depreciation, depletion and amortization per BOE, excluding the dismantlement-related depreciation, depletion and amortization, decreased 19.1% to Rmb 108.5 (US\$15.79) per BOE in 2018 from Rmb 134.1 (US\$20.61) per BOE in 2017, primarily due to the increase of reserve by optimizing the development plan of producing oil and gas fields to control natural decline and improve production performance.

*Impairment and provision*

Our impairment and provision decreased 92.7% to Rmb 666 million (US\$96.9 million) in 2018 from Rmb 9,185 million in 2017. The vast majority of impairment and provision is inventory provision in 2018, while Rmb 8,660 million of oil and gas assets impairment was recognized in 2017.

*Selling and administrative expenses*

Our selling and administrative expenses increased 6.0% to Rmb 7,429 million (US\$1,080.5 million) in 2018 from Rmb 7,010 million in 2017. Our selling and administrative expenses per BOE increased 5.7% to Rmb 16.28 (US\$ 2.37) per BOE in 2018 from Rmb 15.40 (US\$2.37) per BOE in 2017, due to the increase of scientific research expenses, arising from the active implementation of the “innovation-driven” strategy, the reform of science and technology system, which increases the technological investment.

*Finance costs/Interest income*

Our finance costs were Rmb 5,162 million (US\$750.8 million) in 2018 which were stable compared to Rmb 5,121 million in 2017. Our interest income increased 21.8% to Rmb 798 million (US\$116.1 million) in 2018 from Rmb 655 million in 2017, primarily due to the higher proportion of long-term deposits in China.

*Exchange losses/gains, net*

Our net exchange losses changed to Rmb 141 million (US\$20.5 million) in 2018, while there was net exchange gains of Rmb 356 million in 2017, primarily arising from Rmb fluctuation against the U.S. dollars and Hong Kong dollars.

*Investment income*

Our investment income increased 53.0% to Rmb 3,685 million (US\$ 536.0 million) in 2018 from Rmb 2,409 million in 2017, primarily attributable to the higher interest rates and increased average stock of corporate wealth management products.

*Share of losses/profits of associates and a joint venture*

Our share of losses of associates and a joint venture changed to Rmb 5,187 million (US\$754.4 million) in 2018, while in 2017 our shared profits was Rmb 855 million, mainly due to depreciation of the value of the assets in Argentina owned by the joint venture BC Energy Investments Corp., as a result of the huge depreciation of the Argentina peso against the U.S. dollar and the sharp increase of interest rate.

*Income tax expense*

Our income tax expense increased 92.7% to Rmb 22,482 million (US\$3,269.9 million) in 2018 from Rmb 11,668 million in 2017, mainly because our overall profitability increased in 2018.

**B. LIQUIDITY AND CAPITAL RESOURCES**

Our primary source of cash during 2019 was cash flows from operating activities. We used cash primarily to fund capital expenditure and dividends. The following table summarizes our cash flows for the periods presented:

	Year ended December 31,		
	2017	2018	2019
	(restated)	(restated)	
		(Rmb million)	
Cash generated from (used in):			
Operating activities	95,051	124,398	123,521
Investing activities	(64,745)	(95,452)	(67,457)
Financing activities	(31,276)	(27,108)	(37,691)
Net (decrease)/increase in cash and cash equivalents	(970)	1,838	18,373

**Cash Generated from Operating Activities**

The cash inflow from operating activities decreased by 0.7% to Rmb 123,521 million (US\$17,742.7 million) in 2019 from Rmb 124,398 million in 2018, primarily attributable to the combined impact of the increase in oil and gas sales and the change of working capital.

Cash Used in Investing Activities

In 2019, our capital expenditure payment increased by 30.2% to Rmb 66,395 million (US\$9,537.0 million) from 2018. Our development expenditures in 2019 were primarily related to the capital expenditure of Iraq technical service contract project, Lingshui 17-2 project in China, projects of Guyana and shale oil and gas in the U.S., as well as the expenses incurred for improving recovery factors of the oil and gas fields in producing. Our cash outflow from the acquisition of oil and gas properties was Rmb 5,619 million (US\$807.1 million) and our cash outflow from increased investments in associates was Rmb 7,707 million (US\$1,107.0 million).

In addition, our cash used in investing activities was also attributable to the purchase of corporate wealth management products and money market funds of Rmb 187,805 million (US\$26,976.5 million) this year. Our cash generated from investing activities was mainly from the proceeds from the sales of corporate wealth management products and money market funds in the amount of Rmb 197,952 million (US\$28,434.0 million), and the increase in our time deposits with maturity over three months in the amount of Rmb 3,095 million (US\$444.6 million).

Cash Used in Financing Activities

In 2019, the increase in net cash outflow from financing activities was mainly due to the repayment of bank loans of Rmb 8,206 million (US\$1,178.7 million), repayment of guaranteed notes of Rmb 2,067 million (US\$300 million) and the cash outflow of the distribution of dividends of Rmb 28,973 million (US\$4,161.7 million), partially offset by the issuance of guaranteed notes of Rmb 10,464 million (US\$1,500 million) and the proceeds of bank loans of Rmb 3,846 million (US\$552.4 million).

At the end of 2019, our total interest-bearing outstanding debts were Rmb 157,229 million (US\$22,584.5 million), compared to Rmb 142,470 million at the end of 2018. The increase in debts in 2019 was primarily attributable to the issuance of guaranteed notes, recognized lease liabilities in the statement of financial position after the adoption of IFRS 16 Leases and impact of changes in the exchange rate between the U.S. dollar and Renminbi. Our gearing ratio, which is defined as interest-bearing debts divided by the sum of interest-bearing debts plus equity, was 26.0%, higher than that of 25.3% in 2018. The main reason was the lease liabilities recognised in the statement of financial position after the adoption of IFRS 16 Leases.

Due by December 31,	Debt maturities (principal only)		
	Original currency US\$	Total Rmb equivalents	Total US\$ equivalents
	(in millions, except percentages)		
2020	1,805.4	12,569.0	1,805.4
2021-2022	3,064.3	21,332.9	3,064.3
2023-2024	4,785.5	33,315.9	4,785.5
2025 and beyond	10,918.5	76,012.6	10,918.5
Total	20,573.8	143,230.3	20,573.8
Percentage of total debt	100%	100%	100%

As of December 31, 2019, we had total foreign currency debt of US\$ 20,573.8 million, 99.49% of which was in U.S. dollars, and the other 0.51% was in Euro. As of March 31, 2020, we had total foreign currency debt of US\$20,518.0 million, 99.34% of which was in U.S. dollars, and the other 0.66% was in Euro.

As of December 31, 2019, we had unutilized banking facilities amounting to approximately Rmb 54,948 million (US\$7,892.8 million) as compared to Rmb 55,289 million as of December 31, 2018.

In 2017, 2018 and 2019, we paid dividends totaling Rmb 16,842 million, Rmb 23,589 million and Rmb 28,973 million (US\$4,161.7 million) (before PRC withholding tax deducted), respectively. The payment and the amount of any dividends in the future will depend on our results of operations, cash flows, financial condition, the payment by our subsidiaries of cash dividends to us, future prospects and other factors which our directors may consider relevant. The amount of dividends we paid historically is not indicative of the dividends that we will pay in the future.

We believe our future cash flows from operations, borrowing capacity and funds raised from our debt offerings will be sufficient to fund planned capital expenditures and investments, debt maturities and working capital requirements through at least 2020. However, our ability to obtain adequate financing to satisfy our capital expenditures and debt service requirements may be limited by our financial condition and results of operations and the liquidity of international and domestic financial markets.

Capital Expenditures

In early 2020, we have budgeted Rmb 85 to 95 billion for capital expenditures of the year 2020 for exploration and development. Affected by the outbreak of the COVID-19 and sharply fell of international oil prices in March 2020, we will adjust our budgeted capital expenditures in a timely manner. The following table sets forth our actual or budgeted capital expenditures on an accrual basis for the periods indicated.

	Year ended December 31,				
	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>	2019 <sup>(1)</sup>	2020 <sup>(2)</sup>	2019 <sup>(1)</sup>
	(Rmb million)				(US\$ million)
China					
Development <sup>(3)</sup>	16,762	26,212	35,659	40,987	5,122
Exploration	7,978	9,995	15,120	13,676	2,172
Subtotal	24,740	36,207	50,779	54,663	7,294
Overseas					
Development <sup>(3)</sup>	21,891	23,564	24,253	29,132	3,484
Exploration	3,085	2,331	3,546	4,200	509
Subtotal	24,976	25,895	27,799	33,332	3,993
Total	49,716	62,102	78,578	87,995	11,287

- (1) Capitalized interests were not included, and it was Rmb 2,495 million, Rmb 2,838 million and Rmb 3,048 million in 2017, 2018 and 2019, respectively.
- (2) Budgeted capital expenditures for 2020 was made in early 2020, which is under review as international oil prices fell sharply since March 2020.
- (3) Including production expenditures.

In addition to the budgeted development and exploration expenditures relating to the oil and gas properties described above, we may make additional capital expenditures and investments consistent with our business strategy. See “Item 4—Information on the Company—Business Overview—Business Strategy.” We expect to fund our capital expenditures with our cash flows from operations and external financing.

Our ability to maintain and grow our revenues, profit and cash flows depends upon continued capital spending. Generally, we adjust our capital expenditure and investment budget on an annual basis. Our capital expenditure plans are subject to a number of risks, contingencies and other factors, some of which are beyond our control. Therefore, our actual future capital expenditures and investments will likely be different from our current planned amounts, and such differences may be significant.

**Holding Company Structure**

We are a holding company. Our entire oil and gas exploration, development, production and sales business in the PRC is owned and conducted by CNOOC China Limited, our wholly owned subsidiary in the PRC. Our oil and gas exploration, development and production business outside the PRC is owned and conducted by CNOOC International Limited, our wholly owned subsidiary incorporated in the British Virgin Islands, or owned and conducted by CNOOC Petroleum North America ULC, a wholly-owned subsidiary of us located in Canada, or directly owned by us. International sales of crude oil and natural gas are conducted by China Offshore Oil (Singapore) International Pte Ltd, our wholly owned subsidiary incorporated in Singapore. CNOOC Petroleum North America ULC, sells its crude oil and synthetic oil to international markets separately by CNOOC Marketing Canada and CNOOC Marketing U.S.A. Inc. Accordingly, our future cash flows will consist principally of dividends from our subsidiaries. The subsidiaries’ ability to pay dividends to us is subject to various restrictions, including legal restrictions in their jurisdictions of incorporation. For example, legal restrictions in the PRC permit payment of dividends only out of profit determined in accordance with PRC accounting standards and regulations. In addition, in accordance with its articles of association, CNOOC China Limited should set aside a portion of its profit each year to fund certain reserve funds until the total amount of such funds is up to 50% of the registered capital of CNOOC China Limited. These reserves are not distributable as cash dividends.

**Inflation/Deflation**

According to the China Statistical Bureau, as represented by the general consumer price index, China experienced an overall inflation rate of 1.6%, 2.1% and 2.9% in 2017, 2018 and 2019, respectively. Neither deflation nor inflation has had a significant impact on our results of operations in the respective years.

**Impact of Recently Issued Accounting Standards**

**IFRSs and HKFRSs**

We have adopted the IFRSs as issued by the IASB since January 1, 2008. Therefore, our consolidated financial statements for 2019 have been prepared in due compliance with both IFRSs and HKFRSs. The IASB has issued a number of new and revised IFRSs that are first effective for the current accounting year commencing 1 January 2019 or later but available for early adoption. The equivalent new and revised HKFRSs consequently issued by the HKICPA have the same effective dates as those issued by the IASB and are in all material aspects identical to the pronouncements issued by the IASB. The accounting policies adopted are consisted with those of the year ended December 31, 2018, except for the first time adoption of the new and amendments to IFRSs/HKFRSs effective for the Company's financial year beginning on January 1, 2019. Except as described in note 2.2 to our consolidated financial statements included elsewhere in this annual report, the adoption of those new amendments to IFRSs/HKFRSs in the current year had no material impact on the accounting policies, the disclosures or the amounts recognized in the consolidated financial statements of us.

Besides, a number of new and revised IFRSs and HKFRSs have been issued and would become effective for annual periods beginning on or after January 1, 2019. For details, please refer to notes 2.1 and 2.2 to our consolidated financial statements included elsewhere in this annual report.

**C. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.**

See “Item 4—Information on the Company—Business Overview—Research and Development”, “Item 4—Information on the Company—Business Overview—Patents and Trademarks”.

**D. TREND INFORMATION**

In early 2020, affected by the outbreak of the COVID-19 pandemic, demand for commodities decreased. In early March, international oil prices fell sharply. Looking ahead in 2020, with trade frictions, financial turmoil and the elevation of geopolitical tensions, etc., the downward risks of the global economy is expected to increase and international oil prices movement continue to be uncertain. To this end, the Company will closely monitor changes in the external environment and the movement of international oil prices. We will adjust our operation strategy in a timely manner, implement more stringent cost controls, maintain prudent investment decisions and strengthen cash flow management in an effort to ensure the Company’s steady operation.

In early 2020, we have budgeted Rmb 85 to 95 billion for capital expenditures of the year 2020 for exploration and development. Affected by the outbreak of the COVID-19 and sharply fell of international oil prices in March 2020, we will adjust our budgeted capital expenditures in a timely manner. In 2020, ten new projects are expected to commence production. Meanwhile, we will maintain our high standards of health, safety and environmental protection.

As an upstream company specializing in the exploration, development, production and sales of oil and natural gas, we consider reserve and production growth as our top priorities. We plan to increase our reserves and production through drill bits and value-driven acquisitions. We will continue to concentrate our independent exploration efforts on major operating areas, especially offshore China. In the meantime, we will continue to cooperate with our partners through production sharing contracts to lower capital requirements and exploration risks.

We will continue to develop the natural gas market, and continue to explore and develop natural gas fields. In the event that we invest in businesses and geographic areas where we have limited experience and expertise, we plan to structure our investments in the form of alliances or partnerships with partners possessing the relevant experience and expertise.

We will continue to maintain our prudent financial policy. As an essential part of our corporate culture, we continue to promote cost consciousness among both our management team and employees. Also, in our performance evaluation system, cost control has been one of the most important key performance indicators.

Other than as disclosed in the paragraphs above under Item 5.D, we are not aware of any trends that are reasonably likely to have a material effect on our net sales or revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause reported financial information not necessarily to be indicative of future operating results or financial conditions. You are urged to read the forward-looking statements contained elsewhere in this annual report, the cautionary statement on page 12 and the risk factors on pages 17, which describe the risks and uncertainties that may cause actual results and developments to differ materially from those expressed or implied by these forward-looking statements. We provide no commitment to update the forward-looking statements or to publish financial projections for forward-looking statements in the future.

E. OFF-BALANCE SHEET ARRANGEMENTS

None.

F. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table sets forth information regarding our contractual obligations as of December 31, 2019.

Contractual Obligations	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	Rmb million	Rmb million	Rmb million	Rmb million	Rmb million
Long-term debt obligations <sup>(1)</sup>	141,329.8	10,668.4	21,332.9	33,315.9	76,012.6
Provision for dismantlement <sup>(2)</sup>	65,602	1,439	—	—	64,163
Total	206,931.8	12,107.4	21,332.9	33,315.9	140,175.6

- (1) The amount of long-term debt obligations represents the principal of the long-term debt obligations.
- (2) Provision for dismantlement represents the discounted present value of retirement obligations in connection with upstream assets, which primarily relate to asset removal costs at the completion date of the relevant project.

As of December 31, 2017, 2018 and 2019, we had the following capital commitments, principally for the construction and purchase of property, plant and equipment:

Capital Commitments	2017	2018	2019
	Rmb million	Rmb million	Rmb million
Contracted, but not provided for	46,704	55,538	64,542

G. SAFE HARBOR

The safe harbor provided in Section 27A of the Securities Act and Section 21E of the Exchange Act, or the statutory safe harbors, shall apply to forward-looking information provided pursuant to Item 5.F above. For our cautionary statement on the forward looking statement in this annual report, see the section “Forward-Looking Statements” on page 12 of this annual report.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. DIRECTORS AND SENIOR MANAGEMENT

In accordance with Hong Kong law and our articles of association, our affairs are managed by our Board, which has seven members, including two executive directors, one non-executive director and four independent non-executive directors as of March 31, 2020.

The table below sets forth information about our directors and senior officers:

Name	Year of Birth	Position
Keqiang Xu	1971	Executive Director and Chief Executive Officer (appointed as Chief Executive Officer effective November 19, 2019 and appointed as President from April 2017 to March 2020, respectively)
Guangjie Hu	1973	Executive Director and President (effective March 20, 2020)
Guangyu Yuan	1959	Executive Director and Chief Executive Officer (resigned as Executive Director and Chief Executive Officer effective September 2, 2019)
Dongjin Wang	1962	Chairman and Non-executive Director (effective November 18, 2019 and April 27, 2018, respectively)
Hua Yang	1961	Chairman of the Board and Non-executive Director (resigned as Chairman of the Board and Non-executive Director effective September 2, 2019)
Sung Hong Chiu	1947	Independent Non-executive Director
Lawrence J. Lau	1944	Independent Non-executive Director
Aloysius Hau Yin Tse	1948	Independent Non-executive Director
Zhi Zhong Qiu	1955	Independent Non-executive Director (effective May 7, 2019)
Kevin G. Lynch	1951	Independent Non-executive Director (resigned as Independent Non-executive Director effective May 7, 2019)
Yuhong Xie	1961	Executive Vice President and the Chief Safety Official
Xinjian Cao	1966	Executive Vice President and General Manager of CNOOC China Limited Tianjin Branch
Qinglong Xia	1964	Executive Vice President (effective March 20, 2020)
Weizhi Xie	1964	Chief Financial Officer
Guohua Zhang	1960	Senior Vice President and General Manager of CNOOC China Limited Zhanjiang Branch (resigned as Senior Vice President effective March 20, 2020)
Yunhua Deng	1963	Deputy Chief Exploration Engineer and Deputy Director of Beijing Research Center of CNOOC China Limited
Zaisheng Liu	1962	Vice President (resigned as Vice President effective March 20, 2020)
Yun Yang	1964	Vice President and General Manager of CNOOC China Limited Zhanjiang Branch (appointed as Vice President effective March 20, 2020)

Name	Year of Birth	Position
Chenggang Duan	1963	Vice President and General Manager of CNOOC China Limited Shenzhen Branch (appointed as Vice President effective March 20, 2020)
Xiaonan Wu	1967	Joint Company Secretary and General Counsel and Compliance Officer
May Sik Yu Tsue	1973	Joint Company Secretary

We have a management team with extensive experience in the oil and gas industry. As a result of our cooperation with international oil and gas companies, the management team and staff have had the opportunities to work closely with foreign partners both within and outside China. Such opportunities, in conjunction with management exchange programs with foreign partners, have provided valuable training to our personnel in international management practices. A description of the business experience and present position of each director and senior officer is provided below. Our registered office is located at 65<sup>th</sup> Floor, Bank of China Tower, One Garden Road, Central, Hong Kong.

**Executive Directors**

**Keqiang Xu** Born in 1971, Mr. Xu is a professor-level senior engineer. He graduated from Northwest University with a Bachelor of Science degree in Oil and Gas Geology. He received a master’s degree in Coalfield Oil and Gas Geology from Northwest University in 1996. Mr. Xu joined China National Petroleum Corporation in 1996 and served different positions. From April 2003 to April 2005, he served as Deputy General Manager of Sinopetro Investment Company Ltd. From April 2005 to September 2008, he served as Deputy General Manager of CNPC International (Kazakhstan) Ltd. and concurrently General Manager of CNPC Ai-Dan Munai Joint Stock Company. From September 2008 to March 2014, he served as Deputy General Manager of CNPC International (Kazakhstan) Ltd. and concurrently General Manager of Joint Stock Company CNPC International Aktobe Petroleum. From March 2014 to March 2017, he served as General Manager of PetroChina Tuha Oilfield Company, and Director of Tuha Petroleum Exploration & Development Headquarters. From March 2017 to February 2020, Mr. Xu served as a Vice President of CNOOC. From February 25, 2020, Mr. Xu has been appointed as a Director of CNOOC. From April 2017 to June 2018, Mr. Xu served as the Chairman of Nexen Energy ULC, a subsidiary of the Company. In between May 2017 and June 2018, he served as the Chairman of a subsidiary of the Company-CNOOC International Limited. In May 2017, Mr. Xu was appointed as a Director of CNOOC China Limited, a subsidiary of the Company. Mr. Xu was appointed as the General Manager of CNOOC China Limited with effect from May 21, 2018. Mr. Xu was appointed as an Executive Director of the Company with effect from April 18, 2017, and was appointed as the President of the Company from April 2017 to March 2020. He has been appointed as the Chief Executive Officer of the Company with effect from November 19, 2019.

**Guangjie Hu** Born in July 1973, Mr. Hu is a professor-level senior engineer. He received a Bachelor of Science degree in Petroleum Engineering (Reservoir Engineering) from Chengdu University of Technology and a Master’s degree in Oil and Gas Field Development Engineering from China University of Petroleum (Huadong). He served in a number of positions in China Petrochemical Corporation (“Sinopec Group”), including Vice Manager of Northwest Oil Field Company, a subsidiary of China Petroleum & Chemical Corporation (“Sinopec Corp.”), Vice General Manager of Northwest Oil Field Company, Executive Vice Director General of Northwest Petroleum Bureau, Executive Vice General Manager of Northwest Oil Field Company, Director General of Northwest Petroleum Bureau, General Manager of Northwest Oil Field Company, General Manager of Northwest Petroleum Bureau Co., Ltd., Executive Vice Director of Oilfield Exploration & Production Department of Sinopec Corp., Director of Oilfield Exploration & Production Department, General Manager of Oilfield Exploration & Production Department. In March 2020, Mr. Hu was appointed as Vice President of CNOOC. Mr. Hu has been appointed as an Executive Director and the President of the Company with effect from March 20, 2020.

**Guangyu Yuan** Born in 1959, Mr. Yuan is a professor-level senior engineer. He graduated from China University of Petroleum with a bachelor’s degree in drilling engineering. He graduated from the EMBA program of China Europe International Business School in 2007 with an MBA degree. Mr. Yuan joined China National Offshore Oil Corporation (“CNOOC”) in 1982 and has over 30 years of experience in the oil and gas industry. From February 1993 to October 2001, Mr. Yuan served as Deputy Manager of CNOOC Bohai Drilling Company, Deputy General Manager of CNOOC China Offshore Oil Northern Drilling Company, Deputy General Manager of the Operational Department of CNOOC, General Manager of CNOOC China Offshore Oil Northern Drilling Company. From October 2001 to January 2009, Mr. Yuan served as General Manager and President of CNOOC Services, and Vice Chairman of the Board of Directors, Chief Executive Officer and President of China Oilfield Services Limited (a company listed on The Stock Exchange of Hong Kong Limited and Shanghai Stock Exchange). From November 2006 to May 2016, Mr. Yuan served as the Assistant President of CNOOC. From July 2016 to July 2019, Mr. Yuan was appointed as the Vice President of CNOOC. From January 2009 to June 2016, Mr. Yuan served as the Executive Vice President of the Company. From April 2013 to June 2016, Mr. Yuan served as Director of Bohai Petroleum Administrative Bureau of CNOOC and General Manager of CNOOC China Limited Tianjin Branch, a subsidiary of the Company. He served as a Director of CNOOC International Limited, a subsidiary of the Company, from July 31, 2009 to May 5, 2017 and as the Chairman of such company from June 15, 2016 to May 5, 2017. Since March 31, 2009, Mr. Yuan served as a Director of CNOOC China Limited, a subsidiary of the Company, and as the General Manager of such company from June 15, 2016 to May 21, 2018, then he was appointed as the Chairman of such company on May 21, 2018. From June 15, 2016 to April 18, 2017, Mr. Yuan served as President of the Company and Mr. Yuan served as an Executive Director of the Company from June 15, 2016 to September 2, 2019. Mr. Yuan served as the Chief Executive Officer of the Company from April 18, 2017 to September 2, 2019.

**Non-executive Directors**

**Dongjin Wang** Born in 1962, Mr. Wang is a professor-level senior engineer and received a Bachelor of Science degree in Petroleum Drilling from Development Department of China University of Petroleum and a Doctor of Science degree in Petroleum Engineering Management from China University of Petroleum-Beijing in 2012. From July 1995 to December 1997, he was appointed as Deputy Director-General of Jiangsu Petroleum Exploration Bureau. From December 1997 to October 2002, he was appointed as Vice President of China National Oil & Gas Exploration and Development Corporation (“CNODC”). From December 2000 to October 2002, he also served as President of CNPC International (Kazakhstan) Ltd. and President of AktobeMunai Gas Corp. From October 2002 to September 2008, he served as President of CNODC. From January 2004 to September 2008, he was appointed as Assistant President of China National Petroleum Corporation (“CNPC”) and Vice Chairman of CNODC. From September 2008 to March 2018, he served as Vice President of CNPC. From May 2011 to May 2014, he was concurrently appointed as Director of PetroChina Company Limited (“PetroChina”). From July 2013 to March 2018, he was concurrently appointed as President of PetroChina. From May 2014 to March 2018, he served as Vice Chairman of PetroChina. In March 2018, Mr. Wang was appointed as a Director of CNOOC. From October 2018 to October 2019, Mr. Wang was appointed as President of CNOOC. In October 2019, Mr. Wang was appointed as Chairman of CNOOC. On April 27, 2018, Mr. Wang was appointed as a Non-executive Director and a member of the Remuneration Committee of the Company. From December 5, 2018 to November 18, 2019, Mr. Wang was appointed as the Vice Chairman of the Company. Mr. Wang has been appointed as Chairman of the Board and Chairman of the Nomination Committee of the Company with effect from November 18, 2019.

**Hua Yang** Born in 1961, Mr. Yang is a professor-level senior economist and graduated from China University of Petroleum with a B.S. degree in petroleum engineering. He also received an MBA degree from the Sloan School of Management at MIT as a Sloan Fellow. Mr. Yang joined CNOOC in 1982 and has over 30 years of experience in petroleum exploration and production. From 1982 to 1992, Mr. Yang served in a number of positions in CNOOC Research Center including the Director of Field Development Department, the Manager of Reservoir Engineering Department and the Project Manager. Thereafter, Mr. Yang was mainly involved in international business, M&A, corporate finance and capital market operations. From 1993 to 1999, he served as the Deputy Chief Geologist, the Deputy Director and the Acting Director for Overseas Development Department of CNOOC and the Vice President of CNOOC International Limited. From 1999 to 2011, Mr. Yang served in a number of positions in the Company including Senior Vice President, Chief Financial Officer, Executive Vice President, President and Chief Executive Officer. Mr. Yang also served as an Assistant President of CNOOC from November 2006 to April 2010 and as Vice President of CNOOC from April 2010 to August 2011. Mr. Yang served as Director and President of CNOOC from August 2011 to April 2015. From April 2015 to September 2019 Mr. Yang served as Chairman of CNOOC. From June 15, 2016 to April 18, 2017, he was appointed as the Chairman and a Director of Nexen Energy ULC, a subsidiary of the Company. He also served as Chairman, Director and President of CNOOC Southeast Asia Limited, Chairman, Director and General Manager of CNOOC China Limited and Chairman and Director of CNOOC International Limited, all being subsidiaries of the Company. He also served as Director of CNOOC Finance Corporation Limited, a subsidiary of CNOOC. Mr. Yang was appointed as an Executive Director of the Company with effect from August 31, 2005 and was the Vice Chairman of the Board of the Company from September 16, 2010 to May 19, 2015, and was re-designated from an Executive Director to a Non-executive Director of the Company with effect from November 23, 2011. From May 19, 2015 to September 2, 2019, Mr. Yang served as Chairman of the Board and Chairman of the Nomination Committee of the Company. From June 15, 2016 to April 18, 2017, Mr. Yang was re-designated from a Non-executive Director to an Executive Director and served as the Chief Executive Officer of the Company. Mr. Yang was re-designated as a Non-executive Director of the Company from April 18, 2017 to September 2, 2019.

**Independent Non-executive Directors**

**Sung Hong Chiu** Born in 1947, Mr. Chiu received an LL.B. degree from the University of Sydney. He was admitted as a solicitor of the Supreme Court of New South Wales and the High Court of Australia. He has over 30 years’ experience in legal practice and had been a director of a listed company in Australia. Mr. Chiu was the founding member of the Board of Trustees of the Australian Nursing Home Foundation and a senior research fellow of Centre for Law & Globalization of Renmin University of China since 2016. He also served as the General Secretary of the Australian Chinese Community Association of New South Wales. Mr. Chiu is also an Independent Non-executive Director of Tianda Pharmaceuticals Limited (formerly Yunnan Enterprises Holdings Limited, Tianda Holdings Limited) since April 2008, a company listed on The Stock Exchange of Hong Kong Limited. Mr. Chiu is also an Independent Non-executive Director of Bank of China (Australia) Limited (a wholly subsidiary of Bank of China Limited). Mr. Chiu was appointed as an Independent Non-executive Director of the Company with effect from September 7, 1999.

**Lawrence J. Lau** Born in 1944, Professor Lau graduated with a B.S. (with Great Distinction) in Physics from Stanford University in 1964, and received his M.A. and Ph.D. degrees in Economics from the University of California at Berkeley in 1966 and 1969 respectively. He joined the faculty of the Department of Economics at Stanford University in 1966, becoming Professor of Economics in 1976, the first Kwoh-Ting Li Professor in Economic Development in 1992, and Kwoh-Ting Li Professor in Economic Development, Emeritus in 2006. From 2004 to 2010, Professor Lau served as the Vice-chancellor (President) of The Chinese University of Hong Kong. From September 2010 to September 2014, Professor Lau served as Chairman of CIC International (Hong Kong) Co., Limited. From March 2008 to February 2018, Professor Lau served as a member of the 11<sup>th</sup> and 12<sup>th</sup> National Committee of the Chinese People’s Political Consultative Conference (and a Vice Chairman of its

Economics Subcommittee). Professor Lau specializes in economic development, economic growth, and the economies of East Asia, including that of China. He has authored, co-authored, or edited thirteen books, including The China-U.S. Trade War and Future Economic Relations, and published more than 200 articles and notes in professional journals. Professor Lau serves as a member of the Hong Kong Special Administrative Region Exchange Fund Advisory Committee Currency Board Subcommittee, and a member of the Hong Kong Trade Development Council (HKTDC) Belt and Road and Greater Bay Area Committee. In addition, he also serves as the Chairman of the Board of Directors of the Chinese University of Hong Kong (Shenzhen) Advanced Finance Institute, aka Shenzhen Finance Institute, a member and Chairman of the Prize Recommendation Committee of the LUI Che Woo Prize Company, as well as a Vice-Chairman of Our Hong Kong Foundation. He was appointed a Justice of the Peace in Hong Kong in July 2007 and awarded the Gold Bauhinia Star in 2011 by the Government of the Hong Kong Special Administrative Region. He currently serves as the Ralph and Claire Landau Professor of Economics at the Lau ChorTak Institute of Global Economics and Finance, The Chinese University of Hong Kong, an independent non-executive director of AIA Group Limited, Hysan Development Company Limited (until May 13, 2020) and Semiconductor Manufacturing International Corporation, all listed on the Hong Kong Stock Exchange, and an independent non-executive director of Far EasTone Telecommunications Company Limited, Taipei, which is listed on the Taiwan Stock Exchange. Professor Lau was appointed as an Independent Non-executive Director of the Company with effect from August 31, 2005.

**Aloysius Tse Hau Yin** Born in 1948, Mr. Tse is a fellow of The Institute of Chartered Accountants in England and Wales, and the Hong Kong Institute of Certified Public Accountants (“HKICPA”). Mr. Tse is a past president and a former member of the Audit Committee of the HKICPA. He joined KPMG in 1976, became a partner in 1984 and retired in March 2003. Mr. Tse was a non-executive Chairman of KPMG’s operations in the PRC and a member of the KPMG China advisory board from 1997 to 2000. Mr. Tse is currently an independent non-executive director of China Telecom Corporation Limited, SJM Holdings Limited, Sinofert Holdings Limited and China Huarong Asset Management Company, Limited, companies listed on The Stock Exchange of Hong Kong Limited. From 2004 to 2010, he was an independent non-executive director of China Construction Bank Corporation, which is listed on the HKSE Main Board. From 2005 to 2016, Mr. Tse was also an independent non-executive director of Daohe Global Group Limited (formerly known as Linmark Group Limited), which is listed on the HKSE Main Board, Mr. Tse is currently an independent non-executive director of CCB International (Holdings) Limited, a wholly owned subsidiary of China Construction Bank Corporation and OCBC Wing Hang Bank Limited (formerly named as Wing Hang Bank Limited whose shares were delisted from The Stock Exchange of Hong Kong Limited with effect from 16 October 2014). Mr. Tse is also a member of the International Advisory Council of the People’s Municipal Government of Wuhan. Mr. Tse was appointed as an Independent Non-executive Director of the Company with effect from June 8, 2005.

**Zhi Zhong Qiu** Born in 1955, Mr. Qiu obtained a Bachelor of Science degree in Computer Science from New York University and a Bachelor of Engineering degree in Electrical Engineering from Cooper Union for the Advancement of Science and Art in 1983, a Master of Science degree in Electrical Power Engineering from Ohio State University in 1985, and a Master of Business Administration from Harvard Business School in 1990. Mr. Qiu is the Senior Advisor to MacAndrews & Forbes Incorporated. He also serves as the Honorary Consul of Republic of Rwanda in Hong Kong. From 1991 to 2002, Mr. Qiu served as the Chairman of Greater China Region and a Managing Director of Credit Suisse First Boston. From 2002 to 2006, Mr. Qiu established and served as the Managing Director of Quartz Capital. From 2004 to 2014, he served as the Chairman of the DragonTech Ventures Fund and DragonTech Ventures Management Limited. From 2006 to 2009, he served as the Executive Chairman of China and Vice Chairman of Asia of ABN AMRO Bank N.V., and during this period he also served as the Chairman of ABN AMRO (China) Co. Ltd. and the Chairman of ABN AMRO Leasing (China) Co. Ltd. From 2009 to March 2013, he served as a Managing Director, the Vice Chairman of Asia Pacific and Chairman of Greater China of Barclays Capital. From 2013 to 2016, he served as the Chairman of Meridian Capital (Asia) Limited. In 1994 and 1995, Mr. Qiu was named as one of the world's “50 Most Wanted in Finance” and “World’s 50 Derivatives Superstars” respectively by the Global Finance magazine. Mr. Qiu was appointed as an Independent Non-executive Director and a member of the Nomination Committee of the Company with effect from May 7, 2019.

**Kevin G. Lynch** Born in 1951, Mr. Lynch obtained a B.A. degree from Mount Allison University, a M.A. degree in Economics from the University of Manchester, and a doctorate degree in Economics from McMaster University. He also holds 11 honorary degrees. Mr. Lynch was made a life Member of the Privy Council for Canada, and an Officer of the Order of Canada. He is the Vice Chairman of BMO Financial Group and also a distinguished former public servant with 33 years of service with the Government of Canada. Mr. Lynch served as Deputy Minister of Industry of Canada from 1995 to 2000, Deputy Minister of Finance of Canada from 2000 to 2004, Executive Director at the International Monetary Fund from 2004 to 2006 and was appointed as Clerk of the Privy Council for Canada, Secretary to the Cabinet and Head of the Public Service from 2006 to 2009. Mr. Lynch is the Senior Fellow of Massey College, former Chancellor of the University of King’s College, former Chair of the Board of Governors of the University of Waterloo, former Chair of the Canadian Ditchley Foundation, and past Chair of the World Economic Forum’s Global Policy Council on the Global Financial System. He also serves on other boards including the Killam Trusts, Communitech, the Governor General’s Rideau Hall Foundation, the Asia Pacific Foundation of Canada. Mr. Lynch is currently a director of Canadian National Railway Company listed on the Toronto Stock Exchange and New York Stock Exchange, and a director and chairman of the Board of Directors of SNC Lavalin Group Inc. listed on the Toronto Stock Exchange. Mr. Lynch was appointed as an Independent Non-executive Director of the Company on November 27, 2013, and such appointment took effect from March 1, 2014. On May 7, 2019, Mr. Kevin G. Lynch has resigned as an Independent Non-executive Director and a member of the nomination committee.

**Other Members of Senior Management**

**Yuhong Xie** Born in 1961, Mr. Xie is an Executive Vice President and the Chief Safety Official of the Company as well as a professor-level senior engineer. Mr. Xie obtained a Ph.D. degree from China University of Geosciences in 2005. From 1982 to 1995, Mr. Xie served as an engineer of Research Institute and Exploration Department of CNOOC Naihui West Corporation. From 1995 to 1996, he served as the Deputy Manager of Exploration Department of CNOOC Naihui West Corporation. From 1996 to 1999, he served as Manager of Tepu Company of CNOOC Naihui West Corporation, Deputy Chief Earth Physicist and Manager of Exploration Department of Naihui West Corporation. From 2001 to 2005, he was Deputy Chief Manager of CNOOC China Limited Zhanjiang Branch. From 2005 to 2013, he served as the Chief Manager of CNOOC China Limited Zhanjiang Branch. From 2013 to 2015, he was appointed as the Director of Naihui West Petroleum Administrative Bureau of CNOOC. In July 2015, he was appointed as Deputy Chief Geologist of CNOOC, Deputy Chief Geologist and General Manager of Exploration Department of the Company. From 2016 to 2018, he was appointed as the Chief Geologist of CNOOC, an Executive Vice President and General Manager of Exploration Department of the Company. In May 2018, he was appointed as the Chief Geologist of CNOOC, an Executive Vice President and the Chief Safety Official of the Company.

**Xinjian Cao** Born in 1966, Mr. Cao is an Executive Vice President and the General Manager of CNOOC China Limited Tianjin Branch as well as a professor-level senior economist. Mr. Cao obtained a master degree of Business Administration from the University of Wales in 2003. From 1989 to 1999, Mr. Cao served as a geological delegate of the Contract Area of CNOOC Donghai Company & Caltex and the deputy manager of Exploration Department of CNOOC Donghai Company. From 1999 to 2004, he served as Exploration Manager of Exploration Department, Assistant Manager, Acting Manager and Manager of Human Resources Department of CNOOC China Limited Shanghai Branch. From 2004 to 2006, he served as Deputy Director of the CNOOC Talent Work Leading Group’s Office. From 2006 to 2013 he served as Deputy General Manager of CNOOC China Limited Shanghai Branch. From 2009 to 2013, he also served as Deputy Director of Donghai Petroleum Administration Bureau of CNOOC. From 2013 to 2017, he served as Deputy General Manager and General Manager of Human Resources Department of CNOOC and the Company. From March 2017, he has served as the Director of Bohai Petroleum Administration Bureau of CNOOC and General Manager of CNOOC China Limited Tianjin Branch. From August 2017, he was appointed as an Executive Vice President of the Company. In September 2017, he was appointed as Assistant President of CNOOC.

***Qinglong Xia*** Born in 1964, Mr. Xia is a professor-level senior engineer. He graduated from Geophysical Exploration Department of Chengdu Institute of Geology with a bachelor’s degree in engineering. He graduated from Institute of Geology and Geophysics, Chinese Academy of Sciences with a PhD degree of science in solid earth geophysics. From August 1986 to November 2005, Mr. Xia successively served as assistant engineer and engineer of the Computation Centre of Bohai Oil Corporation, project manager of Bohai Oil Research Institute, an officer, chief of geophysics, deputy chief engineer (geophysical prospect) and exploration chief of the exploration department of Bohai Oil Corporation, Chief engineer (exploration) of Bohai Research Institute CNOOC Research Institute and the manager of at the Technology Department of CNOOC (China) Limited Tianjin Branch. He served as chief geologist, deputy general manager and executive deputy general manager of CNOOC (China) Limited Tianjin Branch from November 2005 to May 2016, deputy director and executive deputy director of CNOOC Bohai Petroleum Administrative Bureau from April 2013 to May 2016, and successively served as Chief Executive Officer and President, Chairman of BlueChemical Ltd. from May 2016 to December 2019. He serves as Chairman of the Board of CNOOC International Limited since December 2019 and was appointed as an Executive Vice President of the Company on March 20, 2020.

***Weizhi Xie*** Born in 1964, Mr. Xie is the Chief Financial Officer of the Company. Mr. Xie is a Senior Accountant. He graduated from Guanghua School of Management of Peking University with a master’s degree in Business Administration. Mr. Xie joined CNOOC in 1986. Mr. Xie served as Deputy Manager of Finance Department of CNOOC Nanhai West Corporation, Deputy Manager and Manager of Controllers’ Department and General Manager of Treasury Department of CNOOC. From January 2002 to February 2011, Mr. Xie served as General Manager of CNOOC Finance Corporation Ltd. From February 2011 to May 2016, Mr. Xie served as Assistant President of CHINALCO, Executive Director of CHINALCO Finance Company Limited, President of CHINALCO Offshore Holding Company, Vice President& CFO of CHALCO, President of CHALCO (Hong Kong), Chairman of CHINALCO Finance Company Limited, General Auditor & Director of Audit Department CHINALCO. From 2016 to 2017, Mr. Xie was appointed as General Manager of Finance Department of CNOOC. From August 2017, Mr. Xie was appointed as the Chief Financial Officer of the Company.

***Guohua Zhang*** Born in 1960, Mr. Zhang is a Senior Vice President of the Company and the General Manager of CNOOC China Limited Zhanjiang Branch. He is a professor-level senior engineer. He graduated from Shandong Oceanographic Institute (now Ocean University of China) with a bachelor degree. He studied in the Business Institute of University of Alberta in Canada in 2001. He joined CNOOC in 1982 and served as Deputy Chief Geologist and Manager of Exploration Department of CNOOC Naihai West Corporation, a subsidiary of CNOOC, Chief Geologist of CNOOC Research Center, Assistant to General Manager of CNOOC China Limited and the General Manager of Exploration Department of the Company. In March 2003, he was appointed as Senior Vice President of the Company. In October 2005, Mr. Zhang was appointed as Senior Vice President of the Company and General Manager of CNOOC China Limited Shanghai Branch. In July 2009, he was appointed as Director of Donghai Petroleum Administrative Bureau of CNOOC. From July 2015 to December 2019, he was appointed as Director of Nanhai West Petroleum Administrative Bureau of CNOOC and General Manager of CNOOC China Limited Zhanjiang Branch. From March 20, 2020, Mr. Zhang resigned as Senior Vice President of the Company.

***Yunhua Deng*** Born in 1963, Mr. Deng is an academician of the Chinese Academy of Engineering and the Deputy Chief Exploration Engineer of the Company. Mr. Deng graduated from the Scientific Research Institute of Petroleum Exploration and Development with a major in Petroleum Geology and Exploration and received a master’s degree in Engineering in 1988. He was assistant geologist and then geologist in the Exploration Department of CNOOC Bohai Corporation Institute from 1988 to 1989; and served as the Team Leader of the Comprehensive Petroleum Geological Research Team, Project Manager, Deputy Principal of Geologist, Deputy Principal Geologist and Director of the Exploration Department and Deputy Chief Geologist in the CNOOC Bohai Corporation Institute from 1989 to 1999. Mr. Deng became Deputy Chief Geology Engineer and Deputy General Manager of CNOOC China Limited Tianjian Branch from 1999 to 2005. He was Deputy Director of CNOOC Research Center from 2005 to 2006. He served as the Deputy Chief Exploration Engineer of the Company and the Deputy Director of CNOOC Research Center from 2006 to 2007. Mr. Deng served as Deputy Chief Geology Engineer of CNOOC, Deputy Chief Exploration Engineer of the Company and Deputy Director of CNOOC Research Center from 2007 to 2009; and Deputy Chief Geology Engineer of CNOOC, Deputy Chief Exploration Engineer of the Company and Deputy General Director of CNOOC Research Institute from 2009 to 2015. In November 2015, he was appointed as the Deputy Chief Geology Engineer of CNOOC, Deputy Chief Exploration Engineer of the Company and Deputy Director of Beijing Research Center of CNOOC China Limited.

***Zaisheng Liu*** Born in 1962, Mr. Liu is a Vice President of the Company and Director of Beijing Research Center of CNOOC China Limited, General Manager of CNOOC China Limited Beijing Branch, Director of CNOOC Energy Technology Development Research Institute and General Manager of CNOOC Energy Technology Development Research Institute Company Limited. Mr. Liu graduated from Southwest Petroleum Institute (now Southwest Petroleum University) with a bachelor’s degree. From 1983 to 1994, he served as Deputy Manager of District Research First Team of Exploration and Development Department Research Institute of Nanhai East Oil Corporation of CNOOC. From 1994 to 1997, he served as Principal of Seismic Engineer and Principal of Geologist of Exploration and Development Department of Nanhai East Oil Corporation of CNOOC. From 1997 to 1999, he served as Deputy Manager of Exploration and Development Department of Nanhai East Oil Corporation of CNOOC. From 1997 to 2001, he served as Deputy Director of Scientific and Technology Research Institute of Nanhai East Oil Corporation of CNOOC. From 2001 to 2004, he served as Director of Nanhai East Institute of the Research Center of CNOOC China Limited. From 2004 to 2009, he served as Manager, Assistant to General Manager, Deputy General Manager and Acting General Manager of Technology Department of CNOOC China Limited Shenzhen Branch respectively. From 2009 to 2016, he served as General Manager of CNOOC China Limited Shenzhen Branch and Director of Nanhai East Petroleum Administrative Bureau of CNOOC and General Manager of CNOOC Deepwater Development Limited respectively. From April to November 2016, he served as Director of Beijing Research Center of CNOOC China Limited, General Manager of CNOOC China Limited Beijing Branch, and General Director of CNOOC Energy Technology Development Research Institute and General Manager of CNOOC Energy Technology Development Research Institute Company Limited. In February 2017, Mr. Liu was appointed as a Vice President of the Company. On March 20, 2020, Mr. Liu resigned as Vice President of the Company.

***Yun Yang*** Born in 1964, Mr. Yang is a professor-level senior engineer. He graduated from Southwest Petroleum Institute with a bachelor of engineering degree in oil exploration engineering department and graduated from School of Economics and Management of Tsinghua University with an MBA degree in business administration. From September 1985 to December 1999, Mr. Yang successively serviced as assistant engineer, engineer and deputy officer of the craft room of oil production plant of Qinghai Petroleum Management Bureau, engineer and deputy head of the operation department of Nanhai West Oil Corporation, a section level officer and chief engineer of the production office of Nanhai West Oil Corporation and the manager of development and production department of CNOOC. From December 1999 to June 2007, he served as production manager of the production department of the Company. From June 2007 to May 2011, he served as the deputy general manager of CNOOC (China) Limited Shenzhen Branch and the deputy director of CNOOC Nanhai East Petroleum Administration Bureau. From May 2011 to July 2015, he served as the executive vice president of Offshore Oil Engineering Co., Ltd. From July 2015 to December 2019, he served as the director of CNOOC Donghai Petroleum Administration Bureau, general manager of CNOOC (China) Limited Shanghai Branch and chairman of CNOOC Rongfeng Energy Co., Ltd.. He was appointed as the general manager of CNOOC (China) Limited Zhanjiang Branch in December 2019 and was appointed as a Vice President of the Company on March 20, 2020.

**Chenggang Duan** Born in 1963, Mr. Duan is a professor-level senior engineer. He graduated from Southwest Petroleum Institute with a bachelor degree of engineering in petroleum geological exploration and graduated from China University of Petroleum with a mater degree of management in management science and engineering. From August 1984 to May 2001, Mr. Duan successively served as an engineer of the exploration department and the science and technology research center, the chief engineer, deputy director of science and technology research center, deputy manager of exploration and development department of CNOOC Nanhai East Corporation. He served as the chief representative of the Chinese side of the joint management committee of the contract area, Assistant to General Manager and Deputy General Manager of CNOOC (China) Limited Shenzhen Branch from May 2001 to June 2007, Executive Vice President and President of CNOOC Southeast Asia Co., Ltd. from June 2007 to August 2012, General Manager of CNOOC Iraq Limited from August 2012 to February 2016. In February 2016, he served as Director of CNOOC Nahai East Petroleum Administration Bureau and General Manager of CNOOC (China) Limited Shenzhen Branch. He was appointed as a Vice President of the Company on March 20, 2020.

**Xiaonan Wu** Born in 1967, Ms. Wu Xiaonan is the General Counsel and the Compliance Officer of the Company. Ms. Wu is an Enterprise Legal Adviser (註冊企業法律顧問) and Certified Senior Enterprise Risk Manager (註冊高級企業風險管理師). Ms. Wu received a bachelor of laws degree from China University of Political Science and Law in 1990. Ms. Wu has been working in the oil and gas industry for over 19 years. From September 1999 to June 2002, Ms. Wu successively worked in the Regulatory and Legislative Division of the Legal Department of China National Offshore Oil Corporation (“CNOOC”) and the Company. From June 2002 to February 2012, Ms. Wu served as the Manager of the Regulatory and Legislative Division of the Legal Department of the Company. From February 2012 to May 2016, she served as the Deputy General Manager of the Legal Department of the Company and was promoted as the General Manager of the Legal Department of the Company in May 2016. In August 2018, Ms. Wu was appointed as the Vice General Counsel of CNOOC and the General Counsel and the Compliance Officer of the Company. In September 2018, Ms. Wu was appointed as the Director of the Legal Support Center of CNOOC. Ms. Wu was appointed as a Joint Company Secretary of the Company with effect from November 19, 2018.

**Joint Company Secretaries**

**Xiaonan Wu**

See “Item 6— Directors, Senior Management and Employees—A. Directors and Senior Management— Other Members of Senior Management —Xiaonan Wu.”

**May Sik Yu Tsue** Born in 1973, Ms. Tsue Sik Yu, May is the Joint Company Secretary of the Company. She graduated from Curtin University of Technology in Australia with a bachelor of commerce in accounting. Ms. Tsue furthered her education at The Hong Kong Polytechnic University in Master of Corporate Governance from 2004 to 2006, and MBA from The University of Hong Kong from 2014 to 2016. She is a fellow member of both the Institute of Chartered Secretaries and Administrators and the Hong Kong Institute of Chartered Secretaries since 2012 and became a member of Company Secretaries Panel and Advisor for Academy of Professional Certification in the

same year, and became a member of ACCA since 2016. She is also a fellow member and certified risk trainer of the Institute of Crisis and Risk Management and an associate member of CPA Australia. Furthermore, she was granted a Practitioner’s Endorsement (PE) since 2017/2018 under The Hong Kong Institute of Chartered Secretaries and accredited a General Mediator under Hong Kong Mediation Accreditation Association Limited (HKMAAL) since August 2017. From August 1998 to March 1999, Ms. Tsue worked in LG International (HK) Ltd. as a senior accounts clerk. Ms. Tsue joined China Ocean Oilfield Services (HK) Limited in 1999 as an accountant. She helped to manage the finance of the CNOOC Insurance Limited since 2000 and became its employee in 2004 as a manager of finance department. She serves as company secretary of CNOOC Insurance Limited since March 2007. Ms. Tsue gained The Chartered Governance Professional (CGP) qualification of The Institute of Chartered Secretaries and Administrators and The Hong Kong Institute of Chartered Secretaries on September 30, 2018. She volunteered on Hong Kong Management Association (HKMA) of Panel of Adjudicators HKMA Best Annual Reports Awards since 2018. Ms. Tsue was appointed as a Joint Company Secretary of the Company with effect from November 25, 2008.

**B. COMPENSATION**

The aggregate amount of fees, salaries, bonus, housing allowances, other allowances and benefits in kind paid to our directors for the year ended December 31, 2019 was Rmb 6,091,577 (US\$875,000), while the amount paid to our other senior management for the same period was Rmb 13,070,303 (US\$1,877,432). In addition, under our pension plan for 2019, we set aside an aggregate amount of Rmb 1,457,874 (US\$209,410) for pension and similar benefits for our directors (other than independent non-executive directors) and senior management. Our directors (other than independent non-executive directors) and senior management contributed an additional Rmb 434,429 (US\$62,402) to the pension plan for 2019. Each director’s annual compensation, including fees, salaries, allowances, benefits in kind, pension benefits and share option benefits, is disclosed in note 9 to our consolidated financial statements included elsewhere in this annual report. Note 10 to our consolidated financial statements included elsewhere in this annual report discloses our five highest paid employees during 2019. For further details regarding share options granted to our directors, officers and employees, see “Item 6—Directors, Senior Management and Employees—E. Share Ownership.” For further details regarding our employee compensation, see “Item 4—Information on the Company—Business Overview—Employees and Employee Benefits.”

**C. BOARD PRACTICE**

**Committees**

We have established an audit committee, a remuneration committee and a nomination committee. Our audit committee meets at least twice a year and is responsible for reviewing the completeness, accuracy and fairness of our accounts, evaluating our auditing scope (both internal and external) and procedures as well as the effectiveness of our risk management and internal control systems. Our audit committee together with senior management and the external auditors, review the accounting principles and practices adopted by us and discuss the risk management and internal control and financial reporting matters. Our audit committee is also responsible for overseeing the operation of the internal monitoring systems, so as to ensure our Board is able to monitor our overall financial position, to protect our assets, and to prevent major errors or omissions resulting from financial reporting. In addition, our audit committee reviews our Company’s business ethics and compliance policies, related reports and performs other corporate governance functions. Our Board is responsible for these systems and appropriate delegations and guidance have been made. Our audit committee regularly reports to our Board. Our audit committee consists of Aloysius Hau Yin Tse as the audit committee financial expert for the purposes of U.S. securities laws and chairman of the audit committee, Sung Hong Chiu and Professor Lawrence J. Lau. Our audit committee charter is available on our website, [www.cnooc ltd.com](http://www.cnooc ltd.com).

The main responsibilities and authorities of our remuneration committee include making recommendations to our Board on our policy and structure of the remuneration of our directors and senior management and on the establishment of a formal and transparent procedure for developing remuneration policy, determining the service contracts and specific remuneration packages for all executive directors and senior management, such as benefits in kind, pension rights and compensation payments, including any compensation payable for loss or termination of their office or appointment, reviewing and approving the compensation arrangements relating to dismissal or removal of directors for misconduct to ensure consistency with contractual terms, and making recommendations to our Board on the remuneration of non-executive directors and independent non-executive directors. Our remuneration committee consisted of two independent non-executive directors (Sung Hong Chiu as chairman and Aloysius Hau Yin Tse) and one non-executive director (Dongjin Wang). Our remuneration committee charter is available on our website, [www.cnooltd.com](http://www.cnooltd.com).

The main authorities and responsibilities of our nomination committee include nominating candidates to serve as our directors and senior management for approval by our Board, reviewing the structure and composition of our Board, and evaluating the leadership abilities of our executive directors so as to ensure our competitive position, determine the policy and establish proper procedures for the selection of our leadership positions. Our nomination committee is also responsible for reviewing and monitoring the training and continuous professional development of directors and senior management and make recommendations to our Board in this regard. Prior to May 7, 2019, our nomination committee comprised two independent non-executive directors (Professor Lawrence J. Lau and Kevin G. Lynch) and one non-executive director (Hua Yang), with Hua Yang serving as chairman. From May 7, 2019 to September 2, 2019, our nomination committee comprised two independent non-executive directors (Professor Lawrence J. Lau and Zhi Zhong Qiu) and one non-executive director (Hua Yang), with Hua Yang serving as chairman. With effect from September 2, 2019, Hua Yang resigned as chairman. Dongjin Wang as the then Vice Chairman of our Board assumed the duties and responsibilities of the chairman of our nomination committee as a transitional arrangement. With effect from November 18, 2019, Dongjin Wang was appointed as the Chairman of the Board and the chairman of our nomination committee. Since November 18, 2019, our nomination committee comprised two independent non-executive directors (Professor Lawrence J. Lau and Zhi Zhong Qiu) and one non-executive director (Dongjin Wang), with Dongjin Wang serving as chairman. Our nomination committee charter is available on our website, [www.cnooltd.com](http://www.cnooltd.com).

For information on our audit committee financial expert and our code of ethics, see “Item 16A—Audit Committee Financial Expert,” and “Item 16B—Code of Ethics.”

**Directors Service Contracts**

Our executive directors and non-executive directors have entered into director’s service contracts with us and the terms of appointment of our independent non-executive directors are governed by appointment letters. There is no severance pay arrangement for our directors.

**Summary of Significant Differences in Corporate Governance Practices for Purposes of Section 303A.11 of the New York Stock Exchange Listed Company Manual**

We are incorporated under the laws of Hong Kong. The principal trading market for our shares is the Hong Kong Stock Exchange. In addition, because our shares are registered with the United States Securities and Exchange Commission and are listed on the New York Stock Exchange, or the NYSE, we are subject to certain corporate governance requirements. However, certain of the corporate governance rules in the NYSE Listed Company Manual, or the NYSE Standards, do not apply to us as a “foreign private issuer” and we are permitted to follow the corporate governance practices in Hong Kong in lieu of most corporate governance standards contained in the NYSE Standards. Section 303A.11 of the NYSE Standards requires NYSE-listed foreign private issuers to describe the significant differences between their corporate governance practices and the corporate governance standards applicable to U.S. domestic companies listed on the NYSE, or U.S. domestic issuers. We set forth below a brief summary of such significant differences.

**1. Board and Committee Independence**

While NYSE Standards require U.S. domestic issuers to have a majority of independent directors, we are not subject to this requirement. Four of our seven directors are independent non-executive directors.

NYSE Standards require U.S. domestic issuers to schedule regular executive sessions of non-management directors, or regular executive sessions of independent directors only. NYSE Standards also require that, if a U.S. domestic issuer chooses to hold regular meetings of all non-management directors, it should hold an executive session at least once a year to be attended by only independent directors. We are not subject to such requirements and our independent directors attend all board meetings where possible. We also schedule meetings between our chairman and our independent non-executive directors.

NYSE Standards require U.S. domestic issuers to disclose a method for interested parties to communicate directly with the presiding director of the executive sessions, or with the non-management or independent directors as a group. We are not subject to such requirement and we have not adopted such a method yet.

**2. Audit Committee**

If an audit committee member simultaneously serves on the audit committees of more than three public companies, and the listed company does not limit the number of audit committees on which its audit committee members serve to three or less, then in each case, the board of directors of the U.S. domestic issuer is required to determine that such simultaneous service would not impair the ability of such member to effectively serve on its audit committee and disclose such determination on or through the U.S. domestic issuer’s website or in its annual proxy statement or annual report. We are not subject to such requirement and we have not addressed this in our audit committee charter.

NYSE Standards require audit committees of U.S. domestic issuers to discuss guidelines and policies that govern the process by which risk assessment and risk management are handled and include such responsibilities in their audit committee charters. We are not subject to such requirement and our audit committee charter does not have such provision. Our audit committee charter only provides that our audit committee shall review with our external auditors and the general managers of internal audit and risk management departments the scope, adequacy and effectiveness of our corporate accounting and financial controls, internal control and risk management systems, and any related significant findings regarding risks or exposures and consider recommendations for improvement of such controls.

NYSE Standards require audit committees of U.S. domestic issuers to produce an audit committee report annually and include such report in their annual proxy statements. We are not subject to such requirement and we have not addressed this in our audit committee charter.

**3. Remuneration Committee**

NYSE Standards require U.S. domestic issuers to have a compensation committee composed entirely of independent directors. We are not subject to such requirement and have a remuneration committee that consists of two independent non-executive directors and one non-executive director. NYSE Standards also require the board of directors of U.S. domestic issuers to consider additional factors in evaluating the independence of compensation committee members, including the source of compensation of the director, including any consulting, advisory or other compensatory fee paid by the issuer to such director and whether such director is affiliated with the issuer, a subsidiary of the issuer or an affiliate of a subsidiary of the issuer. We are not subject to such requirement and we have not considered such additional factors in evaluating the independence of compensation committee members.

NYSE Standards require U.S. domestic issuers to address in their compensation committee charters matters regarding committee member removal and committee structure and operations (including authority to delegate to subcommittees). We are not subject to such requirement and we have not addressed this in our remuneration committee charter.

NYSE Standards require compensation committees of U.S. domestic issuers to produce a compensation committee report annually and include such report in their annual proxy statements or annual reports on Form 10-K. We are not subject to such requirement and we have not addressed this in our remuneration committee charter. We disclose the amounts of compensation of our directors on a named basis, senior management by band and the five highest paid employees in our annual reports according to the requirements of the Hong Kong Stock Exchange Listing Rules.

NYSE Standards require compensation committees of U.S. domestic issuers may, in its sole discretion, retain or obtain the advice of compensation consultants or other advisers, only after taking into consideration all factors relevant to such advisers’ independence from management, including the various factors as specified in the NYSE Standards, and issuers must provide funding for the retention of such advisers. Also, compensation committees shall be directly responsible for the appointment, compensation and oversight of the advisers they retain. We are not subject to these requirements and we have not applied such requirements and addressed them in our remuneration committee charter.

**4. Nomination Committee**

While NYSE Standards require U.S. domestic issuers to have only independent directors on their nomination committee, we are not subject to such requirement and our nomination committee consists of two independent non-executive directors and one non-executive director.

NYSE Standards require U.S. domestic issuers to address in their nomination committee charters matters regarding committee member removal and committee structure and operations (including authority to delegate to subcommittees). We are not subject to such requirement and we have not addressed this in our nomination committee charter.

**5. Corporate Governance Guidelines**

NYSE Standards require U.S. domestic issuers to adopt and disclose corporate governance guidelines. They must state in their annual proxy statements or annual reports that such corporate governance guidelines are available on their websites and provide the website addresses. We are not subject to such requirement. We have adopted a set of corporate governance guidelines in accordance with the Hong Kong Stock Exchange Listing Rules, including the CNOOC Limited Code of Ethics for Directors and Senior Officers (the “Code of Ethics”), to govern various aspects of our corporate governance. We have posted the Code of Ethics on our website, [www.cnoocld.com](http://www.cnoocld.com). See “Item 16B—Code of Ethics.”

**D. EMPLOYEES**

See “Item 4—Information on the Company—Business Overview—Employees and Employee Benefits.”

E. SHARE OWNERSHIP

As of March 31, 2020, our directors and employees had the following personal interests in options to subscribe for shares granted under our share option schemes:

Name of Grantee	Number of shares involved in the options outstanding as of January 1, 2019	Number of shares involved in the options outstanding as of March 31, 2020	Date of Grant	Date of Expiration <sup>(1)</sup>	Closing price per share immediately before the date of grant (HK\$)	Exercise Price (HK\$)
Director:	—	—	—	—	—	—
Other Employees In Aggregate <sup>(2)</sup> :						
	30,900,000	—	May 27, 2009	May 27, 2019	9.33	9.93
	37,007,000	27,030,000	May 20, 2010	May 20, 2020	12.22	12.696
Total	67,907,000	27,030,000				

- (1) Except for share options granted under the Pre-Global Offering Share Option Scheme, all share options granted are subject to a vesting schedule pursuant to which one third of the options granted vest on the first, second and third anniversaries of the date of grant, respectively, such that the options granted are fully vested on the third anniversary of the date of grant.
- (2) With effect from September 2, 2019, Mr. Yang Hua resigned as a Non-executive Director, the Chairman of the Board and the Chairman of the Nomination Committee of the Company and Mr. Yuan Guangyu resigned as an Executive Director and the Chief Executive Officer of the Company. Information on Mr. Yang and Mr. Yuan’s share options outstanding at the beginning of the reporting period is included in the category of “Other Employees.”

For the year ended December 31, 2019, no share options granted under our share option schemes were exercised. For the period from January 1, 2019 to March 31, 2020, no share options were exercised.

As of December 31, 2019, we had 27,030,000 share options outstanding under our share option schemes, which represented approximately 0.06% of our shares in issue as of that date.

For further details about our share option schemes, see notes 10 and 30 to our consolidated financial statements included elsewhere in this annual report.

As of March 31, 2020, none of our directors or employees owned 1% or more of our shares including the shares underlying the share options granted as of that date.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. MAJOR SHAREHOLDERS

The following table sets forth information regarding the ownership of our outstanding shares by major shareholders as of March 31, 2020.

Shareholder	Number of Shares Owned	Percentage
CNOOC <sup>(1)</sup>	28,772,727,273	64.44%

(1) CNOOC owns our shares indirectly through its wholly owned subsidiaries, CNOOC (BVI) Limited and Overseas Oil & Gas Corporation, Ltd.

Our major shareholder listed above does not have voting rights different from our other shareholders. Except as set forth in the above table, we are not aware of any shareholders that hold more than 5% of our shares. Except as disclosed above, we are not aware of any significant changes in the percentage ownership of our major shareholder over the course of the past three years. To our knowledge, no arrangements are currently in place that could lead to a change of control of our Company.

As of March 31, 2020, 10,936,696 ADSs, representing approximately 2.4% of our then outstanding shares, were held of record in the form of ADSs. At such date, the number of registered ADS holders in the United States was 54.

**B. RELATED PARTY TRANSACTIONS**

**Overview**

We regularly enter into transactions with related parties, including CNOOC and its associates. Since CNOOC indirectly owns an aggregate of approximately 64.44% of our outstanding shares, some of these transactions constitute connected transactions under the Hong Kong Stock Exchange Listing Rules, and are regulated by the Hong Kong Stock Exchange.

Apart from transactions with CNOOC and its associates, we have transactions with other state-owned enterprises, including, but not limited to, the following:

- sales and purchase of goods and services;
- purchases of assets, goods and services;
- leases of assets; and
- bank deposits.

These transactions are conducted in the normal course of business on terms comparable to those with other non-state-owned enterprises.

**Categories of Continuing Connected Transactions**

As we are controlled by CNOOC, transactions with CNOOC, and its subsidiaries and associates are deemed to be related party transactions. The continuing connected transactions defined in Chapter 14A of the Hong Kong Stock Exchange Listing Rules in respect of items listed below also constitute related party transactions. We entered into a comprehensive framework agreement with CNOOC on November 15, 2016 for the provision (1) by us to CNOOC and/or its associates and (2) by CNOOC and/or its associates to us, of a range of products and services which may be required and requested from time to time by either party and/or its associates in respect of the continuing connected transactions. The term of the comprehensive framework agreement is for a period of three years from January 1, 2017. The comprehensive framework agreement is substantially on the same terms as the terms contained in the comprehensive framework agreement entered into by the Company on November 6, 2013, with more details about the pricing principles. The continuing connected transactions under such comprehensive framework agreement and the relevant annual caps for the three years from January 1, 2017 were approved by our independent shareholders on December 1, 2016. The approved continuing connected transactions are as follows:

- 1. Provision of exploration, oil and gas development, oil and gas production as well as marketing, management and ancillary services by CNOOC and/or its associates to us:
  - (a) Provision of exploration and support services
  - (b) Provision of oil and gas development and support services
  - (c) Provision of oil and gas production and support services
  - (d) Provision of marketing, management and ancillary services
  - (e) FPSO vessel leases
- 2. Provision of management, technical, facilities and ancillary services, including the supply of materials by us to CNOOC and/or its associates
- 3. Sales of petroleum and natural gas products by us to CNOOC and/or its associates
  - (a) Sales of petroleum and natural gas products (other than long term sales of natural gas and liquefied natural gas)
  - (b) Long-term sales of natural gas and liquefied natural gas

*Pricing principles*

The basic pricing principle for the continuing connected transactions between the Company and CNOOC is based on arm’s length negotiations, on normal commercial terms or better and with reference to the prevailing local market conditions (including the volume of sales, length of contracts, the volume of services, overall customer relationship and other market factors).

On the basis of the above basic pricing principle, each type of products or services must be charged in accordance with the following pricing mechanism and in the following sequential order:

- (a) government-prescribed price; or
- (b) where there is no government-prescribed price, in accordance with market prices, including the local, national or international market prices.

The continuing connected transactions referred to in paragraph 1(a)-1(b) above provided by CNOOC to the Company and 3(a)-3(b) above provided by the Company to CNOOC, on the basis of the above pricing principle, are determined through arm’s length negotiations based on market prices (as defined in the comprehensive framework agreement).

The continuing connected transactions referred to in paragraph 1(c)-1(d) above provided by CNOOC to the Company, on the basis of the above pricing principle, are based on government-prescribed price or market prices.

The continuing connected transactions referred to in paragraph 1(e) on the basis of the above pricing principle, are unanimously determined with the subsidiaries of CNOOC which provides the FPSO vessel leases after arm’s length negotiation in accordance with normal commercial terms.

The continuing connected transactions referred to in paragraph 2 above provided by the Company to CNOOC on the basis of the above pricing principle, are determined through arm’s length negotiation between both parties with reference market price.

**Disclosure and/or Independent Shareholders’ Approval Requirements**

Under the Hong Kong Stock Exchange Listing Rules, the following categories of continuing connected transactions are exempted from the independent shareholders’ approval requirement but are subject to the announcement, annual report and annual review requirements set out in the Hong Kong Stock Exchange Listing Rules, because each of the percentage ratios for these categories under the Hong Kong Stock Exchange Listing Rules (other than the profits ratio) , where applicable, is expected to be less than 5% on an annual basis:

- (a) Provision of marketing, management and ancillary services by CNOOC and/or its associates to us;
- (b) Provision of management, technical, facilities and ancillary services, including the supply of materials from us to CNOOC and/or its associates; and
- (c) FPSO vessel leases from CNOOC and/or its associate to us.

Under the Hong Kong Stock Exchange Listing Rules, the following categories of continuing connected transactions, or the non-exempt continuing connected transactions, are subject to the connected transaction requirements:

- (a) Provision of exploration and support services;
- (b) Provision of oil and gas development and support services;
- (c) Provision of oil and gas production and support services;
- (d) Sales of petroleum and natural gas products (other than long-term sales of natural gas and liquefied natural gas); and
- (e) Long term sales of natural gas and liquefied natural gas.

We obtained independent shareholders’ approval at the extraordinary general meetings held on December 1, 2016 for the non-exempt continuing connected transactions and relevant annual caps for the period from January 1, 2017 to December 31, 2019, respectively. The annual caps for our continuing connected transactions with CNOOC and/or its associates are specified as follows:

Categories of Continuing Connected Transactions	Relevant Annual Caps
<i>Provision of exploration, oil and gas development, oil and gas production as well as marketing, management and ancillary services by CNOOC and/or its associates to us</i>	
(a) Provision of exploration and support services	For the three years ended December 31, 2019,
	Rmb 9,969 million,
	Rmb 10,579 million and
	Rmb 11,590 million respectively

Categories of Continuing Connected Transactions	Relevant Annual Caps
(b) Provision of oil and gas development and support services	For the three years ended December 31, 2019  Rmb 31,670 million,  Rmb 38,289 million and  Rmb 43,745 million, respectively
(c) Provision of oil and gas production and support services	For the three years ended December 31, 2019,  Rmb 12,625 million,  Rmb 14,678 million and  Rmb 16,877 million, respectively
(d) Provision of marketing, management and ancillary services	For the three years ended December 31, 2019,  Rmb 1,620 million,  Rmb 1,786 million and  Rmb 1,970 million, respectively
(e) FPSO vessel leases	For the three years ended December 31, 2019,  Rmb 2,880 million,  Rmb 3,120 million and  Rmb 3,360 million, respectively
<i>Provision of management, technical, facilities and ancillary services, including the supply of materials from us to CNOOC and/or its associates</i>	
Provision of management, technical, facilities and ancillary services, including the supply of materials to CNOOC and/or its associates	For the three years ended December 31, 2019,  Rmb 100 million,  Rmb 100 million and  Rmb 100 million, respectively
<i>Sales of petroleum and natural gas products by us to CNOOC and/or its associates</i>	
(a) Sales of petroleum and natural gas products (other than long-term sales of natural gas and liquefied natural gas)	For the three years ended December 31, 2019,  Rmb 263,893 million,  Rmb 314,371 million and  Rmb 437,773 million , respectively
(b) Long-term sales of natural gas and liquefied natural gas	For the three years ended December 31, 2019,  Rmb 25,654 million,  Rmb 33,386 million and  Rmb 43,649 million, respectively

A detailed discussion of significant connected transactions entered into in the ordinary course of business between us and our related parties during 2019 and the balances arising from connected transactions at the end of 2019 is included in note 32 to our consolidated financial statements included elsewhere in this annual report.

The non-exempt continuing connected transactions for the year ended December 31, 2019 to which any member of us was a party were entered into by us:

- (i) in the ordinary and usual course of our business;
- (ii) on normal commercial terms or better; and
- (iii) in accordance with the relevant agreements (including pricing principles and guidelines set out therein) governing the transactions on terms that were fair and reasonable and in the interests of the shareholders of our Company as a whole.

We confirmed that the annual amount of each category of the non-exempt continuing connected transactions for the year ended December 31, 2019 did not exceed the applicable annual caps; and we have complied with other relevant provisions of the Hong Kong Stock Exchange Listing Rules in relation to each category of the non-exempt continuing connected transactions.

The Company expected to continue the continuing connected transactions contemplated under such comprehensive framework agreement after December 31, 2019. Therefore, the Company entered into a new comprehensive framework agreement with CNOOC on November 1, 2019. The term of the new comprehensive framework agreement is for a period of three years from January 1, 2020. The new comprehensive framework agreement is substantially on the same terms as the terms contained in the comprehensive framework agreement entered into by the Company on November 15, 2016, with more details about the pricing policies. The continuing connected transactions under the new comprehensive framework agreement and the relevant annual caps for the three years from January 1, 2020 were approved by the independent shareholders of the Company on November 21, 2019.

**Transactions with CNOOC Finance Corporation Limited**

On December 1, 2016, we entered into a financial services framework agreement (“Financial Services Framework Agreement”) with CNOOC Finance Corporation Limited (“CNOOC Finance”), our 31.8% owned affiliate and a subsidiary of CNOOC, pursuant to which CNOOC Finance provides a range of financial services as may be required and requested by the Company, for a term of three years from January 1, 2017 to December 31, 2019. Apart from the duration of the Financial Services Framework Agreement, more details about the pricing policy for the depositary services and update of the address and relevant dates, the Financial Services Framework Agreement is substantially on the same terms as the terms contained in the financial services framework agreement (as renewed on August 20, 2010 and November 27, 2013) entered into by the Company on October 14, 2008. The continuing connected transactions in respect of the depositary services under the Financial Services Framework Agreement are exempted from independent shareholders’ approval requirement, but subject to the annual reporting, annual review and announcement requirements. In August 2018, the Board expected that the existing annual cap for the depositary services under the Financial Services Framework Agreement for its remaining term will not fully satisfy the demands of business of us and resolved to revise the annual cap for the depositary services for the period from August 23, 2018 to December 31, 2019.

The maximum daily outstanding balance of deposits (including accrued interest) (excluding funds placed for the purpose of extending entrustment loans pursuant to the entrustment loan services) placed by the Company with CNOOC Finance should not exceed Rmb 19.5 billion for the period from January 1, 2017 to August 22, 2018 and should not exceed Rmb 23.5 billion for the period from August 23, 2018 to December 31, 2019.

We confirmed that the maximum daily outstanding balance of deposits (including accrued interests but excluding funds placed for the purpose of extending entrustment loans pursuant to the entrustment loan services) placed by us with CNOOC Finance did not exceed Rmb 23.5 billion for the period from January 1, 2019 to December 31, 2019.

The Company expected to continue the continuing connected transactions contemplated under the Financial Services Framework Agreement after December 31, 2019. Therefore, on November 21, 2019, the Company entered into a new financial services framework agreement with CNOOC Finance pursuant to which CNOOC Finance would continue to provide a range of financial services as may be required and requested by the Company, for a term of another three years from January 1, 2020 to December 31, 2022. The new financial services framework agreement is substantially on the same terms as the terms contained in the Financial Services Framework Agreement. The continuing connected transactions in respect of the depositary services under the new financial services framework agreement are exempted from independent shareholders’ approval requirement, but subject to annual reporting, annual review and announcement requirements. The maximum daily outstanding balance of deposits and interest (excluding funds placed for the purpose of extending entrustment loans pursuant to the entrustment loan services) placed by the Group with CNOOC Finance should not exceed Rmb 23.5 billion for the period from January 1, 2020 to December 31, 2022.

**Borrowings from CNOOC**

In September 2014, CNOOC provided CNOOC International Limited, a wholly-owned subsidiary of us a five-year uncommitted revolving loan facility for general purposes, with the principal amount of US\$ 135 million of 0.95% per annum. We have repaid the outstanding principal amount and accrued interest under this facility on December 2, 2019.

In December 2014, CNOOC provided us a five-year uncommitted revolving loan facility for general purposes, with the principal amount of US\$ 600 million of 0.95% per annum. We have repaid the outstanding principal amount and accrued interest under this facility on December 11, 2019.

**C. INTERESTS OF EXPERTS AND COUNSEL**

Not applicable.

**ITEM 8. FINANCIAL INFORMATION**

**A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION**

See pages beginning on page F-1 following Item 19.

**Legal Proceedings**

As at December 31, 2019, we were not involved in any material litigation or arbitration and no material litigation or arbitration were pending or threatened or made against us so far as we are aware.

**Dividend Distribution Policy**

The payment of any future dividends will be determined by our Board, subject to shareholders’ approval for all dividends other than interim dividends, based upon, among other things, our future earnings, capital requirements, financial conditions, future prospects and other factors which our Board may consider relevant. Our ability to pay dividends will also depend on the cash flows determined by the dividends, if any, received by us from our subsidiaries and associates. Holders of our shares will be entitled to receive such dividends declared by our Board pro rata according to the amounts paid up or credited as paid up on the shares. Subject to the factors described above, we currently intend to pursue a dividend policy consistent with other international oil and gas exploration and production companies.

Dividends may be paid only out of our distributable profits as permitted under Hong Kong law, which does not restrict the payment of dividends to nonresident holders of our securities. To the extent profits are distributed as dividends, such portion of profits will not be available to be reinvested in our operations.

Holders of our ADSs will be entitled to receive dividends, subject to the terms of the deposit agreement, to the same extent as holders of our shares, less the fees and expenses payable under the deposit agreement and withholding taxes of 10%. Cash dividends will be paid to the depositary in Hong Kong dollars and will be converted by the depositary into U.S. dollars and paid to holders of ADSs. Stock dividends, if any, will be distributed to the depositary and will be distributed by the depositary, in the form of additional ADSs, to holders of the ADSs.

In 2017, we declared and paid dividends totaling Rmb 16,448 million. In 2018, we declared and paid dividends totaling Rmb 23,523 million. In 2019, we declared and paid dividends totaling Rmb 28,973 million (US\$ 4,161.7 million). The amount of dividends we paid historically is not indicative of the dividends that we will pay in the future.

Substantially all our dividend payments result from dividends paid to us by CNOOC China Limited. CNOOC China Limited must follow the laws and regulations of the PRC and its articles of association in determining its dividends. As a wholly foreign owned enterprise in China, CNOOC China Limited has to provide for a reserve fund and staff and workers’ bonus and welfare fund, each of which is appropriated from net profit after taxation but before dividend distribution according to the prevailing accounting rules and regulations in the PRC. The general reserve fund, which is determined at the discretion of the board of directors of CNOOC China Limited, can only be used, upon approval by the relevant authority, to offset against accumulated losses or to increase capital. Appropriations to the staff and workers’ bonus and welfare fund, which are determined at the discretion of the directors of CNOOC China Limited, are charged to expense as incurred in our consolidated financial statements, which were prepared under IFRSs. In accordance with the “Temporary Regulation for Safety Expense Financial Management of High Risk Industry” and the implementation guidance issued by the Ministry of Finance of the PRC, a safety fund has been accrued for our oil and gas exploration and production activities within the PRC. The accrued safety fund will be utilized for improving the safety conditions of our production. None of the contributions of CNOOC China Limited to these statutory funds may be used for dividend purposes.

For the years ended December 31, 2017, 2018 and 2019, CNOOC China Limited made the following appropriations to the statutory reserves:

	For the year ended December 31, 2017		For the year ended December 31, 2018		For the year ended December 31, 2019	
	Percentage of Net Profits	Rmb (in millions)	Percentage of Net Profits	Rmb (in millions)	Percentage of Net Profits	Rmb (in millions)
Reserve fund	202.6%	50,000.0	—	—	—	—
Staff and workers’ bonus and welfare fund	—	—	—	—	—	—
Safety fund	2.7%	671.6	1.1%	667.3	1.0%	630.0

Contingencies

As a Chinese Resident Enterprise, we may be liable to pay taxes on the deemed interest income for the funding provided to our overseas subsidiaries starting from January 1, 2008. We have prepared contemporaneous documentation in accordance with applicable PRC tax laws and regulations and is currently awaiting confirmation from our local tax authority.

We are subject to tax in numerous jurisdictions around the world. There are audits in progress and items under review. Difference in positions taken by taxation authorities over the interpretation and application of tax laws and regulations may increase our tax liability. We have assessed the possible future outcome of matters that are currently under dispute. We believe that an adequate provision for future tax liability has been included in the consolidated financial statements based on available information.

In addition to the matters mentioned above, we are dealing with a number of other lawsuits and arbitrations that arise in the ordinary course of business. While the results of these legal proceedings cannot be ascertained at this stage, we believe these proceedings are not expected to have a material effect on the consolidated financial statements.

**B.       SIGNIFICANT CHANGES**

We have no other subsequent events needed to be disclosed except those disclosed in note 40 to our consolidated financial statements included elsewhere in this annual report.

**ITEM 9. THE OFFER AND LISTING**

Not applicable, except for Item 9.A.4 and Item 9.C.

We listed our shares on the Hong Kong Stock Exchange in February 2001 under the stock code “00883” , our ADSs on the New York Stock Exchange in February 2001 under the symbol “CEO”, and our ADSs on the Toronto Stock Exchange in September 2013 under the symbol “CNU”.

**ITEM 10. ADDITIONAL INFORMATION**

**A.       SHARE CAPITAL**

Not applicable.

**B.       MEMORANDUM AND ARTICLES OF ASSOCIATION**

We were incorporated with limited liability on August 20, 1999 in Hong Kong under the Companies Ordinance (Chapter 32 of the Laws of Hong Kong, the predecessor to the Hong Kong Companies Ordinance). Our Company registration number in Hong Kong is 685974. Under the Hong Kong Companies Ordinance, we have the capacity, rights, powers and privileges of a natural person of full age and may do anything which we are permitted or required to do by our articles of association or any enactment or rule of law.

The following are summaries of provisions of our articles of association and the Hong Kong Companies Ordinance. By operation of this Ordinance, provisions that were previously contained in our memorandum of association are deemed to be incorporated into our articles of association except for those provisions which conflict with the Hong Kong Companies Ordinance. For further details, you should read our memorandum of association, which was filed as an exhibit to our registration statement on Form F-1 (Registration No.333-10862) and our articles of association, as amended, which was filed as an exhibit to our annual report on Form 20-F for the fiscal year of 2010. We are required by the Hong Kong Stock Exchange Listing Rules to upload, among other things, our memorandum and articles of association on our website and on the website of the Hong Kong Stock Exchange. We have complied with such requirement and as such, our memorandum and articles of association were further filed as an exhibit to the Form 6-K filed with the SEC on March 30, 2012 (File Number: 1-14966).

**Issue of Shares**

Under the Hong Kong Companies Ordinance, our directors may, without obtaining the prior approval of our shareholders, offer to allot new shares in our Company to existing shareholders on a pro rata basis. Our directors may not allot new shares of our Company or grant rights to subscribe for, or to convert any security into, shares of our Company in any other manner without the prior approval of our shareholders at a general meeting. Any approval given at a general meeting granting our directors power to allot shares or securities convertible into shares or to grant rights to subscribe for shares generally shall continue in force from the date of the passing of the resolution until the earlier of:

- the conclusion of the next annual general meeting following the passing of the resolution; and
- the date on which the authority given under the resolution is revoked or varied by an ordinary resolution of our shareholders in a general meeting.

If such an approval for a general mandate to issue shares is given, our Board shall have the discretion to issue such number of shares as are approved pursuant to such general mandate, and our directors may offer, allot, grant options or other rights of subscription or conversion over, or otherwise issue, such number of shares to persons at such times and for such consideration and upon such terms and conditions as our directors may determine, subject to the restrictions under the Hong Kong Stock Exchange Listing Rules.

In accordance with Hong Kong Stock Exchange Listing Rules, any such approval of the shareholders must be limited to shares not exceeding 20% of our total number of shares in issue as of the date of granting such approval plus the number of shares repurchased by us since the granting of such approval.

**Dividends**

Subject to the Hong Kong Companies Ordinance, the shareholders at a general meeting may declare dividends to be paid to shareholders. However, under our articles of association, dividends cannot be declared in excess of the amount recommended by our Board. Further, all dividends unclaimed for one year after having become payable may be invested or otherwise made use of by the directors for the benefit of our Company until claimed, and all dividends unclaimed for six years after having become payable may be forfeited by the directors and shall revert to our Company.

In addition to dividends declared at a general meeting, our Board may declare and pay to the shareholders interim dividends as our Board deems justified by our financial position. Our Board may also pay any fixed dividend on any shares of our Company semi-annually or at other suitable intervals, whenever our financial position, in their opinion, justifies such payment.

**Winding Up**

If we are wound up, the surplus assets remaining after payment to all creditors are to be divided among our shareholders in proportion to the amount paid on the shares held by them respectively, and if such surplus assets are insufficient to repay the whole of the paid-up share capital, they are to be distributed so that the losses are borne by our shareholders in proportion to the amount paid up on the shares held by them respectively. The liquidator may, with the sanction of a special resolution, divide among our shareholders in specie or in kind the whole or any part of our assets or vest any part of our assets in trustees upon such trusts for the benefit of our shareholders or any of them as the resolution shall provide.

**Voting Rights**

Under the Hong Kong Companies Ordinance, any action to be taken by the shareholders at a general meeting requires the affirmative vote of either an ordinary or a special resolution passed at such meeting.

- An ordinary resolution is a resolution passed by a majority of shareholders that are entitled to, and do, vote in person or by proxy at a general meeting;

- A special resolution is a resolution passed by not less than 75% of shareholders that are entitled to, and do, vote in person or by proxy at a general meeting.

Generally, resolutions of shareholders are passed by ordinary resolution. However, the Hong Kong Companies Ordinance provides that certain specified matters may only approved by shareholders by way of special resolutions. These matters include, for example:

- alteration of the articles;
- change of a company’s name;
- reduction of share capital; and
- voluntary winding up.

The Hong Kong Stock Exchange Listing Rules require that voting at any general meeting must be taken by way of poll, except where the chairman, in good faith, decides to allow a resolution which relates purely a procedural or administrative matter to be voted on by a show of hands. On a poll, every shareholder who is present in person or by proxy has one vote for every share held or represented by him or her.

Any action to be taken by the shareholders requires the affirmative vote of the requisite majority of the shares at a general meeting. There are no cumulative voting rights. Accordingly, the holders of a majority of the shares voting for the election of directors can elect all the directors if they choose to do so.

Under Hong Kong law and our articles of association, shareholders who are not residents of Hong Kong may hold, vote and transfer their shares in our Company in the same manner as our shareholders who are Hong Kong residents.

**General Meetings**

We are required to hold an annual general meeting each year within six months from the end of our financial year. We may also hold extraordinary general meetings from time to time. Our Board may convene an extraordinary general meeting at will, and shall on requisition in accordance with the Hong Kong Companies Ordinance, proceed to convene an extraordinary general meeting. Our annual general meeting and a meeting called for the purpose of passing a special resolution require at least twenty-one days’ prior notice, and any other general meeting requires at least fourteen days’ prior notice. The notice must specify the place, day and time of the meeting and, in the case of special business, the general nature of that business. The quorum for a general meeting is two shareholders present in person or by proxy. If within thirty minutes from the time appointed for the meeting a quorum is not present, the meeting, if convened upon requisition in accordance with the Hong Kong Companies Ordinance, shall be dissolved; but in any other case it shall stand adjourned to the same day in the next week at the same time and place, or to such other day, time and place as the chairman of the meeting may determine. If at such adjourned meeting a quorum is not present within thirty minutes from the time appointed for the meeting, the member or members present in person or by proxy shall be a quorum and may transact the business for which the meeting is called.

At each annual general meeting one third of our directors are to retire from office by rotation, save any director holding office as chairman or chief executive officer. The directors to retire every year are to be those who have been longest in office since their last election and the retiring directors will be eligible for re-election.

**Modification of Rights**

Subject to the Hong Kong Companies Ordinance, any of the rights attaching to any class of shares, unless otherwise provided for by the terms of issue of the shares of that class, may be varied or abrogated with the written consent of the holders of not less than 75% of the issued shares of that class or with the sanction of a special resolution passed at a separate general meeting of the holders of shares of that class.

**Borrowing Powers**

Our Board may exercise all the powers of our Company to borrow money and to mortgage or charge all or any part of our undertaking, property and assets, whether present or future, and uncalled capital. Our Board may issue debentures, debenture stock, bonds or other securities of our Company, whether outright or as collateral security for any debt, liability or obligation of our Company or of any third party. These borrowing powers are subject to variation by a special resolution of our Company.

**Interested Transactions**

Subject to the exceptions described below, none of our directors may vote on any contract, arrangement or proposal in which the director or any of his or her associates is materially interested. Subject to provision of the Hong Kong Companies Ordinance, our directors may vote at a board meeting or by way of written resolution of directors on the following matters:

- any contract or arrangement to give security or indemnity to the director or his or her associates for money lent or obligations incurred or undertaken by such director or his or her associates at the request of or for the benefit of our Company or subsidiaries;
- any contract or arrangement for the giving by us of any security or indemnity to a third party for our debts or obligations or debts or obligations of our subsidiaries for which such director or his or her associates assumed responsibility, or guaranteed or secured in whole or in part whether alone or jointly;
- any contract or arrangement concerning offering of securities by us (or any company which we may promote or be interested in purchasing) for which the director or his or her associates is/are or is/are to be interested as a participant in the underwriting or sub-underwriting;
- any contract or arrangement in which the director or his or her associates are interested in the same manner as other holders of our securities by virtue only of their interest in our securities;
- any proposal or arrangement concerning employee benefits that do not provide privileges to our directors or their associates not generally accorded to the class of persons to whom such scheme or fund relates, including pension fund or retirement, death or disability benefits schemes; and
- any proposal or arrangement concerning the adoption, modification or operation of any employees’ share scheme involving the issue or grant of options over shares or other securities by us to, or for the benefit of, our employees or employees of our subsidiaries under which the director or his or her associates may benefit.

**C. MATERIAL CONTRACTS**

We have not entered into any material contracts in the last two years other than in the ordinary course of business, those described in “Item 7—Major Shareholders and Related Party Transactions — Related Party Transactions.”

**D. EXCHANGE CONTROLS**

For information on foreign exchange controls in the PRC, foreign exchange rates, hedging activities and related foreign exchange risks, see “Item 3—Key Information—Risk Factors—Risks Relating to the PRC—Government control of currency conversion and future movements in exchange rates may adversely affect our operations and financial condition” and “Item 11—Qualitative and Quantitative Disclosure about Market Risk.”

**E. TAXATION**

The taxation of income and capital gains of holders of our shares or ADSs is subject to the laws and practices of the PRC, Hong Kong and the jurisdictions in which holders of our shares or ADSs are resident or otherwise subject to tax. The following is a summary of taxation provisions that are anticipated to be material based on current law and practice. This summary is subject to change and does not constitute legal or tax advice. The discussion does not deal with all possible tax consequences relating to an investment in our shares or ADSs. In particular, the discussion does not address the tax consequences under state, local or other laws, such as non-PRC, non-Hong Kong or non-U.S. laws. Accordingly, we urge you to consult your tax adviser regarding the tax consequences of owning our shares and ADSs. The discussion is based upon laws and relevant interpretations in effect as of the date of this annual report, all of which are subject to change. There is no reciprocal tax treaty in effect between Hong Kong and the United States.

**The PRC**

On April 22, 2009, the State Administration of Taxation of the PRC (the “SAT”) issued the “Notice regarding Matters on Determination of Tax Residence Status of Chinese-controlled Offshore Incorporated Enterprises under Rules of Effective Management” (the “Notice”).

Pursuant to the “Enterprise Income Tax Law of the PRC” (the “New EIT Law”) and the Notice, enterprises established outside of China whose “de facto management bodies” are located in China are considered Chinese Resident Enterprises, or CREs.

We are considered a PRC resident enterprise for purposes of the Notice. In accordance with the Notice and the PRC income tax law as well as the formal approval from the SAT in October 2010, we are regarded as a CRE pursuant to the provisions of the New EIT Law and the Notice. Accordingly, we are required to withhold 10% corporate income tax when we make dividend distributions to the ADS depositary and to our non-Chinese resident enterprise shareholders, whose names appear on our register of members, as of the record date for such dividend, and who are not individuals. The 10% dividend withholding tax rate will not be reduced under the 1984 Agreement between the United States and the People’s Republic of China for the Avoidance of Double Taxation, or the PRC Treaty. In the past, we did not withhold any tax in respect of dividends payable to any natural person shareholders whose names appeared on our register of members on the relevant record dates.

Currently, gains realized by foreign individual investors upon the sale of overseas-listed shares or American depositary shares are not subject to tax on capital gains. In accordance with the New EIT Law, capital gains realized by foreign enterprises which are non-resident enterprises in China upon the sale of overseas-listed shares or American depositary shares are generally subject to a PRC enterprise income tax levied at a rate of 10%, unless exempted or reduced pursuant to an applicable double-taxation treaty or other exemption.

**Hong Kong**

**Tax on Dividends**

Under the current practices of the Hong Kong Inland Revenue Department, no tax is payable in Hong Kong on dividends paid by us.

**Profits Tax**

No tax is imposed in Hong Kong in respect of capital gains from the sale of property, such as the shares and ADSs. Trading gains from the sale of property by persons carrying on a trade, profession or business in Hong Kong where such gains are derived from or arise in Hong Kong from such trade, profession or business will be subject to Hong Kong profits tax which is currently imposed at a rate of 16.5% on corporations and at a standard rate of 15% on individuals. Gains from sales of shares effected on the Hong Kong Stock Exchange will be considered to be derived from or arise in Hong Kong. Liability for Hong Kong profits tax will therefore arise in respect of trading gains from sales of shares realized by persons carrying on a business of trading or dealing in securities in Hong Kong.

**Stamp Duty**

Hong Kong stamp duty, currently charged at the rate of HK\$1.00 per HK\$1,000 or part thereof on the higher of the consideration for, or the value of, the shares, will be payable by the purchaser on every purchase and by the seller on every sale of shares. A total of HK\$2.00 per HK\$1,000 or part thereof is currently payable on a typical sale and purchase transaction involving shares. In addition, a fixed duty of HK\$5.00 is currently payable on any instrument of transfer of shares. The withdrawal of shares upon the surrender of ADSs, and the issuance of ADSs upon the deposit of shares, will also attract stamp duty at the rate described above for sale and purchase transactions unless the withdrawal or deposit does not result in a change in the beneficial ownership of the shares under Hong Kong law. The issuance of the ADSs upon the deposit of shares issued directly to the depositary or for the account of the depositary does not incur stamp duty if it does not involve a change of beneficial ownership in the shares. No Hong Kong stamp duty is payable upon the transfer of ADSs outside Hong Kong.

**U.S. Federal Income Tax Considerations**

The following is a discussion of material U.S. federal income tax consequences of owning and disposing of ADSs or shares by the U.S. Holders described below, but it does not purport to be a comprehensive description of all the tax considerations that may be relevant to a particular person’s decision to own such ADSs or shares. This discussion does not address any alternative minimum tax considerations or the potential application of the Medicare contribution tax to “net investment income” of non-corporate U.S. Holders. In addition, this discussion does not address U.S. state, local and non-U.S. tax consequences. The discussion applies only to U.S. Holders who hold ADSs or shares as capital assets for U.S. federal income tax purposes and does not address all of the U.S. federal income tax consequences that may be relevant to U.S. Holders that are subject to special rules, such as:

- certain financial institutions;
- dealers or traders in securities who use a mark-to-market method of tax accounting;

- persons holding ADSs or shares as part of a straddle, conversion transaction, integrated transaction or similar transaction;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- partnerships or other entities classified as partnerships for U.S. federal income tax purposes;
- tax-exempt entities, “individual retirement accounts” or “Roth IRAs”;
- persons that own or are deemed to own 10% or more of our stock, by vote or value;
- persons who acquired our ADSs or shares pursuant to the exercise of an employee stock option or otherwise as compensation; or
- persons holding shares in connection with a trade or business conducted outside of the United States.

If an entity that is classified as a partnership for U.S. federal income tax purposes owns ADSs or shares, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships owning ADSs or shares and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of owning and disposing of the ADSs or shares.

This discussion is based on the Internal Revenue Code of 1986, as amended (the “Code”), administrative pronouncements, judicial decisions, final, temporary and proposed U.S. Treasury regulations and the PRC Treaty, all as of the date hereof. These laws are subject to change, possibly on a retroactive basis. It is also based, in part, on representations by the Depositary and assumes that each obligation under the Deposit Agreement and any related agreement will be performed in accordance with its terms. U.S. Holders should consult their tax advisers concerning the U.S. federal, state, local and non-U.S. tax consequences of owning and disposing of ADSs or shares in their particular circumstances.

As used herein, a “U.S. Holder” is a person that for U.S. federal income tax purposes is a beneficial owner of ADSs or shares and is: (i) a citizen or individual resident of the United States; (ii) a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia; or (iii) an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

In general, a U.S. Holder who owns ADSs should be treated as the owner of the underlying shares represented by those ADSs for U.S. federal income tax purposes. Accordingly, no gain or loss should be recognized if a U.S. Holder exchanges ADSs for the underlying shares represented by those ADSs.

Except as specifically described below, this discussion assumes that we were not, and will not become, a passive foreign investment company, or PFIC, for any taxable year.

***Taxation of Distributions***

Distributions received by a U.S. Holder on ADSs or shares, other than certain *pro rata* distributions of common shares to all shareholders, will constitute foreign-source dividend income to the extent paid out of our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes). Because we do not maintain calculations of our earnings and profits under U.S. federal income tax principles, it is expected that distributions generally will be reported to U.S. Holders as dividends. Dividends will be included in a U.S. Holder’s income on the date of the U.S. Holder’s or, in the case of ADSs, the Depositary’s receipt of the dividend. The amount of the dividend will equal the U.S. dollar value of the Hong Kong dollar distribution, calculated by reference to the exchange rate in effect on the date of receipt, regardless of whether the payment is converted into U.S. dollars on the date of receipt. If the dividend is converted into U.S. dollars on the date of receipt, a U.S. Holder should not be required to recognize foreign currency gain or loss in respect of the dividend income. A U.S. Holder may have foreign currency gain or loss if the dividend is converted into U.S. dollars after the date of receipt. Corporate U.S. Holders will not be entitled to claim dividends-received deductions with respect to dividends paid by us.

Subject to applicable limitations, dividends paid by “qualified foreign corporations” to certain non-corporate U.S. shareholders are taxable at rates applicable to long-term capital gains. A foreign corporation is treated as a qualified foreign corporation with respect to dividends paid on stock that is readily tradable on an established securities market in the United States, such as the New York Stock Exchange where our ADSs are traded. A foreign corporation may also be treated as a qualified foreign corporation if it is eligible for benefits of a comprehensive income tax treaty with the United States determined by the U.S. Treasury to be satisfactory for these purposes and that includes an exchange of information program. Non-corporate U.S. Holders should consult their tax advisers to determine whether these favorable rates may apply to dividends they receive from us and whether they are subject to any special rules that limit their ability to be taxed at these favorable rates.

As described in “—Taxation—The PRC,” we are regarded as a CRE pursuant to the provisions of the New EIT Law and the Notice. Accordingly, dividends paid with respect to our ordinary shares or ADSs generally will be subject to PRC withholding taxes. For U.S. federal income tax purposes, the amount of a dividend would include any amounts withheld by us in respect of PRC taxes. Subject to applicable limitations, any PRC income taxes withheld from dividends on ADSs or shares (in the case of a U.S. Holder that is eligible for the benefits of the PRC Treaty, at a rate not exceeding the rate provided by the PRC Treaty) may be creditable against the U.S. Holder’s U.S. federal income tax liability. Where a U.S. Holder is eligible for the benefits of the PRC Treaty, PRC taxes withheld in excess of the rate applicable under the PRC Treaty will not be eligible for credit against the U.S. Holder’s U.S. federal income tax liability. The rules governing foreign tax credits are complex, and U.S. Holders should consult their tax advisers regarding the creditability of foreign taxes in their particular circumstances. Instead of claiming a credit, a U.S. Holder may, at the U.S. Holder’s election, deduct such PRC taxes in computing taxable income, subject to applicable limitations. An election to deduct foreign taxes instead of claiming foreign tax credits must apply to all foreign taxes paid or accrued in the taxable year.

***Sale or Other Disposition of ADSs or Shares***

A U.S. Holder will generally recognize capital gain or loss on the sale or other disposition of ADSs or shares, which will be long-term capital gain or loss if the U.S. Holder has held such ADSs or shares for more than one year. The amount of the U.S. Holder’s gain or loss will be equal to the difference between the amount realized on the sale or other disposition and the U.S. Holder’s tax basis in the ADSs or shares (each determined in U.S. dollars).

As described in “—Taxation —The PRC,” gains from dispositions of our ADSs or shares may be subject to PRC tax. A U.S. Holder’s amount realized would include the gross amount of the disposition proceeds before any withholding or deduction of PRC tax. Although under the Code any such gain of a U.S. Holder would generally be characterized as U.S.-source income, a U.S. Holder that is eligible for the benefits of the PRC Treaty may be able to elect to treat the gain as foreign-source gain for foreign tax credit purposes. The rules governing foreign tax credits are complex and the creditability of foreign taxes is subject to limitations. U.S. Holders should consult their tax advisers regarding their eligibility for benefits under the PRC Treaty and the creditability or deductibility of any PRC tax paid with respect to dispositions in their particular circumstances.

*Passive Foreign Investment Company Considerations*

We believe that we were not a PFIC for U.S. federal income tax purposes for our taxable year ended December 31, 2019. In general, a non-U.S. company will be a PFIC for U.S. federal income tax purposes for any taxable year in which (i) 75% or more of its gross income consists of passive income or (ii) 50% or more of the average quarterly value of its assets consists of assets that produce, or are held for the production of, passive income. As PFIC status depends upon the composition of our income and assets and the market value of our assets from time to time, and since there are uncertainties in the manner of application of the PFIC rules, there can be no assurance that we will not be a PFIC for any taxable year.

If we were a PFIC for any taxable year during which a U.S. Holder held ADSs or shares, certain adverse U.S. federal income tax rules would apply on a disposition (including certain pledges) of ADSs or shares by the U.S. Holder. In general, under those rules, gain recognized by the U.S. Holder on a sale or other disposition of ADSs or shares would be allocated ratably over the U.S. Holder’s holding period for the ADSs or shares. The amounts allocated to the taxable year of the sale or other disposition and to any year before we became a PFIC would be taxed as ordinary income. The amount allocated to each other taxable year would be subject to tax at the highest rate in effect for individuals or corporations, as appropriate, for such taxable year, and an interest charge would be imposed on the resulting tax liability for each such taxable year. Any distribution in respect of ADSs or shares in excess of 125% of the average of the annual distributions on ADSs or shares received by the U.S. Holder during the preceding three years or the U.S. Holder’s holding period, whichever is shorter, would be subject to taxation in the same manner. Certain elections (such as a mark-to-market election) may be available to U.S. Holders and may result in alternative tax treatment.

In addition, if we were to be treated as a PFIC in a taxable year in which we pay a dividend or the prior taxable year, the favorable rates discussed above with respect to dividends received by certain non-corporate U.S. Holders would not apply.

If we are a PFIC for any taxable year during which a U.S. Holder owned our ADSs or shares, the U.S. Holder will generally be required to file annual reports on IRS Form 8621.

*Information Reporting and Backup Withholding*

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries may be subject to information reporting and backup withholding, unless the U.S. Holder is an exempt recipient or, in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding. The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder’s U.S. federal income tax liability and may entitle such U.S. Holder to a refund, provided that the required information is timely furnished to the Internal Revenue Service.

Subject to certain exceptions, U.S. Holders who are individuals or certain specified entities may be required to report information relating to their ownership of the securities of non-U.S. companies, or non-U.S. accounts through which they are held. U.S. Holders should consult their tax advisers regarding the effect, if any, of this requirement on the ownership and disposition of our ADSs or shares.

**F. DIVIDENDS AND PAYING AGENTS**

Not applicable.

**G. STATEMENT BY EXPERTS**

Not applicable.

**H. DOCUMENTS ON DISPLAY**

We are subject to the informational requirements of the Exchange Act and accordingly file reports and other information with the Securities and Exchange Commission. You may inspect and copy our reports and other information we file with the Securities and Exchange Commission at the public reference facilities maintained by the Securities and Exchange Commission. Copies of such material may also be obtained at prescribed rates by writing to the Public Reference Section of the Securities and Exchange Commission at 100 F Street, NE, Washington, D.C. 20549. Please call 1-800-SEC-0330 for information on the location and operation of the Securities and Exchange Commission’s public reference facilities. Our filings with the Securities and Exchange Commission are also available to the public over the internet at its website at <http://www.sec.gov>.

**I. SUBSIDIARY INFORMATION**

Not applicable.

**ITEM 11. QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK**

Our market risk exposures primarily consist of fluctuations in oil and gas prices, exchange rates and interest rates.

**Commodity Price Risks**

We are exposed to fluctuations in prices of crude oil. International oil prices are volatile and this volatility has a significant effect on our net sales and profit. We do not hedge market risk resulting from fluctuations in oil prices. See “Item 4—Information on the Company—Business Overview—Overview” and “Item 3—Key Information—Risk Factors—Our business, cash flows and profits fluctuate with volatility in oil and gas prices.”

**Currency Risk**

Our foreign exchange exposure gives rise to market risk associated with exchange rate movements.

Substantially all of our oil and gas sales are denominated in Renminbi and U.S. dollars. China adopted a managed floating exchange rate approach based on market supply and demand and with reference to a basket of currencies. From January 1, 2019 to December 31, 2019, Rmb has depreciated by approximately 1.62% against the US dollars.

Management has assessed our exposure to foreign currency risk by using a sensitivity analysis on the change in foreign exchange rate of the US dollars, to which the Group is mainly exposed to as at December 31, 2019 and 2018. Based on management's assessment at 31 December 2019, a 5% strengthening/weakening of Rmb against US dollars would have increased/decreased the profit for the year of the Group by 0.04% (2018: 0.15%) and the equity of the Group by 0.47% (2018: 0.25%). This analysis has been determined assuming that the change in foreign exchange rates had occurred at the end of the reporting period and had been applied to the foreign currency balances to which the Group has significant exposure with all other variables held constant. The analysis is performed on the same basis for 2018.

The depreciation of Renminbi against U.S. dollar may have the following impact on us:

- Our oil and gas sales may increase, because the benchmark oil and gas prices are usually in U.S. dollars;
- Our cost for imported equipment and materials will increase, because most of these costs are denominated in U.S. dollars; and
- Our debt repayment burden will increase, since all of our debt is denominated in U.S. dollars.

For further information on our currency risk, see “Item 3—Key Information—Risk Factors—We face currency risks and liquidity risks.”

**Interest Rate Risk**

We are exposed to interest rate risk arising from our debts. An upward fluctuation in interest rates increases the cost of new debt and the cost of servicing our floating rate debt. We may use interest rate swap transactions, from time to time, to hedge our interest rate exposure when considered appropriate, based on existing and anticipated market conditions.

As of December 31, 2019, the interest rates for 96% of our outstanding debts were fixed. The term of the weighted average balance was approximately 8.89 years. A fixed interest rate can reduce the volatility of finance costs in uncertain markets. We do not currently engage in any interest rate hedging activities.

As of December 31, 2019, the interest rates for 97.2% of our total outstanding long-term debts were fixed. The following table sets forth additional information about the expected maturity dates of our outstanding long-term debt (including the current portion) as of December 31, 2019.

	2020	2021	2022	2023	2024	2025 and after	Total	Fair value as of December 31, 2019
	(Rmb in millions, except percentages)							
Long-term loans, including current portion								
Floating rate	225.7	203.5	244.0	276.3	319.2	2,635.2	3,903.8	3,909.3
	Libor + 0.19%	Libor + 0.19%	Libor + 0.19%	Libor + 0.19%	Libor + 0.19%	Libor + 0.19%		
Interest rate-Tangguh	~0.335%	~0.335%	~0.335%	~0.33%	~0.335%	~0.335%		
Interest rate-Tangguh III	Libor + 1.37%	Libor + 1.37%	Libor + 1.37%	Libor + 1.37%	Libor + 1.37%	Libor + 1.37%		
	~3.45%	~3.45%	~3.45%	~3.45%	~3.45%	~3.45%		
Interest rate- Arctic LNG2	EURIBOR+ 0.70%~1.20%	EURIBOR+ 1.20%	EURIBOR+ 1.20%	EURIBOR+ 1.20%	EURIBOR+ 1.20%	EURIBOR+ 1.20%		
Long-term guaranteed notes, including current portion								
Fixed rate	10,442.7	10,442.7	10,442.7	17,056.4	15,664.1	73,377.4	137,425.9	154,088.2
Average interest rate	4.42%	4.49%	4.53%	4.71%	4.89%	5.14%		

For additional discussions of our market risks, see “Item 3—Key Information—Risk Factors.”

ITEM 12 DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. DEBT SECURITIES

Not applicable.

B. WARRANTS AND RIGHTS

Not applicable.

C. OTHER SECURITIES

Not applicable.

D. AMERICAN DEPOSITARY SHARES

JPMorgan Chase Bank, N.A. is our Depositary. The depositary’s office is located at 383 Madison Ave, Floor 11 New York, NY 10179. Each of our ADSs represents 100 shares.

**ADR Fees Payable by Investors**

The Depositary may charge each person to whom ADRs are issued, including, without limitation, issuances against deposits of shares, issuances in respect of share distributions, rights and other distributions, issuances pursuant to a stock dividend or stock split declared by us, or issuances pursuant to a merger, exchange of securities or any other transaction or event affecting the ADSs or the deposited securities, and each person surrendering ADSs for withdrawal of deposited securities or whose ADSs are cancelled or reduced for any other reason, US\$5.00 for each 100 ADSs (or portion thereof) issued, delivered, reduced, cancelled or surrendered, as the case may be.

The following additional charges shall be incurred by the ADR holders, by any party depositing or withdrawing shares or by any party surrendering ADSs and/or to whom ADSs are issued (including, without limitation, issuances pursuant to a stock dividend or stock split declared by us or an exchange of stock regarding the ADSs or the Deposited Securities or a distribution of ADSs), whichever is applicable:

- a fee of up to US\$0.05 per ADS for any cash distribution made pursuant to the deposit agreement;
- a fee of US\$1.50 per ADR for transfers of certificated or direct registration ADRs;
- a fee of up to US\$0.05 per ADS per calendar year (or portion thereof) for services performed by the Depositary in administering the ADRs (which fee may be charged on a periodic basis during each calendar year and shall be assessed against holders of ADRs as of the record date or record dates set by the Depositary during each calendar year shall be payable in the manner described in the next succeeding provision);
- a fee for the reimbursement of such fees, charges and expenses as are incurred by the Depositary or any of its agents (including, without limitation, the custodian and expenses incurred on behalf of holders in connection with compliance with foreign exchange control regulations or any law or regulation relating to foreign investment) in connection with the servicing of the shares or other deposited securities, the sale of securities (including, without limitation, deposited securities), the delivery of deposited securities or otherwise in connection with the Depositary’s or its custodian’s compliance with applicable law, rule or regulation (which fees and charges shall be assessed on a proportionate basis against holders as of the record date or dates set by the Depositary and shall be payable at the sole discretion of the Depositary by billing such holders or by deducting such charge from one or more cash dividends or other cash distributions);
- stock transfer or other taxes and other governmental charges;
- cable, telex and facsimile transmission and delivery charges incurred at the request of an ADR holder in connection with the deposit or delivery of shares;
- transfer or registration fees for the registration of transfer of deposited securities on any applicable register in connection with the deposit or withdrawal of deposited securities;
- in connection with the conversion of foreign currency into U.S. dollars, the fees, expenses and other charges charged by the Depositary or its agent (which may be a division, branch or affiliate) so appointed in connection with such conversion; and

- fees of any division, branch or affiliate of the Depositary utilized by the Depositary to direct, manage or execute any public or private sale of securities under the deposit agreement.

**Payments Received by Foreign Private Issuer**

The Depositary has agreed to reimburse certain company expenses related to our ADS program and incurred by us in connection with the program. The Depositary reimbursed us, or paid amounts on our behalf to third parties, or waived our fees and expenses, of US\$553,628.12 for the year ended December 31, 2019.

*Direct Payments*

The table below sets forth the types of expenses that the Depositary has agreed to reimburse, and the invoices relating to the year ended December 31, 2019 that were reimbursed:

Category of Expenses	Amount Reimbursed for Fiscal Year Ended December 31, 2019 (US\$) <sup>(1)</sup>
ADR training expenses	\$ 42,951.69
Directors & Officers Liability insurance fees	\$ 510,676.43
<b>Total</b>	<b>\$ 553,628.12</b>

(1) Includes the 30% withholding tax paid to the U.S. government.

*Indirect Payments*

The Depositary has also agreed to waive fees for standard costs associated with the administration of the ADS program and has paid certain expenses directly to third parties on our behalf. The table below sets forth those expenses that the Depositary waived or paid directly to third parties relating to the year ended December 31, 2019:

Category of Expenses	Amount Reimbursed for Fiscal Year Ended December 31, 2019 (US\$)
Fees waived	150,000

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

A. MATERIAL MODIFICATIONS TO THE INSTRUMENTS DEFINING THE RIGHTS OF SECURITY HOLDERS

None.

B. MATERIAL MODIFICATIONS TO THE RIGHTS OF REGISTERED SECURITIES BY ISSUING OR MODIFYING ANY OTHER CLASS OF SECURITIES

None.

C. WITHDRAWAL OR SUBSTITUTION OF A MATERIAL AMOUNT OF THE ASSETS SECURING ANY REGISTERED SECURITIES

Not applicable.

D. CHANGE OF TRUSTEES OR PAYING AGENTS FOR ANY REGISTERED SECURITIES

Not applicable.

E. USE OF PROCEEDS

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES

(a) Disclosure Controls and Procedures

An evaluation was carried out under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness, as of December 31, 2019, of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act).

Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2019, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported as and when required by the SEC’s rules and forms and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

**(b) Management’s annual report on internal control over financial reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2019 using the criteria set forth in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, our management has concluded that our internal control over financial reporting as of December 31, 2019 was effective.

**(c) Attestation Report of the Independent Registered Public Accounting Firm**

Our independent registered public accounting firm has issued an audit report on the effectiveness of our internal control over financial reporting. This report appears on page F-6.

**(d) Changes in Internal Control over Financial Reporting**

There were no changes in our internal control over financial reporting that occurred during the year ended December 31, 2019 that have materially affected, or that were reasonably likely to materially affect, our internal control over financial reporting.

**ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

Aloysius Hau Yin Tse has been designated by our Board as an audit committee financial expert. Mr. Tse is independent as defined in the listing standards of the New York Stock Exchange.

**ITEM 16B. CODE OF ETHICS**

Our Board adopted a Code of Ethics in 2003 to provide guidelines to our senior management and directors in legal and ethical matters as well as the sensitivities involved in reporting illegal and unethical matters. The Code of Ethics covers areas such as supervisory rules, insider dealing, market malpractices, conflict of interests, company opportunities, protection and proper use of our assets as well as reporting requirements. As part of the continued efforts to improve our corporate governance standards, our Board conducted an annual review to the Code of Ethics since 2009, and the current version of the Code of Ethics was reviewed and adopted in August 2019.

We have provided all our directors and senior officers with a copy of the Code of Ethics and require them to comply with the Code of Ethics, so as to ensure that our business is conducted with integrity. We will take disciplinary actions towards any act which is in breach of the Code of Ethics. Any change or waiver, explicit or implicit, with respect to our Code of Ethics, must be disclosed to our shareholders either in our annual report or on our internet website, [www.cnooc.com.cn](http://www.cnooc.com.cn).

We have posted our Code of Ethics on our website. To request a copy of our Code of Ethics free of charge, please contact our investor relations manager, by email to [ir@cnooc.com.cn](mailto:ir@cnooc.com.cn).

**ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

**Audit Fees**

The aggregate fees billed for professional services rendered by our principal accountant for the audit of our annual financial statements were Rmb 51.8 million for 2018 and Rmb 54.1million (US\$7.8 million) for 2019.

**Audit-Related Fees**

The aggregate fees billed for services that are normally provided by the accountants in connection with statutory and regulatory filings or engagements and assurance and related services by our principal accountant that are reasonably related to the performance of the audit or review of financial statements and are not reported under “Audit Fees” were Rmb 6.8 million for 2018 and Rmb 8.2 million (US\$1.2 million) for 2019.

**Tax Fees**

The aggregate fees billed for professional service rendered by the principal accountant for tax compliance, tax advice and tax planning were nil for 2018 and Rmb 2.1 million (US\$0.3 million) for 2019.

**All Other Fees**

The aggregate fees billed for professional services rendered by our principal accountant for risk management advisory services and information systems reviews were Rmb 250,000 for 2018 and Rmb 250,000 (US\$35,910) for 2019.

There are no other fees payable to our principal accountant for products and/or services provided by our principal accountant, other than the services reported above, for the financial year ended December 31, 2018 and for the financial year ended December 31, 2019.

**Audit Committee’s pre-approval policies and procedures**

Our audit committee under our Board is responsible for the appointment, compensation and oversight of the work of our principal accountant. Our audit committee adopted a policy calling for the audit committee’s pre-approval for the engagement of our principal accountant for audit and permitted non-audit services. Our Board has also ratified the policy and procedures. Under this audit committee policy, proposed services may be pre-approved by our audit committee either on an annual basis or on a case-by-case basis. Appendices to the audit committee policy set forth (1) the audit, audit-related, tax and other services that may be subject to the general annual pre-approval of the audit committee; and (2) a list of prohibited non-audit services. Our audit committee will periodically review and revise these appendices based on its subsequent determinations. The audit committee policy also provides for procedures to establish annual fee levels or budgets for pre-approved services and ratios between different categories of pre-approved services. In addition, the audit committee policy contains provisions that deal with compliance, monitoring, reporting and other related matters.

During 2019, all fees for audit-related services, tax services and all other services paid to our principal accountant were approved by our audit committee.

**ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES**

Not applicable.

**ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS**

None.

**ITEM 16F. CHANGE IN REGISTRANT’S CERTIFYING ACCOUNTANT**

Not applicable.

**ITEM 16G. CORPORATE GOVERNANCE**

See “Item 6—Directors, Senior Management and Employees—Board Practice—Summary of Significant Differences in Corporate Governance Practices for Purposes of Section 303A.11 of the New York Stock Exchange Listed Company Manual.”

**ITEM 16H. MINE SAFETY DISCLOSURE**

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

Not applicable.

ITEM 18. FINANCIAL STATEMENTS

See pages beginning on page F-1 following Item 19.

ITEM 19. EXHIBITS

The following documents are filed as part of this annual report:

Exhibit Number	Document
1.1	<a href="#">Articles of Association of the Registrant, as amended in 2009, incorporated by reference to Exhibit 1.1 to our Annual Report on Form 20-F for fiscal year 2010 filed with the Securities and Exchange Commission (File number: 1-14966) and Exhibit 99.1 to Form 6-K furnished with the Securities and Exchange Commission on March 30, 2012 (File number: 1-14966).</a>
1.2	<a href="#">Memorandum of Association of the Registrant, incorporated by reference to Exhibit 3.2 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862) and Exhibit 99.1 to Form 6-K furnished with the Securities and Exchange Commission on March 30, 2012 (File number: 1-14966).</a>
2.1	<a href="#">Registrant’s Specimen Certificate for Ordinary Shares.</a>
2.2	Registrant’s Specimen American Depositary Receipt (included in Exhibit 2.3).
2.3	<a href="#">Form of Amendment No. 2 to Deposit Agreement (incorporated by reference to Exhibit (a)(3) to From F-6 (File No. 333-210253) filed with the SEC on March 17, 2016).</a>
2.4	<a href="#">Form of Indenture, incorporated by reference to Exhibit 2.1 to our annual report on Form 20-F for fiscal year 2002 filed with the Securities and Exchange Commission (File Number: 1-14966).</a>
2.5	<a href="#">Trust Deed dated December 15, 2004 among CNOOC Limited, CNOOC Finance (2004) Limited and J.P. Morgan Corporate Trustee Services Limited, incorporated by reference to Exhibit 2.2 to our annual report on Form 20-F for fiscal year 2004 filed with the Securities and Exchange Commission (File Number: 1-14966).</a>
2.6	Indentures dated January 26, 2011 among CNOOC Finance (2011) Limited, as Issuer, CNOOC Limited, as Guarantor, and The Bank of New York Mellon, as Trustee*.

\* Pursuant to Instruction 2(b)(i) to Item 19 of Form 20-F, we undertake to furnish this document upon request of the Securities and Exchange Commission.

2.7	Indentures dated May 2, 2012 among CNOOC Finance (2012) Limited, as Issuer, CNOOC Limited, as Guarantor, Citicorp International Limited, as Trustee, Citibank, N.A., London Brach, as Paying Agent, and Citigroup Global Markets Deutschland AG, as Registrar*.
2.8	<a href="#">Fourth Supplemental Indenture dated March 22, 2013 to the Senior Debt Indenture dated May 4, 2007 among CNOOC Limited, Deutsche Bank Trust Company Americas and Nexen Inc., incorporated by reference to Exhibit 4.1 to Form 6-K furnished with the Securities and Exchange Commission on March 22, 2013 (File number: 1-14966).</a>
2.9	<a href="#">Seventh Supplemental Indenture dated March 22, 2013 to the Trust Indenture dated April 28, 1998 among CNOOC Limited, CIBC Mellon Trust Company, The Bank of New York Mellon and Nexen Inc., incorporated by reference to Exhibit 4.2 to Form 6-K furnished with the Securities and Exchange Commission on March 22, 2013 (File number: 1-14966).</a>
2.10	<a href="#">Form of Indenture among CNOOC Finance (2013) Limited, CNOOC Limited and The Bank of New York Mellon, incorporated by reference to Exhibit 4.1 to Form F-3 filed with the Securities and Exchange Commission on May 1, 2013 (File number: 333-188261).</a>
2.11	<a href="#">Form of 1.125% Guaranteed Note due 2016, incorporated by reference to Exhibit 4.2 to Form 6-K furnished with the Securities and Exchange Commission on May 9, 2013 (File number: 1-14966).</a>
2.12	<a href="#">Form of 1.750% Guaranteed Note due 2018, incorporated by reference to Exhibit 4.3 to Form 6-K furnished with the Securities and Exchange Commission on May 9, 2013 (File number: 1-14966).</a>
2.13	<a href="#">Form of 3.000% Guaranteed Note due 2023, incorporated by reference to Exhibit 4.4 to Form 6-K furnished with the Securities and Exchange Commission on May 9, 2013 (File number: 1-14966).</a>
2.14	<a href="#">Form of 4.250% Guaranteed Note due 2043, incorporated by reference to Exhibit 4.5 to Form 6-K furnished with the Securities and Exchange Commission on May 9, 2013 (File number: 1-14966).</a>
2.15	<a href="#">Form of Indenture among CNOOC Nexen Finance (2014) ULC, CNOOC Limited and The Bank of New York Mellon, incorporated by reference to Exhibit 4.3 to Post-Effective Amendment No. 1 to Form F-3 filed with the Securities and Exchange Commission on April 22, 2014 (File number: 333-188261).</a>
2.16	<a href="#">Form of 1.625% Guaranteed Note due 2017, incorporated by reference to Exhibit 4.2 to Form 6-K furnished with the Securities and Exchange Commission on May 1, 2014 (File number: 1-14966).</a>
2.17	<a href="#">Form of 4.250% Guaranteed Note due 2024, incorporated by reference to Exhibit 4.3 to Form 6-K furnished with the Securities and Exchange Commission on May 1, 2014 (File number: 1-14966).</a>
2.18	<a href="#">Form of 4.875% Guaranteed Note due 2044, incorporated by reference to Exhibit 4.4 to Form 6-K furnished with the Securities and Exchange Commission on May 1, 2014 (File number: 1-14966).</a>

2.19	<a href="#">Form of Indenture among CNOOC Finance (2015) Australia Pty Ltd, CNOOC Limited and The Bank of New York Mellon, incorporated by reference to Exhibit 4.5 to Post-Effective Amendment No.2 to Form F-3 filed with the Securities and Exchange Commission on April 27, 2015 (File number: 333-188261).</a>
2.20	<a href="#">Form of Indenture among CNOOC Finance (2015) U.S.A. LLC, CNOOC Limited and The Bank of New York Mellon, incorporated by reference to Exhibit 4.7 to Post-Effective Amendment No. 2 to Form F-3 filed with the Securities and Exchange Commission on April 27, 2015 (File number: 333-188261).</a>
2.21	<a href="#">Form of 2.625% Guaranteed Note due 2020, incorporated by reference to Exhibit 4.1 to Form 6-K furnished with the Securities and Exchange Commission on May 5, 2015 (File number: 1-14966).</a>
2.22	<a href="#">Form of 3.500% Guaranteed Note due 2025, incorporated by reference to Exhibit 4.2 to Form 6-K furnished with the Securities and Exchange Commission on May 5, 2015 (File number: 1-14966).</a>
2.23	<a href="#">Form of 4.200% Guaranteed Note due 2045, incorporated by reference to Exhibit 4.3 to Form 6-K furnished with the Securities and Exchange Commission on May 5, 2015 (File number: 1-14966).</a>
2.24	<a href="#">Form of Indenture among CNOOC Finance (2015) U.S.A. LLC, CNOOC Limited and The Bank of New York Mellon, incorporated by reference to Exhibit 4.1 to Form F-3 filed with the Securities and Exchange Commission on April 20, 2018 (File number: 333-224357).</a>
2.25	<a href="#">Form of 2.875% Guaranteed Note due 2029, incorporated by reference to Exhibit 4.1 to Form 6-K furnished with the Securities and Exchange Commission on September 30, 2019 (File number: 001-14966).</a>
2.26	<a href="#">Form of 3.300% Guaranteed Note due 2049, incorporated by reference to Exhibit 4.2 to Form 6-K furnished with the Securities and Exchange Commission on September 30, 2019 (File number: 001-14966).</a>
2.27	<a href="#">Form of Indenture among CNOOC Finance (2013) Limited, CNOOC Limited and The Bank of New York Mellon, incorporated by reference to Exhibit 4.3 to Form F-3 filed with the Securities and Exchange Commission on September 20, 2019 (File number: 333-224357).</a>
2.28	<a href="#">Description of Securities registered under Section 12 of the Exchange Act.</a>
4.1	The Asset Swap Agreement dated July 20, 1999 between CNOOC and Offshore Oil Company Limited, incorporated by reference to Exhibit 10.1 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.2	The Asset Allocation Agreement dated July 20, 1999 between CNOOC and Offshore Oil Company Limited, incorporated by reference to Exhibit 10.2 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.3	The Reorganization Agreement dated September 13, 1999 between CNOOC, Offshore Oil Company Limited and CNOOC Limited, incorporated by reference to Exhibit 10.3 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.4	Form of the Equity Transfer Agreement between CNOOC and CNOOC Limited, incorporated by reference to Exhibit 10.4 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).

4.5	Form of the Transfer Agreement dated October 1, 1999 between CNOOC and Offshore Oil Company Limited regarding the transfer of the rights and obligations of CNOOC under the 37 PSCs and one geophysical exploration agreement, incorporated by reference to Exhibit 10.5 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.6	Form of Equity Transfer Agreement between China Offshore Oil East China Sea Corporation and Offshore Oil Company Limited regarding the transfer of the rights and obligations under Joint Venture Contract of Shanghai Petroleum and Natural Gas Company Limited dated July 28, 1992 to Offshore Oil Company Limited, incorporated by reference to Exhibit 10.6 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.7	Transfer Agreement dated September 9, 1999 between CNOOC and Offshore Oil Company Limited regarding the transfer of the rights and obligations of CNOOC under the Natural Gas Sale and Purchase Contract dated December 22, 1992 to Offshore Oil Company Limited, incorporated by reference to Exhibit 10.7 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.8	Transfer Agreement dated September 9, 1999 between CNOOC and Offshore Oil Company Limited regarding the transfer of the rights and obligations of CNOOC under the Natural Gas Sale and Purchase Contract dated November 7, 1992 to Offshore Oil Company Limited, incorporated by reference to Exhibit 10.8 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.9	Transfer Agreement dated September 9, 1999 among CNOOC, Offshore Oil Company Limited, the four PRC subsidiaries and CNOOC’s affiliates regarding the transfer of the rights and obligations of the technical services agreements to Offshore Oil Company Limited, incorporated by reference to Exhibit 10.9 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.10	Nanshan Terminal Leasing Agreement dated September 9, 1999 between CNOOC, Hainan China Oil and Offshore Natural Gas Company and Offshore Oil Company Limited, incorporated by reference to Exhibit 10.10 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.11	Trademark License Agreement dated September 9, 1999 between CNOOC, Offshore Oil Company Limited and CNOOC Limited, incorporated by reference to Exhibit 10.11 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.12	Trademark License Agreement dated September 9, 1999 between China Offshore Oil Marketing Company, CNOOC Limited and Offshore Oil Company Limited, incorporated by reference to Exhibit 10.12 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.13	<a href="#">Trademark License Agreement between CNOOC, CNOOC Limited and CNOOC China Limited, incorporated by reference to Exhibit 4.13 to our Annual Report on Form 20-F for fiscal year 2008 filed with the Securities and Exchange Commission (File Number: 1-14966).</a>

4.14	<a href="#">Trademark License Agreement between CNOOC, CNOOC Limited and CNOOC China Limited, incorporated by reference to Exhibit 4.14 to our Annual Report on Form 20-F for fiscal year 2008 filed with the Securities and Exchange Commission (File Number: 1-14966).</a>
4.15	Property Leasing Agreement dated September 9, 1999 between Wui Hai Enterprise Company Limited and Offshore Oil Company Limited in respect of the office premises at 6th, 7th and 8th Floors, CNOOC Plaza, No. 6 Dong Zhi Men Wai Xiao Jie, Beijing, incorporated by reference to Exhibit 10.18 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.16	Property Leasing Agreement dated September 9, 1999 between China Offshore Oil Western South China Sea Corporation and Offshore Oil Company Limited in respect of the office premises at 1st to 9th Floors, Nantiao Road, Potou District Zhangjiang, Guangdong, incorporated by reference to Exhibit 10.19 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.17	Property Leasing Agreement dated September 9, 1999 between China Offshore Oil Bohai Corporation and Offshore Oil Company Limited in respect of the office premises at 1st to 7th Floors and 9th Floor, 2-37 He Kou Jie, Tanggu District, Tianjin, incorporated by reference to Exhibit 10.20 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.18	Property Leasing Agreement dated September 9, 1999 between China Offshore Oil East China Sea Corporation and Offshore Oil Company Limited in respect of the office premises at 20th, 22nd and 23rd Floors, 583 Ling Ling Road, Shanghai, the PRC, incorporated by reference to Exhibit 10.21 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.19	Property Leasing Agreement dated September 9, 1999 between China Offshore Oil Eastern South China Sea Corporation and Offshore Oil Company Limited in respect of the office premises at 3rd Floor and 6th to 11th Floors, 1 Second Industrial Road, Shekou, Shenzhen, the PRC, incorporated by reference to Exhibit 10.22 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.20	Property Leasing Agreement dated September 9, 1999 between China Offshore Oil Bohai Corporation and Offshore Oil Company Limited in respect of the Chengbei Warehouse, Chengbei Road, Tanggu District, Tianjin City, the PRC, incorporated by reference to Exhibit 10.23 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.21	Property Leasing Agreement dated September 9, 1999 between Overseas Oil & Gas Corporation, Ltd. and China Offshore Oil (Singapore) International Pte Ltd in respect of the residential premises at 10-01 and 17-002 Aquamarine Tower, 50 Bayshore Road, 13-05 Jade Tower, 60 Bayshore Road, Singapore, incorporated by reference to Exhibit 10.24 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.22	Suizhong Pier Agreement dated September 9, 1999 between Offshore Oil Company Limited and China Offshore Bohai Corporation, incorporated by reference to Exhibit 10.25 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).

4.23	Form of Novation Agreement among CNOOC, CNOOC China Limited, the Banks and other financial institution and the Fuji Bank Limited Hong Kong Branch, as agent, in respect of the transfer of the US\$110 million syndicated loan, incorporated by reference to Exhibit 10.26 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.24	Form of the Undertaking Agreement between CNOOC and CNOOC Limited, incorporated by reference to Exhibit 10.27 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.25	Form of Pre-Global Offering Share Option Scheme for the Senior Management of CNOOC Limited, incorporated by reference to Exhibit 10.31 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.26	Form of Share Option Scheme for the Senior Management of CNOOC Limited, incorporated by reference to Exhibit 10.32 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.27	<a href="#"><u>CNOOC Limited Share Option Scheme adopted on December 31, 2005, incorporated by reference to Exhibit 4.37 to our Annual Report on Form 20-F for fiscal year 2005 filed with the Securities and Exchange Commission (File Number: 1-14966).</u></a>
4.28	Subscription Agreement dated March 17, 2000 among CNOOC Limited, CNOOC (BVI) Limited, Overseas Oil & Gas Corporation, Ltd., et al., incorporated by reference to Exhibit 10.33 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.29	Subscription Agreement dated May 31, 2000 among CNOOC Limited, CNOOC (BVI) Limited, Overseas Oil & Gas Corporation, Ltd. and Hutchison International Limited, incorporated by reference to Exhibit 10.34 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.30	Subscription Agreement dated May 31, 2000 among CNOOC Limited, CNOOC (BVI) Limited, Overseas Oil & Gas Corporation, Ltd. and Hong Kong Electric Holdings Limited, incorporated by reference to Exhibit 10.35 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.31	Subscription Agreement dated June 28, 2000 among CNOOC Limited, CNOOC (BVI) Limited, Overseas Oil & Gas Corporation, Ltd., et al., incorporated by reference to Exhibit 10.36 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.32	Corporation Placing Agreement dated February 6, 2001 among CNOOC Limited, China National Offshore Oil Corporation, Shell Eastern Petroleum (Pte) Limited and Merrill Lynch Far East Limited, incorporated by reference to Exhibit 10.37 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission (File Number: 333-10862).
4.33	<a href="#"><u>Equity Transfer Agreement dated September 5, 2003 between CNOOC China Limited and CNOOC (Summary Translation), incorporated by reference to Exhibit 4.38 to our annual report on Form 20-F for fiscal year 2003 filed with the Securities and Exchange Commission (File Number: 1-14966).</u></a>

4.34	<a href="#"><u>Framework Agreement dated April 8, 2004 with CNOOC Finance Corporation Limited (Summary Translation), incorporated by reference to Exhibit 4.39 to our annual report on Form 20-F for fiscal year 2003 filed with the Securities and Exchange Commission (File Number: 1-14966).</u></a>
4.35	<a href="#"><u>Framework Agreement dated December 8, 2005 with CNOOC (Summary Translation), incorporated by reference to Exhibit 4.45 to our Annual Report on Form 20-F for fiscal year 2005 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.36	<a href="#"><u>Framework Agreement dated December 8, 2005 with China Oilfield Services Limited (Summary Translation), incorporated by reference to Exhibit 4.46 to our Annual Report on Form 20-F for fiscal year 2005 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.37	<a href="#"><u>Framework Agreement dated December 8, 2005 with Offshore Oil Engineering Co., Ltd. (Summary Translation), incorporated by reference to Exhibit 4.47 to our Annual Report on Form 20-F for fiscal year 2005 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.38	<a href="#"><u>Sale and Purchase Agreement, dated January 8, 2006 between CNOOC Exploration &amp; Production Limited and South Atlantic Petroleum Limited (certain statements, marked with an asterisk in brackets [ * ], have been omitted from this agreement pursuant to a request for confidential treatment pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended, and the omitted materials have been filed separately in paper form with the Securities and Exchange Commission), incorporated by reference to Exhibit 4.49 to our Annual Report on Form 20-F for fiscal year 2005 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.39	<a href="#"><u>Framework Agreement dated November 8, 2007 with China BlueChemical Ltd. (Summary Translation), incorporated by reference to Exhibit 4.37 to our Annual Report on Form 20-F for fiscal year 2007 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.40	<a href="#"><u>Framework Agreement dated November 8, 2007 with CNOOC (Summary Translation), incorporated by reference to Exhibit 4.38 to our Annual Report on Form 20-F for fiscal year 2007 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.41	<a href="#"><u>Framework Agreement dated November 8, 2007 with China Oilfield Services Limited (Summary Translation), incorporated by reference to Exhibit 4.39 to our Annual Report on Form 20-F for fiscal year 2007 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.42	<a href="#"><u>Framework Agreement dated November 8, 2007 with Offshore Oil Engineering Co., Ltd. (Summary Translation), incorporated by reference to Exhibit 4.40 to our Annual Report on Form 20-F for fiscal year 2007 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.43	<a href="#"><u>Framework Agreement dated November 1, 2010 with CNOOC (Summary Translation), incorporated by reference to Exhibit 4.43 to our Annual Report on Form 20-F for fiscal year 2010 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.44	<a href="#"><u>Arrangement Agreement dated July 23, 2012 among CNOOC Limited, CNOOC Canada Holding Ltd. and Nexen Inc., incorporated by reference to Exhibit 4.44 to our Annual Report on Form 20-F for fiscal year 2012 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>

4.45	<a href="#"><u>Framework Agreement dated November 6, 2013 with CNOOC (Summary Translation), incorporated by reference to Exhibit 4.45 to our Annual Report on Form 20-F for fiscal year 2014 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.46	<a href="#"><u>Framework Agreement dated November 15, 2016 with CNOOC (Summary Translation), incorporated by reference to Exhibit 4.46 to our Annual Report on Form 20-F for fiscal year 2016 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.47	<a href="#"><u>Framework Agreement dated December 1, 2016 with CNOOC Finance (Summary Translation), incorporated by reference to Exhibit 4.47 to our Annual Report on Form 20-F for fiscal year 2016 filed with the Securities and Exchange Commission (File number: 1-14966).</u></a>
4.48	<a href="#"><u>Framework Agreement dated November 1, 2019 with CNOOC (Summary Translation).</u></a>
4.49	<a href="#"><u>Financial Services Framework Agreement dated November 21, 2019 with CNOOC Finance (Summary Translation).</u></a>
8.1	<a href="#"><u>List of Subsidiaries.</u></a>
10.1	<a href="#"><u>Letter from CNOOC Limited dated May 23, 2002 regarding receipt of certain representations from Arthur Andersen &amp; Co pursuant to the requirements of the Securities and Exchange Commission, incorporated by reference to Exhibit 10 to our annual report on Form 20-F for fiscal year 2001 filed with the Securities and Exchange Commission (File Number: 1-14966).</u></a>
11.1	<a href="#"><u>Code of Ethics for Directors and Senior Officers, as amended in 2019.</u></a>
12.1	<a href="#"><u>Certification by the Chief Executive Officer in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
12.2	<a href="#"><u>Certification by the Chief Financial Officer in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
13.1	<a href="#"><u>Sarbanes-Oxley Act of 2002 Section 906 Certification furnished to (not filed with) the Securities and Exchange Commission.</u></a>
15.1	<a href="#"><u>2019 Reserves Report of Ryder Scott Company, L.P. (Certain Leasehold Interests and Certain Production Sharing Contracts)</u></a>
15.2	<a href="#"><u>2019 Reserves Report of Ryder Scott Company, L.P. (Pan American Energy SL)</u></a>
15.3	<a href="#"><u>2019 Reserves Report of Ryder Scott Company, L.P. (Certain Leasehold and Royalty Interests)</u></a>
15.4	<a href="#"><u>2019 Reserves Report of Gaffney, Cline &amp; Associates (Consultants) Pte Ltd. (Greater Angostura Fields)</u></a>
15.5	<a href="#"><u>2019 Reserves Report of Gaffney, Cline &amp; Associates (Consultants) Pte Ltd. (Missan Oil Fields)</u></a>
15.6	<a href="#"><u>2019 Reserves Report of RPS</u></a>
15.7	<a href="#"><u>2019 Reserves Report of DeGolyer and MacNaughton</u></a>
15.8	<a href="#"><u>2019 Reserves Audit Report of McDaniel &amp; Associates Consultants Ltd.</u></a>
15.9	<a href="#"><u>Letter from Ernst &amp; Young (incorporated by reference to Exhibit 15.7 of our Annual Report on Form 20-F (file No. 001-14966) filed with the Securities and Exchange Commission on April 17, 2014).</u></a>
15.10	<a href="#"><u>Consent from Ryder Scott Company, L.P.</u></a>
15.11	<a href="#"><u>Consent from Gaffney, Cline &amp; Associates (Consultants) Pte Ltd.</u></a>

15.12	<a href="#">Consent from RPS</a>
15.13	<a href="#">Consent from McDaniel &amp; Associates Consultants Ltd.</a>
15.14	<a href="#">Consent from DeGolyer and MacNaughton</a>
15.15	<a href="#">Consent from Deloitte Touche Tohmatsu</a>

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

CNOOC Limited

By: /s/ Xiaonan Wu  
Name: Xiaonan Wu  
Title: Joint Company Secretary

Date: April 22, 2020

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**CNOOC LIMITED**  
CONSOLIDATED FINANCIAL STATEMENTS  
FOR THE YEARS ENDED DECEMBER 31, 2017, 2018 AND 2019  
TOGETHER WITH REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of CNOOC Limited

**Opinion on the Financial Statements**

We have audited the accompanying consolidated statements of financial position of CNOOC Limited and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of profit or loss and other comprehensive income, consolidated statements of changes in equity, and consolidated statements of cash flows, for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board and Hong Kong Financial Reporting Standards as issued by the Hong Kong Institute of Certified Public Accountants.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 25, 2020 expressed an unqualified opinion on the Company's internal control over financial reporting.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM-continued**

**Convenience Translation**

Our audits also comprehended the translation of Renminbi amounts into United State dollar amounts and, in our opinion, such translation has been made in conformity with the basis stated in Note 3 to the consolidated financial statements. Such United States dollar amounts are presented solely for the convenience of readers in the United States of America.

**Critical Audit Matter**

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

***Impairment and provision; Depreciation, depletion and amortization-The estimation of oil and gas reserves has a significant impact on the consolidated financial statements, particularly oil and gas properties' impairment testing and depreciation, depletion and amortization charges — Refer to Notes 3 and 14 to the consolidated financial statements***

*Critical Audit Matter Description*

The estimation of oil and gas reserves has a significant impact on the consolidated financial statements, particularly oil and gas properties' impairment testing and depreciation, depletion and amortization charges. For the year ended December 31, 2019, oil and gas properties' impairment and provision, depreciation, depletion and amortization of RMB2,072 million and RMB54,451 million respectively were recognized.

We identified the estimation of oil and gas reserves as a critical audit matter because of the significant judgments made by the management in assessing quantities of reserves. This required extensive audit effort and a high degree of auditor judgment, when performing audit procedures to evaluate the reasonableness of the management’s assessment.

*How the Critical Audit Matter Was Addressed in the Audit*

Our procedures related to the estimation of oil and gas reserves included the following, among others:

- We tested the effectiveness of controls over reserves estimation and review process.
- We evaluated whether the methodology adopted by the Company’s internal and external reserve specialists to estimate oil and gas reserves was consistent with recognized industry standards.
- We evaluated the competence and objectivity of the reserve specialists to assess whether they were appropriately qualified to carry out the estimation of oil and gas reserves.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM-continued**

- We compared the Company’s oil and gas reserves volumes at December 31, 2019 to that at December 31, 2018, and performed corroborative inquires of the reserve specialists and the management as to the reason for any significant changes.
- We tested whether the updated estimation of oil and gas reserves was included appropriately in the Company’s consideration in oil and gas properties' impairment testing and depreciation, depletion and amortization charges.

**/s/ Deloitte Touche Tohmatsu**  
*Certified Public Accountants*  
Hong Kong  
March 25, 2020

We have served as the Company's auditor since 2013.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of CNOOC Limited

**Opinion on Internal Control over Financial Reporting**

We have audited the internal control over financial reporting of CNOOC Limited and subsidiaries (the "Company") as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control —Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2019 of the Company and our report dated March 25, 2020 expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the translation of Renminbi amounts into United States dollar amounts for the convenience of readers in the United States of America.

**Basis for Opinion**

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's annual report on internal control over financial reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM-continued**

**Definition and Limitations of Internal Control over Financial Reporting**

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

**/s/ Deloitte Touche Tohmatsu**  
*Certified Public Accountants*  
Hong Kong  
March 25, 2020

CNOOC LIMITED

CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE YEARS ENDED DECEMBER 31, 2017 (Restated), 2018 (Restated) AND 2019

(All amounts expressed in millions of Renminbi/US\$, except per share data)

	Notes	2017 RMB (restated)	2018 RMB (restated)	2019 RMB	2019 US\$
REVENUE					
Revenue recognized from contracts with customers					
Oil and gas sales	5	152,412	186,557	197,173	28,322
Marketing revenues	5	28,907	35,830	30,867	4,434
Other revenue		5,652	5,324	5,159	741
		186,971	227,711	233,199	33,497
EXPENSES					
Operating expenses		(24,410)	(24,388)	(24,735)	(3,553)
Taxes other than income tax	11 (ii)	(7,221)	(9,141)	(9,156)	(1,315)
Exploration expenses		(6,966)	(13,135)	(12,342)	(1,773)
Depreciation, depletion and amortization	7	(61,442)	(50,838)	(57,699)	(8,288)
Special oil gain levy	11 (iii)	(55)	(2,599)	(894)	(128)
Impairment and provision	7, 14	(9,185)	(666)	(2,094)	(301)
Crude oil and product purchases		(27,643)	(33,558)	(29,040)	(4,171)
Selling and administrative expenses		(7,010)	(7,429)	(8,062)	(1,158)
Others		(6,042)	(5,790)	(4,982)	(716)
		(149,974)	(147,544)	(149,004)	(21,403)
PROFIT FROM OPERATING ACTIVITIES		36,997	80,167	84,195	12,094
Interest income	7	655	798	1,067	153
Finance costs	8	(5,121)	(5,162)	(5,865)	(842)
Exchange gains/(losses), net		356	(141)	(213)	(31)
Investment income	7	2,409	3,685	4,632	665
Share of profits of associates	17	302	406	459	66
Profit/(loss) attributable to a joint venture	18	553	(5,593)	543	78
Other income, net		236	997	831	120
PROFIT BEFORE TAX	7	36,387	75,157	85,649	12,303
Income tax expense	11 (i)	(11,668)	(22,482)	(24,604)	(3,534)
PROFIT FOR THE YEAR ATTRIBUTABLE TO OWNERS OF THE PARENT		24,719	52,675	61,045	8,769
OTHER COMPREHENSIVE (EXPENSE)/INCOME					
Items that may be subsequently reclassified to profit or loss					
Exchange differences on translation of foreign operations		(10,121)	8,638	2,848	409
Share of other comprehensive income of associates		36	16	25	4
Other items that will not be reclassified to profit or loss					
Fair value change on equity investments designated as at fair value through other comprehensive income	19 (ii)	(542)	278	(1,167)	(168)
Others		54	80	(133)	(19)
OTHER COMPREHENSIVE (EXPENSE)/INCOME FOR THE YEAR, NET OF TAX		(10,573)	9,012	1,573	226
TOTAL COMPREHENSIVE INCOME FOR THE YEAR ATTRIBUTABLE TO OWNERS OF THE PARENT		14,146	61,687	62,618	8,995
EARNINGS PER SHARE ATTRIBUTABLE TO OWNERS OF THE PARENT					
Basic (RMB Yuan)	12	0.55	1.18	1.37	US\$0.20
Diluted (RMB Yuan)	12	0.55	1.18	1.37	US\$0.20

Details of the dividends proposed and paid for the year are disclosed in note 13 to the consolidated financial statements.

The accompanying notes are an integral part of these financial statements.

CNOOC LIMITED  
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION  
AS OF DECEMBER 31, 2018 (Restated) AND 2019  
(All amounts expressed in millions of Renminbi/US\$)

	Notes	2018 RMB (restated)	2019 RMB	2019 US\$
<b>NON-CURRENT ASSETS</b>				
Property, plant and equipment	14	413,383	440,554	63,282
Right-of-use assets	15	-	9,179	1,318
Intangible assets	16	16,073	16,306	2,342
Investments in associates	17	4,433	24,513	3,521
Investment in a joint venture	18	20,268	20,977	3,013
Debt investment		-	1,608	231
Equity investments	19, 36	4,066	2,936	422
Deferred tax assets	11 (i)	27,465	25,992	3,734
Other non-current assets	20	9,542	9,721	1,396
Total non-current assets		495,230	551,786	79,259
<b>CURRENT ASSETS</b>				
Inventories and supplies	21	5,853	6,314	907
Trade receivables	22	7,922	10,006	1,436
Due from related companies	32	15,210	15,300	2,198
Other financial assets	19, 36	125,283	114,513	16,449
Other current assets		8,128	9,278	1,333
Time deposits with maturity over three months	23	13,760	16,855	2,421
Cash and cash equivalents	23	14,995	33,679	4,838
Total current assets		191,151	205,945	29,582
<b>CURRENT LIABILITIES</b>				
Loans and borrowings	27	4,231	12,590	1,809
Borrowings from the parent company	32	4,760	-	-
Trade and accrued payables	24	13,679	19,828	2,848
Due to the parent company	32	147	3	-
Due to related companies	32	19,628	20,318	2,918
Lease liabilities	28	-	1,425	205
Contract liabilities	25	2,036	2,231	320
Other payables and accrued liabilities	26	13,937	20,898	3,002
Taxes payable		15,739	13,956	2,005
Total current liabilities		74,157	91,249	13,107
<b>NET CURRENT ASSETS</b>		116,994	114,696	16,475
<b>TOTAL ASSETS LESS CURRENT LIABILITIES</b>		612,224	666,482	95,734
<b>NON-CURRENT LIABILITIES</b>				
Loans and borrowings	27	133,479	136,152	19,557
Lease Liabilities	28	-	7,062	1,014
Provision for dismantlement	29	54,204	64,163	9,217
Deferred tax liabilities	11 (i)	3,180	3,602	517
Other non-current liabilities		1,451	7,277	1,045
Total non-current liabilities		192,314	218,256	31,350
Net Assets		419,910	448,226	64,384
<b>EQUITY</b>				
Equity attributable to owners of the parent				
Issued capital	30	43,081	43,081	6,188
Reserves	31	376,819	405,106	58,190
Non-controlling interests		10	39	6
<b>TOTAL EQUITY</b>		419,910	448,226	64,384

The accompanying notes are an integral part of these financial statements.

CNOOC LIMITED

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

FOR THE YEARS ENDED DECEMBER 31, 2017 (Restated), 2018 (Restated) AND 2019

(All amounts expressed in millions of Renminbi)

	Attributable to owners of the parent								
	Issued capital	Cumulative translation reserve	Statutory and non-distributable reserves	Other reserves	Retained earnings	Proposed final dividend	Total	Non-controlling interests	Total equity
Balance at January 1, 2017 (Originally Stated)	43,081	(2,517)	20,000	4,556	308,155	9,096	382,371	-	382,371
Impact of business combination under common control	-	-	-	2,633	314	-	2,947	-	2,947
Balance at January 1, 2017 (restated)	43,081	(2,517)	20,000	7,189	308,469	9,096	385,318	-	385,318
Profit for the year (restated)	-	-	-	-	24,719	-	24,719	-	24,719
Other comprehensive expense, net of income tax	-	(10,121)	-	(452)	-	-	(10,573)	-	(10,573)
Total comprehensive (expense)/income (restated)	-	(10,121)	-	(452)	24,719	-	14,146	-	14,146
2016 final dividend	-	-	-	-	183	(9,096)	(8,913)	-	(8,913)
2017 interim dividend	-	-	-	-	(7,587)	-	(7,587)	-	(7,587)
Proposed 2017 final dividend	-	-	-	-	(10,830)	10,830	-	-	-
Appropriation to reserve**	-	-	50,000	-	(50,000)	-	-	-	-
Others	-	-	-	1	(394)	-	(393)	-	(393)
Balance at December 31, 2017 (restated)	43,081	(12,638)*	70,000*	6,738*	264,560*	10,830*	382,571	-	382,571
Impact of adopting IFRS 15/HKFRS 15	-	-	-	-	(1,218)	-	(1,218)	-	(1,218)
Balance at January 1, 2018 (restated)	43,081	(12,638)	70,000	6,738	263,342	10,830	381,353	-	381,353
Profit for the year (restated)	-	-	-	-	52,675	-	52,675	-	52,675
Other comprehensive income, net of tax	-	8,638	-	374	-	-	9,012	-	9,012
Total comprehensive income (restated)	-	8,638	-	374	52,675	-	61,687	-	61,687
2017 final dividend	-	-	-	-	(463)	(10,830)	(11,293)	-	(11,293)
2018 interim dividend	-	-	-	-	(11,785)	-	(11,785)	-	(11,785)
Proposed 2018 final dividend	-	-	-	-	(15,221)	15,221	-	-	-
Disposal of investments in equity instruments at FVTOCI	-	-	-	-	(14)	-	(14)	-	(14)
Others	-	-	-	19	(67)	-	(48)	10	(38)
Balance at December 31, 2018 (restated)	43,081	(4,000)*	70,000*	7,131*	288,467*	15,221*	419,900	10	419,910

CNOOC LIMITED  
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY  
FOR THE YEARS ENDED DECEMBER 31, 2017 (Restated), 2018 (Restated) AND 2019 (continued)  
(All amounts expressed in millions of Renminbi)

	Attributable to owners of the parent						Total	Non-controlling interests	Total equity
	Issued capital	Cumulative translation reserve	Statutory and non-distributable reserves	Other reserves	Retained earnings	Proposed final dividend			
Balance at January 1, 2019	43,081	(4,000)	70,000	7,131	288,467	15,221	419,900	10	419,910
Profit for the year	-	-	-	-	61,045	-	61,045	-	61,045
Other comprehensive income, net of tax	-	2,848	-	(1,275)	-	-	1,573	-	1,573
Total comprehensive income	-	2,848	-	(1,275)	61,045	-	62,618	-	62,618
2018 final dividend	-	-	-	-	(489)	(15,221)	(15,710)	-	(15,710)
2019 interim dividend	-	-	-	-	(13,290)	-	(13,290)	-	(13,290)
Proposed 2019 final dividend	-	-	-	-	(18,055)	18,055	-	-	-
Acquisition of a subsidiary under common control	-	-	-	(5,331)	-	-	(5,331)	29	(5,302)
Balance at December 31, 2019	43,081	(1,152)*	70,000*	525*	317,678*	18,055*	448,187	39	448,226

\* These reserve accounts constitute the consolidated reserves of approximately RMB405,106 million (2018: RMB376,819 million) in the consolidated statement of financial position.

\*\* During the year ended December 31, 2017, CNOOC China Limited (the "CNOOC China"), the Company's wholly-owned subsidiary, appropriated RMB50,000 million of the general reserve fund.

The accompanying notes are an integral part of these financial statements.

CNOOC LIMITED					
CONSOLIDATED STATEMENTS OF CASH FLOWS					
FOR THE YEARS ENDED DECEMBER 31, 2017 (Restated), 2018 (Restated) AND 2019					
(All amounts expressed in millions of Renminbi/US\$)					
	Notes	2017 RMB (restated)	2018 RMB (restated)	2019 RMB	2019 US\$
CASH FLOWS FROM OPERATING ACTIVITIES					
Cash generated from operations	34	111,136	140,082	145,979	20,969
Income taxes paid		(16,085)	(15,684)	(22,458)	(3,226)
Net cash flows from operating activities		95,051	124,398	123,521	17,743
CASH FLOWS FROM INVESTING ACTIVITIES					
Acquisition of oil and gas properties		-	(264)	(5,619)	(807)
Capital expenditure		(48,068)	(51,002)	(66,395)	(9,537)
Additions to investments in associates		(161)	(64)	(7,707)	(1,107)
Decrease/(increase) in time deposits with maturity over three months		1,450	1,620	(3,095)	(445)
Dividends received from associates		116	162	231	33
Dividends received from a joint venture		243	132	172	25
Interest received		666	872	923	133
Investment income received		1,821	2,721	3,822	549
Purchase of other financial assets		(122,267)	(178,100)	(187,805)	(26,977)
Purchase of equity investments		(51)	(39)	-	-
Proceeds from sale of other financial assets		101,396	127,903	197,952	28,434
Proceeds from sale of equity investments		-	17	-	-
Proceeds from disposal of property, plant and equipment		110	590	64	9
Net cash flows used in investing activities		(64,745)	(95,452)	(67,457)	(9,690)
CASH FLOWS FROM FINANCING ACTIVITIES					
Proceeds from issuance of guaranteed notes		-	9,952	10,464	1,503
Repayment of guaranteed notes		(8,869)	(4,976)	(2,067)	(297)
Repayments of lease liabilities		-	-	(1,451)	(208)
Proceeds from bank loans		12,737	2,874	3,846	552
Repayment of bank loans		(13,052)	(6,133)	(8,206)	(1,179)
Dividends paid		(16,842)	(23,589)	(28,973)	(4,162)
Interest paid		(5,250)	(5,264)	(5,998)	(861)
Acquisition of a subsidiary under common control		-	-	(5,335)	(766)
Others		-	28	29	4
Net cash flows used in financing activities		(31,276)	(27,108)	(37,691)	(5,414)
NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS		(970)	1,838	18,373	2,639
Cash and cash equivalents at beginning of year		14,134	12,949	14,995	2,154
Effect of foreign exchange rate changes, net		(215)	208	311	45
CASH AND CASH EQUIVALENTS AT END OF YEAR	23	12,949	14,995	33,679	4,838

Total cash outflow for leases amounted to RMB2,453 million.

The accompanying notes are an integral part of these financial statements.

CNOOC LIMITED  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(All amounts expressed in millions of Renminbi unless otherwise stated)

1. CORPORATE INFORMATION

CNOOC Limited (the "Company") was incorporated in the Hong Kong Special Administrative Region ("Hong Kong") of the People’s Republic of China (the "PRC") on 20 August 1999 to hold the interests in certain entities thereby creating a group comprising the Company and its subsidiaries (hereinafter collectively referred to as the "Group"). During the year, the Group was principally engaged in the exploration, development, production and sale of crude oil and natural gas.

The registered office address of the Company is 65/F, Bank of China Tower, 1 Garden Road, Hong Kong.

In the opinion of the directors of the Company (the "Directors"), the parent and the ultimate holding company of the Company is China National Offshore Oil Corporation ("CNOOC"), a company established in the PRC.

Particulars of the principal subsidiaries at the end of the reporting period are as follows:

Name of entity	Place of establishment	Nominal value of ordinary shares issued and paid-up/ registered capital	Percentage of equity attributable to the Group	Principal activities
Directly held subsidiaries:				
CNOOC China Limited <sup>(1)</sup>	Tianjin, PRC	RMB20 billion	100%	Offshore petroleum and natural gas exploration, development, production and sales, and shale gas exploration in the PRC
China Offshore Oil (Singapore) International Pte Ltd	Singapore	SG\$3 million	100%	Sales and marketing of petroleum and natural gas products outside the PRC
CNOOC International Limited	British Virgin Islands	US\$20,000,000,002	100%	Investment holding
CNOOC Finance (2003) Limited	British Virgin Islands	US\$1,000	100%	Bond issuance
CNOOC Finance (2011) Limited	British Virgin Islands	US\$1,000	100%	Bond issuance
CNOOC Finance (2012) Limited	British Virgin Islands	US\$1,000	100%	Bond issuance
CNOOC Finance (2013) Limited	British Virgin Islands	US\$1,000	100%	Bond issuance
CEPR Limited <sup>(2)</sup>	Hong Kong, PRC	EUR1,000	100%	Investment holding
Indirectly held subsidiaries <sup>(3)</sup> :				
CNOOC Deepwater Development Limited <sup>(1) (4)</sup>	Zhuhai, PRC	RMB20.78 billion	100%	Deepwater and low-grade oil and gas fields exploitation in the PRC and exploration, development, production and sales of oil and gas in the oil and gas fields of South China Sea
China United Coalbed Methane Corporation Limited	Beijing, PRC	RMB1.311 billion	100%	Coalbed methane exploration and sales, Coalbed methane surface exploration, gas mineral prospecting, shallow gas development and utilization in the coalbed methane fields in the PRC
CNOOC Southeast Asia Limited	Bermuda	US\$12,000	100%	Investment holding
CNOOC SES Ltd.	Malaysia	US\$1	100%	Petroleum and natural gas exploration, development and production in Indonesia
CNOOC Muturi Limited	Isle of Man	US\$7,780,770	100%	Petroleum and natural gas exploration, development and production in Indonesia
CNOOC NWS Private Limited	Singapore	SG\$2	100%	Offshore petroleum and natural gas exploration, development and production in Australia
CNOOC Exploration & Production Nigeria Limited	Nigeria	NGN10 million	100%	Petroleum and natural gas exploration, development and production in Africa
CNOOC Iraq Limited	British Virgin Islands	US\$1	100%	Providing services of petroleum and natural gas exploration and development in the Republic of Iraq

CNOOC LIMITED  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(All amounts expressed in millions of Renminbi unless otherwise stated)

1. CORPORATE INFORMATION (continued)

Name of entity	Place of establishment	Nominal value of ordinary shares issued and paid-up/registered capital	Percentage of equity attributable to the Group	Principal activities
Indirectly held subsidiaries <sup>(3)</sup> (continued):				
CNOOC Canada Energy Ltd.	Canada	100 common shares without a par value 103,000 preferred shares without a par value	100%	Oil sands exploration, development and production in Canada
CNOOC Uganda Ltd	Uganda	1 million Uganda Shilling	100%	Petroleum and natural gas exploration, development and production in Africa
CNOOC Petroleum North America ULC	Canada	13,671,421,700 common shares without a par value	100%	Petroleum and natural gas exploration, development and production in Canada
CNOOC Petroleum Europe Limited <sup>(5)</sup>	England and Wales	GBP98,009,131	100%	Petroleum and natural gas exploration, development and production in the UK
Nexen Petroleum Nigeria Limited	Nigeria	NGN30 million	100%	Petroleum and natural gas exploration, development and production in Nigeria
CNOOC Energy U.S.A. LLC	USA	N/A	100%	Petroleum and natural gas exploration, development and production in the USA
CNOOC Petroleum Offshore U.S.A. Inc. <sup>(6)</sup>	USA	US\$15,830	100%	Petroleum and natural gas exploration, development and production in the USA
CNOOC Oil Sands Canada <sup>(4)</sup>	Canada	N/A	100%	Petroleum and natural gas exploration, development and production in Canada
CNOOC PETROLEUM BRASIL LTDA <sup>(7)</sup>	Brazil	R\$6,778,134,300	100%	Petroleum and natural gas exploration, development and production in Brazil
CNOOC Finance (2014) ULC <sup>(8)</sup>	Canada	100 common shares without a par value	100%	Bond issuance
CNOOC Finance (2015) U.S.A. LLC	USA	N/A	100%	Bond Issuance
CNOOC Finance (2015) Australia Pty Ltd	Australia	US\$1	100%	Bond Issuance

- (1) Registered as a wholly foreign owned enterprise under the PRC law.
- (2) CEPR Limited ("CEPR") was incorporated on May 31, 2019.
- (3) All subsidiaries are indirectly held through CNOOC International Limited, except CNOOC Deepwater Development Limited and China United Coalbed Methane Corporation Limited which are indirectly held through CNOOC China.
- (4) The registered capital of CNOOC Deepwater Development Limited increased from 20.3 billion to 20.78 billion on December 26, 2019.
- (5) Nexen Petroleum U.K. Limited changed its name to CNOOC Petroleum Europe Limited on January 14, 2019.
- (6) Nexen Petroleum Offshore U.S.A. Inc. changed its name to CNOOC Petroleum Offshore U.S.A. Inc. on January 1, 2019.
- (7) The registered capital of CNOOC PETROLEUM BRASIL LTDA increased from R\$3,565,600,000 to R\$6,778,134,300 on December 26, 2019.
- (8) CNOOC Nexen Finance (2014) ULC changed its name to CNOOC Finance (2014) ULC on June 25, 2019.

CNOOC LIMITED  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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1. CORPORATE INFORMATION (continued)

The above table lists the subsidiaries of the Company which, in the opinion of the Directors, principally affected the results for the year or formed a substantial portion of the total assets of the Group. To give details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

2.1 STATEMENT OF COMPLIANCE

These financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board (the "IASB"), Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA"), the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules") and the Companies Ordinance (Cap. 622 of the Laws of Hong Kong) (the "Companies Ordinance"). A summary of the significant accounting policies adopted by the Group is set out below.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The IASB has issued a number of new and amendments to IFRS standards that are first effective for the current accounting year commencing January 1, 2019 or later but available for early adoption. The equivalent new and amendments to HKFRSs consequently issued by the HKICPA have the same effective dates as those issued by the IASB and are in all material aspects identical to the pronouncements issued by the IASB.

The accounting policies adopted are consistent with those of the year ended December 31, 2018, except for the first time adoption of the new and amendments to IFRS standards/HKFRSs effective for the Group's financial year beginning on January 1, 2019. Except as described below, the application of the new and amendments to IFRS standards/HKFRSs in the current year has had no material impact on the accounting policies, the disclosures or the amounts recognized in the consolidated financial statements of the Group.

2.2.1 IFRS 16/HKFRS 16 Leases

The Group has applied IFRS 16/HKFRS 16 for the first time in the current year. IFRS 16/HKFRS 16 superseded IAS 17/ HKAS 17 Leases ("IAS 17/HKAS 17") and the related interpretations.

Definition of a lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified or arising from business combinations, the Group assesses whether a contract is or contains a lease based on the definition at inception, modification date or acquisition date, as appropriate.

As a lessee

The Group has applied IFRS 16/HKFRS 16 retrospectively with the cumulative effect recognized at the date of initial application, January 1, 2019. Any difference at the date of initial application is recognized in the opening retained earnings and comparative information has not been restated.

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2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

2.2.1 IFRS 16/HKFRS 16 Leases (continued)

As a lessee (continued)

When applying the modified retrospective approach under IFRS 16/HKFRS 16 at transition, the Group applied the following practical expedients to leases previously classified as operating leases under IAS 17/HKAS 17, on lease-by-lease basis, to the extent relevant to the respective lease contracts:

- i. relied on the assessment of whether leases are onerous by applying IAS 37/HKAS 37 *Provisions, Contingent Liabilities and Contingent Assets* as an alternative of impairment review;
- ii. elected not to recognize right-of-use assets and lease liabilities for leases with lease term ends within 12 months of the date of initial application;
- iii. excluded initial direct costs from measuring the right-of-use assets at the date of initial application;
- iv. applied a single discount rate to a portfolio of leases with a similar remaining terms for similar class of underlying assets in similar economic environment. Specifically, the Group applies different discount rates to certain domestic and overseas leases on a portfolio basis; and
- v. used hindsight based on facts and circumstances as at date of initial application in determining the lease term for the Group's leases with extension and termination options.

On transition, the Group has made the following adjustments upon application of IFRS 16/HKFRS 16:

The Group recognized additional lease liabilities of RMB8,373 million upon application of IFRS 16/HKFRS 16 and right-of- use assets at amounts equal to the related lease liabilities by applying IFRS 16/HKFRS 16.C8(b)(ii) transition, adjusted by accrued lease payments and any reclassification of property, plant and equipment, leasehold lands at January 1, 2019.

When recognizing the lease liabilities for leases previously classified as operating leases, the Group has applied incremental borrowing rates of the relevant group entities at the date of initial application. The lessee’s incremental borrowing rates ranged from 3.3%-5.16%.

	At January 1, 2019
Operating lease commitments disclosed as at December 31, 2018	16,372
Lease liabilities discounted at relevant incremental borrowing rates	13,226
Add: Lease liabilities resulting from lease modifications of existing leases	2,359
Less: Recognition exemption – short-term leases	(768)
Exclusion of non-lease components	(6,444)
Lease liabilities relating to operating leases recognized upon application of IFRS16/HKFRS 16	8,373
Add: Obligations under finance leases recognized as at December 31, 2018	766
Lease liabilities as at January 1, 2019	9,139
Analyzed as: Current	3,614
Non-current	5,525
Total lease liabilities	9,139

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2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

2.2.1 IFRS 16/HKFRS 16 Leases (continued)

As a lessee (continued)

The carrying amount of right-of-use assets as at January 1, 2019 comprises the following:

	At January 1, 2019
By class:	
Floating production, storage and offloading ("FPSO") vessels	7,334
Pipeline	755
Buildings and structures	739
Leasehold lands	666
Equipment	274
Total right-of-use assets	9,768

The following adjustments were made to the amounts recognized in the consolidated statement of financial position at January 1, 2019. Line items that were not affected by the changes have not been included.

		Carrying amounts at December 31, 2018 (restated)	Adjustments	Carrying amounts under IFRS 16/HKFRS 16 at January 1, 2019
<b>Non-current Assets</b>				
Property, plant and equipment	*	413,383	(755)	412,628
Right-of-use assets	*/**	-	9,768	9,768
Other non-current assets	**	9,542	(666)	8,876
<b>Current Liabilities</b>				
Lease liabilities	*	-	(3,614)	(3,614)
Other payables and accrued liabilities	*/***	(14,084)	128	(13,956)
<b>Non-current liabilities</b>				
Lease liabilities	*	-	(5,525)	(5,525)
Other non-current liabilities	*	(1,451)	664	(787)

- \*

In relation to assets previously under finance leases, the Group recategorized the carrying amounts of the relevant assets which were still under lease as at January 1, 2019 amounting to RMB755 million as right-of-use assets.
- \*\*

Payments for leasehold lands included in other non-current assets were recategorized as right-of-use assets.
- \*\*\*

The amount includes balances with related parties.
- Note:

For the purpose of reporting cash flows for the year ended December 31, 2019, movements in working capital have been computed based on opening statement of financial position as at January 1, 2019 as disclosed above.

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2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

2.2.2 IFRIC 23/HK(IFRIC)- Int 23 Uncertainty over Income Tax Treatments

IFRIC 23/HK(IFRIC)-Int 23 sets out how to determine the accounting tax position when there is uncertainty over income tax treatments. The interpretation requires the Group to determine whether uncertain tax positions are assessed separately or as a group and assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by individual group entities in their respective income tax filings. If it is probable, the current and deferred taxes are determined consistently with the tax treatment in the income tax filings. If it is not probable that the relevant taxation authority will accept an uncertain tax treatment, the effect of each uncertainty is reflected by using either the most likely amount or the expected value.

The Group applied this interpretation retrospectively with the cumulative effect of initially applying the interpretation recognized at the date of initial application, January 1, 2019, without restating comparatives. The application of this interpretation in the current period has had no material impact on the consolidated financial statements of the Group.

The Group has not applied the following new and amendments to IFRS standards/HKFRSs, which may be relevant to the Group and have been issued but are not yet effective, in these consolidated financial statements:

IFRS 17/HKFRS 17	Insurance Contracts <sup>1</sup>
Amendments to IFRS 3/HKFRS 3	Definition of a Business <sup>2</sup>
Amendments to IFRS 10/HKFRS 10	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture <sup>3</sup>
Amendments to IAS 1	Classification of Liabilities as Current or Non-current <sup>5</sup>
Amendments to IAS 1/HKAS 1 and IAS 8/HKAS 8	Definition of Material <sup>4</sup>
Amendments to IFRS 9/HKFRS 9, IAS 39/HKAS 39 and IFRS 7/HKFRS 7	Interest Rate Benchmark Reform <sup>4</sup>
<div><div>1.</div><div>Effective for annual periods beginning on or after January 1, 2021</div></div> <div><div>2.</div><div>Effective for business combinations and asset acquisitions for which the acquisition date is on or after the beginning of the first annual period beginning on or after January 1, 2020</div></div> <div><div>3.</div><div>Effective for annual periods beginning on or after a date to be determined</div></div> <div><div>4.</div><div>Effective for annual periods beginning on or after January 1, 2020</div></div> <div><div>5.</div><div>Effective for annual periods beginning on or after January 1, 2022</div></div>	

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of preparation

These consolidated financial statements have been prepared under the historical cost convention, except for as detailed in the accounting policies notes hereafter. These consolidated financial statements are presented in Renminbi ("RMB") and all values are rounded to the nearest million except when otherwise indicated.

Basis of consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries for the year ended December 31, 2019.

The results of subsidiaries are consolidated from the date of acquisition, being the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases. The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies.

The results of subsidiaries are included in the Company’s statement of profit or loss and other comprehensive income to the extent of dividends received and receivable. The Company’s interests in subsidiaries are stated at cost less any impairment losses.

All intra-group balances, income and expenses, unrealized gains and losses and dividends resulting from intra-group transactions are eliminated in full.

Business combinations and goodwill

Business combinations, other than business combinations under common control, are accounted for using the acquisition method. The consideration transferred is measured at acquisition date fair value which is the sum of the acquisition date fair values of assets transferred by the Group, liabilities assumed by the Group from the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. For each business combination, the Group elects whether it measures the non-controlling interests in the acquiree either at fair value or at the proportionate share of the acquiree’s identifiable net assets. Acquisition-related costs incurred are included in profit or loss.

If the business combination is achieved in stages, the Group’s previously held equity interest in the acquiree is remeasured to fair value at the acquisition date through profit or loss or other comprehensive income, as appropriate.

Any contingent consideration to be transferred by the acquirer is recognized at fair value at the acquisition date. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is remeasured to fair value at subsequent reporting dates, with the corresponding gain or loss being recognized in profit or loss.

Goodwill is initially measured at cost, being the excess of the aggregate of the purchase consideration, the amount recognized for non-controlling interests and any fair value of the Group’s previously held equity interests in the acquiree over the identifiable net assets acquired and liabilities assumed. If the sum of this consideration and other items is lower than the fair value of the net assets of the business acquired, the difference is recognized in profit or loss as a gain on bargain purchase.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Business combinations and goodwill (continued)

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. Goodwill is tested for impairment annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired. For goodwill arising on an acquisition in a reporting period, the cash-generating unit (or group of cash-generating units) to which goodwill has been allocated is tested for impairment before the end of that reporting period.

For the purposes of impairment testing, goodwill is allocated to each of the Group’s cash-generating units (or group of cash-generating units) that is expected to benefit from the synergies of the combination, which represent the lowest level at which the goodwill is monitored for internal management purposes and not larger than an operating segment.

Impairment is determined by assessing the recoverable amount of the exploration and production ("E&P") segment, using value in use, to which the goodwill relates. Where the recoverable amount of the cash-generating unit (or group of cash-generating units) is less than the carrying amount, an impairment loss on goodwill is recognized. An impairment loss recognized for goodwill is not reversed in a subsequent period.

Where goodwill has been allocated to a cash-generating unit (or group of cash-generating units) and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on the disposal. Goodwill disposed of in these circumstances is measured based on the relative value of the operation disposed of and the portion of the cash-generating unit (or group of cash-generating units) retained.

Subsidiaries

Subsidiaries are all those entities over which the Group has power over the investee such that the Group is able to direct the relevant activities, has exposure or rights to variable returns from its involvement with the investee and has the ability to use its power over the investee to affect the amount of the investor’s returns.

Associates

Based on the Group’s ownership percentage (considering its direct ownership as well as potentially exercisable or convertible shares) and other contractual terms, the Group has significant influence over its associates, rather than the power to control.

The Group’s investments in associates are stated in the consolidated statement of financial position at the Group’s share of net assets under the equity method of accounting, less any impairment losses. Necessary adjustments are made to bring into line any dissimilar accounting policies that may exist. Under the equity method, an investment in an associate is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group’s share of the profit or loss and other comprehensive income of the associate. Unrealized gains and losses resulting from transactions between the Group and its associates are eliminated to the extent of the Group’s investments in the associates, except where unrealized losses provide evidence of an impairment of the asset transferred. Goodwill arising from the acquisition of associates is included as part of the Group’s investments in associates and is not individually tested for impairment.

Joint arrangements

Certain of the Group’s activities are conducted through joint arrangements. Joint arrangements are classified as either a joint operation or joint venture, based on the rights and obligations arising from the contractual obligations between the parties to the arrangement.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Joint arrangements (continued)

Joint control

Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Joint operations

Some arrangements have been assessed by the Group as joint operations as both parties to the contract are responsible for the assets and obligations in proportion to their respective interest, whether or not the arrangement is structured through a separate vehicle. This evaluation applies to both the Group’s interests in production sharing arrangements and certain joint operation.

The Group entered into numerous production sharing arrangements or similar agreements in China and overseas countries. The Group’s participating interest may vary in each arrangement. The Group, as one of the title owners under certain exploration and/or production licenses or permits, is required to bear exploration (with some exceptions in China), development and operating costs together with other co-owners based on each owner’s participating interest. Once production occurs, a certain percentage of the annual production or revenue is first distributed to the local government, which, in most cases, with the nature of royalty and other taxes or expenses, and the rest of the annual production or revenue is allocated among the co-owners.

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the IFRS standards/HKFRSs applicable to the particular assets, liabilities, revenues and expenses.

Joint venture

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The Group’s investments in joint ventures are stated in the consolidated statement of financial position at the Group’s share of net assets under the equity method of accounting, less any impairment losses. Necessary adjustments are made to bring into line any dissimilar accounting policies that may exist. Under the equity method, an investment in a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group’s share of the profit or loss and other comprehensive income of the joint venture. Where the profit sharing ratios are different to the Group’s equity interest, the share of post-acquisition results of the joint ventures is determined based on the agreed profit sharing ratio. Unrealized gains and losses resulting from transactions between the Group and its joint ventures are eliminated to the extent of the Group’s investments in the joint ventures, except where unrealized losses provide evidence of an impairment of the asset transferred. Goodwill arising from the acquisition of joint ventures is included as part of the Group’s investments in joint ventures and is not individually tested for impairment.

Related parties

A party is considered to be related to the Group if:

- (a) the party is a person or a close member of that person's family and that person
  - (i) has control or joint control of the Group;
  - (ii) has significant influence over the Group; or
  - (iii) is a member of the key management personnel of the Group or of a parent of the Group;

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Related parties (continued)

- (b) the party is an entity where any of the following conditions applies:
- (i) the entity and the Group are members of the same group;
  - (ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);
  - (iii) the entity and the Group are joint ventures of the same third party;
  - (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;
  - (v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;
  - (vi) the entity is controlled or jointly controlled by a person identified in (a);
  - (vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and
  - (viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Company or to the parent of the Company.

Impairment of non-financial assets other than goodwill

Where an indication of impairment exists, or when annual impairment testing for an asset is required (other than inventories, deferred tax assets and goodwill), the asset’s recoverable amount is estimated. An asset’s recoverable amount is the higher of the asset’s value in use and its fair value less costs of disposal, and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss is recognized only if the carrying amount of an asset exceeds its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. An impairment loss is charged to profit or loss in the period in which it arises in those expense categories consistent with the function of the impaired asset.

An assessment is made at the end of each reporting period as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such an indication exists, the recoverable amount is estimated. A previously recognized impairment loss of an asset other than goodwill is reversed only if there has been a change in the estimates used to determine the recoverable amount of that asset, but not to an amount higher than the carrying amount that would have been determined (net of any depreciation/amortization) had no impairment loss been recognized for the asset in prior years. A reversal of such an impairment loss is credited to profit or loss in the period in which it arises.

Property, plant and equipment

Property, plant and equipment comprise oil and gas properties, and vehicles and office equipment and others.

(a) Oil and gas properties

For oil and gas properties, the successful efforts method of accounting is adopted. The Group capitalizes the initial acquisition costs of oil and gas properties. Impairment of initial acquisition costs is recognized based on exploratory experience and management judgement and charged to profit and loss as exploration expenses. Upon discovery of commercial reserves, acquisition costs are transferred to prove properties. The costs of drilling and equipping successful exploratory wells, all development expenditures on construction, installation or completion of infrastructure facilities such as platforms, pipelines, processing plants and the drilling of development wells and the building of enhanced recovery facilities, including those renewals and betterments that extend the economic lives of the assets, and the related borrowing costs are capitalized. The costs of unsuccessful exploratory wells and all other exploration costs are expensed as incurred.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Property, plant and equipment (continued)

(a) Oil and gas properties (continued)

The Group carries exploratory well costs as an asset when the well has found a sufficient quantity of reserves to justify its completion as a producing well and where the Group is making sufficient progress assessing the reserves and the economic and operating viability of the project. Exploratory well costs not meeting these criteria are charged to expenses. Exploratory wells that discover potentially economic reserves in areas where major capital expenditure will be required before production would begin and when the major capital expenditure depends upon the successful completion of further exploratory work remain capitalized and are reviewed periodically for impairment.

Producing oil and gas properties are depreciated on a unit-of-production basis over the proved developed reserves. Common facilities that are built specifically to service production directly attributed to designated oil and gas properties are depreciated based on the proved developed reserves of the respective oil and gas properties on a pro-rata basis. Common facilities that are not built specifically to service identified oil and gas properties are depreciated using the straight-line method over their estimated useful lives. Costs associated with significant development projects are not depreciated until commercial production commences and the reserves related to those costs are excluded from the calculation of depreciation.

Capitalized acquisition costs of proved properties are depreciated on a unit-of-production method over the total proved reserves of the relevant oil and gas properties.

(b) Vehicles, office equipment and others

Vehicles, office equipment and others are stated at cost less accumulated depreciation and impairment losses. The straight-line method is adopted to depreciate the cost less any estimated residual value of these assets over their expected useful lives. The useful lives of vehicles, office equipment and other assets are in line with their beneficial periods.

Where parts of an item of property, plant and equipment have different useful lives, the cost of that item is allocated on a recoverable basis among the parts and each part is depreciated separately.

Residual values, useful lives and the depreciation method are reviewed and, adjusted if appropriate, at each reporting date.

Any gains and losses on disposals of property, plant and equipment (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) are recognized in profit or loss.

**Intangible assets other than goodwill**

The intangible assets of the Group comprise software and others, gas processing rights under NWS Project, marketing transportation and storage contracts, exploration rights. Intangible assets with finite lives are carried at cost, less accumulated amortization and accumulated impairment losses. The cost of intangible assets acquired in a business combination is the fair value as at the date of acquisition. Intangible assets with finite lives except for gas processing rights, are amortized on the straight-line basis over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at each financial year end.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Intangible assets other than goodwill (continued)

The intangible assets regarding software have been amortized on the straight-line basis over their respective useful lives. The intangible asset regarding the gas processing rights has been amortized upon the commercial production of the liquefied natural gas on a unit-of-production basis over the total proved reserves of the relevant asset. The intangible assets regarding the marketing transportation and storage contracts and drilling rig contracts are amortized over the life of the contracts on the straight-line basis. The intangible assets related to the exploration rights are amortized over the estimated useful life.

Major maintenance and repairs

Expenditure on major maintenance refits and repairs comprises the costs of replacement assets or parts of assets and overhaul costs. Where an asset or part of an asset that is separately depreciated and is replaced, and it is probable that future economic benefits associated with the item will flow to the Group, the replacement expenditure is capitalized. Where part of the asset is not separately considered as a component, the replacement value is used to estimate the carrying amount of the replaced assets which is immediately written off. All other maintenance costs are expensed as incurred.

Research and development costs

All research costs are expensed as incurred.

Expenditure (other than that relating to oil and gas properties discussed above) incurred on projects to develop new products is capitalized and deferred only when the Group can demonstrate the technical feasibility of completing the intangible asset so that it will be available for use or sale, its intention to complete and its ability to use or sell the asset, how the asset will generate future economic benefits, the availability of resources to complete the project and the ability to measure reliably the expenditure during the development. Product development expenditure which does not meet these criteria is expensed when incurred.

Financial assets

Financial assets are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with IFRS 15/HKFRS 15. All recognized financial assets are subsequently measured in their entirety at either amortized cost or fair value, depending on the classification of the financial assets.

(a) Financial assets at amortized cost

Debt instruments that meet the following conditions are subsequently measured at amortized cost less impairment loss:

- the asset is held within a business model whose objective is to hold assets in order to collect contractual cash flows; and
- the contractual terms of the instrument give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

All other financial assets are subsequently measured at fair value.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial assets (continued)

(a) Financial assets at amortized cost (continued)

The effective interest method is a method of calculating the amortized cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that accurately discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

(b) Financial assets at fair value through other comprehensive income (FVTOCI)

On initial recognition, the Group can make an irrevocable election (on an instrument-by-instrument basis) to designate investments in equity instruments as at FVTOCI. The Group has investments in certain equity instruments (publicly traded or non-publicly traded), the purpose of which are not held for trading, but held for medium or long-term strategic purpose. Therefore, those investments in equity instruments are designated as at FVTOCI.

Investments in equity instruments at FVTOCI are initially measured at fair value plus transaction costs. Subsequently, they are measured at fair value with gains or losses arising from changes in fair value recognized in other comprehensive income and accumulated in other reserves. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the investments.

Dividends from these investments in equity instruments are recognized in profit or loss when the Group’s right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

(c) Financial assets at fair value through profit or loss (FVTPL)

Financial assets that do not meet the criteria for being measured at amortized cost or FVTOCI or designated as at FVTOCI are measured at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any gains or losses arising on remeasurement recognized in profit or loss.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Fair value

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations, without any deduction for transaction costs.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm’s length market transactions; reference to the current fair value of another instrument that is substantially the same; a discounted cash flow analysis or other valuation models.

An analysis of fair values of financial instruments and further details as to how they are measured are provided in note 36.

Impairment of financial assets

The Group performs impairment assessment under expected credit loss ("ECL") model on financial assets (including cash and cash equivalents, time deposits with maturity over three months, trade receivables, other receivables and debt investment), which are subject to impairment under IFRS 9/HKFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL ("12m ECL") represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessment is done based on the Group’s historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognizes lifetime ECL for trade receivables without significant financing component.

For all other instruments, the Group measures the loss allowance equal to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, in which case the Group recognizes lifetime ECL. The assessment of whether lifetime ECL should be recognized is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment of financial assets (continued)

Significant increase in credit risk (continued)

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

Credit-impaired financial assets

A financial asset is credit-impaired when one or more events of default that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past due event;
- the lenders of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession that the lenders would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- the disappearance of an active market for that financial asset because of financial difficulties; or
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment of financial assets (continued)

*Write-off policy*

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery. Financial assets written off may still be subject to enforcement activities under the Group’s recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognized in profit or loss.

*Measurement and recognition of ECL*

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and all the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition.

The Group recognizes an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade receivables and other receivables where the corresponding adjustment is recognized through a loss allowance account.

Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- (i) The contractual rights to receive cash flows from the asset have expired; or
- (ii) the Group has transferred its rights to receive cash flows from the asset, or the Group retains the contractual rights to receive the cash flows from the asset, but has assumed an obligation to pay the received cash flows in full without material delay to a third party under a "pass-through" arrangement; and either (a) has transferred substantially all the risks and rewards of the asset, or (b) has neither transferred nor retained substantially all the risks and rewards of the asset, but has no control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risk and rewards of ownership of the asset. When it has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the Group continues to recognize the transferred asset to the extent of the Group’s continuing involvement. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Financial liabilities at amortized cost (including interest-bearing loans and borrowings)

Financial liabilities including trade and accrued payables, other payables, and interest-bearing loans and borrowings are initially stated at fair value including directly attributable transaction costs and are subsequently measured at amortized cost, using the effective interest method.

Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the amortization process.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Derecognition of financial liabilities

Financial liabilities are derecognized when the obligations under the liabilities are discharged, cancelled, or have expired.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference between the respective carrying amounts is recognized in profit or loss.

Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the consolidated statement of financial position, if and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Inventories and supplies

Inventories primarily consist of oil and supplies, including items for repairs and maintenance of oil and gas properties. Inventories are stated at the lower of cost and net realisable value. Costs of inventories and supplies represent purchase or production cost of goods and are determined on a weighted average basis.

Cash and cash equivalents

Cash and cash equivalents comprise cash at banks and on hand and short term deposits with an original maturity of three months or less.

Provisions

(a) General

A provision is recognized when a present obligation (legal or constructive) has arisen as a result of a past event and it is probable that a future outflow of resources will be required to settle the obligation, provided that a reliable estimate can be made of the amount of the obligation. When the effect of discounting is material, the amount recognized for a provision is the present value at the reporting date of the future expenditures expected to be required to settle the obligation. The increase in the discounted present value amount arising from the passage of time is included in profit or loss.

(b) Dismantlement liability

Dismantlement liability is recognized when the Group has a present legal or constructive obligation as a result of the past events, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. A corresponding amount equivalent to the provision is also recognized as part of the cost of the related property, plant and equipment. The amount recognized is the estimated cost of dismantlement, discounted to its present value using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Changes in the estimated timing of dismantlement or dismantlement cost estimates are dealt with prospectively by recording an adjustment to the provision, and a corresponding adjustment to property, plant and equipment. The unwinding of the discount on the dismantlement provision is included as a finance cost.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Income tax

Income tax comprises current and deferred tax. Income tax is recognized in the consolidated statement of profit or loss and other comprehensive income, either as an expense as it relates to operating activities or as a component of the applicable categories of other comprehensive income or expense.

Current tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantially enacted, by the reporting date, in the countries where the Group operates and generates taxable income.

Deferred tax is provided, using the balance sheet liability method, on all temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, the carryforward of unused tax credits and any unused tax losses to the extent that it is probable that taxable profit and taxable temporary differences will be available against which the deductible temporary differences, the carryforward of unused tax credits and unused tax losses can be utilized, except:

- when the deferred tax assets relating to the deductible temporary differences arise from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are only recognized to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it is probable that sufficient taxable profit and taxable temporary differences will be available to allow all or part of the deferred tax asset to be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

In assessing any uncertainty over income tax treatments, the Group considers whether it is probable that the relevant tax authority will accept the uncertain tax treatment used, or proposed to be use by individual group entities in their income tax filings. If it is probable, the current and deferred taxes are determined consistently with the tax treatment in the income tax filings. If it is not probable that the relevant taxation authority will accept an uncertain tax treatment, the effect of each uncertainty is reflected by using either the most likely amount or the expected value.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue

The Group recognizes revenue when (or as) a performance obligation is satisfied, i.e. when "control" of the goods or services underlying the particular obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognized over time by reference to the progress towards complete satisfaction of the relevant performance obligation if any one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs;
- the Group's performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognized at a point in time when the customer obtains control of the distinct good or service.

A contract liability represents the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

Share-based payment transactions

Employees (including directors) of the Group receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments ("equity-settled transactions").

The cost of equity-settled transactions with employees is measured by reference to the fair value at the date at which they are granted. The fair value is determined by using the Black-Scholes option pricing model, further details of which are given in note 30.

The cost of equity-settled transactions is recognized, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled. The cumulative expense recognized for equity-settled transactions at the end of each reporting period until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The charge or credit to profit or loss for a period represents the movement in the cumulative expense recognized as at the beginning and end of that period.

No expense is recognized for awards that do not ultimately vest for the Group.

The dilutive effect of outstanding options is reflected as additional share dilution in the computation of earnings per share.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Retirement and termination benefits

The Group participates in defined contribution plans in accordance with local laws and regulations for full-time employees in the PRC and other countries in which it operates. The Group’s contributions to these defined contribution plans are charged to profit or loss in the year to which they relate.

Borrowing costs

Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing costs directly relating to the acquisition, construction or production of a qualifying asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period in which they are incurred.

Leases on and after January 1, 2019

Definition of a lease (upon application of IFRS 16/HKFRS 16 in accordance with transitions in note 2)

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified or arising from business combinations, the Group assesses whether a contract is or contains a lease based on the definition under IFRS 16/HKFRS 16 at inception, modification date or acquisition date, as appropriate. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee (upon application of IFRS 16/HKFRS 16 in accordance with transitions in note 2)

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

Non-lease components are separated from lease component on the basis of their relative stand-alone prices.

As a practical expedient, leases with similar characteristics are accounted on a portfolio basis when the Group reasonably expects that the effects on the consolidated financial statements would not differ materially from individual leases within the portfolio.

Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. It also applies the recognition exemption for lease of low-value assets. Lease payments on short-term leases and leases of low-value assets are recognized as expense on a straight-line basis or another systematic basis over the lease term.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases on and after January 1, 2019 (continued)

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred by the Group; and
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term are depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.

Lease liabilities

At the commencement date of a lease, the Group recognizes and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments (including in-substance fixed payments) less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise the option; and
- payments of penalties for terminating a lease, if the lease term reflects the Group exercising an option to terminate the lease.

Variable lease payments that reflect changes in market rental rates are initially measured using the market rental rates as at the commencement date. Variable lease payments that do not depend on an index or a rate are not included in the measurement of lease liabilities and right-of-use assets, and are recognized as expense in the period in which the event or condition that triggers the payment occurs.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases on and after January 1, 2019 (continued)

Lease liabilities (continued)

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review or expected payment under a guaranteed residual value, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.

Lease modifications

The Group accounts for a lease modification as a separate lease if:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The Group accounts for the remeasurement of lease liabilities by making corresponding adjustments to the relevant right-of- use asset. When the modified contract contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the modified contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

Leases prior to January 1, 2019

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Where the Group is the lessee, rentals payable under operating leases are charged to profit or loss on the straight-line basis over the lease terms.

Prepaid land lease payments under operating leases in China are initially stated at cost and subsequently amortized on the straight-line basis over the lease terms.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Foreign currencies

These consolidated financial statements are presented in RMB. Each entity in the Group maintains its books and records in its own functional currency. Foreign currency transactions recorded by the entities of the Group are initially recorded using their respective exchange rates ruling at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated at the exchange rates ruling at the end of the reporting period. All differences arising on settlement or translation of monetary items are taken to profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. The gain or loss arising on retranslation of a non-monetary item is treated consistently with the recognition of the gain or loss on change in fair value of the item.

The functional currencies of certain entities within the Group are currencies other than RMB. As at the end of the reporting period, the assets and liabilities of these entities are translated into the presentation currency of the Group at the exchange rates ruling at the reporting date, and their statement of profit or loss and other comprehensive income are translated into RMB at the weighted average exchange rates for the year. The resulting exchange differences are included in the cumulative translation reserve. On disposal of a foreign operation, the deferred cumulative amount recognized in equity relating to that particular foreign operation is recognized in profit or loss.

Convenience translation

Translations of the consolidated balance sheets, the consolidated statements of operations and comprehensive income/(loss) and the consolidated statements of cash flows from RMB into US\$ as of and for the year ended December 31, 2019 are solely for the convenience of the readers and were calculated at the rate of US\$1.00=RMB6.9618, representing the noon buying rate set forth in the H.10 statistical release of the U.S. Federal Reserve Board on December 31, 2019. No representation is made that the RMB amounts could have been, or could be, converted, realized or settled into US\$ at that rate on December 31, 2019, or at any other rate.

Contingencies

A contingent liability is disclosed when the existence of an obligation will only be confirmed by future events or when the amount of the obligation cannot be measured reliably.

A contingent asset is not recognized in the financial statements, but is disclosed when an inflow of economic benefits is probable.

Significant accounting judgements, estimates and assumptions

The preparation of the consolidated financial statements in accordance with IFRSs and HKFRSs requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Estimates and judgements are continuously evaluated and are based on management’s experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates.

In the process of applying the Group’s accounting policies, the Directors have made the following judgements, estimates and assumptions, which have the most significant effect on the amounts recognized in the consolidated financial statements.

(a) Reserve base

Oil and gas properties are depreciated on a unit-of-production basis at a rate calculated by reference to proved reserves. Commercial reserves are determined using estimates of oil in place, recovery factors and future oil prices, the latter having an impact on the proportion of the gross reserves which are attributable to the host government under the terms of the production sharing contracts. The level of estimated commercial reserves is also a key determinant in assessing whether the carrying value of any of the Group’s oil and gas properties has been impaired.

Pursuant to the oil and gas reserve estimation requirements under US Securities and Exchange Commission’s rules, the Group uses the average, first-day-of-the-month oil price during the 12-month period before the ending date of the period covered by the consolidated financial statements to estimate its proved oil and gas reserves.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Significant accounting judgements, estimates and assumptions (continued)

(b) Carrying value of oil and gas properties

The calculation of the unit-of-production rate for oil and gas properties depreciation could be impacted to the extent that actual production in the future is different from current forecast production based on proved reserves. This would generally result from significant changes in any of the factors or assumptions used in estimating reserves. These factors could include changes in proved reserves, the effect on proved reserves of differences between actual oil and gas prices and oil and gas price assumptions and unforeseen operational issues.

(c) Recoverable amount of oil and gas properties

The Group makes an assessment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, or when there is any indication that an impairment loss previously recognized for an asset in prior years may no longer exist or may have decreased. In any event, the Group would make an estimate of the asset’s recoverable amount, which is calculated at the higher of the asset’s value in use and its fair value less costs of disposal. The Group recognizes an impairment loss only if the carrying amount of an asset exceeds its recoverable amount. The Group charges an impairment loss to the profit or loss in the period in which it arises. A reversal of an impairment loss is credited to the profit or loss in the period in which it arises.

The calculations of the recoverable amount of assets require the use of estimates and assumptions. The key assumptions include, but are not limited to, future oil and gas prices, future production estimates, estimated future capital expenditures, estimated future operating expenses and the discount rate.

Changes in the key assumptions used, which could be significant, include updates to future pricing estimates, updates to future production estimates to align with the Group’s anticipated drilling plan, changes in the Group’s capital costs and operating expense assumptions, and discount rate. There is a significant degree of uncertainty with the assumptions used to estimate future cash flows due to various risk factors. The complex economic outlook may also materially and adversely affect the Group’s key assumptions. Changes in economic conditions can also affect the discount rates applied in assessments of impairment.

Actual cash flows are likely to be different from those estimated or forecast since anticipated events frequently do not occur as expected and unforeseen events may arise. The Group’s results of operations could be materially and adversely affected for the period in which future impairment charges are incurred.

The sensitivity analysis for the impairment testing involves estimates and judgments to consider numerous assumptions comprehensively. Those assumptions interact on each other and interrelate with each other complexly and do not have fixed patterns along with the changes in price. Accordingly, the Group believes that the preparation of the sensitivity analysis for the impairment testing will be impracticable. Changes in assumptions could affect impairment charges and reversals in the consolidated statement of profit or loss and other comprehensive income, and the carrying amounts of assets in the consolidated statement of financial position.

In the calculations of the recoverable amount of the oil and gas properties in a joint venture, the Group uses the approach above.

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3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Significant accounting judgements, estimates and assumptions (continued)

(d) Dismantlement costs

Dismantlement costs will be incurred by the Group at the end of the operating life of certain of the Group’s facilities and properties. The ultimate dismantlement costs are uncertain and cost estimates can vary in response to many factors including changes to relevant legal requirements, the emergence of new restoration techniques or experience at other production sites. The expected timing and amount of expenditure can also change, for example, in response to changes in reserves or changes in laws and regulations or their interpretation. As a result, there could be significant adjustments to the provisions established which would affect future financial results.

(e) Taxes

Uncertainties exist with respect to the interpretation of complex tax regulations (including those applicable to tax credits) and the amount and timing of future taxable income. Given the wide range of international business relationships and the long term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate future adjustments to tax income and expense already recorded. The Group establishes provisions, based on best estimates, for possible consequences of audits by the tax authorities of the respective countries in which it operates. The amount of such provisions is based on various factors, such as the Group’s experience of previous tax audits and differing interpretations of tax regulations by the taxable entity and the responsible tax authority. Such differences of interpretation may arise on a wide variety of issues depending on the conditions prevailing in the respective group company’s domicile.

4. ACQUISITION AND OTHER VENTURE

On June 7, 2019, the Company and CEPR, a wholly-owned subsidiary of the Company, entered into a share purchase agreement with Joint Stock Company Novatek (“JSC Novatek”) and Ekropromstroy Limited Liability Company ("Ekropromstroy"), a wholly-owned subsidiary of JSC Novatek, pursuant to which, CEPR shall acquire a 10% equity interest in Arctic LNG 2 LLC held by Ekropromstroy. The acquisition was completed on July 19, 2019. The Company has the ability to participate in the financial and operating policy decisions through the voting power of its share ownership interest at general meetings of shareholders, which is the decision-making institution of Arctic LNG 2 LLC. It is therefore determined that the Company has significant influence, and recognized Arctic LNG 2 LLC as an associate and accounted for its participation interest using the equity method. The total consideration comprises a cash consideration of USD903 million which has been paid, a deferred consideration of USD820 million over 2020 and a series of contingent payments, which are capped at USD 920 million, based on the date on which the LNG facility train 1 achieves operational start-up and future oil prices.

On August 1, 2019, CNOOC China, a wholly-owned subsidiary of the Company, entered into an equity transfer agreement with CNOOC, pursuant to which, CNOOC China shall acquire the 100% equity interest in China United Coalbed Methane Corporation Limited ("CUCBM") held by CNOOC at a total consideration of approximately RMB5.335 billion, which was settled in cash by CNOOC China. The acquisition was completed on October 11, 2019 and CUCBM becomes an indirect wholly-owned subsidiary of the Company.

Since the Group and CUCBM are under common control of CNOOC, the Group’s acquisition of CUCBM has been accounted for as a combination of entities under common control. Accordingly, the assets and liabilities of CUCBM have been accounted for at historical amounts and consolidated financial statements of the Group prior to the acquisition are combined with the financial statements of CUCBM. The consideration for the acquisition is accounted for as an equity transaction in the consolidated statement of changes in equity.

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4. ACQUISITION AND OTHER VENTURE (continued)

The consolidated statements of profit or loss and other comprehensive income for the year ended December 31, 2018 and 2017 and the consolidated statement of financial position as at December 31, 2018 have been restated, the restated amounts presented and the amounts previously reported in the consolidated financial statements of the Group in 2018 are set out below:

	Amounts previously reported	Impact of business combination under common control	Amounts restated
Consolidated statement of profit or loss and other comprehensive income for the year ended December 31, 2018			
Revenue	226,963	748	227,711
Profit before tax	75,177	(20)	75,157
Profit for the year	52,688	(13)	52,675
Consolidated statement of financial position as at December 31, 2018			
Total assets	678,779	7,602	686,381
Total liabilities	261,414	5,057	266,471
Total Equity	417,365	2,545	419,910

For the periods presented, all significant transactions and balances between the Group and CUCBM have been eliminated on combination.

5. OIL AND GAS SALES AND MARKETING REVENUES

	2017 (restated)	2018 (restated)	2019
Gross sales	156,828	191,966	202,635
Less: Royalties	(3,226)	(4,215)	(4,432)
PRC government's share of oil	(1,190)	(1,194)	(1,030)
Oil and gas sales	152,412	186,557	197,173
Marketing revenues	28,907	35,830	30,867

Oil and gas sales represent the sales of oil and gas, net of royalties and obligations to government and other mineral interest owners. Revenue from the sales of oil and gas is recognized at a point in time when oil and gas has been delivered to the customer, which is when the customer obtains the control of oil and gas, and the Group has present right to payment and collection of the consideration is probable.

Marketing revenues principally represent the sales of oil and gas belonging to the foreign partners under the production sharing contracts and revenues from the trading of oil and gas through the Company’s subsidiaries, which is recognized at a point in time when oil and gas has been delivered to the customer, which is when the customer obtains the control of oil and gas, and the Group has present right to payment and collection of the consideration is probable. The cost of the oil and gas sold is included in "Crude oil and product purchases" in the consolidated statement of profit or loss and other comprehensive income.

The payment is typically due within 30 days after the delivery of oil and gas. For contracts where the period between payment and transfer of the associated goods is less than one year, the Group applies the practical expedient of not adjusting the transaction price for any significant financing component.

CNOOC LIMITED

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6. SEGMENT INFORMATION

(a) Segment results

The Group is engaged worldwide in the upstream operating activities of the conventional oil and gas, shale oil and gas, oil sands and other unconventional oil and gas business. The Group reports the business through three operating and reporting segments: E&P, trading business and corporate. The division of these operating segments is made because the Group’s chief operating decision makers make decisions on resource allocation and performance evaluation by reviewing the financial information of these operating segments. The geographical information is separately disclosed in (b).

The following table presents the segment financial information for the Group for the years ended December 31, 2017, 2018 and 2019.

	E&P			Trading business			Corporate			Eliminations			Consolidated		
	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019
External Revenue	143,010	174,671	179,654	43,618	52,610	53,093	343	430	452	-	-	-	186,971	227,711	233,199
Intersegment Revenue*	14,737	16,805	22,256	(14,737)	(16,805)	(22,256)	84	176	84	(84)	(176)	(84)	-	-	-
Total revenue	157,747	191,476	201,910	28,881	35,805	30,837	427	606	536	(84)	(176)	(84)	186,971	227,711	233,199
Segment profit/(loss) for the year	23,905	53,935	60,296	808	1,894	1,517	6,391	4,581	(776)	(6,385)	(7,735)	8	24,719	52,675	61,045
Amounts included in the measure of segment profit or loss															
Operating expenses	(24,410)	(24,405)	(24,754)	-	-	-	-	-	-	-	17	19	(24,410)	(24,388)	(24,735)
Taxes other than income tax	(7,180)	(9,086)	(9,094)	-	-	-	(41)	(55)	(62)	-	-	-	(7,221)	(9,141)	(9,156)
Exploration expenses	(6,981)	(13,201)	(12,342)	-	-	-	-	-	-	15	66	-	(6,966)	(13,135)	(12,342)
Depreciation, depletion and amortization	(61,019)	(50,558)	(57,213)	(67)	(55)	(79)	(423)	(301)	(478)	67	76	71	(61,442)	(50,838)	(57,699)
Impairment and provision	(9,216)	(659)	(2,094)	-	-	-	31	(7)	-	-	-	-	(9,185)	(666)	(2,094)
Selling and administrative expenses	(5,115)	(5,359)	(6,124)	(269)	(296)	(199)	(1,654)	(1,816)	(1,757)	28	42	18	(7,010)	(7,429)	(8,062)
Interest income	317	478	759	-	3	4	1,571	1,385	1,104	(1,233)	(1,068)	(800)	655	798	1,067
Finance costs	(3,351)	(4,048)	(4,451)	(1)	(1)	(2)	(3,011)	(2,181)	(2,238)	1,242	1,068	826	(5,121)	(5,162)	(5,865)
Share of profits of associates and profit/(loss) attributable to a joint venture	(88)	(2)	31	-	-	-	943	(5,185)	971	-	-	-	855	(5,187)	1,002
Income tax expense	(11,224)	(23,552)	(21,551)	(3)	(4)	(7)	(441)	1,074	(3,046)	-	-	-	(11,668)	(22,482)	(24,604)
Other segment information															
Investments in associates and a joint venture	655	661	20,447	-	-	-	28,491	24,040	25,043	-	-	-	29,146	24,701	45,490
Others	464,650	490,065	541,591	3,588	3,154	6,347	340,329	401,290	407,851	(213,624)	(232,829)	(243,548)	594,943	661,680	712,241
Segment assets	465,305	490,726	562,038	3,588	3,154	6,347	368,820	425,330	432,894	(213,624)	(232,829)	(243,548)	624,089	686,381	757,731
Segment liabilities	(305,441)	(336,370)	(384,359)	(2,375)	(2,125)	(4,535)	(124,794)	(138,232)	(152,870)	191,092	210,256	232,259	(241,518)	(266,471)	(309,505)
Capital expenditure	53,159	70,783	85,001	-	-	-	421	542	487	-	-	-	53,580	71,325	85,488

\* Certain oil and gas produced by the E&P segment are sold via the trading business segment. For the Group’s chief operating decision maker’s assessment of segment performance, these revenues are reclassified back to E&P segment.

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6. SEGMENT INFORMATION (continued)

(b) Geographical information

The Group mainly engages in the exploration, development, production and sale of crude oil and natural gas in offshore China, Canada, the United States of America, the United Kingdom, Nigeria, Argentina, Indonesia, Uganda, Iraq, Brazil, Guyana, Russia and Australia etc.

In presenting the Group's geographical information, revenues from external customers are based on the location of the Group's customers, and non-current assets are attributed to the segments based on the location of the Group's assets. 66% (2018: 68%, 2017: 65%) of the Group's revenues are generated from PRC customers, and revenues generated from customers in other locations are individually less than 10%.

The following table presents certain non-current assets information for the Group's geographical information for the years ended December 31, 2017, 2018 and 2019.

	PRC			Canada			Others			Consolidated		
	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019	2017 (restated)	2018 (restated)	2019
Property, plant and equipment	167,703	173,846	197,115	95,552	92,386	92,537	138,289	147,151	150,902	401,544	413,383	440,554
Right-of-use assets	-	-	5,774	-	-	689	-	-	2,716	-	-	9,179
Investments in associates and a joint venture	3,680	3,947	4,649	-	-	-	25,466	20,754	40,841	29,146	24,701	45,490
Other non-current assets	8,564	8,827	9,275	605	636	405	141	79	41	9,310	9,542	9,721

(c) Information about major customers

The current year's revenue of approximately RMB19,126 million (2018: approximately RMB13,329 million, 2017: approximately RMB15,488 million) was derived from sales by the E&P segment and the trading business segment to China Petroleum & Chemical Corporation. Sales to CNOOC, its subsidiaries (excluding the Group) and associates (the "CNOOC Group") are included in Note 32 (iii).

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7. PROFIT BEFORE TAX

The Group's profit before tax is arrived at after (crediting)/charging:

	2017 (restated)	2018 (restated)	2019
Crediting:			
Interest income from bank deposits	(655)	(798)	(1,067)
Investment income:			
– Fair value changes on other financial assets	(2,409)	(3,685)	(4,603)
Insurance compensation on disposal of property, plant and equipment	(110)	(611)	(436)
Charging:			
Auditors' remuneration:			
– Audit fee	51	52	54
– Other fees	5	7	10
	56	59	64
Employee wages, salaries, allowances and social security costs	6,678	8,406	7,943
Impairment and provision:			
- Property, plant and equipment	8,660	196	2,072
- Others	525	470	22
	9,185	666	2,094
Depreciation, depletion and amortization:			
– Property, plant and equipment	60,971	50,810	54,862
– Right-of-use assets	-	-	1,359
– Intangible assets	857	405	365
– Net amount capitalized	(386)	(377)	1,113
	61,442	50,838	57,699
Lease rentals:			
– Office properties	644	668	444
– Plant and equipment	1,560	1,563	280
	2,204	2,231	724
Repairs and maintenance	4,801	4,596	5,415
Research and development costs	1,777	2,350	1,632
Loss/(gain) on disposal of property, plant and equipment	133	77	(92)

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8. FINANCE COSTS

	2017 (restated)	2018 (restated)	2019
Interest on bank loans	241	139	114
Interest on other loans	5,207	5,280	5,631
Interest on lease liabilities		-	348
Other borrowing costs	23	21	26
Total borrowing costs	5,471	5,440	6,119
Less: Amount capitalized in property, plant and equipment (note 14)	(2,495)	(2,838)	(3,048)
	2,976	2,602	3,071
Other finance costs:			
Unwinding of discount on provision for dismantlement (note 29)	2,145	2,560	2,794
	5,121	5,162	5,865

During the year ended December 31, 2019, the effective interest rates used to determine the amount of related borrowing costs for capitalization varied from 0.7% to 7.875% (2018: from 0.95% to 7.875% , 2017: from 0.95% to 7.875%) per annum.

9. KEY MANAGEMENT PERSONNEL'S REMUNERATION

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of the Company.

(i) Directors' remuneration

	Fees <sup>(1)</sup> RMB'000	Salaries allowances and benefits in kind <sup>(1)</sup> RMB'000	Performance related bonuses <sup>(1)</sup> RMB'000	Pension scheme contributions RMB'000	Total paid/payable during the year RMB'000
<b>2017</b>					
Executive directors:					
Yuan Guangyu <sup>(2)</sup>	-	197	455	134	786
Xu Keqiang <sup>(3)</sup>	-	146	162	94	402
Subtotal	-	343	617	228	1,188
Non-executive directors:					
Yang Hua <sup>(4)</sup>	-	-	-	-	-
Liu Jian	-	-	-	-	-
Wu Guangqi	-	-	-	-	-
Subtotal	-	-	-	-	-
Independent non-executive directors:					
Chiu Sung Hong	972	-	-	-	972
Lawrence J. Lau	824	-	-	-	824
Tse Hau Yin, Aloysius	972	-	-	-	972
Kevin G. Lynch	824	-	-	-	824
Subtotal	3,592	-	-	-	3,592
Total	3,592	343	617	228	4,780

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9. KEY MANAGEMENT PERSONNEL'S REMUNERATION (continued)

(i) Directors' remuneration (continued)

	Fees <sup>(1)</sup> RMB'000	Salaries allowances and benefits in kind <sup>(1)</sup> RMB'000	Performance related bonuses <sup>(1)</sup> RMB'000	Pension scheme contributions RMB'000	Total paid/payable during the year RMB'000
<b>2018</b>					
Executive directors:					
Yuan Guangyu	-	231	546	143	920
Xu Keqiang	-	231	467	143	841
Subtotal	-	462	1,013	286	1,761
Non-executive directors:					
Yang Hua	-	-	-	-	-
Wang Dongjin <sup>(5)(7)</sup>	-	-	-	-	-
Liu Jian <sup>(6)</sup>	-	-	-	-	-
Wu Guangqi <sup>(5)</sup>	-	-	-	-	-
Subtotal	-	-	-	-	-
Independent non-executive directors:					
Chiu Sung Hong	946	-	-	-	946
Lawrence J. Lau	802	-	-	-	802
Tse Hau Yin, Aloysius	946	-	-	-	946
Kevin G. Lynch	802	-	-	-	802
Subtotal	3,496	-	-	-	3,496
Total	3,496	462	1,013	286	5,257
<b>2019</b>					
Executive directors:					
Xu Keqiang <sup>(13)</sup>	-	257	870	186	1,313
Yuan Guangyu <sup>(11)</sup>	-	175	1,034	128	1,337
Subtotal	-	432	1,904	314	2,650
Non-executive directors:					
Wang Dongjin <sup>(12)</sup>	-	-	-	-	-
Yang Hua <sup>(10)</sup>	-	-	-	-	-
Subtotal	-	-	-	-	-
Independent non-executive directors:					
Chiu Sung Hong	985	-	-	-	985
Lawrence J. Lau	835	-	-	-	835
Tse Hau Yin, Aloysius	1,029	-	-	-	1,029
Qiu Zhi Zhong <sup>(8)</sup>	543	-	-	-	543
Kevin G. Lynch <sup>(9)</sup>	294	-	-	-	294
Subtotal	3,686	-	-	-	3,686
Total	3,686	432	1,904	314	6,336

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9. KEY MANAGEMENT PERSONNEL'S REMUNERATION (continued)

(i)Directors' remuneration (continued)

Notes:

- (1) Fees, salaries, allowances, benefits in kind and performance related bonuses represent the gross amount (before applicable individual salary tax) paid/payable to individual directors.
- (2) On April 18, 2017, Mr. Yuan Guangyu was appointed as the Chief Executive Officer of the Company. Mr. Yuan Guangyu resigned as the President of the Company.
- (3) On April 18, 2017, Mr. Xu Keqiang was appointed as an Executive Director and the President of the Company.
- (4) On April 18, 2017, Mr. Yang Hua was re-designated as a Non-executive Director of the Company and resigned as the Chief Executive Officer of the Company. He remains as the Chairman of the Board.
- (5) On April 27, 2018, Mr. Wang Dongjin was appointed as a Non-executive Director and a member of the Remuneration Committee of the Company. Mr. Wu Guangqi resigned as a Non-executive Director and a member of the Remuneration Committee of the Company.
- (6) On August 16, 2018, Mr. Liu Jian resigned as the Vice Chairman and a Non-executive Director of the Company.
- (7) On December 5, 2018, Mr. Wang Dongjin, a Non-executive Director, was appointed as the Vice Chairman of the Company.
- (8) On May 7, 2019, Mr. Qiu Zhi Zhong was appointed as an Independent Non-executive Director and a member of the Nomination Committee of the Company.
- (9) On May 7, 2019, Mr. Kevin G. Lynch resigned as an Independent Non-executive Director and a member of the Nomination Committee of the Company.
- (10) On September 2, 2019, Mr. Yang Hua resigned as a Non-executive Director, the Chairman of the Board and the Chairman of the Nomination Committee of the Company.
- (11) On September 2, 2019, Mr. Yuan Guangyu resigned as an Executive Director and the Chief Executive Officer of the Company.
- (12) On November 18, 2019, Mr. Wang Dongjin was appointed as the Chairman of the Board and the Chairman of the Nomination Committee of the Company, and on longer served as Vice Chairman of the Board.
- (13) On November 19, 2019, Mr. Xu Keqiang, Executive Director and the then President of the Company, was appointed as the Chief Executive Officer of the Company.

The Company has adopted the share option schemes for the grant of options to the Company’s directors. The fair value of share options for the directors is measured according to the Group’s accounting policies as set out in note 3. No Directors exercised any share option in 2017, 2018 or 2019. No new share option was granted to Directors in respect of their services to the Group under the applicable share option schemes of the Company in 2017, 2018 or 2019. Further details of share option scheme and valuation techniques are set out in note 30.

Save as disclosed above, there was no arrangement under which a director waived or agreed to waive any remuneration during the year. In 2017, 2018 or 2019, the executive directors’ remuneration shown above were for their services in connection with the management of the affairs of the Company. The other directors’ remuneration shown above were for their services as directors of the Company.

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9. KEY MANAGEMENT PERSONNEL'S REMUNERATION (continued)

(ii) Other key management personnel's (excluding Directors') remuneration

	2017	2018	2019
Short term employee benefits	9	9	13
Pension scheme contributions	1	1	1
Amount paid/payable during the year	10	10	14

The bands of the remuneration of other key management personnel (excluding Directors) and the related number of members of other key management personnel (excluding Directors) are as follows:

	Number of employees		
	2017	2018	2019
Nil to RMB 2,000,000	12	9	4
RMB2,000,001 to RMB2,500,000	-	-	3
	12	9	7

10. FIVE HIGHEST PAID EMPLOYEES

During the year, none (2018: none; 2017: none) of the Directors, details of whose remuneration are disclosed in note 9(i) above, received an amount which falls within the category of the five highest paid employees. Details of the remuneration of the five (2018: five; 2017: five) highest paid employees, for the year are as follows:

	2017	2018	2019
Salaries, allowances and benefits in kind <sup>(1)</sup>	21	21	27
Performance-related bonuses	19	18	18
Pension scheme contributions	1	1	2
Amount paid/payable during the year	41	40	47

(1) Salaries, allowances, and benefits in kind represent the gross amount (before applicable individual salary tax) paid/payable to individual employees.

The remuneration of the five (2018: five, 2017: five) highest paid employees, falls within the following bands:

	2017	2018	2019
RMB6,000,001 to RMB6,500,000	1	-	-
RMB6,500,001 to RMB7,000,000	-	2	-
RMB7,000,001 to RMB7,500,000	1	-	-
RMB7,500,001 to RMB8,000,000	-	1	2
RMB8,000,001 to RMB8,500,000	1	-	1
RMB8,500,001 to RMB9,000,000	-	1	-
RMB9,000,001 to RMB9,500,000	1	-	-
RMB10,000,001 to RMB10,500,000	1	-	1
RMB10,500,001 to RMB11,000,000	-	1	-
RMB12,500,001 – RMB13,000,000	-	-	1
	5	5	5

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11. TAX

(i) Income tax

The Company and its subsidiaries are subject, on an entity basis, to income taxes on profits arising in or derived from the tax jurisdictions in which the entities of the Group are domiciled and operate. The Company is subject to profits tax at a rate of 16.5 % (2018: 16.5%, 2017: 16.5%) on profits arising in or derived from Hong Kong.

The Company is regarded as a Chinese Resident Enterprise (as defined in the "Enterprise Income Tax Law of the People's Republic of China") by the State Administration of Taxation of the PRC. As a result, the Company is subject to the PRC corporate income tax at the rate of 25% starting from January 1, 2008. The corporate income tax which is subjected in Hong Kong is qualified as a foreign tax credit to offset the PRC corporate income tax starting from January 1, 2008.

The Company's subsidiary in Mainland China, CNOOC China, is a wholly-owned foreign enterprise. It is subject to corporate income tax at the rate of 25% under the prevailing tax rules and regulations. CNOOC Deepwater Development Limited, a wholly-owned subsidiary of CNOOC China, is subject to corporate income tax at the rate of 15% from 2018 to 2020 (2017: 15%), after being reassessed as a high and new technology enterprise.

Subsidiaries of the Group domiciled outside the PRC are subject to income tax at rates ranging from 10% to 50% (2018: 10% to 50%, 2017: 10% to 50%). The province income tax rate of Alberta, Canada reduced from 12% to 11% on July 1, 2019, and will decrease by one percentage point on January 1 of each year until it reaches 8% on January 1, 2022.

As at December 31, 2019, deferred tax liabilities related to undistributed earnings of the Company's overseas subsidiaries have not been provided since the timing of the reversal of the taxable temporary differences can be controlled by the Company and it is probable that the temporary differences would not reverse in the foreseeable future.

An analysis of the tax expense in the Group's consolidated statement of profit or loss and other comprehensive income is as follows:

	2017 (restated)	2018 (restated)	2019
Current tax			
Provision for PRC enterprise income tax on the estimated taxable profits for the year	11,475	18,151	19,054
Provision for overseas enterprise income tax on the estimated taxable profits for the year	4,390	5,043	3,179
Deferred tax			
Temporary differences in the current year	(7,573)	(712)	(130)
Effect of changes in tax rates	3,376	-	2,501
Income tax expense for the year	11,668	22,482	24,604

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11. TAX (continued)

(i) Income tax (continued)

A reconciliation of the PRC statutory corporate income tax rate to the effective income tax rate of the Group is as follows:

	2017 % (restated)	2018 % (restated)	2019 %
PRC statutory enterprise income tax rate	25.0	25.0	25.0
Effect of different tax rates for overseas subsidiaries	(1.6)	7.0	2.6
Effect of changes in tax rates	9.4	-	2.9
Tax credit from the government	(2.7)	(0.8)	(2.6)
Tax reported in equity-accounted entities within China	(0.2)	(0.2)	(0.1)
Tax losses previously not recognized	-	(0.2)	-
Others	2.2	(0.9)	0.9
Group's effective income tax rate	32.1	29.9	28.7

The movements of deferred tax liabilities net of deferred tax assets are as follows:

	2017 (restated)
At December 31, 2016	(19,185)
Credit to the profit or loss	(7,573)
Changes in tax rates	3,376
Charge to equity	7
Exchange differences	1,143
At December 31, 2017	(22,232)
	2018 (restated)
At December 31, 2017	(22,232)
Credit to the profit or loss	(712)
Changes in tax rates	-
Charge to equity	(190)
Exchange differences	(1,151)
At December 31, 2018	(24,285)
	2019
At December 31, 2018	(24,285)
Credit to the profit or loss	(130)
Changes in tax rates	2,501
Charge to equity	(111)
Exchange differences	(365)
At December 31, 2019	(22,390)

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11. TAX (continued)

(i) Income tax (continued)

Principal components of deferred tax balances are as follows:

	2018 (restated)	2019
Deferred tax assets		
Property, plant and equipment	5,322	5,996
Provision for dismantlement	11,087	12,418
Losses available for offsetting against future taxable profit	18,565	19,367
Fair value of long term borrowings	1,770	1,472
Others	2,008	687
	38,752	39,940
Deferred tax liabilities		
Property, plant and equipment	(14,078)	(17,313)
Fair value changes on other financial assets	-	(2)
Others	(389)	(235)
	(14,467)	(17,550)
Net deferred tax assets	24,285	22,390
Of which		
– deferred tax assets	27,465	25,992
– deferred tax liabilities	(3,180)	(3,602)

As at December 31, 2019, the Group had approximately RMB95,794 million (2018: RMB97,614 million) of carryforward tax losses, predominantly in North America, that would be available to offset against future taxable profits of the subsidiaries in which the tax losses arose. Most of the US and Canadian tax losses will expire in 5 to 19 years.

Deferred tax assets in respect of tax losses are recognized only to the extent of the anticipated future taxable profits or reversal of existing taxable temporary differences.

As at December 31, 2019, the Group's recognized deferred tax assets on tax losses amounted to RMB89,268 million (2018: RMB83,158 million). Unrecognized tax losses, where recovery is not currently expected, amounted to RMB6,526 million (2018: RMB14,456 million). This includes RMB3,398 million (2018: RMB7,876 million) of unrecognized tax loss arising from Uganda which has no fixed expiry date. The remainder expires between 1 to 7 years.

As at December 31, 2019, the Group's unrecognized deferred tax assets related to unused tax credits amounted to RMB10,220 million (2018: RMB10,944 million). This includes RMB9,949 million (2018: RMB10,696 million) of unrecognized deferred tax assets related to unused tax credits from Nigeria which has no fixed expiry date. The remainder expires between 2028 and 2039.

The realisability of the deferred tax assets recognized mainly depends on whether sufficient future profits or taxable temporary differences will be available in the future. In case where the actual future taxable profits generated are less than expected, or change in facts and circumstances which result in revision of future taxable profits estimation, the balance of deferred tax assets may be significantly revised.

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11. TAX (continued)

(ii) Other taxes

The Company's PRC subsidiaries pay the following other taxes and dues:

- i. Production tax at the rate of 5% on production under production sharing contracts;
- ii. Value added tax ("VAT") at the rates from 11% to 17% on taxable sales under independent oil and gas fields before May 1, 2018. VAT rates of 17% and 11% have been adjusted to 16% and 10% respectively since May 1, 2018 according to "Notice on Adjustment on Value-added Tax Rates" (Cai Shui [2018] No.32). VAT rates of 16% and 10% have been adjusted to 13% and 9% respectively since April 1, 2019 according to "Announcement on Policies for Deepening the VAT Reform" (Announcement [2019] No. 39 of the Ministry of Finance, the State Taxation Administration and the General Administration of Customs).

The VAT payable is calculated using the taxable sales amount multiplied by the applicable tax rate less relevant deductible input VAT;

- iii. Resource tax at the rate of 6% (reduced tax rates may apply to specific products and fields) on the oil and gas sales revenue (excluding production tax) derived by oil and gas fields under production sharing contracts signed after November 1, 2011 and independent offshore oil and gas fields, except for those under production sharing contracts signed before November 1, 2011 which will be subject to related resource tax requirement after the expiration of such production sharing contracts;
- iv. City construction tax at the rates of 1% or 7% on the production tax and VAT paid;
- v. Educational surcharge at the rate of 3% on the production tax and VAT paid; and
- vi. Local educational surcharge at the rate of 2% on the production tax and VAT paid.

In addition, other taxes paid and payable by the Company's non-PRC subsidiaries include royalty as well as taxes levied on petroleum-related income, budgeted operating and capital expenditure.

(iii) Special Oil Gain Levy

In 2006, a Special Oil Gain Levy ("SOG Levy") was imposed by the Ministry of Finance of the PRC ("MOF") at the progressive rates from 20% to 40% on the portion of the monthly weighted average sales price of the crude oil lifted in the PRC exceeding US\$40 per barrel. The MOF has decided to increase the threshold of the SOG Levy to US\$65 with effect from January 1, 2015. Notwithstanding this adjustment, the SOG Levy continues to have five levels and is calculated and charged according to the progressive and ad valorem rates on the excess amounts. The SOG Levy paid can be claimed as a deductible expense for corporate income tax purposes and is calculated based on the actual volume of the crude oil entitled.

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12. EARNINGS PER SHARE

	2017 (restated)	2018 (restated)	2019
<b>Earnings:</b>			
Profit for the purpose of basic and diluted earnings per share calculation	24,719	52,675	61,045
<b>Number of shares:</b>			
Number of ordinary shares for the purpose of basic earnings per share calculation	44,647,455,984	44,647,455,984	44,647,455,984
Effect of dilutive potential ordinary shares under the share option schemes	4,101,969	8,566,982	3,654,758
Weighted average number of ordinary shares for the purpose of diluted earnings per share	44,651,557,953	44,656,022,966	44,651,110,742
<b>Earnings per share:</b>			
Basic (RMB Yuan)	0.55	1.18	1.37
Diluted (RMB Yuan)	0.55	1.18	1.37

13. DIVIDENDS

	2017	2018	2019
Dividend per ordinary share:			
2019 interim dividend - HK\$0.33 (2018: interim dividend HK\$0.30, 2017: interim dividend HK\$0.20) per ordinary share	7,601	11,890	13,260
2018 final dividend - HK\$0.40 (2017: final dividend HK\$0.30, 2016: Final dividend HK\$0.23) per ordinary share	8,847	11,633	15,713
2019 final dividend proposed at HK\$0.45 per ordinary share by the Board of Directors - not recognized as a liability as at the end of the year	11,633	15,713	18,055

Pursuant to the Enterprise Income Tax Law of the People’s Republic of China and related laws and regulations, the Company is regarded as a Chinese Resident Enterprise, and thus is required to withhold corporate income tax at the rate of 10% when it distributes dividends to its non-resident enterprise (as defined in the "Enterprise Income Tax Law of the People’s Republic of China") shareholders, with effect from the distribution of the 2008 final dividend. In respect of all shareholders whose names appear on the Company’s register of members and who are not individuals (including HKSCC Nominees Limited, corporate nominees or trustees such as securities companies and banks, and other entities or organizations, which are all considered as non-resident enterprise shareholders), the Company will distribute the dividend after deducting corporate income tax of 10%.

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14. PROPERTY, PLANT AND EQUIPMENT

	Oil and gas properties	Vehicles and office equipment and others	Total
Cost:			
At January 1, 2018 (restated)	895,141	5,062	900,203
Additions	58,232	120	58,352
Acquisitions	264	-	264
Disposals and write-offs	(2,751)	(41)	(2,792)
Exchange differences	21,719	128	21,847
At December 31, 2018 (restated)	972,605	5,269	977,874
At January 1, 2019 (restated)	972,605	5,269	977,874
Additions	78,523	710	79,233
Acquisitions	5,619	-	5,619
Disposals and write-offs	(9,270)	(313)	(9,583)
Exchange differences	8,463	36	8,499
At December 31, 2019	1,055,940	5,702	1,061,642
Accumulated depreciation, depletion and amortization and impairment:			
At January 1, 2018 (restated)	(496,763)	(1,924)	(498,687)
Depreciation charge for the year	(50,401)	(409)	(50,810)
Impairment	(5,861)	-	(5,861)
Disposals and write-offs	1,497	38	1,535
Exchange differences	(10,616)	(52)	(10,668)
At December 31, 2018(restated)	(562,144)	(2,347)	(564,491)
At January 1, 2019(restated)	(562,144)	(2,347)	(564,491)
Depreciation charge for the year	(54,451)	(411)	(54,862)
Impairment	(2,072)	-	(2,072)
Disposals and write-offs	4,312	278	4,590
Exchange differences	(4,233)	(20)	(4,253)
At December 31, 2019	(618,588)	(2,500)	(621,088)
Net book value:			
At December 31, 2018 (restated)	410,461	2,922	413,383
At December 31, 2019	437,352	3,202	440,554

Included in the current year's additions was an amount of approximately RMB3,048 million (2018: approximately RMB2,838 million, 2017: approximately RMB2,495 million ) in respect of interest capitalized in property, plant and equipment (note 8). Included also in the depreciation charge for the year was an amount of approximately RMB1,199 million (2018: approximately RMB1,298 million, 2017: approximately RMB636 million) in respect of a depreciation charge on dismantlement cost capitalized in oil and gas properties.

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14. PROPERTY, PLANT AND EQUIPMENT (continued)

Impairment and provision recognized during the year included the impairment loss to reduce the carrying amount of certain oil and gas properties to the recoverable amount. In 2019, impairment losses of RMB513 million and RMB1,559 million related to oil and gas properties in China and North America were recognized as impairment and provision in profit or loss, primarily triggered by reserve decrease. In 2018, an impairment loss of RMB5,387 million related to certain exploration and evaluation assets in North America was recognized as exploration expenses in profit or loss, primarily triggered by the uncertainty of future development.

For both years, the recoverable amount was calculated based on the assets’ value in use and was determined at the cash-generating unit level. The Company identifies a field or a group of fields that could generate cash inflows independently as a cash-generating unit. The principal parameters used in determining the recoverable amount of the Group’s assets include estimates of proved and unproved reserves, future commodity prices that come from the price forecast of respected and independent institutions, combined with internal analysis and judgment of the international market environment, as well as best estimates of drilling and development costs.

The discount rate is derived from the Company’s weighted average cost of capital ("WACC") and is adjusted, where applicable, to take into account any specific risks relating to the country where the asset is located as well as the asset specific characteristics, such as specific tax treatments, cash flow profiles and economic life. The discount rate used for value in use calculations was 8% in 2019 after tax (2018: 8%). A derived pre-tax discount rate would be 8%-10% (2018: 9%).

In June 2016, the book value of the Long Lake assets was written down to an estimated recoverable amount of RMB33,902 million. While the future operating plan of Long Lake assets is under assessment by management, there had not been any further impairment of such assets during the year ended December 31, 2019.

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15. RIGHT-OF-USE ASSETS

	FPSO	Building and structures	Equipment	Pipelines	Leasehold lands	Total
Cost:						
At January 1, 2019	7,334	739	274	907	754	10,008
Additions	-	40	576	-	123	739
Disposals and write-offs	-	(38)	-	-	-	(38)
Exchange differences	31	11	14	15	-	71
At December 31, 2019	7,365	752	864	922	877	10,780
Accumulated depreciation, depletion and amortization and impairment:						
At January 1, 2019	-	-	-	(152)	(88)	(240)
Depreciation charge for the year	(712)	(169)	(422)	(33)	(23)	(1,359)
Impairment	-	-	-	-	-	-
Disposals and write-offs	-	-	-	-	-	-
Exchange differences	-	-	-	(2)	-	(2)
At December 31, 2019	(712)	(169)	(422)	(187)	(111)	(1,601)
Net book value:						
At January 1, 2019	7,334	739	274	755	666	9,768
At December 31, 2019	6,653	583	442	735	766	9,179
Expense relating to short-term leases and other leases with lease terms end within 12 months of the date of initial application of IFRS 16 /HKFRS 16	-	443	-	-	-	443
Variable lease payments not included in the measurement of lease liabilities	280	1	-	-	-	281

For both years, the Group leases various FPSO and offices for its operations. Lease contracts are entered into for fixed term of 13 months to 171 months, but may have extension options. Certain leases of pipelines were accounted for as finance leases during the year ended December 31, 2018 and carried interest ranged from 6.35% to 11%. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable.

During the current period, the Group recognized right-of-use assets of approximately RMB12 million for leases with the CNOOC Group.

Variable lease payments

Leases of FPSO are either with only fixed lease payments or contain variable lease payment that are based on production volume and minimum annual lease payment that are fixed over the lease term. The fixed and variable lease payments paid to relevant FPSO lessors for the year ended December 31, 2019 amounted to RMB1,016 million and RMB280 million.

The overall financial effect of using variable payment terms is that higher rental costs are incurred by FPSO with higher production volume. Variable rent expenses are expected to continue to represent a similar proportion of production volume in future years.

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16. INTANGIBLE ASSETS

	Gas processing rights under NWS Project	Exploration rights	Marketing transportation and storage contracts	Software and others	Goodwill	Total
Cost:						
At January 1, 2018 (restated)	1,199	531	1,484	2,712	13,892	19,818
Additions	-	-	-	309	-	309
Disposal	-	-	(50)	(29)	-	(79)
Exchange differences	60	-	73	47	700	880
At December 31, 2018 (restated)	1,259	531	1,507	3,039	14,592	20,928
At January 1, 2019	1,259	531	1,507	3,039	14,592	20,928
Additions	-	-	-	348	-	348
Disposal	-	-	-	(27)	-	(27)
Exchange differences	21	-	24	14	239	298
At December 31, 2019	1,280	531	1,531	3,374	14,831	21,547
Accumulated amortization:						
At January 1, 2018 (restated)	(732)	(189)	(1,239)	(2,228)	-	(4,388)
Amortization charge for the year	(65)	(30)	(48)	(262)	-	(405)
Disposal	-	-	50	29	-	79
Exchange differences	(39)	-	(62)	(40)	-	(141)
At December 31, 2018 (restated)	(836)	(219)	(1,299)	(2,501)	-	(4,855)
At January 1, 2019	(836)	(219)	(1,299)	(2,501)	-	(4,855)
Amortization charge for the year	(53)	(30)	(55)	(227)	-	(365)
Disposal	-	-	-	27	-	27
Exchange differences	(15)	-	(20)	(13)	-	(48)
At December 31, 2019	(904)	(249)	(1,374)	(2,714)	-	(5,241)
Net book value:						
At December 31, 2018 (restated)	423	312	208	538	14,592	16,073
At December 31, 2019	376	282	157	660	14,831	16,306

Goodwill represents the excess of the purchase price over the estimated fair value of the assets acquired and liabilities assumed in a business combination. Goodwill acquired through business combinations is held at the E&P segment.

According to the accounting policies as set out in note 3, goodwill is acquired in the acquisition of Nexen Inc., and from the acquisition date, allocated to the entire E&P assets, which are the groups of cash-generating units that are expected to benefit from the synergies of the acquisition.

Impairment is determined by assessing the recoverable amount of the entire E&P assets to which the goodwill relates. Where the recoverable amount of the entire E&P assets is less than the carrying amount of the assets and the goodwill together, an impairment loss on goodwill is recognized.

In assessing value in use of E&P segment, the key assumptions include, but are not limited to, future commodity prices, future production estimates, estimated future capital expenditures, estimated future operating expenses and the discount rate. The discount rate used for value in use is derived from the Company’s WACC and is adjusted, where applicable, to take into account any specific risks relating to the country where the asset is located as well as the asset specific characteristics, such as specific tax treatments, cash flow profiles and economic life. However, actual results could differ from those estimates.

The intangible asset regarding the gas processing rights has been amortized upon the commercial production of the liquefied natural gas on a unit-of-production basis over the total proved reserves of the relevant asset. The intangible assets regarding the marketing transportation and storage contracts are amortized on a straight-line basis over the life of the contracts which is less than 20 years. Other identifiable intangible assets are amortized on a straight-line basis over a period ranging from 3 to 5 years.

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17. INVESTMENTS IN ASSOCIATES

Particulars of the principal associates at the end of the reporting period are as follows:

Name of associates	Place of establishment	Nominal value of ordinary shares issued and paid-up/registered capital	Percentage of equity attributable to the Group	Principal activities
Shanghai Petroleum Corporation Limited <sup>(1)</sup>	Shanghai, PRC	RMB900 million	30.0%	Production, processing and technology consultation of oil, gas and relevant products in the PRC
CNOOC Finance Corporation Limited <sup>(1)</sup>	Beijing, PRC	RMB4 billion	31.8%	Provision of deposit, transfer, settlement, loan, discounting and other financing services to CNOOC and its member entities
Jiangsu Shuangchuang Renewable Energy Development Corporation Limited <sup>(1)(2)</sup>	Jiangsu, PRC	RMB960 million	47%	New energy technology research and development, technical consulting, technical services; wind power; technical services for power system and facilities; power engineering and construction (operated with qualification certificates); generator set installation, commissioning and maintenance
Arctic LNG 2 LLC	Russian Federation	RUB15,975,910,000	10%	Exploration and development of natural gas and production and marketing of liquefied natural gas in Russia

- (1)Registered as a limited liability company under the PRC Law.
- (2)Interest in Jiangsu Shuangchuang Renewable Energy Development Corporation Limited ("Jiangsu Shuangchuang") held by CNOOC China was updated to 47% and the registered capital of Jiangsu Shuangchuang increased from 100 million to 960 million on October 30, 2019.

To give details of other associates would, in the opinion of the Directors, result in particulars of excessive length.

The Group's investments in associates represent:

	2018	2019
Share of net assets	4,433	24,513

None of the Group's associates are considered to be individually material. The following table illustrates the summarized financial information of the Group's associates in the consolidated financial statements:

	2017	2018	2019
Profit for the year	302	406	459
Other comprehensive income	36	16	25
Total comprehensive income	338	422	484

Dividend of RMB231 million was received from the associates in 2019 (2018: RMB162 million, 2017: RMB116 million).

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18. INVESTMENT IN A JOINT VENTURE

Particulars of the joint venture at the end of the reporting period are as follows:

Name of entity	Place of establishment	Nominal value of ordinary shares issued and paid- up/registered capital	Percentage of equity attributable to the Group	Principal activities
BC ENERGY INVESTMENTS CORP.	British Virgin Islands	US\$ 102,325,582	50%	Investment holding

Summarized financial information of the joint venture is disclosed below:

	2018	2019
Current assets	12,054	10,742
Non-current assets	47,116	49,417
Current liabilities	(6,851)	(7,616)
Non-current liabilities	(11,783)	(10,589)

	2017	2018	2019
Revenue	29,879	18,661	18,178
Depreciation, depletion and amortization	(3,742)	(3,446)	(3,195)
Interest income	313	95	140
Finance costs	(550)	(518)	(822)
Profit/(loss) before tax	2,215	(17,816)	1,961
Income tax (expense)/credit	(1,109)	6,630	(875)
Profit/(loss) after tax	1,106	(11,186)	1,086
Total comprehensive income/(expense)	1,106	(11,186)	1,086

Dividend of US\$25 million (equivalent to RMB172 million) was received from the joint venture in 2019 and US\$20 million (equivalent to RMB132 million) was received from the joint venture in 2018 and US\$36 million (equivalent to RMB243 million) was received from the joint venture in 2017.

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19. EQUITY INVESTMENTS AND OTHER FINANCIAL ASSETS

(i) Equity investments		2018 (restated)	2019
Non-current:			
Publicly traded investments			
Equity investment in MEG Energy Corporation ("MEG") classified at FVTOCI <sup>(1)</sup>		1,110	1,127
		1,110	1,127
Non-publicly traded investments			
Private equity fund in Kerogen Energy Fund classified at FVTOCI <sup>(2)</sup>		2,938	1,778
Other equity investments classified at FVTOCI		18	31
		2,956	1,809
		4,066	2,936
(1) MEG is principally engaged in the exploitation and production of oil sands. The investment in MEG is designated by the Group as at FVTOCI. As at December 31, 2019, the investment in MEG was stated at the quoted market price.			
(2) Kerogen Energy Fund is principally engaged in the investment in the oil and gas industry. The equity investment in Kerogen Energy Fund is designated by the Group as at FVTOCI.			

(ii) Other financial assets		2018	2019
Current:			
Publicly traded investments classified at FVTPL:			
Money market funds <sup>(1)</sup>		19,366	6,660
Non-publicly traded investments classified at FVTPL:			
Corporate wealth management products <sup>(2)</sup>		105,917	107,853
		125,283	114,513
(1) The money market funds can be redeemed at any time.			
(2) The corporate wealth management products will mature from January 8, 2020 to October 14, 2020 (2018: from January 8, 2019 to November 20, 2019).			

The gains of the Group's other financial assets recognized in the profit or loss for the year was RMB4,603 million (2018: RMB3,685 million , 2017: RMB2,409 million ).

During the year, the fair value changes on the Group's equity investments recognized directly in other comprehensive expense amounted to RMB1,167 million (2018: other comprehensive income RMB278 million, 2017: other comprehensive expense RMB542 million).

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20. OTHER NON-CURRENT ASSETS

Included in the other non-current assets were restricted deposits for future dismantlement. Pursuant to the Provisional Regulations on the Dismantlement of Offshore Oil and Gas Production Facilities of the People’s Republic of China, the Group accrues dismantlement costs for all the oil and gas fields under production sharing contracts in the PRC, and makes monthly cash contributions to the specified dismantlement fund accounts supervised by the PRC government. The deposit cannot be withdrawn or utilized for any other purposes but the dismantlement of oil and gas production facilities in the future. As at December 31, 2019, the balance of the specified dismantlement fund accounts was RMB8,860 million (December 31, 2018: RMB8,100 million).

21. INVENTORIES AND SUPPLIES

	2018 (restated)	2019
Materials and supplies	4,955	5,758
Oil in tanks	1,499	1,483
Less: Provision for inventory obsolescence	(601)	(927)
	5,853	6,314

22. TRADE RECEIVABLES

The credit terms of the Group are generally within 30 days after the delivery of oil and gas. Payment in advance or collateral may be required from customers, depending on credit rating. Trade receivables are non-interest bearing.

All customers have good credit quality with good repayment history and no significant receivables are past due. As at December 31, 2019 and December 31, 2018, the age of substantially all the trade receivables was within one year.

23. CASH AND CASH EQUIVALENTS AND TIME DEPOSITS WITH MATURITY OVER THREE MONTHS

The Group's cash and cash equivalents mainly consist of current deposits and time deposits with maturity within seven days. The bank balances are deposited with creditworthy banks.

The weighted average effective interest rate of the Group's bank deposits was 2.71% per annum for the year ended December 31, 2019 (2018: 2.83% per annum, 2017: 2.23% per annum).

24. TRADE AND ACCRUED PAYABLES

As at December 31, 2019 and 2018, substantially all the trade and accrued payables were aged within six months. The trade and accrued payables are non-interest-bearing.

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25. CONTRACT LIABILITIES

	2018	2019
Contract Liabilities	2,036	2,231
-Current	2,036	2,231

Under the natural gas sale contracts, which contain take-or-pay clauses, the Group recorded the payments received from customers for natural gas not yet taken as contract liabilities.

The amount of RMB477 million contract liability at the beginning of the year has been recognized as revenue for the year ended December 31, 2019.

26. OTHER PAYABLES AND ACCRUED LIABILITIES

	2018* (restated)	2019*
Accrued payroll and welfare payable	2,017	2,128
Accrued expenses	747	1,527
Special oil gain levy payable	615	327
Royalties payable	55	81
Provision for dismantlement (note 29)	674	1,439
Deferred consideration to Arctic LNG 2 LLC	-	5,720
Other payables	9,976	9,679
	14,084	20,901

\* These amounts include balances with related parties.

27. LOANS AND BORROWINGS

Current

These amounts include balances with related parties.

Effective interest rate and final maturity		2018 (restated)			2019		
		Loans	Notes	Total	Loans	Notes	Total
Short-term loans and borrowings							
General loans****	LIBOR+0.60% to 3.915% per annum with maturity within one year	4,960	-	4,960	1,905	-	1,905
		4,960	-	4,960	1,905	-	1,905
Loans and borrowings due within one year							
General loans of CUCBM	3.75% to 4.125% per annum with maturity within one year	1,749	-	1,749	-	-	-
For Tangguh LNG Project**							
	LIBOR+0.19% to 0.335% per annum with maturity within one year	223	-	223	226	-	226
Notes*		-	2,059	2,059	-	10,459	10,459
		1,972	2,059	4,031	226	10,459	10,685
		6,932	2,059	8,991	2,131	10,459	12,590

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27. LOANS AND BORROWINGS (continued)

Non-current

Effective interest rate and final maturity		2018(restated)			2019		
		Loans	Notes	Total	Loans	Notes	Total
For Tangguh LNG Project**	LIBOR+0.19% to 0.335% per annum with maturity through to 2021	305	-	305	84	-	84
For Tangguh LNG III Project***	LIBOR+1.37% to 3.45% per annum with maturity from 2021 to 2029	1,618	-	1,618	2,866	-	2,866
For Arctic LNG 2 Project****	EURIBOR+0.7% to 0.76% per annum with maturity in 2026	-	-	-	735	-	735
General loans of CUCBM*****	4.275% per annum with maturity in 2020	1,000	-	1,000	-	-	-
Notes*		-	130,556	130,556	-	132,467	132,467
		2,923	130,556	133,479	3,685	132,467	136,152

\* The details of notes are as follows:

Issued by	Maturity	Coupon Rate	Outstanding Principal Amount	
			December 31, 2019 USD million	December 31, 2018 USD million
CNOOC Finance (2003) Limited	Due in 2033	5.500%	300	300
CNOOC Finance (2011) Limited	Due in 2021	4.25%	1,500	1,500
CNOOC Finance (2011) Limited	Due in 2041	5.75%	500	500
CNOOC Finance (2012) Limited	Due in 2022	3.875%	1,500	1,500
CNOOC Finance (2012) Limited	Due in 2042	5.000%	500	500
CNOOC Finance (2013) Limited	Due in 2023	3.000%	2,000	2,000
CNOOC Finance (2013) Limited	Due in 2043	4.250%	500	500
CNOOC Finance (2013) Limited	Due in 2029	2.875%	1,000	-
CNOOC Finance (2013) Limited	Due in 2049	3.300%	500	-
CNOOC Finance (2014) ULC	Due in 2024	4.25%	2,250	2,250
CNOOC Finance (2014) ULC	Due in 2044	4.875%	500	500
CNOOC Petroleum North America ULC	Matured in 2019	6.2%	-	300
CNOOC Petroleum North America ULC	Due in 2028	7.4%	200	200
CNOOC Petroleum North America ULC	Due in 2032	7.875%	500	500
CNOOC Petroleum North America ULC	Due in 2035	5.875%	790	790
CNOOC Petroleum North America ULC	Due in 2037	6.4%	1,250	1,250
CNOOC Petroleum North America ULC	Due in 2039	7.5%	700	700
CNOOC Finance (2015) U.S.A. LLC	Due in 2025	3.500%	2,000	2,000
CNOOC Finance (2015) Australia Pty Ltd	Due in 2020	2.625%	1,500	1,500
CNOOC Finance (2015) Australia Pty Ltd	Due in 2045	4.200%	300	300
CNOOC Finance (2015) U.S.A. LLC	Due in 2023	3.75%	450	450
CNOOC Finance (2015) U.S.A. LLC	Due in 2028	4.375%	1,000	1,000

All the notes issued mentioned above were fully and unconditionally guaranteed by the Company.

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27. LOANS AND BORROWINGS (continued)

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In connection with the Tangguh LNG Project in Indonesia, the Company delivered a guarantee dated October 29, 2007, in favor of Mizuho Corporate Bank, Ltd., which acts as the facility agent for and on behalf of various international commercial banks under a US\$884 million commercial loan agreement. The Company guarantees the payment obligations of the trustee borrower under the subject loan agreement and is subject to a maximum cap of US\$135,163,308.28.
- \*\*\*

In connection with the financing for the third LNG process train of Tangguh LNG Project in Indonesia, the Company delivered two guarantees dated August 3, 2016, in favor of Mizuho Bank, Ltd., which acts as the facility agent for and on behalf of various international commercial banks and Indonesian local commercial banks under two commercial loan agreements with aggregate loan amount of US\$2,145 million. The Company guarantees the payment obligations of the trustee borrower under the subject loan agreements and is subject to an aggregate maximum cap of approximately US\$573 million.
- \*\*\*\*

As at December 31, 2019, US\$378 million of the bank loans (2018: none) were guaranteed by the Company.
- As at December 31, 2019, US\$0 million shareholder loans (2018: US\$694 million) of the Group were included in general loans. For details please refer to Note 32(v).
- \*\*\*\*\*

The general loans of CUCBM has been prepaid during 2019.

The maturities of the long term loans are as follows:

	2018 (restated)	2019
Repayable:		
Within one year	1,972	226
After one year but within two years	1,222	204
After two years but within three years	150	244
After three years but within four years	138	277
After four years but within five years	156	320
After five years	1,257	2,640
	4,895	3,911
Amount due within one year shown under current liabilities	(1,972)	(226)
	2,923	3,685

Supplemental information with respect to the long term loans:

For the year ended December 31	Balance at year end	Weighted average interest rate at year end	Maximum amount outstanding during the year	Average amount outstanding during the year <sup>(1)</sup>	Weighted average interest rate during the year <sup>(2)</sup>
2018 (restated)	4,895	4.17%	4,895	4,402	3.76%
2019	3,911	2.70%	3,911	4,403	3.43%

(1) The average amount outstanding is computed by averaging the outstanding principal balances as at January 1, and December 31, of each year.

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27. LOANS AND BORROWINGS (continued)

- (2) The weighted average interest rate is computed by averaging the interest rates as at January 1, and December 31, of each year.
- There was no default of principal, interest or redemption terms of the loans and borrowings during the year.

28. LEASE LIABILITIES

	12/31/2019
Lease liabilities payable:	
Within one year	1,732
Within a period of more than one year but not more than two years	1,266
Within a period of more than two years but not more than five years	3,091
Within a period of more than five years	4,536
	10,625
Less: Discount to present value	(2,138)
Total lease liabilities	8,487

29. PROVISION FOR DISMANTLEMENT

	2018 (restated)	2019
At January 1	54,114	54,878
New projects <sup>(1)</sup>	3,468	3,309
Revision <sup>(1)</sup>	(4,090)	5,117
Utilization	(1,337)	(1,141)
Deletion	-	(15)
Unwinding of discount <sup>(2)</sup> (note 8)	2,560	2,794
Exchange differences	163	660
At December 31	54,878	65,602
Current portion of provision for dismantlement included in other payables and accrued liabilities (note 26)	(674)	(1,439)
At December 31	54,204	64,163

- (1) The amounts are included in the additions of oil and gas properties in note 14.
- (2) The discount rates used for calculating the provision for dismantlement is 3.50%-4.25% (2018: 5%, 2017: 4% to 5%).

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30. SHARE CAPITAL

	Number of shares	Issued share capital equivalent of RMB million
Issued and fully paid:		
Ordinary shares with no par value as at January 1, 2018, as at December 31, 2018 and as at December 31, 2019	44,647,455,984	43,081

Share option schemes

The Company has adopted the share option schemes for the grant of options to the Company's directors, senior management and other eligible grantees.

- (1) Pre-Global Offering Share Option Scheme (expired in 2011);
- (2) 2001 Share Option Scheme (expired in 2011);
- (3) 2002 Share Option Scheme (expired in 2015); and
- (4) 2005 Share Option Scheme (as defined below).

Under these share option schemes, the Remuneration Committee of the Board will from time to time propose for the Board’s approval the grant of share options and the number of share options to be granted to the relevant grantees. The maximum aggregate number of shares (including those that could be subscribed for under the Pre-Global Offering Share Option Scheme, the 2001 Share Option Scheme, the 2002 Share Option Scheme and the 2005 Share Option Scheme) which may be issued upon exercise of all options granted shall not exceed 10% of the total issued share capital of the Company as at December 31, 2005, being the date on which the shareholders of the Company approved the 2005 Share Option Scheme, excluding shares under options which have lapsed.

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30. SHARE CAPITAL (continued)

Share option schemes (continued)

2005 Share Option Scheme

On December 31, 2005, the Company adopted a new share option scheme (the "2005 Share Option Scheme"). The purpose of the 2005 Share Option Scheme is to provide incentive and/or reward to eligible persons for their contribution to, and continuing efforts to promote the interests of the Company. Under the 2005 Share Option Scheme, the Board has the authority to grant options to subscribe for shares to the directors, officers and employees of the Group, and any other persons who in the sole discretion of the Board, have contributed or will contribute to the Group. Unless approved by the shareholders, the total number of shares issued and to be issued upon exercise of the options granted to each individual (including exercised and unexercised options) under the 2005 Share Option Scheme or any other share option scheme adopted by the Company, in any 12-month period, must not exceed 1% of the shares in issue of the Company.

According to the 2005 Share Option Scheme, the consideration payable by a grantee for the grant of options will be HK\$1.00. The exercise price for such options will be determined by the Board at its discretion at the date of grant, except that such price shall be at least the higher of:

- (1) the nominal value of a share of the Company on the date of grant;
- (2) the average closing price of the shares as stated in the daily quotation sheets of The Stock Exchange of Hong Kong Limited for the five trading days immediately preceding the date of grant; and
- (3) the closing price of the shares as stated in the HKSE's daily quotation sheet on the date of grant.

The period within which the options must be exercised, as well as any minimum holding period or performance targets which apply to the options, will be specified by the Board of the Company at the time of grant. The exercise periods for options granted under the 2005 Share Option Scheme shall end not later than 10 years from the date of grant. No options may be granted under the 2005 Share Option Scheme after the date of the 10th anniversary of the adoption of the 2005 Share Option Scheme.

No new share option was granted during the year (2018 and 2017: nil) and the Group recognized an equity-settled share option expense of nil (2018 and 2017: nil) during the year.

The fair value of equity-settled share options granted was estimated as at the date of grant if any, using the Black-Scholes option pricing model, taking into account the terms and conditions upon which the options were granted.

Details of the share options outstanding are as follows:

	2017		2018		2019	
	Number of share options	Weighted average exercise price	Number of share options	Weighted average exercise price	Number of share options	Weighted average exercise price
		HK\$		HK\$		HK\$
Outstanding at the beginning of the year	187,529,000	11.40	129,919,000	12.34	67,907,000	11.44
Granted during the year	-	-	-	-	-	-
Forfeited during the year	(22,506,000)	12.43	(26,732,000)	11.33	(9,977,000)	12.70
Expired during the year	(35,104,000)	7.29	(35,280,000)	14.83	(30,900,000)	9.93
Exercised during the year	-	-	-	-	-	-
Outstanding at the end of the year	129,919,000	12.34	67,907,000	11.44	27,030,000	12.70
Exercisable at the end of the year	129,919,000	12.34	67,907,000	11.44	27,030,000	12.70

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30. SHARE CAPITAL (continued)

Share option schemes (continued)

2005 Share Option Scheme (continued)

No share options had been cancelled or modified during the years ended December 31, 2017, 2018 or 2019.

At the date of approval of these consolidated financial statements for issuance, the share options outstanding under these share option schemes represented approximately 0.06% of the Company’s shares in issue as at that date (2018: 0.15%, 2017: 0.29%). The weighted average remaining contractual life of share options outstanding at the end of the year was 0.39 years (2018: 0.93 years, 2017: 1.52 years). The exercise in full of the outstanding share options would, under the present capital structure of the Company, result in the issue of 27,030,000 (2018: 67,907,000) additional ordinary shares of the Company and additional share capital of RMB308,176,111 (2018: RMB680,525,151 ).

31. RESERVES

According to the laws and regulations of the PRC and the articles of association of CNOOC China, CNOOC China is required to provide for certain statutory funds, namely, the general reserve fund and the staff and workers' bonus and welfare fund, which are appropriated from net profit (after making up for losses from previous years), but before dividend distribution.

The general reserve fund, which is determined at the discretion of the board of directors of CNOOC China, can only be used, upon approval by the relevant authority, to offset against accumulated losses or to increase capital.

Appropriation to the staff and workers’ bonus and welfare fund, which is determined at the discretion of the board of directors of CNOOC China, is expensed as incurred under IFRS standards/HKFRSs. The staff and workers’ bonus and welfare fund can only be used for special bonuses or collective welfare of employees.

As at December 31, 2019, the general reserve fund amounted to RMB57,504 million (December 31, 2018: RMB60,000 million).

In accordance with the "Temporary Regulation for Safety Expense Financial Management of Higher Risk Industry" and the implementation guidance issued by the MOF of the PRC, the Group is required to accrue a safety fund for its oil and gas exploration and production activities within the PRC by appropriating a portion of its net profit to other reserves based on its annual production from offshore China. Such reserve is reduced for expenses incurred to improve the safety conditions of oil and gas production. When the safety fund is fully utilized, additional expenses incurred for safety production purposes are charged directly to the profit or loss for the year. As of December 31, 2019, the Group's safety fund reserve under the PRC regulations amounted to nil (December 31, 2018: nil).

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32. RELATED PARTY TRANSACTIONS

As disclosed in note 1, the Company is a subsidiary of CNOOC, which is a state-owned enterprise subject to the control of the State Council of the PRC. The State Council of the PRC directly and indirectly controls a significant number of state-owned entities and organizations.

Comprehensive framework agreement with CNOOC in respect of a range of products and services

As the Group is controlled by CNOOC, transactions with the CNOOC Group are disclosed as related party transactions. The connected transactions or continuing connected transactions defined in Chapter 14A of the Listing Rules in respect of items listed below also constitute related party transactions. The Company has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules for continuing connected transactions listed below. The Company entered into a comprehensive framework agreement with CNOOC on November 15, 2016 for the provision (1) by the Group to the CNOOC Group and (2) by the CNOOC Group to the Group, of a range of products and services which may be required and requested from time to time by either party and/or its associates in respect of the continuing connected transactions. The term of the comprehensive framework agreement is for a period of three years from January 1, 2017. The continuing connected transactions under the comprehensive framework agreement and the relevant annual caps for the three years from January 1, 2017 were approved by the independent shareholders of the Company on December 1, 2016. The approved continuing connected transactions are as follows:

- (1) Provision of exploration, oil and gas development, oil and gas production as well as marketing, management and ancillary services by the CNOOC Group to the Group:
  - (a) Provision of exploration and support services
  - (b) Provision of oil and gas development and support services
  - (c) Provision of oil and gas production and support services
  - (d) Provision of marketing, management and ancillary services
  - (e) FPSO vessel leases
- (2) Provision of management, technical, facilities and ancillary services, including the supply of materials by the Group to the CNOOC Group; and
- (3) Sales of petroleum and natural gas products by the Group to the CNOOC Group:
  - (a) Sales of petroleum and natural gas products (other than long-term sales of natural gas and liquefied natural gas)
  - (b) Long-term sales of natural gas and liquefied natural gas

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32. RELATED PARTY TRANSACTIONS (continued)

Pricing principles

The basic pricing principle for the continuing connected transactions between the Group and the CNOOC Group is based on arm's length negotiations, on normal commercial terms or better and with reference to the prevailing local market conditions (including the volume of sales, length of contracts, the volume of services, overall customer relationship and other market factors).

On the basis of the above basic pricing principle, each type of products or services must be charged in accordance with the following pricing mechanism and in the following sequential order:

- (a) government-prescribed prices; or
- (b) where there is no government-prescribed price, in accordance with market prices, including the local, national or international market prices.

The continuing connected transactions referred to in paragraph (1)(a)-(1)(b) above provided by the CNOOC Group to the Group and (3)(a)-(3)(b) above provided by the Group to the CNOOC Group, on the basis of the above pricing principle, are determined through arm's length negotiations based on market prices (as defined in the comprehensive framework agreement).

The continuing connected transactions referred to in paragraph (1)(c)-(1)(d) above provided by the CNOOC Group to the Group, on the basis of the above pricing principle, are based on government-prescribed price or market prices.

The continuing connected transactions referred to in paragraph (1)(e), on the basis of the above pricing principle, are unanimously determined with the CNOOC Group which provides the FPSO vessel leases after arm's length negotiation in accordance with normal commercial terms.

The continuing connected transactions referred to in paragraph (2) above provided by the Group to the CNOOC Group, on the basis of the above pricing principle, are determined through arm's length negotiation between both parties with reference to market price.

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32. RELATED PARTY TRANSACTIONS (continued)

The following is a summary of significant related party transactions entered into in the ordinary course of business between the Group and its related parties during the year and the balances arising from related party transactions at the end of the year:

(i) Provision of exploration, oil and gas development, oil and gas production as well as marketing, management and ancillary services by the CNOOC Group to the Group

	2017 (restated)	2018 (restated)	2019
Provision of exploration and support services	5,912	7,378	10,284
- Inclusive of amounts capitalized under property, plant and equipment	3,392	3,803	6,369
Provision of oil and gas development and support services	16,401	24,061	31,723
Provision of oil and gas production and support services (note a)	8,951	9,284	9,414
Provision of marketing, management and ancillary services (note b)	1,434	1,460	1,261
FPSO vessel leases (note c)*	1,383	1,213	1,236
	34,081	43,396	53,918

\* For the right-of-use assets recognized during this period from the lease agreements with CNOOC Group please refer to note 15.

(ii) Provision of management, technical, facilities and ancillary services, including the supply of materials by the Group to the CNOOC Group

The Group did not enter into any transactions in the above category for the years ended December 31, 2017, 2018 or 2019.

(iii) Sales of petroleum and natural gas products by the Group to the CNOOC Group

	2017 (restated)	2018 (restated)	2019
Sales of petroleum and natural gas products (other than long-term sales of natural gas and liquefied natural gas) (note d)	109,518	131,730	132,222
Long term sales of natural gas and liquefied natural gas (note e)	10,108	15,461	15,425
	119,626	147,191	147,647

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32. RELATED PARTY TRANSACTIONS (continued)

(iv) Transactions and balances with CNOOC Finance Corporation Limited ("CNOOC Finance") (note f)

(a) Interest income received by the Group

	2017	2018	2019
Interest income from deposits in CNOOC Finance	360	391	333

(b) Deposits balances made by the Group

	2018	2019
Deposits in CNOOC Finance	23,052	23,380

(v) Balances with the CNOOC Group

	2018 (restated)	2019
Amount due to CNOOC		
- included in other payables and accrued liabilities	147	3
Amount due to other related parties		
- included in trade and accrued payables	19,628	20,318
- included in lease liabilities	-	5,327
	19,775	25,648
Borrowings from CNOOC (note g)	4,760	-
Amounts due from other related parties		
- included in trade receivables	14,057	14,788
- included in other current assets	1,153	512
	15,210	15,300

(vi) Balance with a joint venture

	2018	2019
Amount due from a joint venture		
- included in other current assets	137	77

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32. RELATED PARTY TRANSACTIONS (continued)

(vii) Transactions and balances with other state-owned enterprises

The Group enters into extensive transactions covering sales of crude oil and natural gas, purchase of property, plant and equipment and other assets, receiving of services, and making deposits with state-owned enterprises, other than the CNOOC Group, in the normal course of business on terms comparable to those with other non-state-owned enterprises. The purchases of property, plant and equipment and other assets, and receipt of services from these state-owned enterprises are individually not significant. The individually significant sales transactions with these state-owned enterprises are disclosed in note 37. In addition, the Group had certain of its cash in bank and time deposits with certain state-owned banks in the PRC as at December 31, 2019, as summarized below:

	2018	2019
Cash and cash equivalents	2,688	22,129
Time deposits with maturity over three months	227	221
Specified dismantlement fund accounts (note 20)	8,100	8,860
	11,015	31,210

Interest rates for the above time deposits and specified dismantlement fund accounts are at prevailing market rates.

(viii) Key management personnel's remuneration

Key management personnel's remuneration is disclosed in note 9.

Notes:

- a) These represent the services for production operations, the provision of various facilities and ancillary services, such as provision of different types of materials, medical and employee welfare services, maintenance and repair of major equipment and supply of water, electricity and heat to the Group, some of which may not be available from independent third parties or available on comparable terms.
- b) These include marketing, administration and management, management of oil and gas operations and integrated research services as well as other ancillary services relating to exploration, development, production and research activities of the Group. In addition, the CNOOC Group leased certain premises to the Group for use as office premises and staff quarters out of which they provided management services to certain properties.
- c) CNOOC Energy Technology & Services Limited leased FPSO vessels to the Group for use in oil production operations.
- d) The sales include crude oil, condensate oil, liquefied petroleum gas, natural gas and liquefied natural gas to the CNOOC Group. Individual sales contracts were entered into from time to time between the Group and the CNOOC Group.

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32. RELATED PARTY TRANSACTIONS (continued)

(viii) Key management personnel's remuneration (continued)

Notes: - continued

- e) It is the market practice for sales terms to be determined based on the estimated reserves and production profile of the relevant gas fields. The long term sales contracts usually last for 5 to 20 years.
- f) CNOOC Finance is a 31.8% owned associate of the Company and also a subsidiary of CNOOC. The financial services provided by CNOOC Finance to the Group also constitute continuing connected transactions defined in Chapter 14A of the Listing Rules and the Company has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules for the continuing connected transactions. Under the financial services framework agreement with CNOOC Finance dated December 1, 2016, CNOOC Finance continues to provide to the Group settlement, depository, discounting, loans and entrustment loans services. The agreement is effective from January 1, 2017 to December 31, 2019. The depository services were exempted from independent shareholders' approval requirements under the Listing Rules. On August 23, 2018, the Board approved to revise the maximum daily outstanding balance of deposits placed by the Group with CNOOC Finance for the period from August 23, 2018 to December 31, 2019 to RMB23,500 million. The Group's actual maximum daily outstanding balance for deposits stated in CNOOC Finance (including accrued interest but excluding funds placed for the purpose of extending entrustment loans pursuant to the entrustment loan services) in 2019 was RMB23,500 million (2018: RMB23,500million).
- g) In September 2014, CNOOC provided CNOOC International Limited, a wholly-owned subsidiary of the Company a five-year uncommitted revolving loan facility for general purposes, with the principal amount of US\$135 million of 0.95% per annum. As at December 31, 2019, the withdrawal amount of the loan was nil (December 31, 2018: US\$130 million); In December 2014, CNOOC provided the Company a five-year uncommitted revolving loan facility for general purposes, with the principal amount of US\$600 million of 0.95% per annum. As at December 31, 2019, the withdrawal amount of the loan was nil (December 31, 2018: US\$564 million). The Company has paid the above loans off in 2019.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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33. RETIREMENT BENEFITS

All the Group's full-time employees in the PRC are covered by a state-managed retirement benefit plan operated by the government of the PRC, and are entitled to an annual pension. The PRC government is responsible for the pension liabilities to these retired employees. The Group is required to make annual contributions to the state-managed retirement benefit plan at rates ranging from 11% to 22% of the employees' base salaries.

The Company is required to make contributions to a defined contribution mandatory provident fund at a rate of 5% of the salaries of all full-time employees in Hong Kong. The related pension costs are expensed as incurred.

The Group provides retirement benefits for all local employees in overseas locations in accordance with relevant labor law, and provides employee benefits to expatriate staff in accordance with the relevant employment contracts.

During the year, the Group's pension costs charged to the consolidated statement of profit or loss and other comprehensive income amounted to RMB1,075 million (2018: RMB695 million, 2017: RMB668 million).

34. NOTE TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

Reconciliation of profit before tax to cash generated from operations

	2017 (restated)	2018 (restated)	2019
Profit before tax	36,387	75,157	85,649
Adjustments for:			
Interest income	(655)	(798)	(1,067)
Finance costs	5,121	5,162	5,865
Exchange losses, net	(356)	141	213
Share of profits of associates	(302)	(406)	(459)
(Profit)/loss attributable to a joint venture	(553)	5,593	(543)
Investment income	(2,409)	(3,685)	(4,632)
Impairment for property, plant and equipment	8,660	5,861	2,072
Provision for other assets	525	470	22
Depreciation, depletion and amortization	61,442	50,838	57,699
Loss on disposal and write-off of property, plant and equipment	1,936	668	4,238
Subtotal	109,796	139,001	149,057
Increase in trade receivables and other current assets	(1,292)	(940)	(3,213)
Decrease/(increase) in inventories and supplies	1,465	1,720	(1,304)
Increase in trade and accrued payables, contract liabilities and other payables and accrued liabilities	1,167	301	1,439
Cash generated from operations	111,136	140,082	145,979

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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34. NOTE TO THE CONSOLIDATED STATEMENT OF CASH FLOWS (continued)

Reconciliation of liabilities arising from financing activities

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Loans and borrowings (Note 27)	Lease Liabilities (Note 28)	Interest payable (Note 26)	Dividend payable	Total
At January 1, 2018 (restated)	134,869	-	1,185	-	136,054
Financing cash flows	1,717	-	(5,264)	(23,589)	(27,136)
Foreign exchange translation	5,805	-	-	445	6,250
Finance costs	79	-	5,083	-	5,162
Unwinding of discount on provision for dismantlement (note 29)	-	-	(2,560)	-	(2,560)
Amount capitalized in property, plant and equipment (note 14)	-	-	2,838	-	2,838
Dividends declared	-	-	-	23,144	23,144
At December 31, 2018 (restated)	142,470	-	1,282	-	143,752
At January 1, 2019	142,470	9,139	1,282	-	152,891
Financing cash flows	4,037	(1,451)	(5,998)	(28,973)	(32,385)
New lease entered	-	687	-	-	687
Foreign exchange translation	2,157	(236)	-	(27)	1,894
Finance costs	78	348	5,439	-	5,865
Unwinding of discount on provision for dismantlement (note 29)	-	-	(2,794)	-	(2,794)
Interest on lease liabilities(note 8)	-	-	348	-	348
Amount capitalized in property, plant and equipment (note 14)	-	-	3,048	-	3,048
Dividends declared	-	-	-	29,000	29,000
At December 31, 2019	148,742	8,487	1,325	-	158,554

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35. COMMITMENTS AND CONTINGENCIES

(i) Capital commitments

As at December 31, 2019, the Group had the following capital commitments, principally for the construction of property, plant and equipment:

	2018	2019
Contracted, but not provided for <sup>(1)</sup>	55,538	64,542

(1) The capital commitments contracted, but not provided for, include the estimated payments to the Ministry of Natural Resources of the PRC for the next five years with respect to the Group’s exploration and production licenses.

The above table includes a commitment of approximately RMB10,528 million (2018: RMB10,309 million ) contracted with the CNOOC Group.

Capital commitments of a joint venture:

	2018	2019
Contracted, but not provided for	590	344

As at December 31, 2019, the Group had unutilized banking facilities amounting to approximately RMB54,948 million (2018: RMB55,289 million).

(ii) Operating lease commitments

The Group has applied IFRS 16/HKFRS 16 for the first time in the current year. IFRS 16/HKFRS 16 superseded IAS17/HKAS 17 and the related interpretations. For details please refer to note 2 and 28.

a. Office properties

The Group leases certain of its office properties under operating lease arrangements. Leases for properties are negotiated for terms ranging from 6 months to 20 years.

As at December 31, 2018, the Group had total minimum lease payments under non-cancellable operating leases falling due as follows:

	2018
Commitments due:	
No later than one year	1,762
Later than one year and not later than two years	927
Later than two years and not later than five years	2,106
Later than five years	4,260
	9,055

The above table includes minimum lease payments of approximately RMB898 million to the CNOOC Group in 2018.

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35. COMMITMENTS AND CONTINGENCIES (continued)

(ii) Operating lease commitments (continued)

a. Office properties (continued)

Office properties commitments of a joint venture:

	2018
Commitments due:	
No later than one year	24
Later than one year and not later than two years	20
Later than two years and not later than five years	32
Later than five years	63
	139

b. Plant and equipment

The Group leases certain of its plant and equipment under operating lease arrangements for a term from 1 year to 25 years.

As at December 31, 2018, the Group had total minimum lease payments under non-cancellable operating leases falling due as follows:

	2018
Commitments due:	
No later than one year	1,379
Later than one year and not later than two years	1,117
Later than two years and not later than five years	1,760
Later than five years	3,061
	7,317

The above table includes a commitment of approximately RMB5,195 million to the CNOOC Group in 2018.

(iii) Contingencies

As a Chinese Resident Enterprise, the Company may be liable to pay taxes on the deemed interest income for the funding provided to its overseas subsidiaries starting from January 1, 2008. The Company has prepared contemporaneous documentation in accordance with applicable PRC tax laws and regulations and is currently awaiting confirmation from its local tax authority.

The Group is subject to tax in numerous jurisdictions around the world. There are audits in progress and items under review. Difference in positions taken by taxation authorities over the interpretation and application of tax laws and regulations may increase the Group's tax liability. Management of the Company has assessed the possible future outcome of matters that are currently under dispute. Management of the Company believes that an adequate provision for future tax liability has been included in the consolidated financial statements based on available information.

In addition to the matters mentioned above, the Group is dealing with a number of lawsuits and arbitrations that arise in the ordinary course of business. While the results of these legal proceedings cannot be ascertained at this stage, management of the Company believes these proceedings are not expected to have a material effect on the consolidated financial statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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36. FINANCIAL INSTRUMENTS

Fair value of financial instruments

The carrying values of the Group’s cash and cash equivalents, time deposits with maturity more than three months, trade receivables, other current assets, short-term loans and borrowings, trade and accrued payables, other payables and accrued liabilities approximated to their fair values at the reporting date due to the short maturity of these instruments.

The fair value of the Group's long term bank loans with floating interest rates approximated to the carrying amount as at December 31, 2019 and 2018.

The estimated fair value of the Group's long term guaranteed notes was approximately RMB154,407 million as at December 31, 2019 (2018: RMB134,583 million), which was determined by reference to the market price as at December 31, 2019.

Fair value hierarchy

The Group uses the following hierarchy that reflects the significance of the inputs used in making the fair value measurement:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities. Active markets are those in which transaction occur in sufficient frequency and volume to provide pricing information on an on-going basis.

Level 2: fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. The Group obtains information from sources of independent price publications, over-the-counter broker quotes and the fund management’s quotations as at the reporting date.

Level 3: fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs), or where the observable data does not support the majority of the instruments fair value.

As at December 31, 2019 and December 31, 2018, the Group held the following financial instruments measured at fair value for each hierarchy respectively:

	December 31, 2019	Level 1	Level 2	Level 3
Assets measured at fair value				
Other financial assets-current				
Corporate wealth management products	107,853	-	107,853	-
Money market funds	6,660	6,660	-	-
Equity investments				
Non-publicly traded investments – non current	1,809	-	-	1,809
Publicly traded investments – non current*	1,127	1,127	-	
	117,449	7,787	107,853	1,809

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36. FINANCIAL INSTRUMENTS (continued)

Fair value hierarchy (continued)

	December 31, 2018	Level 1	Level 2	Level 3
<b>Assets measured at fair value</b>				
Other financial assets-current				
Corporate wealth management products	105,917	-	105,917	-
Money market funds	19,366	19,366	-	-
Equity investments				
Non-publicly traded investments – non current	18	-	-	18
Publicly traded investments – non current*	1,110	1,110	-	-
	126,411	20,476	105,917	18

\* All gains and losses included in other comprehensive income related to financial assets at fair value through other comprehensive income held at the end of the reporting period are reported as fair value change on equity investments designated as at fair value through other comprehensive income.

Financial assets classified within Level 3 are made up of Kerogen Energy Fund invested by the Group. Significant unobservable inputs are used to determine the fair value of the financial assets. As observable prices are not available, the fair value of the financial assets is derived by using valuation techniques, mainly including embedded terms of the instrument, bid offer price as well as valuations based on net asset value using the discounted cash-flow of each project or asset, having applied an appropriate risk factor for the stage of development of the project. The significant unobservable inputs used in the fair value measurement include net asset value, price to net asset value.

No amounts have been transferred between the different levels of the fair value hierarchy for the year.

37. CONCENTRATION OF CUSTOMERS

A substantial portion of the Group's oil and gas commodities sales to third-party customers is made to a small number of customers on credit. Details of the gross sales to these top five third party customers are as follows:

	2017	2018	2019
China Petroleum & Chemical Corporation*	15,488	13,329	19,126
PetroChina Company Limited*	11,957	15,841	6,964
Phillips 66	2,631	4,440	5,197
PTT Public Company Limited	N/A	853	3,029
Marathon Petroleum Corporation	N/A	2,928	2,808

\* These transactions are with other state-owned enterprises.

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38. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

The Group's principal financial instruments comprise bank loans, long term guaranteed notes, equity investments and other financial assets, cash and short term deposits. The Group has various other financial assets and liabilities such as trade receivables, other receivables, trade and accrued payables, which arise directly from its operations.

The Group is exposed to credit risk, oil and gas price risk, currency risk, interest rate risk and liquidity risk.

The Group's senior management oversees the management of these risks. The Group's senior management is supported by various departments that advise on financial risks and the appropriate financial risks governance framework for the Group. Those departments provide assurance to the Group's senior management that the Group's financial risk-taking activities are governed by appropriate policies and procedures and that financial risks are identified, measured and managed in accordance with group policies and group risk appetite.

(i) Credit risk and management assessment

As at December 31, 2019, the carrying amounts of the Group's cash and cash equivalents, time deposits with maturity more than three months, trade receivables and other receivables (approximately RMB 6,586 million included in other current assets) represent the Group's maximum exposure to credit risk in relation to its financial assets. The Group does not hold any collateral or other credit enhancements to cover its credit risks associated with its financial assets.

In order to minimize the credit risk, the management of the Group has delegated a team responsible for determination of credit limits and credit approvals. Before accepting any new counterparties, the Group uses an internal credit scoring system to assess the potential counterparty’s credit quality and defines credit limits by counterparty. Limits and scoring attributed to counterparties are reviewed twice a year. Other monitoring procedures are in place to ensure that follow-up action is taken to recover overdue debts. In addition, the Group performs impairment assessment under ECL model upon application of IFRS 9/HKFRS 9 on trade receivables individually or based on provision matrix, and other receivables individually. In this regard, the Directors of the Company consider that the Group’s credit risk is significantly reduced.

Concentrations of credit risk are managed by counterparty and by geographical region. At December 31, 2019, the Group has certain concentrations of credit risk as 1.89% (2018: 0.06% ) and 5.83% (2018: 0.07%)of the Group's trade receivables were due from the Group's largest third-party customer and the five largest third-party customers, respectively.

(ii) Oil and gas price risk

Since the Group makes reference to international oil prices to determine its realized oil price, fluctuations in international oil price would have a significant impact on the Group’s sales revenue, profit, assets value and cash-flow. In addition, certain of the Group’s natural gas sales contracts contain price adjustment provisions. Any changes in international oil prices, inflation rate and domestic natural gas pricing policies may result in changes in natural gas prices, which will affect the Group’s profitability.

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38. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (continued)

(iii) Currency risk

Substantially all of the Group’s oil and gas sales are denominated in RMB and United States dollars ("US dollars"). Starting from July 21, 2005, China reformed the exchange rate regime by moving into a managed floating exchange rate regime based on market supply and demand with reference to a basket of currencies. RMB would no longer be pegged to the US dollars. From January 1, 2019 to December 31,2019, RMB has depreciated by approximately 1.62% (December 31, 2018: depreciated by approximately 4.79%) against the US dollars. At December 31, 2019, approximately 52% (2018: 84%) of the Group’s cash and cash equivalents and time deposits with maturity over three months were denominated in RMB, and the remaining amounts were substantially denominated in US dollars and Hong Kong dollars. The Group also has exposures to currencies other than the US dollars, such as Canadian dollars and British Pounds as such exposures are considered insignificant.

Management has assessed the Group's exposure to foreign currency risk by using a sensitivity analysis on the change in foreign exchange rate of the US dollars, to which the Group is mainly exposed to as at December 31, 2019 and 2018. Based on management's assessment at December 31, 2019, a 5% strengthening/weakening of RMB against US dollars would have increased/decreased the profit for the year of the Group by 0.04% (December 31, 2018: 0.15%) and the equity of the Group by 0.47% (December 31, 2018: 0.25%). This analysis has been determined assuming that the change in foreign exchange rates had occurred at the end of the reporting period and had been applied to the foreign currency balances to which the Group has significant exposure with all other variables held constant. The analysis is performed on the same basis for 2018.

Senior management is closely monitoring the Group's net exposure to foreign currency risk. The depreciation of RMB against the US dollars may have the following impact on the Group. On one hand, since the benchmark oil and gas prices are usually in US dollars against RMB, the Group's oil and gas sales may increase due to the appreciation of the US dollars against RMB. On the other hand, the appreciation of the US dollars against RMB will also increase the Group's costs for imported equipment and materials, most of which are denominated in the US dollars.

(iv) Interest rate risk

The interest rate risk is closely monitored by the Group's senior management. As at the end of 2019, the interest rates for 96% of the Group's debts were fixed. Apart from borrowing for Tangguh LNG Project, all of the Group's long term debts are fixed rate. The weighted average term of the Group's debt balance outstanding was approximately 8.89 years. The fixed interest rates can reduce the volatility of finance costs under uncertain environments and the Group's exposure to changes in interest rates is not expected to be material.

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38. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (continued)

(v) Liquidity risk

The Group manages its liquidity risk by regularly monitoring its liquidity requirements and its compliance with debt covenants to ensure that it maintains sufficient cash and cash equivalents, and readily realizable equity investments and other financial assets, and adequate time deposits to meet its liquidity requirements in the short and long term. In addition, bank facilities have been put in place for contingency purposes.

The Group's trade and accrued payables, other payables and accrued liabilities are all due for settlement within six months after the reporting date.

(vi) Capital management

The primary objectives of the Group's capital management are to safeguard the Group's ability to continue as a going concern and to maintain healthy capital ratios in order to support its business and maximise shareholders' value.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may return capital to shareholders, raise new debt or issue new shares. No changes were made in the objectives, policies or processes for managing capital during the years ended December 31, 2019, 2018 and 2017.

The Group monitors capital on the basis of the debt to capital ratio, which is calculated as interest-bearing debts divided by total capital (equity attributable to owners of the parent plus interest-bearing debts).

	2017 (restated)	2018 (restated)	2019
Interest-bearing debts	134,869	142,470	148,742
Lease liability	-	-	8,487
Total Equity	382,571	419,910	448,226
Total capital	517,440	562,380	605,455
Gearing ratio	26.1%	25.3%	26.0%

39. CHARGES ON ASSETS

CNOOC NWS Private Limited, a wholly-owned subsidiary of the Group, together with the other joint venture partners and the operator of the NWS Project, signed a Deed of Cross Charge and an Extended Deed of Cross Charge whereby certain liabilities incurred or to be incurred, if any, by the Company in respect of the NWS Project are secured by its interest in the NWS Project.

40. SUBSEQUENT EVENTS

The Group has no significant subsequent events needed to be disclosed in the consolidated financial statements.

41. APPROVAL OF THE FINANCIAL STATEMENTS

The consolidated financial statements were approved and authorized for issue by the Board of Directors on March 25, 2020.

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
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The following disclosures are included in accordance with the FASB Accounting Standard Codification 932 Extractive Activities-Oil and Gas (the "ASC 932").

The regional analysis presented below is on a continent basis, with separate disclosure for countries that contain 15% or more of the total proved reserve, in accordance with SEC and FASB requirements.

(a) Reserve quantity information

Crude oil and natural gas reserve estimates are determined through analysis of geological and engineering data which appear, with reasonable certainty, to be economically producible in the future from known oil and natural gas reservoirs under existing economic and operating conditions. The reserve data that we disclosed were all based on the definitions and disclosure guidelines contained in the US Securities and Exchange Commission's final rules on "Modernization of Oil and Gas Reporting" (the "SEC Final Rule").

For the years 2019, 2018 and 2017, approximately 66%, 69% and 65%, respectively, of our total proved reserves were evaluated by us, and the remaining were evaluated by independent third parties .

We implemented rigorous internal control system that monitors the entire reserves estimation process and certain key metrics in order to ensure that the process and results of reserves estimates fully comply with the relevant SEC rules.

We established the Reserve Management Committee, or RMC, which is led by one of our Executive Vice Presidents and comprises the general managers of the relevant departments.

The RMC's main responsibilities are to:

- review our reserves policies;
- review our proved reserves and other categories of reserves; and
- select our reserves estimators and auditors.

The RMC follows certain procedures to appoint our internal reserves estimators and reserves auditors, who are required to have undergraduate degrees and at least five years and ten years of experience related to reserves estimation, respectively.

The reserves estimators and auditors are required to be members of a professional society, such as China Petroleum Society (CPS), and are required to take the professional trainings and examinations as required by the professional society and us.

The RMC delegates its daily operation to our Reserves Office, which is led by our Chief Reserve Supervisor. The Reserves Office is mainly responsible for supervising reserves estimates and auditing. It reports to the RMC periodically and is independent from operating divisions such as the exploration, development and production departments. Our Chief Reserve Supervisor has 25 years' experience in oil and gas industry.

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

*(All amounts expressed in millions of Renminbi unless otherwise stated)*

(a) Reserve quantity information (continued)

The Group's net proved reserves consist of its interest in reserves, comprised of a 100% interest in its independent oil and gas properties and its participating interest in the properties covered under the production sharing contracts in the PRC, less (i) an adjustment for the Group's share of royalties payable by the Group to the PRC government and the Group's participating interest in share oil payable to the PRC government under the production sharing contracts, and less (ii) an adjustment for production allocable to foreign partners under the PRC production sharing contracts as reimbursement for exploration expenses attributable to the Group's participating interest, and plus the participating interest in the properties covered under the production sharing contracts in oversea countries, less adjustments, if any, of share oil attributable to the host government and the domestic market obligation.

Pursuant to SEC Final Rule, the Group uses the average, first-day-of-the-month oil price during the 12-month period before the ending date of the period covered by the consolidated financial statements to estimate its proved oil and gas reserves.

The Company determines its net entitlement oil and gas reserves under production sharing contracts using the economic interest method.

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(a) Reserve quantity information (continued)

Proved developed and undeveloped reserves:

											North America (excluding Canada)		South America		Europe		Total					
	PRC		Asia (excluding PRC)		Oceania		Africa		Canada		Synthetic oil	Bitumen	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen
	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas												
	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(mmbls)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(mmbls)
Consolidated entities																						
December 31, 2016	1,446	5,844	77	952	12	333	138	-	-	-	301	-	260	350	1	-	81	7	2,015	7,486	301	-
Purchase/ (Disposal) of reserves	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	-	-
Discoveries and extensions	112	250	-	-	-	-	-	-	-	-	162	10	37	68	78	-	4	-	232	318	162	10
Improved Recovery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Production	(258)	(262)	(21)	(52)	(1)	(35)	(27)	-	-	(14)	(6)	(15)	(17)	(48)	-	-	(35)	(9)	(360)	(420)	(6)	(15)
Revisions of prior estimates	325	77	14	(16)	-	(1)	26	-	-	38	330	123	2	52	-	-	38	7	405	158	330	123
December 31, 2017	1,627	5,911	70	885	11	297	137	-	-	24	786	118	282	421	80	-	88	5	2,295	7,543	786	118
Purchase/ (Disposal) of reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discoveries and extensions	213	519	-	-	-	-	1	-	-	-	13	1	28	47	-	-	11	3	253	570	13	1
Improved Recovery	-	4	-	-	-	-	-	-	-	-	-	-	5	1	-	-	-	-	5	5	-	-
Production	(257)	(305)	(22)	(60)	(2)	(41)	(22)	-	-	(13)	(6)	(17)	(19)	(46)	(1)	-	(27)	(6)	(350)	(470)	(6)	(17)
Revisions of prior estimates	200	(21)	6	17	-	23	(2)	-	-	(11)	4	(14)	(32)	(32)	1	-	38	5	211	(20)	4	(14)
December 31, 2018	1,783	6,108	54	842	9	280	114	-	-	-	796	88	263	391	79	-	111	7	2,414	7,627	796	88
Purchase/ (Disposal) of reserves	-	96	-	-	-	-	-	-	-	-	-	-	(1)	(3)	-	-	-	-	(1)	93	-	-
Discoveries and extensions	175	639	-	-	-	-	-	-	-	-	26	1	22	69	67	-	3	1	268	709	26	1
Improved Recovery	-	2	-	-	-	-	-	-	-	-	-	-	5	1	-	-	-	-	5	3	-	-
Production	(265)	(361)	(16)	(53)	(1)	(34)	(44)	-	-	(1)	(7)	(19)	(23)	(50)	(1)	-	(23)	(3)	(374)	(502)	(7)	(19)
Revisions of prior estimates	207	(125)	19	10	1	15	14	-	-	1	(36)	83	(17)	(3)	(1)	-	16	-	239	(102)	(36)	83
December 31, 2019	1,900	6,358	56	799	9	260	84	-	-	-	780	154	250	405	145	-	108	4	2,550	7,827	780	154

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SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
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(a) Reserve quantity information (continued)

Proved developed and undeveloped reserves: (continued)

	PRC		Asia (excluding PRC)		Oceania		Africa		Canada				North America (excluding Canada)		South America		Europe		Total			
	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen
	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(mmbls)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(mmbls)
Enterprise's share of equity method investees:																						
December 31, 2016	1	7	-	-	-	-	-	-	-	-	-	-	-	-	195	567	-	-	195	574	-	-
Purchase/ (Disposal) of reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	140	-	-	49	140	-	-
Discoveries and extensions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	34	-	-	8	34	-	-
Improved Recovery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	23	-	-	1	23	-	-
Production	-	(2)	-	-	-	-	-	-	-	-	-	-	-	-	(8)	(52)	-	-	(8)	(53)	-	-
Revisions of prior estimates	-	1	-	-	-	-	-	-	-	-	-	-	-	-	(1)	(11)	-	-	-	(11)	-	-
December 31, 2017	1	6	-	-	-	-	-	-	-	-	-	-	-	-	244	701	-	-	245	707	-	-
Purchase/ (Disposal) of reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discoveries and extensions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	36	-	-	11	36	-	-
Improved Recovery	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-
Production	-	(2)	-	-	-	-	-	-	-	-	-	-	-	-	(10)	(62)	-	-	(10)	(63)	-	-
Revisions of prior estimates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	(19)	-	-	12	(19)	-	-
December 31, 2018	1	5	-	-	-	-	-	-	-	-	-	-	-	-	258	657	-	-	258	661	-	-
Purchase/ (Disposal) of reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discoveries and extensions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	46	-	-	20	46	-	-
Improved Recovery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-
Production	-	(2)	-	-	-	-	-	-	-	-	-	-	-	-	(10)	(57)	-	-	(11)	(59)	-	-
Revisions of prior estimates	1	3	-	-	-	-	-	-	-	-	-	-	-	-	1	(33)	-	-	2	(30)	-	-
December 31, 2019	1	6	-	-	-	-	-	-	-	-	-	-	-	-	269	614	-	-	270	620	-	-
Total consolidated and equity interests in reserves																						
December 31, 2017	1,628	5,916	70	885	11	297	137	-	-	24	786	118	282	421	324	701	88	5	2,540	8,250	786	118
December 31, 2018	1,784	6,112	54	842	9	280	114	-	-	-	796	88	263	391	337	657	111	7	2,672	8,288	796	88
December 31, 2019	1,901	6,365	56	799	9	260	84	-	-	-	780	154	250	405	414	614	108	4	2,820	8,447	780	154

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(a) Reserve quantity information (continued)

Proved developed reserves:

	PRC		Asia(excluding PRC)		Oceania		Africa		Canada				North America (excluding Canada)		South America		Europe		Total			
	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen
	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(mmbls)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(bcf)	(mmbls)	(mmbls)
Consolidated entities																						
December 31, 2017	893	1,574	35	558	8	230	37	-	-	24	142	46	123	278	1	-	84	5	1,182	2,669	142	46
December 31, 2018	902	1,544	25	531	8	260	102	-	-	-	136	-	143	275	1	-	98	3	1,279	2,614	136	-
December 31, 2019	910	1,730	30	473	8	241	80	-	-	-	122	95	166	278	26	-	97	1	1,317	2,723	122	95
Enterprise's share of equity method investees:																						
December 31, 2017	1	6	-	-	-	-	-	-	-	-	-	-	-	-	133	533	-	-	133	539	-	-
December 31, 2018	-	5	-	-	-	-	-	-	-	-	-	-	-	-	135	486	-	-	136	491	-	-
December 31, 2019	1	6	-	-	-	-	-	-	-	-	-	-	-	-	139	445	-	-	140	452	-	-

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(a) Reserve quantity information (continued)

Proved undeveloped reserves:

	PRC		Asia(excluding PRC)		Oceania		Africa		Canada				North America (excluding Canada)		South America		Europe		Total			
	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Oil	Natural gas	Synthetic oil	Bitumen
	(mmbbls)	(bcf)	(mmbbls)	(bcf)	(mmbbls)	(bcf)	(mmbbls)	(bcf)	(mmbbls)	(bcf)	(mmbbls)	(mmbbls)	(mmbbls)	(bcf)	(mmbbls)	(bcf)	(mmbbls)	(bcf)	(bcf)	(mmbbls)	(mmbbls)	(mmbbls)
Consolidated entities																						
December 31, 2017	734	4,336	35	327	2	68	100	-	-	-	644	72	159	143	78	-	5	-	1,113	4,875	644	72
December 31, 2018	882	4,564	29	310	-	20	11	-	-	-	660	88	120	116	78	-	13	4	1,135	5,013	660	88
December 31, 2019	989	4,628	26	326	-	20	4	-	-	-	657	58	84	127	119	-	11	4	1,233	5,105	657	58
Enterprise's share of equity method investees:																						
December 31, 2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	111	168	-	-	111	168	-	-
December 31, 2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	122	171	-	-	122	171	-	-
December 31, 2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	169	-	-	130	169	-	-

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(b) Results of operations

	2017 Consolidated entities								
		Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	Total
	PRC								
Net sales to customers	107,887	9,085	1,283	9,722	4,750	6,277	100	12,784	151,888
Operating expenses	(14,882)	(2,401)	(462)	(1,033)	(3,057)	(1,021)	(23)	(1,402)	(24,281)
Taxes other than income tax	(6,297)	-	(159)	(406)	(13)	(282)	-	(12)	(7,169)
Exploration expense	(3,737)	(11)	(7)	(83)	(818)	(714)	(223)	(1,303)	(6,896)
Accretion expense	(1,525)	-	-	(164)	(124)	(82)	-	(249)	(2,144)
Depreciation, depletion and amortization, and impairment	(33,737)	(1,363)	(142)	(17,863)	(3,851)	(5,889)	(23)	(6,605)	(69,473)
Special oil gain levy	(55)	-	-	-	-	-	-	-	(55)
	47,654	5,310	513	(9,827)	(3,113)	(1,711)	(169)	3,213	41,870
Income tax expense	(11,913)	(536)	(154)	341	1,070	(1,075)	4	(1,230)	(13,493)
Result of operations	35,741	4,774	359	(9,486)	(2,043)	(2,786)	(165)	1,983	28,377

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(All amounts expressed in millions of Renminbi unless otherwise stated)

(b)     **Results of operations (continued)**

	2017								Total
	Enterprise's share of equity method investees:								
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Net sales to customers	193	-	-	-	-	-	2,840	-	3,033
Operating expenses	(113)	-	-	-	-	-	(1,281)	-	(1,394)
Taxes other than income tax	(11)	-	-	-	-	-	(448)	-	(459)
Exploration expense	-	-	-	-	-	-	(6)	-	(6)
Accretion expense	(8)	-	-	-	-	-	(53)	-	(61)
Depreciation, depletion and amortization, and impairment	(132)	-	-	-	-	-	(1,330)	-	(1,462)
Special oil gain levy	-	-	-	-	-	-	-	-	-
	(71)	-	-	-	-	-	(278)	-	(349)
Income tax expense	11	-	-	-	-	-	-	-	11
Result of operations	(60)	-	-	-	-	-	(278)	-	(338)
<b>Total result of operations for producing activities</b>	<b>35,681</b>	<b>4,774</b>	<b>359</b>	<b>(9,486)</b>	<b>(2,043)</b>	<b>(2,786)</b>	<b>(443)</b>	<b>1,983</b>	<b>28,039</b>

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(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(b)     **Results of operations (continued)**

	2018								
	Consolidated entities								
		Asia				North			
	PRC	(excluding PRC)	Oceania	Africa	Canada	America (excluding Canada)	South America	Europe	Total
Net sales to customers	134,993	12,567	1,567	10,025	4,690	8,573	529	12,928	185,872
Operating expenses	(14,870)	(2,098)	(438)	(933)	(3,183)	(1,221)	(198)	(1,327)	(24,268)
Taxes other than income tax	(7,823)	-	(192)	(359)	(155)	(438)	(89)	(16)	(9,072)
Exploration expense	(5,054)	(125)	(1)	(441)	(5,660)	(849)	(346)	(514)	(12,990)
Accretion expense	(1,935)	(3)	-	(133)	(150)	(93)	(2)	(244)	(2,560)
Depreciation, depletion and amortization, and impairment	(25,805)	(7,648)	(199)	(6,919)	(2,719)	(3,721)	(91)	(3,389)	(50,491)
Special oil gain levy	(2,599)	-	-	-	-	-	-	-	(2,599)
	76,907	2,693	737	1,240	(7,177)	2,251	(197)	7,438	83,892
Income tax expense	(19,227)	(1,292)	(221)	(621)	1,880	(137)	203	(3,022)	(22,437)
Result of operations	57,680	1,401	516	619	(5,297)	2,114	6	4,416	61,455

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(All amounts expressed in millions of Renminbi unless otherwise stated)

(b)     Results of operations (continued)

	2018								
	Enterprise's share of equity method investees:								
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	Total
Net sales to customers	208	-	-	-	-	-	3,651	-	3,859
Operating expenses	(101)	-	-	-	-	-	(1,554)	-	(1,655)
Taxes other than income tax	(13)	-	-	-	-	-	(1,320)	-	(1,333)
Exploration expense	-	-	-	-	-	-	(22)	-	(22)
Accretion expense	(9)	-	-	-	-	-	(69)	-	(78)
Depreciation, depletion and amortization, and impairment	(132)	-	-	-	-	-	(11,877)	-	(12,009)
Special oil gain levy	-	-	-	-	-	-	-	-	-
	(47)	-	-	-	-	-	(11,191)	-	(11,238)
Income tax expense	-	-	-	-	-	-	-	-	-
Result of operations	(47)	-	-	-	-	-	(11,191)	-	(11,238)
Total result of operations for producing activities	57,633	1,401	516	619	(5,297)	2,114	(11,185)	4,416	50,217

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(b) Results of operations (continued)

	2019								Total
	Consolidated entities								
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Net sales to customers	139,386	9,728	1,389	20,016	7,117	9,080	507	9,950	197,173
Operating expenses	(15,606)	(1,044)	(517)	(1,718)	(3,062)	(1,426)	(178)	(1,203)	(24,754)
Taxes other than income tax	(7,826)	-	(142)	(514)	(111)	(389)	(67)	(45)	(9,094)
Exploration expense	(6,480)	(55)	(3)	(1,311)	(2,666)	(198)	(292)	(1,337)	(12,342)
Accretion expense	(2,032)	(6)	-	(225)	(151)	(112)	(13)	(256)	(2,795)
Depreciation, depletion and amortization, and impairment	(27,921)	(6,733)	(178)	(13,362)	(2,324)	(6,706)	(99)	(1,962)	(59,285)
Special oil gain levy	(894)	-	-	-	-	-	-	-	(894)
	78,627	1,890	549	2,886	(1,197)	249	(142)	5,147	88,009
Income tax expense	(19,656)	(755)	(165)	(1,833)	446	342	15	(2,393)	(23,999)
Result of operations	58,971	1,135	384	1,053	(751)	591	(127)	2,754	64,010

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(b) Results of operations (continued)

	2019								Total
	Enterprise's share of equity method investees:								
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Net sales to customers	198	-	-	-	-	-	9,159	-	9,357
Operating expenses	(106)	-	-	-	-	-	(753)	-	(859)
Taxes other than income tax	(11)	-	-	-	-	-	(976)	-	(987)
Exploration expense	-	-	-	-	-	-	(141)	-	(141)
Accretion expense	(9)	-	-	-	-	-	(72)	-	(81)
Depreciation, depletion and amortization, and impairment	(21)	-	-	-	-	-	(1,598)	-	(1,619)
Special oil gain levy	-	-	-	-	-	-	-	-	-
	51	-	-	-	-	-	5,619	-	5,670
Income tax expense	(7)	-	-	-	-	-	-	-	(7)
Result of operations	44	-	-	-	-	-	5,619	-	5,663
	-	-	-	-	-	-	-	-	-
<b>Total result of operations for producing activities</b>	<b>59,015</b>	<b>1,135</b>	<b>384</b>	<b>1,053</b>	<b>(751)</b>	<b>591</b>	<b>5,492</b>	<b>2,754</b>	<b>69,673</b>

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
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(All amounts expressed in millions of Renminbi unless otherwise stated)

(c) Capitalized costs

	2017 Consolidated entities								Total
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Proved oil and gas properties	443,193	38,541	2,435	84,241	19,534	54,731	1,916	11,586	656,177
Unproved oil and gas properties	16,163	1,195	2	30,690	103,637	34,471	7,917	40,089	234,164
Accumulated depreciation, depletion and amortization	(299,171)	(26,786)	(1,480)	(64,047)	(27,894)	(31,835)	(942)	(40,350)	(492,505)
Net capitalized costs	160,185	12,950	957	50,884	95,277	57,367	8,891	11,325	397,836

	2017 Enterprise's share of equity method investees								Total
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Proved oil and gas properties	2,159	-	-	-	-	-	33,227	-	35,386
Unproved oil and gas properties	-	-	-	-	-	-	4,743	-	4,743
Accumulated depreciation, depletion and amortization	(2,138)	-	-	-	-	-	(11,601)	-	(13,739)
Net capitalized costs	21	-	-	-	-	-	26,369	-	26,390

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(All amounts expressed in millions of Renminbi unless otherwise stated)

(c) Capitalized costs (continued)

	2018								Total
	Consolidated entities								
		Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
	PRC								
Proved oil and gas properties	471,242	46,634	2,558	101,050	50,554	64,875	3,856	20,402	761,171
Unproved oil and gas properties	18,908	1,645	2	27,835	77,824	35,502	9,471	33,519	204,706
Accumulated depreciation, depletion and amortization	(324,046)	(36,000)	(1,692)	(78,819)	(36,785)	(37,164)	(1,088)	(45,652)	(561,246)
Net capitalized costs	166,104	12,279	868	50,066	91,593	63,213	12,239	8,269	404,631

	2018								Total
	Enterprise's share of equity method investees								
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Proved oil and gas properties	2,159	-	-	-	-	-	40,661	-	42,820
Unproved oil and gas properties	-	-	-	-	-	-	4,675	-	4,675
Accumulated depreciation, depletion and amortization	(2,100)	-	-	-	-	-	(13,956)	-	(16,056)
Net capitalized costs	59	-	-	-	-	-	31,380	-	31,439

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(All amounts expressed in millions of Renminbi unless otherwise stated)

(c) Capitalized costs (continued)

	2019 Consolidated entities								Total
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Proved oil and gas properties	520,332	52,968	2,597	109,525	45,485	75,140	11,852	23,977	841,876
Unproved oil and gas properties	23,139	2,101	2	24,149	85,849	31,749	13,189	33,886	214,064
Accumulated depreciation, depletion and amortization	(348,621)	(42,497)	(1,830)	(92,951)	(39,509)	(43,677)	(1,204)	(48,299)	(618,588)
Net capitalized costs	194,850	12,572	769	40,723	91,825	63,212	23,837	9,564	437,352

	2019 Enterprise's share of equity method investees								Total
	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	
Proved oil and gas properties	2,252	-	-	-	-	-	41,827	-	44,079
Unproved oil and gas properties	-	-	-	-	-	-	6,627	20,565	27,192
Accumulated depreciation, depletion and amortization	(2,122)	-	-	-	-	-	(15,804)	-	(17,926)
Net capitalized costs	130	-	-	-	-	-	32,650	20,565	53,345

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(d) Costs incurred in oil and gas property acquisition, exploration and development

	2017								
	Consolidated entities								
		Asia				North			
	PRC	(excluding PRC)	Oceania	Africa	Canada	America (excluding Canada)	South America	Europe	Total
Acquisition costs:									
–Proved	-	-	-	-	-	-	-	-	-
–Unproved	-	-	-	-	-	-	-	-	-
Exploration costs	7,933	46	7	329	64	275	1,143	767	10,564
Development costs*	16,360	4,001	-	9,180	2,353	8,310	1,052	913	42,169
Total costs incurred	24,293	4,047	7	9,509	2,417	8,585	2,195	1,680	52,733

	2017								
	Enterprise's share of equity method investees								
		Asia				North			
	PRC	(excluding PRC)	Oceania	Africa	Canada	America (excluding Canada)	South America	Europe	Total
Acquisition costs:									
–Proved	-	-	-	-	-	-	-	-	-
–Unproved	-	-	-	-	-	-	-	-	-
Exploration costs	-	-	-	-	-	-	59	-	59
Development costs*	2	-	-	-	-	-	2,822	-	2,824
Total costs incurred	2	-	-	-	-	-	2,881	-	2,883

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(d) Costs incurred in oil and gas property acquisition, exploration and development (continued)

2018									
Consolidated entities									
North America									
(excluding Canada)									
South America									
Europe									
Total									
Asia (excluding PRC)									
Oceania									
Africa									
Canada									
PRC									
Acquisition costs:									
–Proved	-	-	-	-	-	-	-	-	-
–Unproved	-	-	-	-	-	-	264	-	264
Exploration costs	10,075	181	1	357	246	178	846	531	12,415
Development costs*	26,801	6,158	-	8,263	463	7,117	2,215	176	51,193
Total costs incurred	36,876	6,339	1	8,620	709	7,295	3,325	707	63,872

2018									
Enterprise's share of equity method investees									
North America									
(excluding Canada)									
South America									
Europe									
Total									
Asia (excluding PRC)									
Oceania									
Africa									
Canada									
PRC									
Acquisition costs:									
–Proved	-	-	-	-	-	-	-	-	-
–Unproved	-	-	-	-	-	-	-	-	-
Exploration costs	-	-	-	-	-	-	32	-	32
Development costs*	-	-	-	-	-	-	2,455	-	2,455
Total costs incurred	-	-	-	-	-	-	2,487	-	2,487

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(d) Costs incurred in oil and gas property acquisition, exploration and development (continued)

	2019								
	Consolidated entities								
		Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	Total
	PRC								
Acquisition costs:									
–Proved	833	-	-	-	-	-	-	-	833
–Unproved	5,185	-	-	-	-	-	5,619	-	10,804
Exploration costs	14,974	87	1	121	291	112	1,192	1,465	18,243
Development costs*	41,571	6,281	-	3,220	3,737	6,242	4,845	2,802	68,698
Total costs incurred	62,563	6,368	1	3,341	4,028	6,354	11,656	4,267	98,578

	2019								
	Enterprise's share of equity method investees								
		Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	Total
Acquisition costs:									
–Proved	-	-	-	-	-	-	-	-	-
–Unproved	-	-	-	-	-	-	-	19,075	19,075
Exploration costs	-	-	-	-	-	-	252	-	252
Development costs*	92	-	-	-	-	-	2,230	1,490	3,812
Total costs incurred	92	-	-	-	-	-	2,482	20,565	23,139

\* The development costs include estimated future dismantlement costs of dismantling offshore oil and gas properties.

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(e) Standardized measure of discounted future net cash flows and changes therein

Pursuant to FASB Topic 932, the average of first-day-of-the-month oil price during the 12-month period before the year end, were used to estimate annual future production from proved reserves to determine future cash inflows.

Future development costs are estimated based upon constant price assumptions and the assumption of the continuation of existing economic, operating and regulatory conditions. Future income taxes are calculated by applying the year-end statutory rate to estimate future pre-tax cash flows after provision for the tax cost of the oil and natural gas properties based upon existing laws and regulations. The discount was computed by the application of a 10% discount factor to the estimated future net cash flows.

Management believes that this information does not represent the fair market value of the oil and natural gas reserves or the present value of estimated cash flows since no economic value is attributed to potential reserves, the use of a 10% discount rate is arbitrary, and prices change constantly.

Present value of estimated future net cash flows:

2017										
Consolidated entities										
North America										
(excluding Canada)										
South America										
Europe										
Notes	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	Total	
Future cash inflows	(1)	856,256	50,074	10,163	24,917	299,553	97,944	27,183	30,636	1,396,726
Future production costs		(316,050)	(22,714)	(2,589)	(1,394)	(222,849)	(42,432)	(12,435)	(11,422)	(631,885)
Future development costs	(2)	(157,966)	(4,134)	(1,825)	(1,593)	(42,844)	(18,495)	(5,938)	(7,685)	(240,480)
Future income taxes		(64,232)	(6,535)	(1,450)	-	-	-	(2,157)	(3,856)	(78,230)
Future net cash flows	(3)	318,008	16,691	4,299	21,930	33,860	37,017	6,653	7,673	446,131
10% discount factor		(142,001)	(6,014)	(1,090)	(4,860)	(28,254)	(18,369)	(3,290)	(349)	(204,227)
Standardized measure of										
discounted future net cash flows		176,007	10,677	3,209	17,070	5,606	18,648	3,363	7,324	241,904

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(e) Standardized measure of discounted future net cash flows and changes therein (continued)

2017										
Enterprise's share of equity method investees										
North										
America										
(excluding										
Canada)										
South										
America										
Europe										
Total										
Notes	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	Canada	Canada	South America	Europe	Total
Future cash inflows	(1)	1,581	-	-	-	-	-	90,964	-	92,545
Future production costs		(985)	-	-	-	-	-	(35,472)	-	(36,457)
Future development costs	(2)	-	-	-	-	-	-	(11,342)	-	(11,342)
Future income taxes		-	-	-	-	-	-	(15,446)	-	(15,446)
Future net cash flows	(3)	596	-	-	-	-	-	28,704	-	29,300
10% discount factor		(364)	-	-	-	-	-	(15,594)	-	(15,958)
Standardized measure of discounted future net cash flows		232	-	-	-	-	-	13,110	-	13,342
Total standardized measure of discounted future net cash flow		176,239	10,677	3,209	17,070	5,606	18,648	16,473	7,324	255,246

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(e) Standardized measure of discounted future net cash flows and changes therein (continued)

		2018								
		Consolidated entities								
		North America								
		(excluding Canada)								
		South America								
		Europe								
		Total								
	Notes	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe	Total
Future cash inflows	(1)	1,265,804	56,121	10,388	53,962	339,668	125,898	38,104	53,669	1,943,614
Future production costs		(435,664)	(23,068)	(2,576)	(10,929)	(227,445)	(51,544)	(14,271)	(18,333)	(783,830)
Future development costs	(2)	(233,501)	(3,990)	(1,792)	(8,373)	(43,197)	(15,186)	(6,539)	(8,939)	(321,517)
Future income taxes		(118,666)	(9,665)	(1,507)	(4,895)	-	(5,537)	(1,616)	(9,882)	(151,768)
Future net cash flows	(3)	477,973	19,398	4,513	29,765	69,026	53,631	15,678	16,515	686,499
10% discount factor		(174,025)	(7,780)	(1,044)	(4,375)	(52,665)	(20,690)	(6,481)	(3,364)	(270,424)
Standardized measure of discounted future net cash flows		303,948	11,618	3,469	25,390	16,361	32,941	9,197	13,151	416,075

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(e) Standardized measure of discounted future net cash flows and changes therein (continued)

2018										
Enterprise's share of equity method investees										
			Asia				North			
			(excluding				America			
			PRC)	Oceania	Africa	Canada	(excluding	South		
	Notes	PRC					Canada)	America	Europe	Total
Future cash inflows	(1)	509	-	-	-	-	-	116,334	-	116,843
Future production costs		(282)	-	-	-	-	-	(39,352)	-	(39,634)
Future development costs	(2)	(174)	-	-	-	-	-	(12,577)	-	(12,751)
Future income taxes		-	-	-	-	-	-	(14,202)	-	(14,202)
Future net cash flows	(3)	53	-	-	-	-	-	50,203	-	50,256
10% discount factor		36	-	-	-	-	-	(27,336)	-	(27,300)
Standardized measure of discounted future net cash flows		89	-	-	-	-	-	22,867	-	22,956
Total standardized measure of discounted future net cash flow		304,037	11,618	3,469	25,390	16,361	32,941	32,064	13,151	439,031

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(e) Standardized measure of discounted future net cash flows and changes therein (continued)

2019										
Consolidated entities										
North America										
(excluding Canada)										
South America										
Europe										
Total										
Notes	PRC	Asia (excluding PRC)	Oceania	Africa	Canada	North America (excluding Canada)	South America	Europe		
Future cash inflows	(1)	1,271,208	67,935	9,746	37,014	337,576	98,597	61,932	46,503	1,930,511
Future production costs		(406,482)	(27,631)	(2,595)	(10,012)	(205,623)	(41,739)	(22,611)	(13,542)	(730,235)
Future development costs	(2)	(218,067)	(12,807)	(1,565)	(7,383)	(46,306)	(11,633)	(13,163)	(8,949)	(319,873)
Future income taxes		(116,697)	(8,320)	(1,383)	-	-	(4)	(2,052)	(8,998)	(137,454)
Future net cash flows	(3)	529,962	19,178	4,204	19,619	85,646	45,222	24,107	15,015	742,952
10% discount factor		(196,568)	(7,252)	(916)	(2,153)	(66,281)	(15,609)	(8,444)	(3,201)	(300,424)
Standardized measure of discounted future net cash flows		333,394	11,926	3,288	17,466	19,365	29,613	15,663	11,814	442,529

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(e) Standardized measure of discounted future net cash flows and changes therein (continued)

2019										
Enterprise's share of equity method investees										
			Asia (excluding PRC)	Oceania	Africa	Canada	America (excluding Canada)	South America	Europe	Total
	Notes	PRC								
Future cash inflows	(1)	774	-	-	-	-	-	105,608	-	106,382
Future production costs		(318)	-	-	-	-	-	(31,515)	-	(31,833)
Future development costs	(2)	(240)	-	-	-	-	-	(13,541)	-	(13,781)
Future income taxes		-	-	-	-	-	-	(10,974)	-	(10,974)
Future net cash flows	(3)	215	-	-	-	-	-	49,578	-	49,794
10% discount factor		31	-	-	-	-	-	(28,372)	-	(28,341)
Standardized measure of discounted future net cash flows		246	-	-	-	-	-	21,206	-	21,452
<b>Total standardized measure of discounted future net cash flow</b>		<b>333,640</b>	<b>11,926</b>	<b>3,288</b>	<b>17,466</b>	<b>19,365</b>	<b>29,613</b>	<b>36,869</b>	<b>11,814</b>	<b>463,982</b>

- (1)

Future cash flows consist of the Group’s 100% interest in the independent oil and gas properties and the Group’s participating interest in the properties under production sharing contracts in the PRC less (i) an adjustment for the royalties payable to the PRC government and share oil payable to the PRC government under production sharing contracts and (ii) an adjustment for production allocable to foreign partners under the PRC production sharing contracts for exploration costs attributable to the Group’s participating interest, and plus the participating interest in the properties covered under the production sharing contracts in oversea countries, less adjustments, if any, of share oil attributable to the host government and the domestic market obligation.
- (2)

Future development costs include the estimated costs of drilling future development wells and building the production platforms.
- (3)

Future net cash flows have been prepared taking into consideration estimated future dismantlement costs of dismantling offshore oil platforms and gas properties.

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(e) Standardized measure of discounted future net cash flows and changes therein (continued)

Changes in the standardized measure of discounted future net cash flows:

	2017		Consolidated and equity share of equity method investee
	Consolidated Total	Equity share of equity method investee	
Standardized measure, beginning of year	223,625	9,872	233,497
Sales of production, net of royalties and production costs	(120,396)	(458)	(120,854)
Net change in prices, net of royalties and production costs	18,779	1,458	20,237
Extensions discoveries and improved recovery, net of related future costs	31,649	1,322	32,971
Change in estimated future development costs	(37,582)	(1,783)	(39,365)
Development costs incurred during the year	40,766	1,584	42,350
Revisions in quantity estimates	67,569	(133)	67,436
Accretion of discount	24,838	1,415	26,253
Net change in income taxes	(7,348)	(2,201)	(9,549)
Purchase of properties	325	5,069	5,394
Changes in timing and other	(321)	(2,804)	(3,125)
Standardized measure, end of year	241,904	13,341	255,245

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(e) Standardized measure of discounted future net cash flows and changes therein (continued)

	2018		Consolidated and equity share of equity method investee
	Consolidated Total	Equity share of equity method investee	
Standardized measure, beginning of year	241,904	13,341	255,245
Sales of production, net of royalties and production costs	(152,494)	(872)	(153,366)
Net change in prices, net of royalties and production costs	210,479	5,771	216,250
Extensions discoveries and improved recovery, net of related future costs	65,730	1,743	67,473
Change in estimated future development costs	(73,551)	(1,754)	(75,305)
Development costs incurred during the year	50,833	2,552	53,385
Revisions in quantity estimates	38,365	850	39,215
Accretion of discount	30,145	2,142	32,287
Net change in income taxes	(51,384)	941	(50,443)
Purchase of properties	-	-	-
Changes in timing and other	56,048	(1,758)	54,290
Standardized measure, end of year	416,075	22,956	439,031

CNOOC LIMITED  
SUPPLEMENTARY INFORMATION ON OIL AND GAS PRODUCING ACTIVITIES  
(UNAUDITED)

(All amounts expressed in millions of Renminbi unless otherwise stated)

(e) Standardized measure of discounted future net cash flows and changes therein (continued)

	2019		Consolidated and equity share of equity method investee
	Consolidated Total	Equity share of equity method investee	
Standardized measure, beginning of year	416,075	22,956	439,031
Sales of production, net of royalties and production costs	(163,282)	(7,604)	(170,886)
Net change in prices, net of royalties and production costs	(2,633)	(557)	(3,190)
Extensions discoveries and improved recovery, net of related future costs	69,736	2,388	72,125
Change in estimated future development costs	(16,430)	(7,787)	(24,217)
Development costs incurred during the year	34,193	16,201	50,394
Revisions in quantity estimates	43,404	(42)	43,363
Accretion of discount	52,330	2,991	55,321
Net change in income taxes	12,169	1,881	14,050
Purchase of properties	2,789	-	2,789
Changes in timing and other	(5,822)	(8,976)	(14,797)
Standardized measure, end of year	442,529	21,452	463,982

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DATE OF ISSUE	CERTIFICATE NUMBER	RUN/TFR. NO.	REGISTER	NUMBER OF SHARES
<div><div><b>CNOOC Limited</b> (中國海洋石油有限公司) <small>(Incorporated in Hong Kong with limited liability under the Companies Ordinance)</small></div></div>				
<b>SHARE CERTIFICATE</b>				
THIS IS TO CERTIFY THAT THE UNDERMENTIONED PERSON(S) IS/ARE THE REGISTERED HOLDER(S) OF FULLY PAID SHARES AS DETAILED BELOW IN THE CAPITAL OF THE ABOVE-NAMED COMPANY SUBJECT TO THE ARTICLES OF ASSOCIATION OF THE COMPANY.				
[ ]		CODE:		
[ ]		NUMBER OF SHARES:		
GIVEN UNDER THE SECURITIES SEAL OF THE COMPANY ON THE DATE STATED ABOVE.				
NO TRANSFER OF THE ABOVE SHARES CAN BE REGISTERED UNLESS ACCOMPANIED BY THIS SHARE CERTIFICATE. HONG KONG REGISTRAR: HONG KONG REGISTRARS LIMITED, SHOPS 1712-1716, 17TH FLOOR, HOPEWELL CENTRE, 183 QUEEN'S ROAD EAST, WANCHAI, HONG KONG.				

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		Remarks	



DESCRIPTION OF SECURITIES  
REGISTERED UNDER SECTION 12 OF THE EXCHANGE ACT

As of December 31, 2019 CNOOC Limited (“we,” “us,” and “our”) had the following series of securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each class	Trading symbol	Name of each exchange on which registered
American depositary shares, each representing 100 shares	CEO	New York Stock Exchange, Inc.
Shares with no par value*	N/A	New York Stock Exchange, Inc.

\* Not for trading, but only in connection with the listing of the American depositary shares on the New York Stock Exchange.

American Depositary Shares (“ADSs”), each representing 100 ordinary shares (the “shares”), have been available in the US through an American Depositary Receipt (“ADR”) program since February 2001. This program was established pursuant to the deposit agreement that we entered into with JPMorgan Chase Bank, N.A. (“JPMorgan Chase”), as depositary (“Deposit Agreement”). Our ADRs have been listed on the New York Stock Exchange (“NYSE”) since February 2001 and are traded under the symbol CEO. In connection with this listing (but not for trading), the shares are registered under Section 12(b) of the Exchange Act. This exhibit contains a description of the rights of (i) the holders of shares and (ii) ADR holders. Shares underlying the ADSs are held by JPMorgan Chase, the depositary, and holders of ADSs will not be treated as holders of the shares.

The following summary is subject to and qualified in its entirety by our Memorandum and Articles of Association, and by the Companies Ordinance (Chapter 32 of the Laws of Hong Kong, the predecessor to Chapter 622 of the Laws of Hong Kong, or the Hong Kong Companies Ordinance, which came into effect on March 3, 2014), and the common law of Hong Kong. This is not a summary of all the significant provisions of our Memorandum and Articles of Association, or of the Hong Kong Companies Ordinance and does not purport to be complete. Capitalized terms used but not defined herein have the meanings given to them in our annual report on Form 20-F for the fiscal year ended December 31, 2019 and in the Deposit Agreement, which is an exhibit to our registration statement on Form F-6 filed with the SEC on March 17, 2016.

ORDINARY SHARES

Item 9. General

Item 9.A.3 Pre-emptive rights

Under the Hong Kong Stock Exchange Listing Rules, except in certain circumstances, prior consent of shareholders in general meeting must be obtained before the Company can allot, issue or grant (i) shares, (ii) securities convertible into shares or (iii) options, warrants or similar rights to subscribe for any shares or such convertible securities.

Item 9.A.5 Type and class of securities

Each of our shares has no par value. The number of our shares that have been issued as of December 31, 2019 is 44,647,455,984. Our shares are registered on the NYSE in connection with the listing of the American depositary shares on the NYSE. All of our shares have equal voting rights and carry equal entitlements to dividends. No participation certificates, non-voting equity securities or profit-sharing certificates have been issued.

Item 9.A.6 Limitations or qualifications

Not applicable.

**Item 9.A.7 Other rights**

Not applicable.

**Item 10.B Memorandum and articles of association**

We were incorporated with limited liability on August 20, 1999 in Hong Kong under the Companies Ordinance (Chapter 32 of the Laws of Hong Kong, the predecessor to the Hong Kong Companies Ordinance). Our Company registration number in Hong Kong is 685974. Under the Hong Kong Companies Ordinance, we have the capacity, rights, powers and privileges of a natural person of full age and may do anything which we are permitted or required to do by our articles of association or any enactment or rule of law.

The following are summaries of provisions of our articles of association and the Hong Kong Companies Ordinance. By operation of this Ordinance, provisions that were previously contained in our memorandum of association are deemed to be incorporated into our articles of association except for those provisions which conflict with the Hong Kong Companies Ordinance. For further details, you should read our memorandum of association, which was filed as an exhibit to our registration statement on Form F-1 (Registration No.333-10862) and our articles of association, as amended, which was filed as an exhibit to our annual report on Form 20-F for the fiscal year of 2010. We are required by the Hong Kong Stock Exchange Listing Rules to upload, among other things, our memorandum and articles of association on our website and on the website of the Hong Kong Stock Exchange. We have complied with such requirement and as such, our memorandum and articles of association were further filed as an exhibit to the Form 6-K filed with the SEC on March 30, 2012 (File Number: 1-14966).

**Issue of Shares**

Under the Hong Kong Companies Ordinance, our directors may, without obtaining the prior approval of our shareholders, offer to allot new shares in our Company to existing shareholders on a pro rata basis. Our directors may not allot new shares of our Company or grant rights to subscribe for, or to convert any security into, shares of our Company in any other manner without the prior approval of our shareholders at a general meeting. Any approval given at a general meeting granting our directors power to allot shares or securities convertible into shares or to grant rights to subscribe for shares generally shall continue in force from the date of the passing of the resolution until the earlier of:

- the conclusion of the next annual general meeting following the passing of the resolution; and
- the date on which the authority given under the resolution is revoked or varied by an ordinary resolution of our shareholders in a general meeting.

If such an approval for a general mandate to issue shares is given, our Board shall have the discretion to issue such number of shares as are approved pursuant to such general mandate, and our directors may offer, allot, grant options or other rights of subscription or conversion over, or otherwise issue, such number of shares to persons at such times and for such consideration and upon such terms and conditions as our directors may determine, subject to the restrictions under the Hong Kong Stock Exchange Listing Rules.

In accordance with Hong Kong Stock Exchange Listing Rules, any such approval of the shareholders must be limited to shares not exceeding 20% of our total number of shares in issue as of the date of granting such approval plus the number of shares repurchased by us since the granting of such approval.

**Dividends**

Subject to the Hong Kong Companies Ordinance, the shareholders at a general meeting may declare dividends to be paid to shareholders. However, under our articles of association, dividends cannot be declared in excess of the amount recommended by our Board. Further, all dividends unclaimed for one year after having become payable may be invested or otherwise made use of by the directors for the benefit of our Company until claimed, and all dividends unclaimed for six years after having become payable may be forfeited by the directors and shall revert to our Company.

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In addition to dividends declared at a general meeting, our Board may declare and pay to the shareholders interim dividends as our Board deems justified by our financial position. Our Board may also pay any fixed dividend on any shares of our Company semi-annually or at other suitable intervals, whenever our financial position, in their opinion, justifies such payment.

**Winding Up**

If we are wound up, the surplus assets remaining after payment to all creditors are to be divided among our shareholders in proportion to the amount paid on the shares held by them respectively, and if such surplus assets are insufficient to repay the whole of the paid-up share capital, they are to be distributed so that the losses are borne by our shareholders in proportion to the amount paid up on the shares held by them respectively. The liquidator may, with the sanction of a special resolution, divide among our shareholders in specie or in kind the whole or any part of our assets or vest any part of our assets in trustees upon such trusts for the benefit of our shareholders or any of them as the resolution shall provide.

**Voting Rights**

Under the Hong Kong Companies Ordinance, any action to be taken by the shareholders at a general meeting requires the affirmative vote of either an ordinary or a special resolution passed at such meeting.

- An ordinary resolution is a resolution passed by a majority of shareholders that are entitled to, and do, vote in person or by proxy at a general meeting;
- A special resolution is a resolution passed by not less than 75% of shareholders that are entitled to, and do, vote in person or by proxy at a general meeting.

Generally, resolutions of shareholders are passed by ordinary resolution. However, the Hong Kong Companies Ordinance provides that certain specified matters may only approved by shareholders by way of special resolutions. These matters include, for example:

- alteration of the articles;
- change of a company’s name;
- reduction of share capital; and
- voluntary winding up.

The Hong Kong Stock Exchange Listing Rules require that voting at any general meeting must be taken by way of poll, except where the chairman, in good faith, decides to allow a resolution which relates purely a procedural or administrative matter to be voted on by a show of hands. On a poll, every shareholder who is present in person or by proxy has one vote for every share held or represented by him or her.

Any action to be taken by the shareholders requires the affirmative vote of the requisite majority of the shares at a general meeting. There are no cumulative voting rights. Accordingly, the holders of a majority of the shares voting for the election of directors can elect all the directors if they choose to do so.

Under Hong Kong law and our articles of association, shareholders who are not residents of Hong Kong may hold, vote and transfer their shares in our Company in the same manner as our shareholders who are Hong Kong residents.

**General Meetings**

We are required to hold an annual general meeting each year within six months from the end of our financial year. We may also hold extraordinary general meetings from time to time. Our Board may convene an extraordinary general meeting at will, and shall on requisition in accordance with the Hong Kong Companies

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Ordinance, proceed to convene an extraordinary general meeting. Our annual general meeting and a meeting called for the purpose of passing a special resolution require at least twenty-one days’ prior notice, and any other general meeting requires at least fourteen days’ prior notice. The notice must specify the place, day and time of the meeting and, in the case of special business, the general nature of that business. The quorum for a general meeting is two shareholders present in person or by proxy. If within thirty minutes from the time appointed for the meeting a quorum is not present, the meeting, if convened upon requisition in accordance with the Hong Kong Companies Ordinance, shall be dissolved; but in any other case it shall stand adjourned to the same day in the next week at the same time and place, or to such other day, time and place as the chairman of the meeting may determine. If at such adjourned meeting a quorum is not present within thirty minutes from the time appointed for the meeting, the member or members present in person or by proxy shall be a quorum and may transact the business for which the meeting is called.

At each annual general meeting one third of our directors are to retire from office by rotation, save any director holding office as chairman or chief executive officer. The directors to retire every year are to be those who have been longest in office since their last election and the retiring directors will be eligible for re-election.

**Modification of Rights**

Subject to the Hong Kong Companies Ordinance, any of the rights attaching to any class of shares, unless otherwise provided for by the terms of issue of the shares of that class, may be varied or abrogated with the written consent of the holders of not less than 75% of the issued shares of that class or with the sanction of a special resolution passed at a separate general meeting of the holders of shares of that class.

**Borrowing Powers**

Our Board may exercise all the powers of our Company to borrow money and to mortgage or charge all or any part of our undertaking, property and assets, whether present or future, and uncalled capital. Our Board may issue debentures, debenture stock, bonds or other securities of our Company, whether outright or as collateral security for any debt, liability or obligation of our Company or of any third party. These borrowing powers are subject to variation by a special resolution of our Company.

**Interested Transactions**

Subject to the exceptions described below, none of our directors may vote on any contract, arrangement or proposal in which the director or any of his or her associates is materially interested. Subject to provision of the Hong Kong Companies Ordinance, our directors may vote at a board meeting or by way of written resolution of directors on the following matters:

- any contract or arrangement to give security or indemnity to the director or his or her associates for money lent or obligations incurred or undertaken by such director or his or her associates at the request of or for the benefit of our Company or subsidiaries;
  - any contract or arrangement for the giving by us of any security or indemnity to a third party for our debts or obligations or debts or obligations of our subsidiaries for which such director or his or her associates assumed responsibility, or guaranteed or secured in whole or in part whether alone or jointly;
  - any contract or arrangement concerning offering of securities by us (or any company which we may promote or be interested in purchasing) for which the director or his or her associates is/are or is/are to be interested as a participant in the underwriting or sub-underwriting;
  - any contract or arrangement in which the director or his or her associates are interested in the same manner as other holders of our securities by virtue only of their interest in our securities;
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- any proposal or arrangement concerning employee benefits that do not provide privileges to our directors or their associates not generally accorded to the class of persons to whom such scheme or fund relates, including pension fund or retirement, death or disability benefits schemes; and
- any proposal or arrangement concerning the adoption, modification or operation of any employees’ share scheme involving the issue or grant of options over shares or other securities by us to, or for the benefit of, our employees or employees of our subsidiaries under which the director or his or her associates may benefit.

AMERICAN DEPOSITARY SHARES

Item 12. Other securities

Disclosures under Items 12.A, 12.B, and 12.C are not applicable.

12.D.1 Depositary

JPMorgan Chase Bank, N.A. is our Depositary. The depositary’s office is located at 383 Madison Ave, Floor 11 New York, NY 10179. Each of our ADSs represents 100 shares.

12.D.2 Provisions

ADSs, each representing 100 ordinary shares and evidenced by ADRs, are issued by the depositary, and not by us. The ADR is vested with rights defined and enumerated in the Deposit Agreement (such as the rights to vote, to receive a dividend and to receive a share of CNOOC in exchange for a certain number of ADRs). The enumeration of rights, including any limitations on those rights in the Deposit Agreement, is final. There are no other rights given to the ADR holders. Only the depositary is registered as shareholder in our share register. An ADR is not a share and an ADR holder is not a CNOOC Limited shareholder.

The following is a summary of the material provisions of the Deposit Agreement. For more complete information, you should read our form of Deposit Agreement. Amendment No. 1 to Deposit Agreement has been filed with the SEC as an exhibit to the Form F-6 filed with the SEC on March 16, 2004, and Amendment No. 2 has been filed with the SEC as an exhibit to the Form F-6 filed with the SEC on March 17, 2016.

*Voting rights*

The Deposit Agreement has granted certain indirect rights to vote to the ADR holders. ADR holders may not attend CNOOC Limited general meetings in person. ADR holders exercise their voting rights by instructing the depositary to exercise the voting rights attached to the registered shares underlying the ADRs. The depositary will not itself exercise any voting discretion in respect of any Deposited Securities.

*Share dividends and other distributions*

To the extent distribution is practicable, the depositary will distribute by mail to each ADR holder on the record date set by the depositary at such ADR holder’s address shown on the ADR Register, in proportion to the number of deposited securities (on which the following distributions on deposited securities are received by the custodian) represented by ADSs evidenced by such holder’s ADRs:

- (a) *Cash*: Any US dollars available to the depositary resulting from a cash dividend or other cash distribution or the net proceeds of sales of any other distribution or portion thereof authorized in paragraph 10 (“Cash”) of the form of ADR, on an averaged or other reasonably practicable basis, subject to (i) appropriate adjustments for taxes withheld, (ii) such distribution being impermissible or impracticable with respect to certain holders, and (iii) deduction of the depositary’s and/or its agents’ fees and expenses in (1) converting any foreign currency to US dollars by sale or in such other manner as the depositary may determine to the extent that it determines that such conversion may be made on a reasonable basis, (2) transferring foreign currency or US dollars to the US by such means as the depositary may determine to the extent that it determines that such transfer may be made on a reasonable basis, (3) obtaining any approval or license of any governmental authority required for such conversion or transfer, which is obtainable at a reasonable cost and within a reasonable time, and (4) making any sale by public or private means in any commercially reasonable manner.

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- (b) *Shares.* (i) Additional ADRs evidencing whole ADSs representing any shares available to the depositary resulting from a dividend or free distribution on deposited securities consisting of shares (a “Share Distribution”), and (ii) US dollars available to it resulting from the net proceeds of sales of shares received in a Share Distribution, which shares would give rise to fractional ADSs if additional ADRs were issued therefor, as in the case of Cash.
- (c) *Rights.* (i) Warrants or other instruments in the discretion of the depositary representing rights to acquire additional ADRs in respect of any rights to subscribe for additional shares or rights of any nature available to the depositary as a result of a distribution on deposited securities (“Rights”), to the extent that CNOOC Limited timely furnishes to the depositary evidence satisfactory to the depositary that the depositary may lawfully distribute the same (CNOOC Limited has no obligation to furnish such evidence), or (ii) to the extent CNOOC Limited does not so furnish such evidence and sales of Rights are practicable, any US dollars available to the depositary from the net proceeds of sales of Rights as in the case of Cash, or (iii) to the extent CNOOC Limited does not so furnish such evidence and such sales cannot practicably be accomplished by reason of the nontransferability of the Rights, limited markets therefor, their short duration or otherwise, nothing (and any Rights may lapse).
- (d) *Other Distributions.* (i) Securities or property available to the depositary resulting from any distribution on deposited securities other than Cash, Share Distributions and Rights (“Other Distributions”), by any means that the depositary may deem equitable and practicable, or (ii) to the extent the depositary deems distribution of such securities or property not to be equitable and practicable, any US dollars available to the depositary from the net proceeds of sales of Other Distributions as in the case of Cash.

The depositary will distribute US dollars by checks drawn on a bank in the US for whole dollars and cents. Fractional cents will be withheld without liability and dealt with by the depositary in accordance with its then current practices.

***Deposit, withdrawal and cancellation***

Subject to certain provisions as provided in the ADR, upon surrender of (a) a certificated ADR in form satisfactory to the depositary at the transfer office or (b) proper instructions and documentation in the case of a direct registration ADR, the holder hereof is entitled to delivery at the custodian’s office of the deposited securities at the time represented by the ADSs evidenced by this ADR. At the request, risk and expense of the holder hereof, the depositary may deliver such deposited securities at such other place as may have been requested by the holder. Notwithstanding any other provision of the deposit agreement or this ADR, the withdrawal of deposited securities may be restricted only for the reasons set forth in General Instruction I.A.(1) of Form F-6 (as such instructions may be amended from time to time) under the Securities Act of 1933.

***Reclassification, recapitalizations and mergers***

If CNOOC Limited takes certain actions that affect the deposited securities, including (i) any change in par value, split-up, consolidation, cancellation or other reclassification of deposited securities or (ii) any recapitalization, reorganization, merger, consolidation, liquidation, receivership, bankruptcy or sale of all or substantially all the assets of the company, then the depositary may choose to:

- (a) issue and distribute additional ADRs;
- (b) amend the deposit agreement and applicable ADRs;
- (c) call for the surrender of outstanding ADRs to be exchanged for new ADRs; and
- (d) distribute cash, securities or property on the record date set by the depositary to reflect the transaction.

To the extent the depositary does not so amend this ADR or make a distribution to holders to reflect any of the foregoing, or the net proceeds thereof, whatever cash, securities or property results from any of the foregoing shall constitute deposited securities and each ADS evidenced by this ADR shall automatically represent its pro rata interest in the deposited securities as then constituted.

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*Amendment and termination*

The ADRs and the Deposit Agreement may be amended by CNOOC Limited and the depositary, provided that any amendment that imposes or increases any fees or charges (other than stock transfer or other taxes and other governmental charges, transfer or registration fees, cable, telex or facsimile transmission costs, delivery costs or other such expenses), or that shall otherwise prejudice any substantial existing right of holders, shall become effective 30 days after notice of such amendment shall have been given to the holders. Every ADR holder at the time any amendment to the Deposit Agreement so becomes effective shall be deemed, by continuing to hold such ADR, to consent and agree to such amendment and to be bound by the Deposit Agreement as amended thereby.

Upon the resignation or removal of the depositary pursuant to the Deposit Agreement, the depositary may, and shall at the written direction of CNOOC Limited, terminate the Deposit Agreement and this ADR by mailing notice of such termination to the holders at least 30 days prior to the date fixed in such notice for such termination.

After the date so fixed for termination, the depositary and its agents will perform no further acts under the Deposit Agreement and this ADR, except to receive and hold (or sell) distributions on Deposited Securities and deliver Deposited Securities being withdrawn. As soon as practicable after the expiration of six months from the date so fixed for termination, the depositary shall sell the Deposited Securities and shall thereafter (as long as it may lawfully do so) hold in a segregated account the net proceeds of such sales, together with any other cash then held by it under the Deposit Agreement, without liability for interest, in trust for the pro rata benefit of the holders of ADRs not theretofore surrendered. After making such sale, the depositary shall be discharged from all obligations in respect of the Deposit Agreement and this ADR, except to account for such net proceeds and other cash. After the date so fixed for termination, CNOOC Limited shall be discharged from all obligations under the Deposit Agreement, except for its obligations to the depositary and its agents.

*Limitation on obligations and liability to ADR holders*

The depositary, CNOOC Limited, their agents and each of them shall: (a) incur no liability (i) if any present or future law, rule, regulation, fiat, order or decree of the United States, the Hong Kong Special Administrative Region, the People’s Republic of China or any other country or jurisdiction, or of any governmental or regulatory authority or any securities exchange or market or automated quotation system, the provisions of or governing any deposited securities, any present or future provision of CNOOC Limited’s charter, any act of God, war, terrorism, nationalization or other circumstance beyond control shall prevent or delay, or shall cause any of them to be subject to any civil or criminal penalty in connection with, any act which the Deposit Agreement or this ADR provides shall be done or performed by it or them (including, without limitation, voting pursuant to paragraph (12) hereof), or (ii) by reason of any exercise or failure to exercise any discretion given it in the Deposit Agreement or this ADR (including, without limitation, any failure to determine that any distribution or action may be lawful or reasonably practicable); (b) assume no liability except to perform its obligations to the extent they are specifically set forth in this ADR and the Deposit Agreement without gross negligence or willful misconduct; (c) be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any deposited securities or this ADR, which in its opinion may involve it in expense or liability, unless indemnity satisfactory to it against all expense (including reasonable fees and disbursements of counsel) and liability be furnished as often as may be required; or (d) not be liable for any action or inaction by it in reliance upon the advice of or information from legal counsel, accountants, any person presenting shares for deposit, any holder, or any other person believed by it to be competent to give such advice or information. The depositary shall not be liable for the acts or omissions made by, or the insolvency of, any securities depositary, clearing agency or settlement system.

The depositary, its agents and CNOOC Limited may rely and shall be protected in acting upon any written notice, request, direction, instruction or other document believed by them to be genuine and to have been signed or presented by the proper party or parties. The depositary and its agents will not be responsible for any failure to carry out any instructions to vote any of the deposited securities, for the manner in which any such vote is cast or for the effect of any such vote. The depositary and its agents may own and deal in any class of securities of CNOOC Limited and its affiliates and in ADRs. CNOOC Limited has agreed to indemnify the depositary and its agents under certain circumstances and the depositary and its agents have agreed to indemnify CNOOC Limited under certain circumstances. No disclaimer of liability the Securities Exchange Act of 1934 is intended by any provision hereof.

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***Books of depositary***

The depositary will keep books at its principal office for the registration and transfer of ADRs, which will be open for your inspection at all reasonable times. Such inspection shall not be for the purpose of communicating with other owners of ADRs in the interest of a business or object other than our business or other than a matter related to the deposit agreement or the ADRs.

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**China National Offshore Oil Corporation**  
**and**  
**CNOOC Limited**

**Framework Agreement**  
**in respect of**  
**Connected Transactions**

(Summary Translation)

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**Framework Agreement in respect of Connected Transactions**

This **Agreement** was entered into on November 1, 2019 by the following parties in Beijing, **the People's Republic of China** ("PRC"):

**Party A: China National Offshore Oil Corporation** (hereinafter referred to as "Party A"), a company incorporated and duly existing under the laws of the PRC with limited liability.

**Party B: CNOOC Limited** (hereinafter referred to as "Party B"), a company incorporated and duly existing under the laws of the Hong Kong Special Administrative Region of the PRC with limited liability.

On the date of this Agreement, Party A owned approximately 64.44% of the equity interests of Party B.

Party A (including its associates (as defined under **the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited** (the "Listing Rules")))) engages in ancillary production services relating to the production and operation of oil and natural gas and petrochemical industries, engineering and technical services, refining and marketing, natural gas and power generation and financial services. The above services are essential to the production operations of Party B and its affiliates. Party A and its associates possess the leading edge of talented personnel, technologies and geographical advantages, and have maintained a long-term working relationship with Party B and its affiliates. Therefore, Party B agrees to acquire the above products and services from Party A and its associates.

Party B possesses crude oil, condensate oil, liquefied oil, natural gas and its by-products and semi-finished products, and is able to provide sales and services of other various types of petroleum-related products. Party B has maintained long-term working relationship with Party A. Therefore, Party A (including its associates) agrees to acquire the above products and services from Party B (including its affiliates).

As such, based on the principles of long-term cooperation, mutual benefits and joint development, after friendly consultations, the Parties agree to enter into this Agreement and to procure their respective affiliates (including the subsidiaries, branch and other units) to provide or accept the products and services as stipulated in this Agreement pursuant to the terms and spirits of this Agreement.

- 1.1
- Party B (including its affiliates) shall provide Party A (including its associates) with the following products and services:
- 1.1.1
- management, technical, facilities and ancillary services, including the supply of materials, technical consulting, technology transfer, delegated administration, technical research services and other supporting services;
- 1.1.2
- sales of petroleum and natural gas products, by-products, semi-finished products and other various types of natural gas-related or petroleum-related products (other than the long-term sales provided under Article 1.1.3);
- 1.1.3
- long-term sales of natural gas and liquefied natural gas, by-products, semi-finished products and other various types of natural gas-related or petroleum-related products.
- 1.2
- Party A (including its associates) shall provide Party B (including its affiliates) with the following products and services:
- 1.2.1
- exploration and support services: well site survey, geophysical exploration, seismic data processing, seismic testing data processing, integrated exploration research services, geophysical data acquisition, marine geological forecast and data processing, drilling, oil and gas well measurement, well logging, well cementation, exploration well operation and other related technical services, tow-boat, transportation, supply of materials/equipment, technical research of exploration and safety services as well as various types of technical services and support services related to the above operations;
- 1.2.2
- oil and gas fields development and support services: engineering exploration, geological exploration, drilling, well completion, oil and gas well measurement, well logging, well cementation and other related technical services, design, construction, installation, testing and tuning of production facilities, shipping transportation, supply of materials/equipment, integrated research on development techniques as well as various types of technical services and support services related to the above operations;

1.2.3 oil and gas field production and support services: integrated research on production techniques, well workover, shipping transportation, oil tanker transportation, supply of material/equipment, maintenances of platform, repair of equipment and pipeline, production operations, oil exploitation operations, oil and gas production labour services, repair of facilities for the production of oil and gas fields, warehousing and storage, lease of equipment and building, road transportation services, telecommunication and network services, wharf services; labour services, warehousing and storage, construction services including roads, wharf, buildings, factories and water barriers, maintenance and repair of major equipment, medical, childcare and social services, provision of water, electricity, gas and heat, security and fire-protection services, technical training, accommodation, maintenance and repair of buildings, catering services, as well as other technical and supporting services related to the above services;

1.2.4 sales, management and ancillary services: marketing services, delegated administration, staff recruitment, publishing and printing, telecommunication networks, lease of properties, property management, supply of water, electricity, heat and gas, car rental, integrated services, integrated research, sewage disposal and other ancillary services;

1.2.5 FPSO vessel leases.

**Article 2                      Transaction Principles**

- 2.1      Specific contracts may be separately entered into between the respective Parties, that is Party A (and its associates) and Party B (and its affiliates), for specific products and services in accordance with the scope of this Agreement. Both Parties agree to implement the specific contracts under this Agreement pursuant to the following principles:
- 2.1.1      the products and services to be provided shall be of satisfactory quality to the recipient;

2.1.2      the pricing of the products and services to be provided shall be fair and reasonable;

2.1.3      the terms and conditions of the products and services provided by Party A to Party B shall be more favourable than those provided by the independent third parties; and

2.1.4      the terms and conditions of the products and services provided by Party B to Party A shall be no less favourable than those provided by Party B to the independent third parties.

- Article 3

Pricing Principles
- 3.1

Basic Pricing Principles. Subject to the transaction principles as mentioned in Article 2.1, the pricing of the respective products and services involved under Article 1 of this Agreement shall be based on arm's length negotiations, on normal commercial terms or better and with reference to the prevailing local market conditions (including the volume of sales, term of contracts, the volume of services, overall customer relationship and other market factors).
- 3.2

Subject to the pricing principles as mentioned in Article 3.1, the pricing of the respective products and services shall be determined on the following terms and in following sequential order:

(1) government-prescribed price; or

(2) where there is no government-prescribed price, in accordance with market prices (including the local, national or international market prices).
- 3.3

Government-prescribed price

3.3.1

Government-prescribed price refers to the price in respect of certain category of services determined by the laws, regulations, decisions, orders or policies, etc. enacted by governments of the relevant countries or regions (including but not limited to the central government, federal government, provincial government, state or coalition government or any organisation responsible for domestic ruling and foreign affairs with respect to certain specified territory, irrespective of its name, organisation or structure) or other regulatory departments.

3.3.2

Government-prescribed prices are applicable to water supply, electricity supply, gas supply and heat supply. The relevant basis for the government-prescribed prices for different types of products and services are detailed below:

3.3.2.1

Water supply: the National Guidelines on Water Tariffs (Ji Jia Ge [1998] No.1810), issued by the former National Planning Committee of the PRC and the former Ministry of Construction of the PRC and revised by the National Development and Reform Commission of the PRC and the former Ministry of Construction of the PRC on 29 November 2004, the urban water supply price shall be government-prescribed price, and the specific pricing authority shall be executed based on the price management catalogue.

- 3.3.2.2 Electricity supply: the Electricity Law issued by the Standing Committee of the National People’s Congress on 28 December 1995 and revised on 24 April 2015, for the on-grid power price of a power network spanning different provinces, autonomous regions, or municipalities directly under the central government, as well as in a provincial power network and an independent power network, a proposal shall be made through negotiation between the enterprises that are engaged in power production and power network operation, and shall be examined and approved by the pricing administrative department of the State Council of the PRC or an authoritative pricing administrative department. If the power produced by locally funded power production enterprises forms an independent power network within different regions of the province or is generated for local use, the price shall be under the control of the people’s governments of the provinces, autonomous regions or municipalities directly under the central government.
- 3.3.2.3 Gas supply: the Regulation on the Administration of Urban Gas (State Council Order No. 583) issued by the State Council of the PRC on 19 October 2010, which provides that the pricing bureau of the people’s governments above the county level shall prescribe and adjust the selling price for pipeline gas.
- 3.3.2.4 Heat supply: the prices for the supply of heat prescribed by the local governments shall be implemented.
- 3.3.3 For the above government-prescribed prices, if the relevant laws, rules or regulations are amended or if new laws, rules or regulations are promulgated and implemented during the term of this Agreement, the government-prescribed prices shall be implemented in accordance with the amended or newly promulgated laws, rules and regulations.
- 3.4 Market price

3.4.1 Market price refers to the price determined with reference to the price charged by at least two independent third parties (if applicable) in areas (or nearby areas) providing such type of products or services on normal terms with comparable scale at that time. Market price will be determined in accordance with normal commercial terms through tendering, price comparison or arm’s length negotiation processes between the two parties. If two or more independent third parties providing such type of products or services do not exist, the price will be determined in accordance with the negotiation between the two parties of the transaction. When both parties enter into fair negotiation on pricing, consideration should be given to the reasonableness of the cost structure of the products or services. Party A (including its associate) shall provide the list of costs and Party B (including its affiliates) shall compare such costs with the company’s internal costs of producing or providing similar products or services to determine the transaction price.

- 3.4.2    The market price is applicable to:
- 3.4.2.1    Petroleum: the price is determined by by taking reference to the Brent, Dubai, Oman and West Texas Intermediate crude oil prices, official prices of national oil company of oil producing countries and Argus sulfur crude oil price index which are updated regularly and making adjustments of approximately 20% more or less than the abovementioned reference prices after taking into consideration appropriate factors (including but not limited to the quality of different types of crude oil, shipping freight rates of crude oil and the international market price of crude oil with similar quality) in accordance with the market-oriented principles (the 20% less than the reference prices adjustment usually happens only if the quality of petroleum is not up to the statutory standard(s)).

3.4.2.2    Domestic natural gas (other than long-term sales of domestic natural gas) and its by-products: the price of natural gas is determined by taking reference to the price of relevant provincial/municipal gate stations prescribed by the National Development and Reform Commission of the PRC from time to time and published on its website and/or the price of other competing gas sources in the local markets through arm’s length negotiation between Party A (and its associates) and Party B (including its affiliates) in accordance with market principles including voluntariness, equality, fairness and good faith. The price of condensate oil is linked to the Brent crude oil price and the price of liquefied petroleum gas is linked to the benchmark price in the local market, and any premium or discount is determined with reference to the prices charged by independent suppliers in the local markets supplying products with similar quality through arm’s length negotiation between Party A (and its associates) and Party B (including its affiliates) in accordance with market principles including voluntariness, equality, fairness and good faith.

- 3.4.2.3 Long-term sales of domestic natural gas: the price is determined with reference to the price of relevant provincial/municipal gate stations prescribed by the National Development and Reform Commission of the PRC from time to time and published on its website and/or the prices charged by the independent natural gas suppliers in the local markets who are the other major natural gas suppliers having operations similar to that of Party B (including its affiliates) and supplying similar products to Party A (and its associates) or other buyers, through negotiation between Party A (and its associates) and Party B (including its affiliates) in accordance with market principles including voluntariness, equality, fairness and good faith, and consideration will be given to the reasonableness of the cost structure of the products.
- 3.4.2.4 Long-term sales of overseas liquefied natural gas: the price is calculated based on a price formula linked to the weighted average crude oil import price into Japan (i.e. the Japanese Crude Cocktail (JCC) index), which is then adjusted by two constants determined through arm's length negotiation among the parties and subject to a price range of approximately US\$2.32 to US\$2.85 per million British Thermal Units.
- 3.4.2.5 Provision of exploration and support services, provision of oil and gas development and support services, provision of oil and gas production and support services, provision of marketing, management and ancillary services and FPSO vessel leases:
- (a) Exploration well operation, drilling and completion well operation and related technical services: the price is determined through comparison of prices disclosed on the Rigzone website ([www.rigzone.com](http://www.rigzone.com)) and the price quoted by Party A (including its associate) , and price will normally be approximately 80% to 100% of the reference prices abovementioned, taking into consideration factors including specific conditions of the projects, nature of specific products and services, complexity of operation, market demand and historical transaction prices.
  - (b) Services related to the design, construction, installation and commissioning of production facilities: the price is determined through arm's length negotiation between Party A (and its associates) and Party B (including its affiliates) with reference to market price and taking into account appropriate factors (including specific working environment such as complexity of operation, different geographic features, different offshore regions, weather conditions and depth of water of the related projects).

- (c) Other exploration and support services, oil and gas development and support services: the price is determined by taking reference to the information disclosed in the annual reports of at least three major overseas goods and service providers for the oil and gas industry (such as Schlumberger, Halliburton and Baker Hughes) and determined by: (1) using the prices quoted by the aforementioned overseas good and service providers for the services provided to Party B (including its affiliates) plus the historical prices multiplied by the annual movement ratio of the profit margin of such service providers, which is calculated by dividing the net operating profit by total operating revenue disclosed in their annual reports, as well as taking into account specific working environment of related project, such as different geographic features, different offshore regions, weather conditions, depth of water, and changes in oil prices; (2) comparing such reference prices with the prices quoted by Party A (including its associates); and (3) entering into arm's length negotiation with the other party. The Price will normally be approximately 80% to 100% of the reference prices abovementioned.
- (d) Other oil and gas production and support services: the price is determined through arm's length negotiation between Party A (including its associates) and Party B (including its affiliates) with reference to market price. The market price is determined with reference to quotations from at least two comparable independent third-party market participants (if applicable) in similar transactions in surrounding markets providing similar services and taking into account factors such as quality of services and supply and demand of local markets.
- (e) Above items (a) to (d) are not applicable to the exploration and support services, oil and gas development and support services, and oil and gas production and support services between China United Coalbed Methane Corporation Limited, a subsidiary of Party B, and Party A (including its associates). For the aforesaid types of services, the pricing policies are as follows: the contract price is determined through arm's length negotiation with reference to the information of same or similar kind of unconventional oil and gas industry contract for adjacent blocks (the blocks of PetroChina Company Limited, China Petroleum & Chemical Corporation, or involved in the cooperation projects with foreign partners). The final transaction price is determined by comparing the quotation from Party A (including its associates) with the aforesaid reference prices.

- (f) Sales, management and ancillary services: the products and services provided by Party A (including its associates) under this category is substantially leases of properties. The rental is determined with reference to prevailing market rates and historical transaction amounts which were reviewed by independent property valuer and confirmed as fair and reasonable commercial market rent. Rental will be approximately 3% more or less than the prevailing market rates. When determining such adjustments, the factors such as the conditions of the leased properties, the location of the leased properties, the availability of properties with similar sizes in similar locations, and the historical transaction amounts shall be considered.
  - (g) FPSO vessel leases: the consideration of the FPSO vessel leases is the rental which is unanimously determined through arm’s length negotiation between Party B (including its affiliates) and with Party A and/or its associates which provides the FPSO vessel leases in accordance with normal commercial terms. The charges usually take reference to FPSO’s fixed daily rent which is determined based on the result of internal economic appraisal made during the course of the overall development plan of the oilfields or the floating rent determined by multiplying the oil and gas production volume by a certain ratio which is determined by the result of the internal economic appraisal made during the course of the overall development plan of the oilfields and the magnitude of production volumes.
  - (h) Above items (a) to (g) will not be applicable to relevant products and services if Party B (including its affiliates) purchases the products and services provided in Article 3.4.2.5 through the tendering or price comparison process.
- 3.4.2.6 Provision of management, technical, facilities and ancillary services: the price is determined with reference to quotations from at least two comparable independent third parties industry players (if applicable) in similar transactions in surrounding markets providing similar services and taking into account factors such as quality of services and supply and demand of local markets.

**Article 4                      Mode of Operations**

- 4.1            Party A shall ensure and procure its associates and Party B shall ensure and procure its affiliates to execute contracts for specific products and services in compliance with the principles and terms of this Agreement.

- 4.2
- The respective product and service contracts executed between Party A (and its associates) and Party B (and its affiliates) prior to January 1, 2020 which are valid after January 1, 2020 shall be deemed as signed pursuant to the principles and terms of this Agreement. Corresponding amendments shall be made to such contracts if the principles and terms of such contracts are inconsistent with those set out in this Agreement.
- 4.3
- The term of the respective product and service contracts executed pursuant to Articles 1.1.1, 1.1.2 and 1.2.1 to 1.2.4 shall not exceed three years. If the term of these contracts does not exceed three years but the expiry date thereof is later than December 31, 2022, then the following provision shall be incorporated into these contracts: "This contract shall terminate on December 31, 2022 if, as of December 31, 2022, CNOOC Limited fails to obtain the waiver for the relevant category of connected transactions in respect of this Agreement for the 3 years from 2023 to 2025 pursuant to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ".
- 4.4
- The term of the liquefied natural gas contracts executed pursuant to Article 1.1.3 of this Agreement shall be approximately 25 years and the term of the natural gas contracts generally shall not exceed 20 years, and the following provision shall be incorporated into these contracts: "This contract shall terminate on December 31, 2022 if, as of December 31, 2022, CNOOC Limited fails to obtain the waiver for the relevant category of connected transactions in respect of this Agreement for the 3 years from 2023 to 2025 pursuant to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ".
- 4.5
- The term of the specific service contracts executed pursuant to Article 1.2.5 of this Agreement shall not exceed 20 years, and the following provision shall be incorporated into these contracts: "This contract shall terminate on December 31, 2022 if, as of December 31, 2022, CNOOC Limited fails to obtain the waiver for the relevant category of connected transactions in respect of this Agreement for the 3 years from 2023 to 2025 pursuant to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited ".

Article 5

Rights and Obligations

- 5.1
- The rights of the Parties include:
- 5.1.1
- a Party may provide corresponding products and services to independent third parties, provided that the products and services shall be provided to the other Party in accordance with the terms of this Agreement;

- 5.1.2

the prices of the product and service fees shall be charged in accordance with the applicable laws and the terms of this Agreement and the specific product and service contracts.
- 5.2

The obligations of the Parties include:
- 5.2.1

to procure and ensure that its affiliates shall provide the other Party with products and services based on the standards and pricing principles as prescribed in this Agreement and the specific product and service contracts;
- 5.2.2

to be entrusted by the parties in the specific product and service contracts and to coordinate matters related to such specific product and service contracts;
- 5.2.3

to pay the relevant prices and service fees pursuant to this Agreement and the specific product and service contracts.

Article 6

Term of this Agreement and Termination of Specific Product and Service Contracts

- 6.1

This Agreement shall be effective on January 1, 2020 for a term of three years after being executed by the authorised representatives of the Parties and sealed.
- 6.2

If there is any default of one of the Parties ("Defaulting Party"), the other Party ("Non-defaulting Party") may notify the Defaulting Party by written notice that a default has been committed and request that the Defaulting Party remedy such default within a reasonable period. If the Defaulting Party fails to remedy such default within the aforementioned period, the Non-defaulting Party may terminate this Agreement immediately. The Non-defaulting Party reserves the right to claim, request for indemnities and any other legally permitted remedies from the Defaulting Party.
- 6.3

The termination of this Agreement shall not affect the rights or obligations of any Party which have accrued under this Agreement.
- 6.4

Either Party shall be entitled to terminate at any time the specific product and service contracts in respect of one or more types of products or services provided that prior written notice is given to the other Party.

Article 7

Representations and Warranties

- 7.1

Party A represents and warrants that:
- 7.1.1

Party A is a company incorporated under the laws of the PRC with limited liability as an independent legal entity and is currently holding a valid business licences;
- 7.1.2

Party A has obtained all government approvals (if necessary) and internal authorisations as required for the purpose of execution of this Agreement and performance of all obligations under this Agreement. This Agreement shall be binding on Party A once it has been executed by the authorised representative of Party A;
- 7.1.3

The execution of this Agreement or performance of the obligations thereunder by Party A will not violate any other agreements executed by it or its articles of association, and will not result in any legal conflicts with other agreements executed by it or its articles of association.
- 7.2

Party B represents and warrants that:
- 7.2.1

Party B is incorporated under the laws of the Hong Kong Special Administrative Region of the PRC with limited liability as an independent legal entity and is currently holding a valid business license;
- 7.2.2

Party B has obtained all internal authorisations necessary for the execution of this Agreement. This Agreement shall be binding on Party B once it has been executed by the authorised representative of Party B;
- 7.2.3

The execution of this Agreement or performance of the obligations thereunder by Party B will not violate any other agreements executed by it or its articles of association, and will not result in any legal conflicts with other agreements executed by it or its articles of association.

Article 8

Performance of this Agreement

- 8.1

If any of the transactions under this Agreement constitutes a connected transaction pursuant to the Listing Rules, these transactions shall only be implemented upon obtaining a waiver from The Stock Exchange of Hong Kong Limited (the "Stock Exchange"), obtaining independent shareholders' approval or complying with any other provisions related to connected transactions under the Listing Rules. The independent shareholders' approval or the compliance with any other provisions related to connected transactions under the Listing Rules shall be a condition precedent to this Agreement and such transactions.

- 8.2

If a conditional waiver is granted by the Stock Exchange, this Agreement shall be implemented according to the conditions so stipulated.
- 8.3

If a waiver in respect of a certain connected transaction is withdrawn, revoked or lapsed, and the transaction fails to comply with the requirements of the Listing Rules regarding connected transactions, then the performance under this Agreement regarding that transaction shall be terminated.
- 8.4

If the performance of all transactions under this Agreement are terminated pursuant to Article 8.3, this Agreement shall be terminated.

Article 9

Force Majeure

- 9.1

If an event of Force Majeure occurs to any Party of this Agreement (Force Majeure events shall mean any event which is beyond the reasonable control of the affected Party, unforeseen or unavoidable and insurmountable even if foreseeable, and which arises after the date of this Agreement and which makes the total or partial performance of this Agreement by that Party become impossible or impracticable (including but not limited to the failure to perform even when a reasonable amount of money has been spent). Such events shall include but not limited flood, fire, drought, typhoons, earthquakes and other natural disasters, traffic accidents, unrests, riots and war (whether declared or not) and acts or omissions of government agencies) and the impact of such event of Force Majeure has resulted in the failure to perform all or part of its obligations under this Agreement, the performance of such obligations shall be suspended during the period of an event of Force Majeure.
- 9.2

The Party claiming Force Majeure shall make its best efforts to inform the other Party in writing within the shortest period of time and shall furnish within fifteen days thereafter proper proof of the occurrence and duration of such Force Majeure by hand or registered post. The Party claiming that its performance of this Agreement becomes objectively impossible or impracticable shall have the liability to use all reasonable endeavours to eliminate or mitigate the impact of Force Majeure.
- 9.3

In the event of Force Majeure, both Parties shall promptly decide how to implement this Agreement through friendly consultations. After the termination or elimination of the Force Majeure events or its consequences, both Parties shall promptly resume the performance of their respective obligations under this Agreement.

**Article 10                      Announcement and Other Disclosures**

- 10.1      Save for announcements and other disclosures made pursuant to the laws of the PRC or the requirements of China Securities Regulatory Commission, the Stock Exchange, Securities and Futures Commission of Hong Kong, New York Stock Exchange, US Securities and Exchange Commission, Toronto Stock Exchange or any other governmental or regulatory authorities, neither party shall make any announcement or other disclosures regarding this Agreement without the prior written consent of the other party.

**Article 11                      Miscellaneous**

- 11.1      Save as otherwise provided in this Agreement, neither Party shall transfer all or part of its rights or obligations under this Agreement without the prior written consent of the other Party.
- 11.2      This Agreement shall constitute the entire agreement between the Parties and shall supersede all prior verbal or written agreements, contracts, understanding and communication between them with respect to such matters.
- 11.3      If any provision in this Agreement becomes illegal, invalid or unenforceable, it shall not affect the validity and enforceability of the other provisions of this Agreement.
- 11.4      Both Parties agree to be liable for all fees and expenses arising from the execution of this Agreement pursuant to relevant PRC laws. If there is no relevant law in relation to such payments, the fees and expenses shall be borne equally by both Parties.
- 11.5      This Agreement shall only be amended in writing, signed and sealed by the authorised representatives from the Parties and shall be subject to approvals given through appropriate corporate actions from the Parties. If such amendment constitutes a substantive or material amendment to this Agreement, then such amendment shall only be valid upon notification or obtaining the approval (subject to the then current requirements of the Stock Exchange) from the Stock Exchange and Party B's shareholders at the shareholders' meeting (if applicable).
- 11.6      Unless otherwise provided, no failure or delay on the part of either Party to this Agreement in exercising any right, power or privilege hereunder shall operate as a waiver of any right, power or privilege of the other party hereto. The single or partial exercise of any right, power or privilege hereunder by any Party shall not preclude any other exercise of any other right, power or privilege hereunder.

Article 12 Notices

- 12.1A notice or other correspondences made by a Party pursuant to this Agreement must be in writing and in Chinese, and must be left at the designated address of the other Party by hand or registered post, or sent by facsimile to the designated facsimile number of the other Party. A notice is deemed to have validly made on a date subject to the following provisions:
- 12.1.1in the case of a notice delivered by hand, the date of receipt by a designated person of the other Party;

12.1.2in the case of a notice by registered post, on the seventh day after the posting (dated on postage stamp) (if the last day is Saturday, Sunday or statutory holiday, then the next following working day);

12.1.3in the case of a notice by facsimile, upon the facsimile being sent.

Article 13 Governing Law and Dispute Resolution

- 13.1This Agreement shall be governed and construed in accordance with the laws of the People's Republic of China (excluding for the purpose of this Agreement, the laws of the Hong Kong Special Administrative Region, the Macau Special Administrative Region and Taiwan).
- 13.2Any dispute arising out of or relating to this Agreement shall be settled by consultation between Party A and Party B. If consultation fails, Party A or Party B may submit such dispute to China International Economic and Trade Arbitration Commission for arbitration in accordance with the arbitration rules of such arbitration commission in effective at the time of application of such arbitration. Any arbitral award shall be final and binding upon both Parties.

Article 14 Supplementary

- 14.1Unless otherwise provided, in this Agreement:
- 14.1.1a Party shall include its successors;

- 14.1.2 the headings of the respective articles of this Agreement shall be solely for ease of reference and shall not have any legal force or prejudice the interpretation of this Agreement.
- 14.2 This Agreement shall be in Chinese.

IN WITNESS whereof, the parties have executed this Agreement on the date and place first above written.

**China National Offshore Oil Corporation**

\_\_\_\_\_  
Authorised representative  
Title:

**CNOOC Limited**

\_\_\_\_\_  
Authorised representative  
Title:

**CNOOC Finance Corporation Limited**  
**and**  
**CNOOC Limited**

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**Framework Agreement**  
**in respect of**  
**the Financial Services**

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November 21, 2019  
(Summary Translation)

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Framework Agreement in respect of the Financial Services

This Framework Agreement in respect of the Financial Services (the “**Agreement**”) was entered into on November 21, 2019 by the following parties in Beijing, the People’s Republic of China (“**PRC**”):

**Party A: CNOOC Limited**, a company incorporated and existing under the laws of the Hong Kong Special Administrative Region (“**Hong Kong**”) with limited liability having its registered address at 65/F, Bank of China Tower, 1 Garden Road, Hong Kong.

**Party B: CNOOC Finance Corporation Limited**, a company incorporated and existing under the laws of the PRC with limited liability having its registered address at No. 25 Chaoyangmenbei Dajie, Dongcheng District, Beijing, PRC.

(Collectively the “**Parties**” and individually the “**Party**”).

WHEREAS:

- 1. Party A is a subsidiary (as defined under the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* (the “**Listing Rules**”)) of CNOOC and is listed on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”), the New York Stock Exchange and the Toronto Stock Exchange;
- 2. Party B is a non-bank financial institution affiliated to China National Offshore Oil Corporation (“**CNOOC**”), which is approved by China Banking and Insurance Regulatory Commission (the “**CBIRC**”) and registered at State Administration for Industry and Commerce, and is qualified for providing financial services to CNOOC group members;
- 3. Party A, out of ordinary business needs, expects to receive financial services from Party B with fair and reasonable market prices and on normal commercial terms or better. On this basis, the Parties hereby agree to enter into this Agreement and to provide / accept the financial services as agreed;

- 4. CNOOC is an indirect controlling shareholder of Party A, holding 64.44% interests in Party A’s issued shares. Party B is a subsidiary of CNOOC and a connected person of Party A according to the Listing Rules. The transactions between Party A and Party B in this Agreement constitute continuing connected transactions under the Listing Rules; and
- 5. Party A hereby agrees to, and ensures to procure its subsidiaries to, accept the financial services as stipulated in this Agreement in accordance with the terms and spirits of this Agreement.

NOW, THEREFORE, with respect of the supply and acceptance of financial services, in accordance with the *Contract Law of the People's Republic of China*, the *Administrative Measures on Finance Companies of Enterprise Groups* promulgated by CBRC and other existing PRC laws and regulations, the Parties hereby agree as follows:

**Article 1 Financial Services**

1.1 Party B hereby agrees to provide financial services to Party A and its subsidiaries pursuant to this Agreement and Party A and its subsidiaries also hereby agree to accept the financial services as set forth below provided by Party B from time to time pursuant to this Agreement, provided that Party A and its subsidiaries are members of CNOOC group in accordance with the *Administrative Measures on Finance Companies of Enterprise Groups* and the financial services provided by Party B are within its business scope approved by CBIRC and confirmed by State Administration for Industry and Commerce:

- (1) settlement services;
- (2) depositary services;

- (3) discounting services;
  - (4) loan services; and
  - (5) entrustment loans services.
- 1.2            Party B hereby agrees to, from time to time, provide relevant information with respect to financial services set forth above to Party A and its subsidiaries as required by Party A, such as deposit / loan status and maximum daily outstanding balance of deposits of Party A and its subsidiaries, and deposit interest rates of commercial banks.

Article 2 Transaction Principles

- 2.1            The Parties hereby agree that Party B shall provide Party A and its subsidiaries financial services under Section 1.1 of this Agreement in accordance with the following principles:
- (1) Provision of settlement services: Party B will provide settlement services to Party A and its subsidiaries on a free-of-charge basis;
  - (2) Provision of depositary services: when Party B provides depositary services to Party A and its subsidiaries, the interest rates must be agreed by both parties and determined in accordance with the relevant unified standard deposit interest rates as promulgated by the People’s Bank of China (the “**PBOC**”) from time to time and may be subject to upward adjustment of up to 40% of such PBOC standard deposit interest rates subject to the requirements of the PRC laws and regulations and with reference to the deposit interest rates offered by commercial banks for deposit of the same nature and maturity;
  - (3) Provision of discounting services: when Party B provides discounting services regarding commercial drafts to Party A and its subsidiaries, the interest rates shall be the relevant unified standard interest rates for discounting services as promulgated by the PBOC from time to time, but such interest rates may be adjusted downward in separate financial service agreements subject to the requirements of the PRC laws and regulations;

- (4) Provision of loan services: when Party B provides loan services to Party A and its subsidiaries, the interest rates shall be the relevant unified standard interest rates for loans as promulgated by the PBOC from time to time, but such interest rates may be adjusted downward subject to the requirements of the PRC laws and regulations. Further, the parties agreed that the loans provided by Party B to Party A and its subsidiaries are not required to be secured by assets of Party A and its subsidiaries; and
- (5) Provision of entrustment loans services: when Party B provides entrustment loans services to Party A and its subsidiaries, the annual service fees are calculated based on the principal balances of the loans. The aggregate amount of the annual service fee plus the interest on the relevant loan shall not exceed the interest payable by Party A and its subsidiaries on a loan of same maturity charged by commercial banks.
- 2.2 Party A and its subsidiaries shall have the right, in their sole discretion with respect to their own benefits, to decide whether to obtain services set forth above from Party B.
- 2.3 In the event of any misappropriation or misuse by Party B in respect of the funds deposited with it by the Party A or its subsidiaries which results in the inability of Party A or its subsidiaries to recover such funds, Party A or its subsidiaries shall offset amounts due to Party A or its subsidiaries from Party B against amounts outstanding from Party A or its subsidiaries to Party B. Party B has no such right to set off.

**Article 3 Mode of Operations**

- 3.1 The Parties and Party A shall ensure and procure its subsidiaries to, if necessary, enter into separate financial service agreements on normal commercial terms or better and in compliance with the terms of this Agreement, and cause separate financial service agreements to be in accordance with the principles set out in this Agreement and subject to the requirements of the PRC laws and regulations (including but not limited to requirements of the Listing Rules).

3.2 The term of such separate financial service agreements executed pursuant to this Agreement shall not exceed three years. In the event the term of such agreement does not exceed three years but the expiry date thereof is later than December 31, 2022, the following provision shall be incorporated into such agreements: “If, as of December 31, 2022, CNOOC Limited fails to comply with the applicable requirements under the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited in relation to connected transactions, unless CNOOC Limited can satisfy the conditions of the relevant exemptions, this agreement shall be terminated on December 31, 2022”.

3.3 The financial service agreements which were executed between Party A or its subsidiaries and Party B prior to the effective date of this Agreement and has not expired shall be valid after this Agreement becomes effective and shall be deemed as separate financial service agreements signed in compliance with the principles and terms of this Agreement. Corresponding amendments, however, shall be made in accordance with the principles and terms of this Agreement if the principles and terms of such agreements are inconsistent with those set out in this Agreement.

**Article 4 Term and Termination**

4.1 This Agreement shall become effective on January 1, 2020 upon execution by the authorised representatives of the Parties and shall remain in effect for a term of three years until 31 December, 2022. This Agreement can be extended for another three years when the abovementioned term expires, provided that the Parties consent in writing and such extension complies with the provisions related to the requirements for connected transactions under the Listing Rules.

- 4.2        Either Party hereto shall be entitled to terminate this Agreement or the offer / acceptance of any specific financial services in this Agreement, provided that it shall notify the other Party in writing three months in advance and shall clarify the termination of this Agreement or the specific financial services which will be terminated and the date of termination. The termination of the offer / acceptance of specific financial services shall not affect other rights and obligations of the Parties in this Agreement, nor other rights and obligations in the separate financial service agreements executed pursuant to this Agreement or in relevant written confirmation documents owned by any of the Parties in such agreements or relevant written confirmation documents.
- 4.3        In the event of any comments or requests made by the Stock Exchange, or for the purpose of complying with any requirements of the Listing Rules, the Parties hereby agree to make corresponding modification to the terms of this Agreement in accordance with such comments or requests of the Stock Exchange or requirements of the Listing Rules.
- 4.4        If any Party breaches any terms of this Agreement (the “**Defaulting Party**”), the other Party (the “**Non-Defaulting Party**”) may notify the Defaulting Party in writing of such breach and request the Defaulting Party to make relevant remedies within a designated reasonable period of time; if the Defaulting Party fails to remedy such defaulting action within such reasonable period of time, the Non-Defaulting Party is entitled to immediately terminate this Agreement or the offer / acceptance of specific financial services. The Non-Defaulting Party reserves the right to recourse and claim compensation and any other claims available under applicable laws.
- 4.5        If one Party is bankrupt, insolvent, in the legal procedure of liquidation or has ceased operation, the other Party may notify such Party in writing to terminate this Agreement.
- 4.6        If all offer / acceptance of financial services as described in this Agreement have been terminated, this Agreement shall be terminated therefore.

4.7 The termination of this Agreement shall not affect the existing rights or obligations of any of the Parties accrued pursuant to this Agreement, including the obligation of making due and payable payment and the obligation of making default and damages payment resulted from breach of this Agreement.

Article 5 Representations and Warranties

5.1 Party A hereby represents and warrants that:

- (1) Party A is a company incorporated and duly existing under the laws of the Hong Kong with limited liability as an independent legal entity;
- (2) Party A has obtained all government approvals (if necessary) and internal authorisations as required for the execution and performance of this Agreement; this Agreement is executed by the authorised representative of Party A, and this Agreement shall be binding on Party A upon execution; and
- (3) The execution and performance of this Agreement will not violate any other agreements entered into by Party A or its articles of association nor conflict as a matter of law with other agreements entered into by Party A or its articles of association.

5.2 Party B hereby represents and warrants that:

- (1) Party B is a non-bank financial institution incorporated and duly existing under the laws of the PRC as an independent legal entity;
- (2) The financial services provided by Party B to Party A and its subsidiaries pursuant to this Agreement do not exceed Party B’s approved and confirmed business scope;
- (3) Party B has obtained all the government approvals (if necessary) and authorisations as required for the execution and performance of this Agreement; this Agreement is executed by the authorised representative of Party B, and this Agreement shall be binding on Party B upon execution;

- (4) The execution and performance of this Agreement by Party B will not violate any other agreements entered into by Party B or its articles of association, nor will conflict as a matter of law with other agreements entered into by Party B or its articles of association; and
- (5) Party B hereby agrees to allow the auditor of Party A to audit the transaction records of Party A and its subsidiaries in connection with this Agreement while Party A is listed on the Stock Exchange, in order to facilitate Party A to fulfil its disclosure obligations under the Listing Rules.

**Article 6 Performance of this Agreement**

- 6.1 If any of the transactions under this Agreement or the modification, amendment, revocation or re-signing of this Agreement constitutes a connected transaction pursuant to the Listing Rules, these transactions shall only be implemented after complying with the relevant requirements related to the connected transactions under the Listing Rules (if applicable); therefore, compliance with relevant requirements related to the connected transaction under the Listing Rules (if applicable) shall be a condition precedent to this Agreement and such transactions.
- 6.2 If a conditional waiver is granted by the Stock Exchange, this Agreement shall be implemented according to the conditions so stipulated.
- 6.3 In the event that a waiver from the Stock Exchange in respect of a certain connected transaction is lapsed, withdrawn or revoked, and the transaction fails to comply with the requirements of the Listing Rules related to connected transactions, the performance under this Agreement regarding that transaction shall be terminated.
- 6.4 If the amount of connected transaction under this Agreement exceeds the relevant cap determined after Party A has fulfilled its reporting and announcement obligations, Party A shall comply with the requirements of the Listing Rules as soon as possible, including to hold a general meeting to pursue independent shareholders to approve a new cap (if necessary). Before complying with the relevant requirements under the Listing Rules, the Parties hereby agree to use its best efforts, respectively, to procure relevant transactions to be limited within the original annual caps determined after Party A has fulfilled its reporting and announcement obligations.

**Article 7 Liabilities for Breach of Contract**

7.1 The Parties shall perform its obligations respectively pursuant to this Agreement; in the event a Party does not perform in conformity with this Agreement and causes the other Party to suffer losses, such Party shall undertake the liabilities for breach of contract, including being liable to pay compensatory damages, in accordance with the PRC laws (excluding, for the purpose of this Agreement, the laws of Hong Kong, the Macau Special Administrative Region and Taiwan).

**Article 8 Force Majeure**

8.1 If an event of Force Majeure occurs to any Party of this Agreement (Force Majeure events shall mean any event which is beyond the reasonable control of the affected Party, unforeseen, unavoidable or insurmountable even if foreseeable, and arises after the date of this Agreement and which makes the total or partial performance of this Agreement by that Party objectively impossible or impracticable (including but not limited to the failure to perform even when a reasonable amount of money has been spent). Such events shall include but not limited to flood, fire, drought, typhoons, earthquakes and other natural disasters, traffic accidents, strikes, unrests, riots and war (whether declared or not) and acts or omissions of governments) and the impact of such event of Force Majeure has resulted in the failure to perform all or part of its obligations under this Agreement, the performance of such obligations shall be suspended during the period of Force Majeure events.

8.2 The Party claiming Force Majeure shall make its best efforts to inform the other Party in writing and shall furnish within fifteen days after the Force Majeure has taken place, proper proof of the occurrence and duration of such Force Majeure by hand or registered post. The Party claiming that a Force Majeure event has made the performance of this Agreement objectively impossible or impracticable shall have the liability to use all reasonable endeavours to eliminate or mitigate the impact of such Force Majeure event.

8.3 In the event of Force Majeure, the Parties shall promptly decide how to implement this Agreement through friendly negotiations. After the termination or elimination of the Force Majeure events or its consequences, the Parties shall promptly resume the performance of their respective obligations under this Agreement. If the Parties, in consideration of the actual impact, enter into a supplementary agreement with respect to the obligations under this Agreement affected by Force Majeure, the obligations shall be performed in accordance with the supplementary agreement.

**Article 9 Announcement**

9.1 Save for announcement made pursuant to the laws of the PRC or the requirements of the CBIRC, the China Securities Regulatory Commission, the Stock Exchange, the Securities and Futures Commission of Hong Kong, the New York Stock Exchange, the US Securities and Exchange Commission, the Toronto Stock Exchange or any other governmental or regulatory authorities, neither party shall make any announcement regarding this Agreement without the prior written consent of the other party.

**Article 10 Governing Law and Dispute Resolution**

10.1 This Agreement shall be governed and construed in accordance with the laws of the PRC (excluding, for the purpose of this Agreement, the laws of Hong Kong, the Macau Special Administrative Region and Taiwan).

10.2 Any dispute arising out of or relating to this Agreement shall be settled by negotiation between the Parties. If negotiation cannot settle the dispute within 30 days, either Party may submit such dispute to China International Economic and Trade Arbitration Commission located in Beijing for arbitration in accordance with the arbitration rules of such arbitration commission in effect at the time of application of such arbitration. Any arbitral award shall be final and binding upon both Parties.

10.3 Except for the clauses being disputed, the Parties shall continue to perform other clauses in this Agreement during the course of the negotiation and arbitration.

**Article 11 Miscellaneous**

11.1 The headings of sections in this Agreement are for convenience of reference only and shall not have legal validity or affect the interpretation of this Agreement.

11.2 Save as otherwise provided in this Agreement, neither Party shall assign in whole or in part its rights or obligations under this Agreement without the prior written consent of the other Party.

11.3 This Agreement shall supersede all prior verbal or written agreements, contracts, understanding and communication between Parties with respect to such matters.

11.4 If any clause in this Agreement becomes illegal, invalid or unenforceable, it shall not affect the validity and enforceability of the other clauses of this Agreement.

11.5 The Parties agree to be liable for all fees and expenses arising from the execution of this Agreement pursuant to the relevant PRC laws. If there is no relevant law in relation to such payments, the fees and expenses shall be borne equally by the Parties.

11.6 This Agreement shall only be amended in writing, signed and sealed by the authorised representatives from the Parties and shall be subject to approvals given through appropriate corporate actions from the Parties. If such amendment constitutes a substantive or material amendment to this Agreement, then such amendment shall only become valid upon compliance with the relevant requirements of the Listing Rules.

11.7 Unless otherwise provided, no failure or delay on the part of either Party to this Agreement in exercising any right, power or privilege hereunder shall constitute a waiver of any right, power or privilege of the other Party hereto. The single or partial exercise of any right, power or privilege hereunder by any Party shall not preclude any other exercise of any other right, power or privilege hereunder in the future.

11.8 All notices or other correspondences made by a Party pursuant to this Agreement must be in writing and in Chinese, and must be left at the designated address of the other Party by hand or by registered post, or sent by facsimile to the designated facsimile number of the other Party. A notice is deemed to have validly made on a date subject to the following provisions: in the case of a notice delivered by hand, the date of receipt by a designated person of the other Party; in the case of a notice by registered post, on the seventh day after the posting (evidenced by the postage stamp) (if the last day is a Saturday, Sunday or official holiday, then the next following working day); in the case of a notice by facsimile, upon the facsimile being sent.

11.9 This Agreement shall be in Chinese and executed in two originals, each of which shall be held by the parties respectively and shall be of equal force and effect.

IN WITNESS whereof which the parties have executed this Agreement on the date and place first above written.

*[Below intentionally left blank and signature pages follow]*

**CNOOC Limited**

\_\_\_\_\_  
Authorised representative  
Title:

**CNOOC Finance Corporation Limited**

\_\_\_\_\_  
Authorised representative  
Title:

Subsidiaries

As of December 31, 2019, we owned, directly or indirectly, the following subsidiaries.

Name of entity	Our interest	Jurisdiction of incorporation
CNOOC China Limited	100%	Tianjin, PRC
CNOOC International Limited	100%	British Virgin Islands
China Offshore Oil (Singapore) International Pte Ltd	100%	Singapore
CNOOC Finance (2003) Limited	100%	British Virgin Islands
CNOOC Energy U.S.A. LLC	100%	Delaware, USA
CNOOC Southeast Asia Limited	100%	Bermuda
CNOOC Africa Holding Ltd.	100%	British Virgin Islands
CNOOC Africa Ltd.	100%	British Virgin Islands
CNOOC SES Ltd.	100%	Labuan, F.T., Malaysia
CNOOC Poleng Ltd.	100%	Labuan, F.T., Malaysia
CNOOC Madura Ltd.	100%	Labuan, F.T., Malaysia
CNOOC NWS Private Limited	100%	Singapore
CNOOC Australia E&P Pty Ltd	100%	Australia
CNOOC Muturi Holding Limited	100%	British Virgin Islands
CNOOC Muturi Limited	100%	The Isle of Man
CNOOC Australia Limited	100%	British Virgin Islands
CNOOC Exploration & Production Nigeria Limited	100%	Nigeria
CNOOC Hong Kong Holding Limited	100%	Hong Kong
CNOOC Congo SA	100%	Republic of Congo
CNOOC Caspian (Kazakhstan) Ltd.	100%	Cayman Islands
CNOOC Australia International Holdings Private Limited	100%	Singapore
CNOOC Australia Energy Capital Management Pty Ltd	100%	Australia
CNOOC Batanghari Ltd.	100%	Labuan, F.T., Malaysia
CNOOC Palung Aru Ltd.	100%	Labuan, F.T., Malaysia
CNOOC FPSO Holding Limited	100%	Liberia
CNOOC Uganda (BVI) Ltd	100%	British Virgin Islands
De coöperatieve vereniging CNOOC Netherlands U.A.	100%	The Netherlands
CNOOC Netherlands B.V.	100%	The Netherlands
CNOOC Uganda Ltd	100%	Uganda
CNOOC Deepwater Development Limited	100%	Zhuhai, PRC

CNOOC Hainan Dock Limited	100%	Hainan, PRC
CNOOC Iraq Limited	100%	British Virgin Islands
CNOOC Finance (2011) Limited	100%	British Virgin Islands
CNOOC Reserves Fund I, Ltd.	100%	Cayman Islands
CNOOC Luxembourg S.à r.l.	100%	Luxembourg
CNOOC Finance (2012) Limited	100%	British Virgin Islands
CNOOC Finance (2013) Limited	100%	British Virgin Islands
Tainan-Chaoshan Petroleum Operating Company Limited <sup>*</sup>	50%	British Virgin Islands
Husky - CNOOC Madura Limited <sup>*</sup>	40%	British Virgin Islands
Chaoyang Petroleum (BVI) Limited <sup>*</sup>	50%	British Virgin Islands
Chaoyang Petroleum (Trinidad) Block 3A Limited <sup>*</sup>	50%	Barbados
Chaoyang Petroleum (Trinidad) Block 2C Limited <sup>*</sup>	50%	Barbados
BC Energy Investments Corp <sup>*</sup>	50%	British Virgin Islands
Axion Energy Holding SL <sup>*</sup>	50%	British Virgin Islands
PNG Energy Limited	70%	British Virgin Islands
GINI Energy Ltd	70%	Papua New Guinea
CNOOC Iceland ehf.	100%	Iceland
CNOOC Luxembourg Holding S.à r.l.	100%	Luxembourg
CNOOC PETROLEUM BRASIL LTDA	100%	Brazil
CNOOC International Energy Services (Beijing) Limited	100%	Beijing, PRC
China Offshore Oil Corporation E&P Mexico, S.A.P.I. de C.V.	100%	Mexico
China Offshore Oil Corporation E&P Services Mexico, S.A.P.I. de C.V.	100%	Mexico
CNOOC New Zealand E&P Limited	100%	New Zealand
CNOOC Finance (2015) Australia Pty Ltd	100%	Australia
Canadian Nexen Petroleum East Al Hajr Ltd.	100%	Alberta, Canada
CanadianOxy Offshore Production Co.	100%	Delaware, USA
CNOOC Canada Energy Ltd.	100%	British Columbia, Canada
CNOOC Finance (2014) ULC	100%	Nova Scotia, Canada
CNOOC Petroleum Guyana Limited	100%	Barbados
CNOOC UK Limited	100%	England and Wales
CNOOC West Africa Petroleum E & P SA	100%	Senegal

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ICM Assurance Ltd.	100%	Barbados
CNOOC Energy Acquisitions Holdings Limited	100%	Jersey
Nexen Energy Capital Management U.S.A. Inc.	100%	Delaware, USA
CNOOC Energy Holdings International Limited	100%	Jersey
CNOOC Energy Holdings U.S.A. Inc.	100%	Delaware, USA
CNOOC Marketing U.S.A. Inc.	100%	Delaware, USA
CNOOC Petroleum North America ULC	100%	British Columbia, Canada
CNOOC Ettrick U.K. Limited	100%	England and Wales
CNOOC Holdings U.S.A. Inc.	100%	Delaware, USA
CNOOC Holdings West Africa Limited	100%	Jersey
Nexen Oil & Gas Holdings U.S.A. LLC.	100%	Delaware, USA
Nexen Oilfield Services Nigeria Limited	100%	Jersey
CNOOC Petroleum Colombia Limited	100%	Jersey
Nexen Petroleum Deepwater Nigeria Limited	100%	Nigeria
CNOOC Petroleum Farragon U.K. Limited	100%	England and Wales
Nexen Petroleum Exploration and Production Nigeria Limited	100%	Nigeria
Nexen Petroleum Nigeria Limited	100%	Nigeria
CNOOC Petroleum Offshore U.S.A. Inc.	100%	Delaware, USA
Nexen Petroleum Operations Yemen Limited	100%	Jersey
CNOOC Petroleum Sales U.S.A. Inc.	100%	Texas, USA
Nexen Petroleum U.K. Holdings Limited	100%	England and Wales
CNOOC Petroleum Europe Limited	100%	England and Wales
CNOOC Petroleum U.S.A. Inc.	100%	Delaware, USA
Nexen Resource Holdings U.K. Limited	100%	England and Wales
Wascana Energy 2001 Ltd.	100%	Saskatchewan, Canada
Canadian Nexen Petroleum Yemen	100%	Alberta, Canada
CNOOC Marketing Canada	100%	Alberta, Canada
CNOOC Nigerian Holdings Coöperatief U.A	100%	The Netherlands
CNOOC Oil Sands Canada	100%	Alberta, Canada
CNOOC Finance (2015) U.S.A. LLC	100%	Delaware, USA
CNOOC Petroleum Mauritania Limited	100%	England and Wales
CEPR Limited	100%	Hong Kong
CNOOC U.K. MARKETING LIMITED	100%	England and Wales
CNOOC Renewable Energy Co., Ltd.	100%	Shanghai, PRC
China United Coalbed Methane Corporation Ltd.	100%	Beijing, PRC
Zhonglian Huarui Gas Co.,Ltd.	51%	Beijing, PRC

\*We and our partners jointly control these entities.

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**CNOOC Limited**  
**(incorporated under the laws of Hong Kong with limited**  
**liability)**  
**Code of Ethics for Directors and Senior Officers**

**29 August 2019**

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I. INTRODUCTION

This “CNOOC Limited Code of Ethics for Directors and Senior Officers” (the “Code of Ethics”) summarizes the major long-standing principles of conduct that our company, CNOOC Limited (the “Company” or “our company”), follows to ensure our business is conducted with integrity and in compliance with applicable law. Because our company is incorporated in Hong Kong with our shares listed on the Stock Exchange of Hong Kong Limited (the “Hong Kong Stock Exchange”) and our ADRs listed on the New York Stock Exchange and the Toronto Stock Exchange, and because our core operation areas are in the People’s Republic of China (the “PRC”), we are at least subject to laws and ethical rules of all these jurisdictions. We expect our directors and senior management to know and follow the policies outlined in this Code of Ethics, as applicable. For the purpose of this Code of Ethics, the scope of senior management includes Chief Executive Officer, President, Chief Financial Officer, Executive Vice Presidents, Senior Vice Presidents, Vice Presidents, Compliance Officer, General Counsel, Company Secretary, other Chief Officers and general managers (directors) and deputy general managers (deputy directors) of the departments of the Company’s headquarters or other equal ranking personnel of the subsidiaries and affiliates (collectively, the “Senior Officers”). Apart from any applicable sanctions under applicable laws, rules and regulations, any director or Senior Officer who violates the provisions or spirit of this Code of Ethics is subject to disciplinary action, up to and including termination of employment.

Each of the directors and Senior Officers has the responsibility to obey applicable laws and act honestly and ethically. To that end, this Code of Ethics is a guide intended to assist each of the directors and Senior Officers to perform proper commercial conduct and to report illegal or unethical conduct. It is not, however, a comprehensive document that addresses every legal or ethical issue that a director or Senior Officer may confront, nor is it a summary of all laws and policies that apply to our company or our business. This Code of Ethics is supplemental to other policies, manuals and internal regulations of our company.

If any director or Senior Officer has any questions about this Code of Ethics or is concerned or unsure about conduct he or she believes may violate this Code of Ethics, other policies of our company or any applicable laws, rules or regulations, the director or Senior Officer should consult with our Compliance Officer, General Counsel, and/or a member of the Audit Committee of our Board of Directors (the “Audit Committee”) using the contact information set forth in Appendix 1. No one at our company has the authority to make exceptions to these policies, other than our Board of Directors (the “Board”) or a committee of the Board, and only if such exceptions are allowed under applicable laws, rules and regulations.

II. COMPLIANCE WITH LAWS, RULES AND REGULATIONS

The directors and Senior Officers must comply fully with, among other things, all applicable laws, rules and regulations that govern our business conduct in the PRC, Hong Kong Special Administrative Region of the PRC (“Hong Kong”), the United States of America (the “U.S.”), Canada, and any other region or country in which the Company conducts its business, including, but not limited to, securities laws, the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “Listing Rules”), the New York Stock Exchange rules, the Toronto Stock Exchange Company Manual, environmental laws, insider trading and other market misconduct laws (including, but not limited to, the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) (the “SFO”)), the U.S. Foreign Corrupt Practices Act and applicable laws relating to the disclosure of payments made to governments for the purpose of commercial development of oil and gas.

**III. PROHIBITION AGAINST INSIDER TRADING/INSIDER DEALING AND PROCEDURE OF HANDLING INSIDE INFORMATION**

The directors and Senior Officers who have access to, or knowledge of, material non- public information from or about our company are prohibited from buying, selling or otherwise trading in our stock or other securities of our company. The prohibition contained in this section not only applies to the directors and Senior Officers but also to any “manager, secretary of, or any other person involved in the management of, a corporation” (collectively, the “Managers”). “Material non-public” information includes any information, positive or negative, that has not yet been made available or disclosed to the public and that might be of significance to an investor, as part of the total mix of information, in deciding whether to buy or sell stock or other securities.

Such insiders are also prohibited from giving “tips” on material non-public information, that is, directly or indirectly disclosing such information to any other person, including family members, other relatives and friends, so that they may trade in our stock or other securities of our company. Furthermore, if, during the course of service with our company, any director, Senior Officer or Manager acquires material non -public information about another company, such as one of our customers or suppliers or our affiliates, or learns that our company is planning to enter into a major transaction with another company (such as an acquisition), the directors, Senior Officers or Managers are restricted from trading in the securities of the other company.

In the U.S., such “insider trading” is both unethical and illegal, with criminal penalties of up to US\$5 million and a jail term of up to 20 years and civil penalties in the U.S. of up to three times the illegal profit gained or loss avoided.

In Hong Kong, “insider dealing” within the meaning of the SFO is broadly similar to insider trading in the U.S. It also constitutes a criminal offence, subject to a maximum penalty of HK\$10,000,000 and 10 years’ imprisonment.

In Canada, “insider trading” and “tipping” restrictions are generally similar to those in the U.S., with penalties including a fine of no more than CAD\$5,000,000 or imprisonment for a term of no more than 5 year less a day, or both, and also liability to compensate the counterparty to any trades for the damages that result from such trade.

In addition to prohibition from insider trading/insider dealing set forth above, Part XIVA of the SFO has been enacted and became effective on 1 January 2013. Such provisions impose statutory obligation of disclosure of “inside” information by listed corporations, in addition to the disclosure obligations under the Listing Rules and the Codes on Takeovers and Mergers and Share Buy-backs. Consequential amendments to the Listing Rules also came into effect on the same day.

Under the SFO, “inside information”, in relation to a listed corporation, means specific information that is about (i) the corporation; (ii) a shareholder or officer of the corporation; or (iii) the listed securities of the corporation or their derivatives; and is not generally known to the persons who are accustomed or would be likely to deal in the listed securities of the corporation but would if generally known to them be likely to materially affect the price of the listed securities.

In general, a listed corporation must, as soon as reasonably practicable after any inside information has come to its knowledge, disclose the information to the public. Although the disclosure obligation rests with the listed corporation, the listed corporation is considered to have knowledge of the inside information when (a) one or more of its officers (which include a director, manager (a person who, under the immediate authority of the board of directors of the listed corporation, is charged with management responsibility affecting the whole of the listed corporation or a substantial part of the listed corporation) or secretary of, or any other person involved in the management (a person who discharges the role of a “manager”) of, the listed corporation) knows or ought reasonably to have known that information in the course of performing functions as officers of the listed corporation and (b) a reasonable person, acting as an officer of the corporation, would consider that the information is inside information in relation to the listed corporation. The listed corporation and its directors must take all reasonable steps to maintain strict confidentiality of inside information until it is announced.

In addition to the provisions under the SFO, where in the view of the Hong Kong Stock Exchange, there is or there is likely to be a false market in an issuer’s securities, the listed corporation must, as soon as reasonably practicable after consultation with the Hong Kong Stock Exchange, announce the information necessary to avoid a false market in its securities. Under the Listing Rules, a listed corporation must not divulge any information in such a way as to place in a privileged dealing position any person or class or category of persons. It must not release any information in such a way that transactions may be entered into at prices which do not reflect the latest available information.

According to the SFO, it is ultimately the responsibility of a listed corporation’s directors and senior officers to ensure that the listed corporation complies with the disclosure obligation. Accordingly, the Company’s directors and Senior Officers are obliged to take all reasonable measures to ensure proper safeguards exist to prevent the Company from breaching the statutory disclosure requirement, which would include the creation and maintenance of appropriate internal control and reporting systems. If a breach on the part of the Company is attributable to the failure to take all reasonable measures to ensure that proper safeguards exist by, or to any intentional, reckless or negligent conduct of, any directors or Senior Officers, the directors or Senior Officers concerned would also be liable.

**IV. PROHIBITION AGAINST OTHER MARKET MISCONDUCT**

The prohibition contained in this section is derived from Hong Kong laws and regulations. It not only applies to the directors and Senior Officers but also to the Managers. Each of the directors, Senior Officers and Managers is ethically and legally required to take all reasonable measures from time to time to ensure that proper safeguards exist to prevent our company from acting in a way which would result in our company perpetrating any “market misconduct” within the meaning of the SFO. Under Hong Kong laws, the directors, Senior Officers and Managers may be subject to criminal liability if they have actively participated in, consented to, or connived in the criminal misconduct of the corporation which they manage. Under the SFO, “market misconduct” includes insider dealing (see above) and the following:

*(a) False Trading*

False trading in our securities takes place if a person, whether in Hong Kong or overseas, does or causes anything to be done with the intention that, or being reckless as to whether, it has or is likely to have the effect of creating a false or misleading market in our securities. Creation of a false market includes activities undertaken by any person creating or maintaining an artificial price for our securities. The directors, Senior Officers and Managers are therefore obliged not to undertake any such activities and to have due regard to the prohibition against false trading in carrying out or authorizing transactions which may impact the price of our securities.

*(b) Price Rigging*

Price rigging occurs where a person, in Hong Kong or elsewhere, engages in a sale or purchase of securities, not involving change in the beneficial ownership of those securities and which has the effect of maintaining, increasing, reducing, stabilizing or causing fluctuations in the price of securities traded on a recognized stock exchange in Hong Kong or overseas. The directors, Senior Officers and Managers must not engage in any such transaction if price rigging, as described above, forms a purpose, even if not the dominant purpose, of the transaction. The onus will be on the relevant director, Senior Officers or Manager to establish that the purpose of any transaction which has the effect of price rigging did not include the purpose of creating a false or misleading appearance with respect to the price of our securities.

*(c) Disclosure of False or Misleading Information Inducing Transactions*

In broad terms, the SFO prohibits the disclosure of false or misleading information that is likely to induce another person to subscribe for, sell or buy securities or deal in futures contracts in Hong Kong. Accordingly, with respect to information disclosed to third parties or to the public generally and which may be expected to induce transactions in our securities (which could include, without limitation, information disclosed through or in the form of a prospectus or other offering memorandum, annual reports, periodic reports, press releases and announcements or through the release of financial information), the directors, Senior Officers and Managers are required to pay proper regard to the veracity of any such information and to consider whether such information is misleading through the inclusion or omission of any material fact.

*(d) Disclosure of Information About Prohibited Transactions*

Disclosure of information concerning the effect on the price of our securities or futures contracts dealt in by our company, by a transaction carried out in breach of the market misconduct provisions relating to our securities or one of our affiliates or to the futures contracts is itself prohibited in circumstances where the person making the disclosure has been involved directly or indirectly in the transaction or has, or expects to receive, directly or indirectly a benefit as a result of the disclosure. Accordingly, the directors, Senior Officers and Managers should exercise caution and have regard to the relevant provisions of the SFO.

*(e) Stock Market Manipulation*

“Stock market manipulation” refers to two or more transactions in securities of a corporation that, by themselves or in conjunction with any other transactions, affects or likely to affect (by way of increasing, reducing, or stabilizing) the price of any securities traded on a recognized stock exchange in Hong Kong or overseas and with the intention of inducing another person to sell, purchase or subscribe for, or to refrain from selling, purchasing or subscribing for such securities or the securities of a related corporation. The directors, Senior Officers and Managers must ensure that no transactions in our securities or securities of our affiliates constitute stock market manipulation.

Each form of market misconduct identified above is unethical and illegal. All such market misconduct constitutes criminal offences in Hong Kong, with penalties of up to HK\$10,000,000 and 10 years’ imprisonment. An offender may also be liable to civil penalties and may be disqualified from acting as a director of, or participating in the management of, a listed or other specified corporation for a period of up to five years. In addition, as a part of this Code of Ethics, we have attached the Model Code for Securities Transactions by Directors of Listed Issuers (the “Model Code”) issued by the Hong Kong Stock Exchange as Appendix 2 to this Code of Ethics. All of our directors should comply with the Model Code; and all Senior Officers should follow the spirit of the Model Code in conducting their securities transactions. In most instances, Senior Officers who are not our directors are subject to the same ethical and legal requirements in securities transactions as our directors.

**V. CONFLICTS OF INTEREST**

Business decisions must be made in the best interest of our company, not motivated by personal interest or gain. Therefore, as a matter of our company policy, all directors and Senior Officers must avoid any actual or perceived conflict of interest. A “conflict of interest” occurs when an individual’s personal interests interfere or conflict in any way (or even appear to interfere or conflict) with the interests of our company. A conflict of interest situation can arise when an employee takes actions or has interests (financial or otherwise) that may make it difficult to perform his or her company work objectively and effectively. Conflicts of interest may also arise when an employee or a member of his or her family receives improper personal benefits as a result of his or her position in our company, regardless of whether such benefits are received from our company or a third party. In relation to loans to, or guarantees of obligations of, employees and their family members, please refer to our company's “Regulations on Prohibition of Provision of Loans to Directors and Senior Officers of CNOOC Limited”. Directors and Senior Officers should also read carefully and comply with our company's “Regulations on the Management of Conflicts of Interest of CNOOC Limited”.

It is difficult to identify exhaustively what constitutes a conflict of interest. For this reason, the directors and Senior Officers must avoid any situation in which their independent business judgment might appear to be compromised. Questions about potential conflicts of interest situations, and disclosure of these situations as they arise, should be addressed and reported to our Compliance Officer, General Counsel and/or a member of the Audit Committee using the contact information set forth in Appendix 1.

**VI. CORPORATE OPPORTUNITIES**

All directors and Senior Officers are prohibited from: (a) taking themselves personally opportunities that properly belong to our company or are discovered through the use of corporate property, information or position; (b) using corporate property, information or position for personal gain; and (c) competing with our company. All directors and Senior Officers owe a duty to our company to advance its legitimate interests when the opportunity to do so arises.

**VII. PROTECTION AND PROPER USE OF COMPANY ASSETS**

All directors and Senior Officers must protect our assets and ensure their efficient use. Such assets include, without limitation, intellectual property such as our corporate name, logos, trademarks, patents, copyrights, confidential information, ideas, plans and strategies. Theft, carelessness and waste have a direct impact on our profitability. Any misuse or infringement of our company assets should be reported to our Compliance Officer, General Counsel and/or a member of the Audit Committee using the contact information set forth in Appendix 1.

**VIII. PUBLIC COMPANY REPORTING**

As a result of our status as a public company in Hong Kong, the U.S. and Canada, we are required to file periodic and other reports with the Hong Kong Stock Exchange, the Hong Kong Securities and Futures Commission, the U.S. Securities and Exchange Commission, the Toronto Stock Exchange and the Canadian securities regulatory authorities. Our company views its public disclosure responsibility seriously. To that end, in respect of the various disclosure and reporting obligations to which our company is from time to time subject in Hong Kong, in the U.S. and in Canada, each of the directors and Senior Officers must:

- A. take all reasonable steps to ensure that these reports and other public communications furnish the marketplace with full, fair, accurate, timely and understandable disclosure regarding the financial and business condition of our company;
- B. promptly bring to the attention of the Audit Committee any material information of which such director or Senior Officer may become aware that affects the disclosures made by our company in its public filings or otherwise would assist the Audit Committee in fulfilling its responsibilities as specified in applicable securities laws and regulations; and
- C. promptly bring to the attention of our Compliance Officer, General Counsel and/or the Audit Committee using the contact information set forth in Appendix 1 any information he or she may have concerning (i) significant deficiencies in the design or operation of internal controls that could adversely affect our company’s ability to record, process, summarize and report financial data, or (ii) any fraud, whether or not material, involving management or other employees who have a significant role in our company’s financial reporting, disclosures or internal controls.

**IX. REPORTING ILLEGAL OR UNETHICAL BEHAVIOR**

Each of the directors and Senior Officers has a duty to adhere to this Code of Ethics. Each of the directors and Senior Officers must also promptly bring to the attention of our Compliance Officer, General Counsel and/or the Audit Committee using the contact information set forth in Appendix 1 any information he or she may have concerning evidence of a material violation of the securities or other laws, rules or regulations applicable to our company and the operation of its business, by our company or any agent thereof, or of a violation of this Code of Ethics, including any actual or apparent conflicts of interest between personal and professional relationships, involving any management or other employees who have a significant role in our company’s financial reporting, disclosures or internal controls. Confidentiality will be maintained to the fullest extent possible.

A director or Senior Officer will not be penalized for making a good-faith report of violations of this Code of Ethics or other illegal or unethical conduct, nor will we permit retaliation of any kind against anyone who makes a good-faith report. A director or Senior Officer who deliberately submits a false report of a violation, however, will be subject to disciplinary action. If a director or Senior Officer reports a violation and in some way is also involved in the violation, the fact that such director or Senior Officer stepped forward will be considered. If the result of an investigation indicates that corrective action is required, the Board will decide, or designate appropriate persons to decide, what actions to take, including, when appropriate, legal proceedings and disciplinary action up to and including termination, to rectify the problem and avoid the likelihood of its recurrence.

**X. RELATIONSHIP WITH COMPANY MANUAL**

This Code of Ethics supplements the existing policies and procedures already in place as stated in other company manuals and communicated to all employees. Certain policies referred to in this Code of Ethics are contained in their entirety in the other company manuals. The company manuals contain information that is proprietary and confidential, and our company hereby expressly denies waiving any right to assert claims that the contents of such company manuals are proprietary and/or confidential. This Code of Ethics and other company manuals are statements of goals and expectations for individual and business conduct. They are not intended to, and do not in any way constitute, an employment contract or an assurance of continued employment. Our company does not create any contractual rights by issuing this Code of Ethics or any company manual.

**XI. AMENDMENT, MODIFICATION AND WAIVER**

This Code of Ethics may be amended, modified or waived by the Board. Any change to, or waiver (whether explicit or implicit) of, this Code of Ethics must be disclosed to our stockholders either by including a statement in our annual report on Form 20-F filed with the U.S. Securities and Exchange Commission or by publishing a statement on our website, [www.cnoc ltd.com](http://www.cnoc ltd.com).

**XII. ACKNOWLEDGMENT**

Each of the directors and Senior Officers is accountable for knowing and abiding by the policies contained in this Code of Ethics. Our company may require that the directors and Senior Officers sign an acknowledgment every year confirming that they have received and read this Code of Ethics, understand them and are complying with them.

Appendix 1:

Contact Information

Audit Committee  
Email: [ac@cnooc.com.cn](mailto:ac@cnooc.com.cn)

Compliance Officer and General Counsel: Ms. Wu Xiaonan  
Address: Room 1405, CNOOC Plaza, 25 Chaoyangmenbei Dajie, Beijing, People’s Republic of China  
Postcode: 100010  
Tel: (86-10) 84521180  
Email: [wuxn@cnooc.com.cn](mailto:wuxn@cnooc.com.cn)

The future changes of the above contact information shall be released as a revised Appendix 1.

Appendix 2: Model Code for Securities Transactions by Directors of Listed Issuers by the Hong Kong Stock Exchange

BASIC PRINCIPLES

1. This code (both the basic principles and the rules) sets a required standard against which directors must measure their conduct regarding transactions in securities of their listed issuers. Any breach of such required standard will be regarded as a breach of the Exchange Listing Rules. A director must seek to secure that all dealings in which he is or is deemed to be interested be conducted in accordance with this code.
2. A listed issuer may adopt its own code on terms no less exacting than those set out in this code if it so wishes. Any breach of such code will not be a breach of the Exchange Listing Rules unless it is also a breach of the required standard contained in this code.
3. The Exchange regards it as highly desirable that directors of a listed issuer should hold securities in the listed issuer.
4. Directors wishing to deal in any securities in a listed issuer must first have regard to the provisions of Parts XIII and XIV of the Securities and Futures Ordinance with respect to insider dealing and market misconduct. However, there are occasions where directors should not be free to deal in the listed issuer’s securities even though the statutory requirements will not be contravened.
5. The single most important thrust of this code is that directors who are aware of or privy to any negotiations or agreements related to intended acquisitions or disposals which are notifiable transactions under Chapter 14 of the Listing Rules or connected transactions under Chapter 14A of the Listing Rules or any inside information must refrain from dealing in the issuer’s securities as soon as they become aware of them or privy to them until the information has been announced. Directors who are privy to relevant negotiations or agreements or any inside information should caution those directors who are not so privy that there may be inside information and that they must not deal in the issuer’s securities for a similar period.

6. In addition, a director must not make any unauthorised disclosure of confidential information, whether to co-trustees or to any other person (even those to whom he owes a fiduciary duty) or make any use of such information for the advantage of himself or others.

**INTERPRETATION**

7. For the purpose of this code:

- (a) “dealing” includes, subject to paragraph (d) below, any acquisition, disposal or transfer of, or offer to acquire, dispose of or transfer, or creation of pledge, charge or any other security interest in, any securities of the listed issuer or any entity whose assets solely or substantially comprise securities of the listed issuer, and the grant, acceptance, acquisition, disposal, transfer, exercise or discharge of any option (whether call, put or both) or other right or obligation, present or future, conditional or unconditional, to acquire, dispose of or transfer securities, or any interest in securities, of the listed issuer or any such entity, in each case whether or not for consideration and any agreements to do any of the foregoing, and “deal” shall be construed accordingly;
- (b) “beneficiary” includes any discretionary object of a discretionary trust (where the director is aware of the arrangement) and any beneficiary of a non-discretionary trust;
- (c) “securities” means listed securities and any unlisted securities that are convertible or exchangeable into listed securities and structured products (including derivative warrants), such as those described in Chapter 15A of the Exchange Listing Rules, issued in respect of the listed securities of a listed issuer;
- (d) notwithstanding the definition of “dealing” in paragraph (a) above, the following dealings are not subject to the provisions of this code:
  - (i) taking up of entitlements under a rights issue, bonus issue, capitalisation issue or other offer made by the listed issuer to holders of its securities (including an offer of shares in lieu of a cash dividend) but, for the avoidance of doubt, applying for excess shares in a rights issue or applying for shares in excess of an assured allotment in an open offer is a “dealing”;
  - (ii) allowing entitlements to lapse under a rights issue or other offer made by the listed issuer to holders of its securities (including an offer of shares in lieu of a cash dividend);
  - (iii) undertakings to accept, or the acceptance of, a general offer for shares in the listed issuer made to shareholders other than those that are concert parties (as defined under the Takeovers Code) of the offeror;
  - (iv) exercise of share options or warrants or acceptance of an offer for shares pursuant to an agreement entered into with a listed issuer before a period during which dealing is prohibited under this code at the pre-determined exercise price, being a fixed monetary amount determined at the time of grant of the share option or warrant or acceptance of an offer for shares;

- (v) an acquisition of qualification shares where, under the listed issuer’s constitutional documents, the final date for acquiring such shares falls within a period when dealing is prohibited under this code and such shares cannot be acquired at another time;
- (vi) dealing where the beneficial interest or interests in the relevant security of the listed issuer do not change;
- (vii) dealing where a shareholder places out his existing shares in a “top-up” placing where the number of new shares subscribed by him pursuant to an irrevocable, binding obligation equals the number of existing shares placed out and the subscription price (after expenses) is the same as the price at which the existing shares were placed out; and
- (viii) dealing where the beneficial ownership is transferred from another party by operation of law.

8. For the purpose of this code, the grant to a director of an option to subscribe or purchase his company’s securities shall be regarded as a dealing by him, if the price at which such option may be exercised is fixed at the time of such grant. If, however, an option is granted to a director on terms whereby the price at which such option may be exercised is to be fixed at the time of exercise, the dealing is to be regarded as taking place at the time of exercise.

**RULES**

**A. Absolute Prohibitions:**

- 2. A director must not deal in any of the securities of the issuer at any time when he possesses inside information in relation to those securities, or where clearance to deal is not otherwise conferred upon him under rule B.8 of this code.
- 3. A director must not deal in the securities of an issuer when by virtue of his position as a director of another issuer, he possesses inside information in relation to those securities.
- 4. (a) A director must not deal in any securities of the listed issuer on any day on which its financial results are published and:
  - (i) during the period of 60 days immediately preceding the publication date of the annual results or, if shorter, the period from the end of the relevant financial year up to the publication date of the results; and
  - (ii) during the period of 30 days immediately preceding the publication date of the quarterly results (if any) and half-year results or, if shorter, the period from the end of the relevant quarterly or half-year period up to the publication date of the results, unless the circumstances are exceptional, for example, where a pressing financial commitment has to be met as described in section C below. In any event, the director must comply with the procedure in rules B.8 and B.9 of this code.

(b) The listed issuer must notify the Exchange in advance of the commencement of each period during which directors are not allowed to deal under rule A.3(a).

*Note: Directors should note that the period during which they are not allowed to deal under rule A.3 will cover any period of delay in the publication of a results announcement.*

4. Where a director is a sole trustee, the provisions of this code will apply to all dealings of the trust as if he were dealing on his own account (unless the director is a bare trustee and neither he nor any of his close associates is a beneficiary of the trust, in which case the provisions of this code will not apply).
5. Where a director deals in the securities of a listed issuer in his capacity as a co-trustee and he has not participated in or influenced the decision to deal in the securities and is not, and none of his close associates is, a beneficiary of the trust, dealings by the trust will not be regarded as his dealings.
6. The restrictions on dealings by a director contained in this code will be regarded as equally applicable to any dealings by the director’s spouse or by or on behalf of any minor child (natural or adopted) and any other dealings in which for the purposes of Part XV of the Securities and Futures Ordinance he is or is to be treated as interested. It is the duty of the director, therefore, to seek to avoid any such dealing at a time when he himself is not free to deal.
7. When a director places investment funds comprising securities of the listed issuer under professional management, discretionary or otherwise, the managers must nonetheless be made subject to the same restrictions and procedures as the director himself in respect of any proposed dealings in the listed issuer’s securities.

**B. Notification**

8. A director must not deal in any securities of the issuer without first notifying in writing the chairman or a director (otherwise than himself) designated by the board for the specific purpose and receiving a dated written acknowledgement. In his own case, the chairman must first notify the board at a board meeting, or alternatively notify a director (otherwise than himself) designated by the board for the purpose and receive a dated written acknowledgement before any dealing. The designated director must not deal in any securities of the issuer without first notifying the chairman and receiving a dated written acknowledgement. In each case,
- (a) a response to a request for clearance to deal must be given to the relevant director within five business days of the request being made; and
- (b) the clearance to deal in accordance with (a) above must be valid for no longer than five business days of clearance being received.

*Note: For the avoidance of doubt, the restriction under A.1 of this code applies if inside information develops following the grant of clearance.*

9. The procedure established within the listed issuer must, as a minimum, provide for there to be a written record maintained by the listed issuer that the appropriate notification was given and acknowledged pursuant to rule B.8 of this code, and for the director concerned to have received written confirmation to that effect.
10. Any director of the listed issuer who acts as trustee of a trust must ensure that his co- trustees are aware of the identity of any company of which he is a director so as to enable them to anticipate possible difficulties. A director having funds under management must likewise advise the investment manager.
11. Any director who is a beneficiary, but not a trustee, of a trust which deals in securities of the listed issuer must endeavour to ensure that the trustees notify him after they have dealt in such securities on behalf of the trust, in order that he in turn may notify the listed issuer. For this purpose, he must ensure that the trustees are aware of the listed issuers of which he is a director.
12. The register maintained in accordance with Section 352 of the Securities and Futures Ordinance should be made available for inspection at every meeting of the board.
13. The directors of a company must as a board and individually endeavour to ensure that any employee of the company or director or employee of a subsidiary company who, because of his office or employment in the company or a subsidiary, is likely to possess inside information in relation to the securities of any issuer does not deal in those securities when he would be prohibited from dealing by this code if he were a director.

**C. Exceptional circumstances**

14. If a director proposes to sell or otherwise dispose of securities of the listed issuer under exceptional circumstances where the sale or disposal is otherwise prohibited under this code, the director must, in addition to complying with the other provisions of this code, comply with the provisions of rule B.8 of this code regarding prior written notice and acknowledgement. The director must satisfy the chairman or the designated director that the circumstances are exceptional and the proposed sale or disposal is the only reasonable course of action available to the director before the director can sell or dispose of the securities. The listed issuer shall give written notice of such sale or disposal to the Exchange as soon as practicable stating why it considered the circumstances to be exceptional. The listed issuer shall publish an announcement in accordance with rule 2.07C immediately after any such sale or disposal and state that the chairman or the designated director is satisfied that there were exceptional circumstances for such sale or disposal of securities by the director. An example of the type of circumstances which may be considered exceptional for such purposes would be a pressing financial commitment on the part of the director that cannot otherwise be satisfied.

D. Disclosure

15. In relation to securities transactions by directors, a listed issuer shall disclose in its interim reports (and summary interim reports, if any) and the Corporate Governance Report contained in its annual reports (and summary financial reports, if any):
- (a) whether the listed issuer has adopted a code of conduct regarding securities transactions by directors on terms no less exacting than the required standard set out in this code;
  - (b) having made specific enquiry of all directors, whether its directors have complied with, or whether there has been any non-compliance with, the required standard set out in this code and its code of conduct regarding securities transactions by directors; and
  - (c) in the event of any non-compliance with the required standard set out in this code, details of such non-compliance and an explanation of the remedial steps taken by the listed issuer to address such non-compliance.

CERTIFICATIONS

I, Keqiang Xu, certify that:

1. I have reviewed this annual report on Form 20-F of CNOOC Limited;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting; and
5. The company’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company’s auditors and the audit committee of the company’s board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company’s ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company’s internal control over financial reporting.

Date: April 22, 2020

By: /s/ Keqiang Xu

Name: Keqiang Xu

Title: Chief Executive Officer

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CERTIFICATIONS

I, Weizhi Xie, certify that:

1. I have reviewed this annual report on Form 20-F of CNOOC Limited;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting; and
5. The company’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company’s auditors and the audit committee of the company’s board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company’s ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company’s internal control over financial reporting.

Date: April 22, 2020

By: /s/ Weizhi Xie

Name: Weizhi Xie

Title: Chief Financial Officer

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CERTIFICATIONS

The certifications set forth below are being submitted in connection with the Annual Report on Form 20-F for the year ended December 31, 2019 (the “Report”) for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the “Exchange Act”) and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Keqiang Xu, the Chief Executive Officer and Weizhi Xie, the Chief Financial Officer of CNOOC Limited, each certifies that, to the best of his knowledge:

- 1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
- 2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of CNOOC Limited.

Date: April 22, 2020

By: /s/ Keqiang Xu  
Name: Keqiang Xu  
Title: Chief Executive Officer

By: /s/ Weizhi Xie  
Name: Weizhi Xie  
Title: Chief Financial Officer

CNOOC LIMITED

Estimated  
Future Reserves and Income  
Attributable to Certain Leasehold Interests  
and  
Derived Through Certain Production Sharing Contracts

SEC Parameters

As of  
December 31, 2019

/s/ Eric T. Nelson  
Eric T. Nelson, P.E.  
TBPE License No. 102286  
Managing Senior Vice President

/s/ He Zhang  
HE Zhang, P.E. Ph.D  
TBPE License No. 118807  
Vice President

[SEAL]

[SEAL]

RYDER SCOTT COMPANY, L.P.  
TBPE Firm Registration No. F-1580

RYDER SCOTT COMPANY PETROLEUM CONSULTANTS



TBPE REGISTERED ENGINEERING FIRM F-1580  
1100 LOUISIANA SUITE 4600

HOUSTON, TEXAS 77002-5294

FAX (713) 651-0849  
TELEPHONE (713) 651-9191

March 17, 2020

CNOOC Limited  
No. 25, ChaoYangMenBei Dajie  
DongCheng District  
Beijing 100010  
China

Ladies and Gentlemen:

At your request, Ryder Scott Company, L.P. (Ryder Scott) has prepared an estimate of the proved reserves, future production and income attributable to certain leasehold interests and derived through certain production sharing contracts of CNOOC Limited (CNOOC) as of December 31, 2019. The subject properties are located in the countries of Australia, China, and Indonesia. The reserves and income data were estimated based on the definitions and disclosure guidelines of the United States Securities and Exchange Commission (SEC) contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register (SEC regulations). Our third party study, completed on March 17, 2020 and presented herein, was prepared for public disclosure by CNOOC in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC regulations.

The properties evaluated by Ryder Scott account for a portion of CNOOC's total net proved reserves as of December 31, 2019. Based on information provided by CNOOC, the third party estimate conducted by Ryder Scott addresses 35 percent of the total proved developed net liquid hydrocarbon reserves, 53 percent of the total proved developed net gas reserves, 19 percent of the total proved undeveloped net liquid hydrocarbon reserves and 8 percent of the total proved undeveloped net gas reserves of CNOOC.

The estimated reserves and future net income amounts presented in this report, as of December 31, 2019, are related to hydrocarbon prices. The hydrocarbon prices used in the preparation of this report are based on the average prices during the 12-month period prior to the "as of date" of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements, as required by the SEC regulations. Actual future prices may vary considerably from the prices required by SEC regulations. The recoverable reserves volumes and the income attributable thereto have a direct relationship to the hydrocarbon prices actually received; therefore, volumes of reserves actually recovered and the amounts of income actually received may differ significantly from the estimated quantities presented in this report. The results of this study are summarized as follows.

SUITE 800, 350 7TH AVENUE, S.W.  
633 17TH STREET, SUITE 1700

CALGARY, ALBERTA T2P 3N9  
DENVER, COLORADO 80202

TEL (403) 262-2799  
TEL (303) 339-8110

FAX (403) 262-2790

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**SEC PARAMETERS**  
Estimated Net Reserves and Income Data  
Attributable to Certain Leasehold Interests and  
Derived Through Certain Production Sharing Contracts of  
**CNOOC Limited**  
As of December 31, 2019

	Proved			
	Developed		Undeveloped	Total Proved
	Producing	Non-Producing		
<b><u>Net Reserves</u></b>				
Oil/Condensate – Barrels	553,245,751	18,327,877	398,509,603	970,083,231
Plant Products – Barrels	11,123,368	1,361,608	1,040,791	13,525,767
Gas – MMcf	1,555,162	120,400	446,724	2,122,286
<b><u>Income Data (\$M)</u></b>				
Future Gross Revenue	\$ 48,386,459	\$ 2,023,929	\$ 29,562,108	\$ 79,972,496
Deductions	21,699,929	851,338	14,113,173	36,664,440
Future Net Income (FNI)	\$ 26,686,530	\$ 1,172,591	\$ 15,448,935	\$ 43,308,056
Discounted FNI @ 10%	\$ 22,613,043	\$ 895,449	\$ 9,430,854	\$ 32,939,346

Liquid hydrocarbons are expressed in standard 42 U.S. gallon barrels. All gas volumes are reported on an “as sold basis” expressed in millions of cubic feet (MMcf) at the official temperature and pressure bases of the areas in which the gas reserves are located. In this report, the revenues, deductions, and income data are expressed as thousands of U.S. dollars (\$M).

The estimates of the reserves, future production, and income attributable to properties in this report were prepared using OGRE Oil and Gas Reserves Evaluation Software, a copyrighted program of OGRE Systems, Inc. The program was used at the request of CNOOC. Ryder Scott notes that certain summaries and calculations may vary due to rounding and may not exactly match the sum of the properties being summarized. Furthermore, one line economic summaries may vary slightly from the more detailed cash flow projections of the same properties, also due to rounding. The rounding differences are not material.

The future gross revenue is after the deduction of the Natural Resource Tax in China and royalties in Australia, which are shown as “production taxes.” The Value Added Tax (VAT) received in China as part of hydrocarbon sales is shown as “Other” revenue. The deductions incorporate the normal direct costs of operating the wells, recompletion costs, development costs, and certain abandonment costs net of salvage. The balance of VAT owed in China and Domestic Market Obligation fees in Indonesia are shown as “other” deductions. The future net income is before the deduction of foreign government income taxes and general administrative overhead, and has not been adjusted for outstanding loans that may exist, nor does it include any adjustment for cash on hand or undistributed income.

Liquid hydrocarbon reserves account for approximately 74 percent and gas reserves account for 17 percent of total future gross revenue from proved reserves, with the remaining 9 percent due to VAT received.

The discounted future net income shown above was calculated using a discount rate of 10 percent per annum compounded annually. Future net income was discounted at four other discount rates which were also compounded annually. These results are shown in summary form as follows.

Discount Rate Percent	Discounted Future Net Income (\$M) As of December 31, 2019
	Total Proved
7	\$35,543,239
8	\$34,633,897
9	\$33,766,723
11	\$32,149,515

The results shown above are presented for your information and should not be construed as our estimate of fair market value.

**Reserves Included in This Report**

The proved reserves included herein conform to the definition as set forth in the Securities and Exchange Commission’s Regulations Part 210.4-10(a). An abridged version of the SEC reserves definitions from 210.4-10(a) entitled “PETROLEUM RESERVES DEFINITIONS” is included as an attachment to this report.

The various reserves status categories are defined in the attachment entitled “PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES” in this report. The proved developed non-producing reserves included herein consist of the shut-in and behind pipe status categories.

No attempt was made to quantify or otherwise account for any accumulated gas production imbalances that may exist. The proved gas volumes included herein do not attribute gas consumed in operations as reserves.

Reserves are “estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.” All reserves estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal categories, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves, and may be further sub-categorized as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. At CNOOC’s request, this report addresses only the proved reserves attributable to the properties evaluated herein.

Proved oil and gas reserves are “those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward.” The proved reserves included herein were estimated using deterministic methods. The SEC has defined reasonable certainty for proved reserves, when based on deterministic methods, as a “high degree of confidence that the quantities will be recovered.”

Proved reserves estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change. For proved reserves, the SEC states that “as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to the estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.” Moreover, estimates of proved reserves may be revised as a result of future operations, effects of regulation by governmental agencies or geopolitical or economic risks. Therefore, the proved reserves included in this report are estimates only and should not be construed as being exact quantities, and if recovered, the revenues therefrom, and the actual costs related thereto, could be more or less than the estimated amounts.

Certain proved reserves reported herein are limited to the period prior to expiration of current contracts providing the legal rights to produce, or a revenue interest in such production, unless evidence indicates that contract renewal is reasonably certain. Furthermore, properties in the different countries may be subjected to substantially varying contractual fiscal terms that affect the net revenue to CNOOC for the production of these volumes. The prices and economic return received for these net volumes can vary materially based on the terms of these contracts. Therefore, when applicable, Ryder Scott reviewed the fiscal terms of such contracts and discussed with CNOOC the net economic benefit attributed to such operations for the determination of the net hydrocarbon volumes and income thereof. Ryder Scott has not conducted an exhaustive audit or verification of such contractual information. Neither our review of such contractual information nor our acceptance of CNOOC's representations regarding such contractual information should be construed as a legal opinion on this matter.

This report includes certain volumes of proved reserves attributable to royalties owed to the host government that are treated as taxes to be paid in cash. In Australia, the government has received the royalty payments in cash, and CNOOC is reasonably certain the government will continue to receive its royalty in cash. These future royalty payments, if converted to reserves, are equivalent to 0.3 percent of CNOOC's total net proved reserves as evaluated by Ryder Scott on a barrel equivalent (BOE) basis calculated by converting natural gas using a factor of 6,000 cubic feet of natural gas per one barrel of oil equivalent.

Ryder Scott did not evaluate the country and geopolitical risks in the countries where CNOOC operates or has interests. CNOOC's operations may be subject to various levels of governmental controls and regulations. These controls and regulations may include, but may not be limited to, matters relating to land tenure and leasing, contract terms, the legal rights to produce hydrocarbons including the granting, extension or termination of production sharing contracts, the fiscal terms of various production sharing contracts, drilling and production practices, environmental protection, marketing and pricing policies, royalties, various taxes and levies including income tax and foreign trade and investment and are subject to change from time to time. Such changes in governmental regulations and policies may cause volumes of proved reserves actually recovered and amounts of proved income actually received to differ significantly from the estimated quantities.

The estimates of proved reserves presented herein were based upon a detailed study of the properties in which CNOOC owns and derives an interest; however, we have not made any field examination of the properties. No consideration was given in this report to potential environmental liabilities that may exist nor were any costs included for potential liabilities to restore and clean up damages, if any, caused by past operating practices.

***Estimates of Reserves***

The estimation of reserves involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities in accordance with the definitions set forth by the Securities and Exchange Commission's Regulations Part 210.4-10(a). The process of estimating the quantities of recoverable oil and gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods, (2) volumetric-based methods and (3) analogy. These methods may be used individually or in combination by the reserves evaluator in the process of estimating the quantities of reserves. Reserves evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated, and the stage of development or producing maturity of the property.

In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of this data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator. When a range in the quantity of reserves is identified, the evaluator must determine the uncertainty associated with the incremental quantities of the reserves. If the reserves quantities are estimated using the deterministic incremental approach, the uncertainty for each discrete incremental quantity of the reserves is addressed by the reserves category assigned by the evaluator. Therefore, it is the categorization of reserves quantities as proved, probable and/or possible that addresses the inherent uncertainty in the estimated quantities reported. For proved reserves, uncertainty is defined by the SEC as reasonable certainty wherein the “quantities actually recovered are much more likely to be achieved than not.” The SEC states that “probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.” The SEC states that “possible reserves are those additional reserves that are less certain to be recovered than probable reserves and the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves.” All quantities of reserves within the same reserves category must meet the SEC definitions as noted above.

Estimates of reserves quantities and their associated reserves categories may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of reserves quantities and their associated reserves categories may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

The proved reserves for the properties included herein were estimated by performance methods, the volumetric method, analogy or a combination of methods. The following table summarizes the approximate percent of reserves estimated by each of these methods.

Method	Approximate Percent Proved Reserves Estimated by the Various Methods			
	Liquid Hydrocarbons		Gas	
	Developed	Undeveloped	Developed	Undeveloped
Performance	90%	0%	78%	0%
Volumetric	8%	77%	0%	81%
Analogy	0%	20%	2%	4%
Combination	2%	3%	20%	15%

These performance methods include, but may not be limited to, decline curve analysis and material balance which utilized extrapolations of historical production and pressure data available through October 31, 2019 in those cases where such data were considered to be definitive. The data utilized in this analysis were supplied to Ryder Scott by CNOOC and were considered sufficient for the purpose thereof. The volumetric method, analogy or a combination of methods were used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as a basis for the reserves estimates was considered to be inappropriate. The volumetric analysis utilized pertinent well and seismic data supplied to Ryder Scott by CNOOC that were available through October 31, 2019. The data utilized from the analogues as well as the well and seismic data incorporated into our volumetric analysis were considered sufficient for the purpose thereof.

To estimate economically recoverable proved oil and gas reserves and related future net cash flows, we consider many factors and assumptions including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on current costs and SEC pricing requirements, and forecasts of future production rates. Under the SEC regulations 210.4-10(a)(22)(v) and (26), proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. While it may reasonably be anticipated that the future prices received for the sale of production and the operating costs and other costs relating to such production may increase or decrease from those under existing economic conditions, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in making this evaluation.

CNOOC has informed us that they have furnished us all of the material accounts, records, geological and engineering data, and reports and other data required for this investigation. In preparing our forecast of future proved production and income, we have relied upon data furnished by CNOOC with respect to property interests owned or derived, production and well tests from examined wells, normal direct costs of operating the wells or leases, other costs such as transportation and/or processing fees, Natural Resource Tax, Value Added Tax and Windfall Profits Taxes in China, Royalties in Australia and Domestic Market Obligation fees in Indonesia, recompletion and development costs, abandonment costs after salvage, product prices based on the SEC regulations, adjustments or differentials to product prices, geological structural and isochore maps, well logs, core analyses and pressure measurements. Ryder Scott reviewed such factual data for its reasonableness; however, we have not conducted an independent verification of the data furnished by CNOOC. We consider the factual data used in this report appropriate and sufficient for the purpose of preparing the estimates of reserves and future net revenues herein.

In summary, we consider the assumptions, data, methods and analytical procedures used in this report appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate to prepare the estimates of reserves herein. The proved reserves included herein were determined in conformance with the United States Securities and Exchange Commission (SEC) Modernization of Oil and Gas Reporting; Final Rule, including all references to Regulation S-X and Regulation S-K, referred to herein collectively as the “SEC Regulations.” In our opinion, the proved reserves presented in this report comply with the definitions, guidelines and disclosure requirements as required by the SEC regulations.

***Future Production Rates***

For wells currently on production, our forecasts of future production rates are based on historical performance data. If no production decline trend has been established, future production rates were held constant, or adjusted for the effects of curtailment where appropriate, until a decline in ability to produce was anticipated. An estimated rate of decline was then applied until depletion of the reserves. If a decline trend has been established, this trend was used as the basis for estimating future production rates.

Test data and other related information were used to estimate the anticipated initial production rates for those wells or locations that are not currently producing. For reserves not yet on production, sales were estimated to commence at an anticipated date furnished by CNOOC. Wells or locations that are not currently producing may start producing earlier or later than anticipated in our estimates due to unforeseen factors causing a change in the timing to initiate production. Such factors may include delays ue to weather, the availability of rigs, the sequence of drilling, completing and/or recompleting wells and/or constraints set by regulatory bodies.

The future production rates from wells currently on production or wells or locations that are not currently producing may be more or less than estimated because of changes including, but not limited to, reservoir performance, operating conditions related to surface facilities, compression and artificial lift, pipeline capacity and/or operating conditions, producing market demand and/or allowables or other constraints set by regulatory bodies.

**Hydrocarbon Prices**

The hydrocarbon prices used herein are based on SEC price parameters using the average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements. For hydrocarbon products sold under contract, the contract prices, including fixed and determinable escalations, exclusive of inflation adjustments, were used until expiration of the contract. Upon contract expiration, the prices were adjusted to the 12-month unweighted arithmetic average as previously described.

CNOOC furnished us with the above mentioned average prices in effect on December 31, 2019. These initial SEC hydrocarbon prices were determined using the 12-month average first-day-of-the-month benchmark prices appropriate to the geographic area where the hydrocarbons are sold. These benchmark prices are prior to the adjustments for differentials as described herein. The following table summarizes the “benchmark prices” and “price reference” used for the geographic areas included in the report. In certain geographic areas, the price reference and benchmark prices may be defined by contractual arrangements.

The product prices which were actually used to determine the future gross revenue for each property reflect adjustments to the benchmark prices for gravity, quality, local conditions, gathering and transportation fees and/or distance from market, referred to herein as “differentials.” The differentials used in the preparation of this report were furnished to us by CNOOC. The differentials furnished by CNOOC were reviewed by us for their reasonableness using information furnished by CNOOC for this purpose.

In addition, the following table summarizes the net volume weighted benchmark prices adjusted for differentials and referred to herein as the “average realized prices.” The average realized prices shown in the table below were determined from the total future gross revenue before production taxes and the total net reserves for the geographic areas and presented in accordance with SEC disclosure requirements for each of the geographic areas included in the report.

Geographic Area	Product	Price Reference	Average Benchmark Prices*	Average Proved Realized Prices
China	Oil/Condensate	Brent	\$63.15/bbl	\$63.25/bbl
	NGLs	Jinzhou	\$532.36/MT	\$40.08/bbl
		Maoming	\$548.05/MT	
	Gas	Gas Sales Agreements		\$6.22/Mcf
Asia	Oil/Condensate	Brent	\$63.15/bbl	\$60.99/bbl
	NGLs	Brent	\$63.15/bbl	\$53.67/bbl
	Gas	Gas Sales Agreements		\$7.93/Mcf Gas Sales Agreements
		JCC	\$64.45/Bbl	
Oceania	Oil/Condensate	Brent	\$63.15/bbl	\$59.57/bbl
	NGLs	Saudi CP	\$438.12/MT	\$51.32/bbl
	Gas	JCC	64.45/Bbl	\$3.44/Mcf

*\*In this report, the benchmark prices for certain NGLs were based on U.S. dollars per metric ton (MT).*

The effects of derivative instruments designated as price hedges of oil and gas quantities are not reflected in our individual property evaluations.

**Costs**

Operating costs for the leases and wells in this report are based on the operating expense reports of CNOOC and include only those costs directly applicable to the leases or wells. The operating costs include a portion of general and administrative costs allocated directly to the leases and wells. The operating costs furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the operating cost data used by CNOOC. No deduction was made for loan repayments, interest expenses or exploration and development prepayments that were not charged directly to the leases or wells.

Development costs were furnished to us by CNOOC and are based on authorizations for expenditure for the proposed work or actual costs for similar projects. The development costs furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of these costs. The estimated net cost of abandonment after salvage was included for properties where abandonment costs net of salvage were material. The estimates of the net abandonment costs furnished by CNOOC were accepted without independent verification.

The proved developed non-producing and undeveloped reserves in this report have been incorporated herein in accordance with CNOOC's plans to develop these reserves as of December 31, 2019. The implementation of CNOOC's development plans as presented to us and incorporated herein is subject to the approval process adopted by CNOOC's management. As the result of our inquiries during the course of preparing this report, CNOOC has informed us that the development activities included herein have been subjected to and received the internal approvals required by CNOOC's management at the appropriate local, regional and/or corporate level. In addition to the internal approvals as noted, certain development activities may still be subject to specific partner AFE processes, Joint Operating Agreement (JOA) requirements or other administrative approvals external to CNOOC. CNOOC has provided written documentation supporting their commitment to proceed with the development activities as presented to us. Additionally, CNOOC has informed us that they are not aware of any legal, regulatory or political obstacles that would significantly alter their plans. While these plans could change from those under existing economic conditions as of December 31, 2019, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in making this evaluation.

According to Item 1203 (d) of the SEC Regulations, an explanation should be included for the reasons "...why material amounts of proved undeveloped reserves ... remain undeveloped for five years or more after disclosure as proved undeveloped reserves." A material amount of proved undeveloped reserves in this report are forecast to be converted to developed beyond the five-year time frame. A five-year time frame for converting undeveloped to developed was adopted by the SEC, "unless specific circumstances justify a longer time frame." In this report, the initial production date of certain proved undeveloped gas fields/reservoirs in Indonesia were scheduled beyond the SEC nominal 5 year development period because these fields/reservoirs are associated with long term gas contracts or LNG sales, and their gas deliverability are not needed within the 5 year period. The reserves from these fields/reservoirs represent 4.0 percent of the total net proved reserves of CNOOC as evaluated by Ryder Scott on a barrel equivalent (BOE) basis using the conversion factor as previously noted. CNOOC and its partners anticipate that these fields/reservoirs will be developed prior to the expiration of the long term gas sales and LNG sales and purchase agreement period.

Current costs used by CNOOC were held constant throughout the life of the properties.

***Standards of Independence and Professional Qualification***

Ryder Scott is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1937. Ryder Scott is employee-owned and maintains offices in Houston, Texas; Denver, Colorado; and Calgary, Alberta, Canada. We have approximately eighty engineers and geoscientists on our permanent staff. By virtue of the size of our firm and the large number of clients for which we provide services, no single client or job represents a material portion of our annual revenue. We do not serve as officers or directors of any privately-owned or publicly-traded oil and gas company and are separate and independent from the operating and investment decision-making process of our clients. This allows us to bring the highest level of independence and objectivity to each engagement for our services.

Ryder Scott actively participates in industry-related professional societies and organizes an annual public forum focused on the subject of reserves evaluations and SEC regulations. Many of our staff have authored or co-authored technical papers on the subject of reserves related topics. We encourage our staff to maintain and enhance their professional skills by actively participating in ongoing continuing education.

Prior to becoming an officer of the Company, Ryder Scott requires that staff engineers and geoscientists have received professional accreditation in the form of a registered or certified professional engineer's license or a registered or certified professional geoscientist's license, or the equivalent thereof, from an appropriate governmental authority or a recognized self-regulating professional organization. Regulating agencies require that, in order to maintain active status, a certain amount of continuing education hours be completed annually, including an hour of ethics training. Ryder Scott fully supports this technical and ethics training with our internal requirement mentioned above.

We are independent petroleum engineers with respect to CNOOC. Neither we nor any of our employees have any financial interest in the subject properties and neither the employment to do this work nor the compensation is contingent on our estimates of reserves for the properties which were reviewed.

The results of this study, presented herein, are based on technical analysis conducted by teams of geoscientists and engineers from Ryder Scott. The professional qualifications of the undersigned, the technical person primarily responsible for overseeing the evaluation of the reserves information discussed in this report, are included as an attachment to this letter.

**Terms of Usage**

The results of our third party study, presented in report form herein, were prepared in accordance with the disclosure requirements set forth in the SEC regulations and intended for public disclosure as an exhibit in filings made with the SEC by CNOOC Limited.

CNOOC makes periodic filings on Form 20-F with the SEC under the 1934 Exchange Act. Furthermore, CNOOC has certain registration statements filed with the SEC under the 1933 Securities Act into which any subsequently filed Form 20-F is incorporated by reference. We have consented to the incorporation by reference in the registration statements on Form F-3 of CNOOC, of the references to our name, as well as to the references to our third party report for CNOOC, which appears in the December 31, 2019 annual report on Form 20-F of CNOOC. Our written consent for such use is included as a separate exhibit to the filings made with the SEC by CNOOC.

We have provided CNOOC Limited with a digital version of the original signed copy of this report letter. In the event there are any differences between the digital version included in filings made by CNOOC Limited and the original signed report letter, the original signed report letter shall control and supersede the digital version.

The data and work papers used in the preparation of this report are available for examination by authorized parties in our offices. Please contact us if we can be of further service.

Very truly yours,

**RYDER SCOTT COMPANY, L.P.**  
TBPE Firm Registration No. F-1580

/s/ Eric T. Nelson

Eric T. Nelson, P.E.  
TBPE License No. 102286  
Managing Senior Vice President [SEAL]

/s/ He Zhang

HE Zhang, P.E.  
TBPE License No. 118807  
Vice President [SEAL]

ETN-HZ (FWZ)/pl

**Professional Qualifications of Primary Technical Person**

The conclusions presented in this report are the result of technical analysis conducted by teams of geoscientists and engineers from Ryder Scott Company, L.P. Mr. Eric T. Nelson is the primary technical person responsible for the estimate of the reserves, future production and income.

Mr. Nelson, an employee of Ryder Scott Company, L.P. (Ryder Scott) since 2005, is a Managing Senior Vice President responsible for ongoing reservoir evaluation studies worldwide. Before joining Ryder Scott, Mr. Nelson served in a number of engineering positions with Exxon Mobil Corporation. For more information regarding Mr. Nelson’s geographic and job specific experience, please refer to the Ryder Scott Company website at [www.ryderscott.com/Company/Employees](http://www.ryderscott.com/Company/Employees).

Mr. Nelson earned a Bachelor of Science degree in Chemical Engineering from the University of Tulsa in 2002 (summa cum laude) and a Master of Business Administration from the University of Texas in 2007 (Dean’s Award). He is a licensed Professional Engineer in the State of Texas. Mr. Nelson is also a member of the Society of Petroleum Engineers.

In addition to gaining experience and competency through prior work experience, the Texas Board of Professional Engineers requires a minimum of 15 hours of continuing education annually, including at least one hour in the area of professional ethics, which Mr. Nelson fulfills. As part of his 2019 continuing education hours, Mr. Nelson attended over 20 hours of training during 2019 covering such topics as updates concerning the implementation of the latest SEC oil and gas reporting requirements, evaluations of resource play reserves, evaluation of simulation models, procedures and software, and ethics training.

Based on his educational background, professional training and more than 12 years of practical experience in the estimation and evaluation of petroleum reserves, Mr. Nelson has attained the professional qualifications as a Reserves Estimator set forth in Article III of the “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information” promulgated by the Society of Petroleum Engineers as of February 19, 2007.

PETROLEUM RESERVES DEFINITIONS

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

PREAMBLE

On January 14, 2009, the United States Securities and Exchange Commission (SEC) published the "Modernization of Oil and Gas Reporting; Final Rule" in the Federal Register of National Archives and Records Administration (NARA). The "Modernization of Oil and Gas Reporting; Final Rule" includes revisions and additions to the definition section in Rule 4-10 of Regulation S-X, revisions and additions to the oil and gas reporting requirements in Regulation S-K, and amends and codifies Industry Guide 2 in Regulation S-K. The "Modernization of Oil and Gas Reporting; Final Rule", including all references to Regulation S-X and Regulation S-K, shall be referred to herein collectively as the "SEC regulations". The SEC regulations take effect for all filings made with the United States Securities and Exchange Commission as of December 31, 2009, or after January 1, 2010. Reference should be made to the full text under Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) for the complete definitions (direct passages excerpted in part or wholly from the aforementioned SEC document are denoted in italics herein).

*Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.* All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-classified as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. Under the SEC regulations as of December 31, 2009, or after January 1, 2010, a company may optionally disclose estimated quantities of probable or possible oil and gas reserves in documents publicly filed with the SEC. The SEC regulations continue to prohibit disclosure of estimates of oil and gas resources other than reserves and any estimated values of such resources in any document publicly filed with the SEC unless such information is required to be disclosed in the document by foreign or state law as noted in §229.1202 Instruction to Item 1202.

Reserves estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change.

Reserves may be attributed to either natural energy or improved recovery methods. Improved recovery methods include all methods for supplementing natural energy or altering natural forces in the reservoir to increase ultimate recovery. Examples of such methods are pressure maintenance, natural gas cycling, waterflooding, thermal methods, chemical flooding, and the use of miscible and immiscible displacement fluids. Other improved recovery methods may be developed in the future as petroleum technology continues to evolve.

Reserves may be attributed to either conventional or unconventional petroleum accumulations. Petroleum accumulations are considered as either conventional or unconventional based on the nature of their in-place characteristics, extraction method applied, or degree of processing prior to sale. Examples of unconventional petroleum accumulations include coalbed or coalseam methane (CBM/CSM), basin-centered gas, shale gas, gas hydrates, natural bitumen and oil shale deposits. These unconventional accumulations may require specialized extraction technology and/or significant processing prior to sale.

Reserves do not include quantities of petroleum being held in inventory.

Because of the differences in uncertainty, caution should be exercised when aggregating quantities of petroleum from different reserves categories.

**RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(26) defines reserves as follows:

**Reserves.** *Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.*

Note to paragraph (a)(26): *Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (i.e., potentially recoverable resources from undiscovered accumulations).*

**PROVED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(22) defines proved oil and gas reserves as follows:

**Proved oil and gas reserves.** *Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.*

(i) *The area of the reservoir considered as proved includes:*

(A) *The area identified by drilling and limited by fluid contacts, if any, and*

(B) *Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.*

- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.*
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.*
- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:*
  - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and*
  - (B) The project has been approved for development by all necessary parties and entities, including governmental entities.*
- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.*

PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)  
  
and

2018 PETROLEUM RESOURCES MANAGEMENT SYSTEM (SPE-PRMS)  
Sponsored and Approved by:  
SOCIETY OF PETROLEUM ENGINEERS (SPE)  
WORLD PETROLEUM COUNCIL (WPC)  
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS (AAPG)  
SOCIETY OF PETROLEUM EVALUATION ENGINEERS (SPEE)  
SOCIETY OF EXPLORATION GEOPHYSICISTS (SEG)  
SOCIETY OF PETROPHYSICISTS AND WELL LOG ANALYSTS (SPWLA)  
EUROPEAN ASSOCIATION OF GEOSCIENTISTS & ENGINEERS (EAGE)

Reserves status categories define the development and producing status of wells and reservoirs. Reference should be made to Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) and the SPE-PRMS as the following reserves status definitions are based on excerpts from the original documents (direct passages excerpted from the aforementioned SEC and SPE-PRMS documents are denoted in italics herein).

**DEVELOPED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(6) defines developed oil and gas reserves as follows:

*Developed oil and gas reserves are reserves of any category that can be expected to be recovered:*

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and*
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.*

**Developed Producing (SPE-PRMS Definitions)**

While not a requirement for disclosure under the SEC regulations, developed oil and gas reserves may be further sub-classified according to the guidance contained in the SPE-PRMS as Producing or Non-Producing.

**Developed Producing Reserves**

*Developed Producing Reserves are expected quantities to be recovered from completion intervals that are open and producing at the effective date of the estimate.*

*Improved recovery reserves are considered producing only after the improved recovery project is in operation.*

**Developed Non-Producing**

*Developed Non-Producing Reserves include shut-in and behind-pipe Reserves.*

**Shut-In**

*Shut-in Reserves are expected to be recovered from:*

- (1) completion intervals that are open at the time of the estimate but which have not yet started producing;*
- (2) wells which were shut-in for market conditions or pipeline connections; or*
- (3) wells not capable of production for mechanical reasons.*

**Behind-Pipe**

*Behind-pipe Reserves are expected to be recovered from zones in existing wells that will require additional completion work or future re-completion before start of production with minor cost to access these reserves.*

*In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.*

**UNDEVELOPED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(31) defines undeveloped oil and gas reserves as follows:

*Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.*

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.*
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.*
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.*

PAN AMERICAN ENERGY SL

Estimated

Future Reserves and Income

CNOOC’s 25 Percent Ownership of

Pan American Energy SL

(Through a 50 Percent Ownership of Bidas Corporation)

SEC Pricing & Cost Parameters

As of

December 31, 2019

/s/ Anna Milena Hardesty  
Anna Milena Hardesty, P.E.  
TBPE License No. 65320  
Senior Vice President  
[SEAL]

/s/ Timothy W. Smith  
Timothy W. Smith, P.E.  
TBPE License No. 70195  
Senior Vice President  
[SEAL]

RYDER SCOTT COMPANY, L.P.  
TBPE Firm Registration No. F-1580

RYDER SCOTT COMPANY PETROLEUM CONSULTANTS



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March 13, 2020

CNOOC Limited  
Mr. Liu Yongjie  
No. 25, Chao YangMenNei Dajie  
Dong Cheng District  
Beijing 100010  
China

Dear Mr. Liu Yongjie:

At your request, Ryder Scott Company, L.P. (Ryder Scott) has prepared an estimate of the proved, probable and possible reserves, future production, and income attributable to CNOOC's 50% ownership of Bidas Corporation, as of December 31, 2019. Bidas owns 50% of Pan American Energy SL (Pan American) and, therefore, CNOOC is entitled to 25% ownership of Pan American's interests in the subject properties. The subject properties are located in the provinces of Neuquen and Tierra del Fuego (onshore and offshore), Argentina. The proved reserves were estimated based on the definitions and disclosure guidelines of the United States Securities and Exchange Commission (SEC) contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register (SEC regulations). The probable and possible reserves were estimated based on the definitions and disclosure guidelines contained in the Society of Petroleum Engineers (SPE), World Petroleum Council (WPC), American Association of Petroleum Geologists (AAPG), Society of Petroleum Evaluation Engineers (SPEE), Society of Exploration Geophysicists (SEG), Society of Petrophysicists and Well Log Analysts (SPWLA), and European Association of Geoscientists & Engineers (EAGE) 2018 Petroleum Resources Management System (SPE-PRMS), which were revised in June 2018. The income data for all categories of reserves were estimated using the SEC requirements for future price and cost parameters. This report should not be publically disclosed and is intended for Pan American's internal use only. The results of our third party study, completed on February 17, 2020, are presented herein. The properties included in this evaluation are listed below:

The properties evaluated by Ryder Scott that are located in Argentina and are included in this report account for a portion of Pan American's total net proved, probable and possible reserves as of December 31, 2019. Based on information provided by Pan American, the third party estimate conducted by Ryder Scott addresses 20.2 percent of the total proved, 30.0 percent of the total probable and 41.8 percent of the total possible net hydrocarbon reserves of Pan American, on a barrel equivalent basis, assuming a conversion factor of 5,800 cubic feet of natural gas per barrel of oil equivalent.

The estimated reserves and future income amounts presented in this report, as of December 31, 2019, are related to hydrocarbon prices. The hydrocarbon prices used in the preparation of this report are based on SEC parameters using the average prices during the 12-month period prior to the "as of date" of this report, determined as unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements, as required by the SEC regulations. For gas sales, some of the prices received by Pan American are determined by the Argentine government's incentive programs and these were applied to the projects that currently receive or qualify to receive such prices in the future. Actual future prices may vary considerably from the prices assumed in this report. The recoverable reserves volumes and the income attributable thereto have a direct relationship to the hydrocarbon prices actually received; therefore, volumes of reserves actually recovered and amounts of income actually received may differ significantly from the estimated quantities presented in this report. The results of this study are summarized below.

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**SEC PRICING & COST PARAMETERS**  
Estimated Net Reserves and Income Data CNOOC's 25 Percent Ownership of  
**Pan American Energy SL**  
As of December 31, 2019

	Proved – SEC Definitions			
	Developed		Undeveloped	Total Proved
	Producing	Non-Producing		
<b><i>Net Reserves</i></b>				
Oil/Condensate – Barrels	4,493,187	315,033	14,134,130	18,942,350
Plant Products - Barrels	1,174,773	790	0	1,175,563
Gas – MMcf	216,768	6,349	114,565	337,682
<b><i>Income Data (\$M)</i></b>				
Future Gross Revenue	\$ 1,089,817	\$ 43,101	\$ 1,185,588	\$ 2,318,506
Deductions	428,779	21,276	742,629	1,192,684
Future Net Income (FNI)	\$ 661,038	\$ 21,825	\$ 442,959	\$ 1,125,822
Discounted FNI @ 10%	\$ 437,791	\$ 12,852	\$ 148,903	\$ 599,546

	Probable – SPE-PRMS Definitions			
	Developed		Undeveloped	Total Probable
	Producing	Non-Producing		
<b><i>Net Reserves</i></b>				
Oil/Condensate – Barrels	687,172	79,779	12,859,048	13,625,999
Plant Products - Barrels	467,501	266	290,750	758,517
Gas – MMcf	54,404	372	175,298	230,074
<b><i>Income Data (\$M)</i></b>				
Future Gross Revenue	\$ 244,559	\$ 5,666	\$ 1,335,388	\$ 1,585,613
Deductions	61,531	1,243	610,627	673,401
Future Net Income (FNI)	\$ 183,028	\$ 4,423	\$ 724,761	\$ 912,212
Discounted FNI @ 10%	\$ 42,461	\$ 2,443	\$ 241,785	\$ 286,689

	Possible – SPE-PRMS Definitions			
	Developed		Undeveloped	Total Possible
	Producing	Non-Producing		
<b><u>Net Reserves</u></b>				
Oil/Condensate – Barrels	64,202	61,815	12,686,545	12,812,562
Plant Products - Barrels	0	0	334,040	334,040
Gas – MMcf	19	334	125,246	125,599
<b><u>Income Data (\$M)</u></b>				
Future Gross Revenue	\$ 3,590	\$ 4,631	\$ 1,148,618	\$ 1,156,839
Deductions	718	916	386,036	387,670
Future Net Income (FNI)	\$ 2,872	\$ 3,715	\$ 762,582	\$ 769,169
Discounted FNI @ 10%	\$ 1,703	\$ 2,286	\$ 256,352	\$ 260,341

Liquid hydrocarbons are expressed in standard 42 U.S. gallon barrels. Oil/condensate volumes include gasoline, which is stripped from the gas and sold as oil. LPG volumes are included above as Plant Products. All gas volumes are reported on an “as sold” basis expressed in millions of cubic feet (MMcf) at the official temperature and pressure bases of the areas in which the gas reserves are located. In this report, the revenues, deductions, and income data are expressed as thousands of U.S. dollars (\$M).

The estimates of the reserves, future production, and income attributable to properties in this report were prepared using the economic software package ARIESTM Petroleum Economics and Reserves Software, a copyrighted program of Halliburton. Ryder Scott has found this program to be generally acceptable, but notes that certain summaries and calculations may vary due to rounding and may not exactly match the sum of the properties being summarized. Furthermore, one line economic summaries may vary slightly from the more detailed cash flow projections of the same properties, also due to rounding. The rounding differences are not material.

The future gross revenue is not subject to direct production taxes. The deductions incorporate the normal direct costs of operating the wells, recompletion costs, development costs, royalty payments and certain abandonment costs net of salvage. The future net income is before the deduction of Argentine federal income taxes and general administrative overhead, and has not been adjusted for outstanding loans that may exist nor does it include any adjustment for cash on hand or undistributed income.

Gas reserves account for approximately 54.5 percent of the total future gross revenue from proved reserves and liquid hydrocarbon reserves account for the remaining 45.5 percent of total future gross revenue from the proved reserves reported herein. Gas reserves account for approximately 52.1 percent of the total future gross revenue from probable reserves and liquid hydrocarbon reserves account for the remaining 47.9 percent of total future gross revenue from the probable reserves reported herein. Liquid hydrocarbon reserves account for approximately 60.7 percent of the total future gross revenue from possible reserves and gas reserves account for the remaining 39.3 percent of total future gross revenue from the possible reserves reported herein.

The discounted future net income shown above was calculated using a discount rate of 10 percent per annum compounded monthly. Future net income was discounted at four other discount rates which were also compounded monthly. These results are shown in summary form as follows.

Discount Rate Percent	Discounted Future Net Income (\$M) As of December 31, 2019		
	Total Proved	Total Probable	Total Possible
5	\$799,371	\$492,982	\$426,476
15	\$468,817	\$175,717	\$171,361
20	\$378,749	\$111,754	\$119,725
25	\$314,104	\$72,853	\$87,743

The results shown above are presented for your information and should not be construed as our estimate of fair market value.

**Reserves Included in This Report**

The proved reserves included herein conform to the definition as set forth in the Securities and Exchange Commission's Regulations Part 210.4-10 (a). The probable reserves and possible reserves included herein conform to the definitions of reserves sponsored and approved by the SPE, WPC, AAPG, SPEE, SEG, SPWLA and EAGE as set forth in the 2018 SPE-PRMS. An abridged version of the SEC proved reserves definitions from 210.4-10(a) and the SPE-PRMS probable and possible reserves terms and definitions used herein are included as attachments to this report and entitled "PETROLEUM RESERVES DEFINITIONS and 2018 PETROLEUM RESOURCES MANAGEMENT SYSTEM."

The various reserves development and production status categories are defined in the attachment to this report entitled "PETROLEUM RESERVES STATUS DEFINITIONS and GUIDELINES." The developed proved and probable non-producing reserves included herein consists of the shut-in and behind pipe categories, and the possible non-producing reserves consist of the shut-in category.

No attempt was made to quantify or otherwise account for any accumulated gas production imbalances that may exist. The gas volumes presented herein do not include volumes of gas consumed in operations as reserves. At Pan American's request, we have calculated the volume of gas projected to be consumed in operations for the proved, probable and possible categories. Reserves guidelines allow for these volumes to be considered as reserves at the company's election. These volumes, to which no revenues were attributed, are as follows and are incremental to the reserves shown above:

	Total Proved	Total Probable	Total Possible
Gas Fuel Consumption - MMcf	15,115	9,085	5,479

**Reserves Uncertainty**

All reserves estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. Estimates will generally be revised only as additional geologic or engineering data becomes available or as economic conditions change.

Reserves are “estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.” The relative degree of uncertainty may be conveyed by placing reserves into one of two principal categories, either proved or unproved.

Proved oil and gas reserves are “those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward.” The proved reserves included herein were estimated using deterministic methods. The SEC has defined reasonable certainty for proved reserves, when based on deterministic methods, as a “high degree of confidence that the quantities will be recovered.”

For proved reserves, the SEC states that “as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to the estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.”

Unproved reserves are less certain to be recovered than proved reserves and may be further sub-categorized as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. Probable reserves are “those additional reserves that analysis of geoscience and engineering data indicates are less likely to be recovered than proved reserves but more certain to be recovered than possible reserves.” For probable reserves, it is “equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated proved plus probable reserves” (cumulative 2P volumes). Possible reserves are “those additional reserves that analysis of geoscience and engineering data indicates are less likely to be recoverable than probable reserves.” For possible reserves, the “total quantities ultimately recovered from the project have a low probability to exceed the sum of the proved plus probable plus possible reserves” (cumulative 3P volumes).

The reserves included herein were estimated using deterministic methods and are presented as incremental quantities. Under the deterministic incremental approach, discrete quantities of reserves are estimated and assigned separately as proved, probable or possible based on their individual level of uncertainty.

The reserves volumes and income quantities attributable to the different reserves categories that are included herein have not been adjusted to reflect these varying degrees of risk associated with them and thus are not comparable. Petroleum reserves under different categories such as proved, probable and possible should not be aggregated with each other without due consideration of the appreciable differences in the criteria associated with their categorization. Moreover, estimates of reserves may increase or decrease as a result of future operations, effects of regulation by governmental agencies or geopolitical risks. As a result, the estimates of oil and gas reserves have an intrinsic uncertainty. The reserves included in this report are therefore estimates only and should not be construed as being exact quantities. They may or may not be actually recovered, and if recovered, the revenues therefrom and the actual costs related thereto could be more or less than the estimated amounts.

The reserves reported herein are limited to the period prior to expiration of current contracts providing the legal rights to produce, or a revenue interest in such production, unless evidence indicates that contract renewal is reasonably certain. At Pan American's request the probable and possible reserves in the Cuenca Marina Austral Concession were extended 10 years beyond the concession limit of May 1, 2031 as they have historically been successful in obtaining contract extensions. Furthermore, properties in the country of Argentina may be subjected to substantially varying contractual fiscal terms that affect the net revenue to Pan American for the production of these volumes. The prices and economic return received for these net volumes can vary materially based on the terms of these contracts. Therefore, when applicable, Ryder Scott reviewed the fiscal terms of such contracts and discussed with Pan American the net economic benefit attributed to such operations for the determination of the net hydrocarbon volumes and income thereof. Ryder Scott has not conducted an exhaustive audit or verification of such contractual information. Neither our review of such contractual information nor our acceptance of Pan American’s representations regarding such contractual information should be construed as a legal opinion on this matter.

This report includes certain volumes of proved, probable and possible reserves attributable to statutory royalties owed to various provincial governments where the properties are located that are treated as taxes to be paid in cash. As a result, the hydrocarbon reserves included in this report are not adjusted for royalty deductions.

**Possible Effects of Regulation**

Ryder Scott did not evaluate the country and geopolitical risks in the country of Argentina where Pan American operates or has interests. Pan American's operations may be subject to various levels of governmental controls and regulations. These controls and regulations may include, but may not be limited to, matters relating to land tenure, the legal rights to produce hydrocarbons, drilling and production practices, environmental protection, marketing and pricing policies, royalties, various taxes and levies including income tax, and foreign trade and investment and are subject to change from time to time. Such changes in governmental regulations and policies may cause volumes of proved, probable and possible reserves actually recovered and amounts of proved, probable and possible income actually received to differ significantly from the estimated quantities.

The estimates of reserves presented herein were based upon a detailed study of the properties in which Pan American owns an interest; however, we have not made any field examination of the properties. No consideration was given in this report to potential environmental liabilities that may exist nor were any costs included for potential liabilities to restore and clean up damages, if any, caused by past operating practices.

**Methodology Employed for Estimates of Reserves**

The estimation of reserves quantities involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities. The process of estimating the quantities of recoverable oil and gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods, (2) volumetric-based methods and (3) analogy. These methods may be used individually or in combination by the reserves evaluator in the process of estimating the quantities of reserves. Reserves evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated, and the stage of development or producing maturity of the property.

In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of these data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator. When a range in the quantity of recoverable hydrocarbons is identified, the evaluator must determine the uncertainty associated with the incremental quantities of those recoverable hydrocarbons. If the quantities are estimated using the deterministic incremental approach, the uncertainty for each discrete incremental quantity is addressed by the reserves category assigned by the evaluator. Therefore, it is the categorization of incremental recoverable quantities that addresses the inherent uncertainty in the estimated quantities reported.

Estimates of reserves quantities and their associated categories or classifications may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of the recoverable quantities and their associated categories or classifications may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

The reserves for the properties included herein were estimated by performance methods, the volumetric method, analogy, or a combination of methods. In general, reserves attributable to producing wells and/or reservoirs were estimated by performance methods. These performance methods include, but may not be limited to, decline curve analysis and material balance, which utilized extrapolations of historical production and pressure data generally available through October 2019 in those cases where such data were considered to be definitive. The data used in these analyses were furnished to Ryder Scott by Pan American and were considered sufficient for the purpose thereof. In certain cases, producing reserves were estimated by a combination of methods including decline curve analysis, the volumetric method and material balance. These methods were used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as the only basis for the estimates was considered to be inappropriate.

Reserves attributable to proved, probable and possible non-producing and undeveloped status categories included herein were estimated by the volumetric method, analogy, material balance or a combination of methods. The volumetric analysis utilized pertinent well and seismic data, reports and other data furnished to Ryder Scott by Pan American that were generally available through October 2019. The data utilized from the analogues as well as well data incorporated into our analysis were considered sufficient for the purpose thereof.

The major fields that were evaluated based primarily on performance or analogy methods include the Cañadon Alfa and Vega Pleyade fields in the Austral Basin, and Aguada Pichana, Aguada San Roque, Loma Las Yeguas, Bandurria Centro, Coiron Amargo Sur Este, Aguada de Castro and Lindero Atravesado fields in the Neuquen Basin. The major field that was evaluated by the volumetric method is the Fenix field in the Austral Basin. Material balance methods were also used to support our results for the Aguada San Roque, Aries and Loma Las Yeguas fields. A combination of methods was used in the evaluations of the Carina, Aries and Leo fields. Proved reserves for the remaining fields were evaluated using performance methods.

***Assumptions and Data Considered for Estimates of Reserves***

To estimate economically recoverable proved, probable and possible oil and gas reserves and related future net cash flows, we consider many factors and assumptions including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on current costs and SEC pricing requirements, and forecasts of future production rates. Under the SEC regulations 210.4-10(a) (22)(v) and (26), proved, probable and possible reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. Likewise, under the SPE-PRMS Section 1.1.0.6, “reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions.”

Pan American has informed us that they have furnished us all of the material accounts, records, geological and engineering data, and reports and other data required for this investigation. In preparing our forecasts of future production and income, we have relied upon data furnished by Pan American with respect to property interests owned, production and well tests from examined wells, normal direct costs of operating the wells or contract areas, other costs such as transportation and/or processing fees, provincial royalty payments, recompletion and development costs, development plans, abandonment costs after salvage, product prices based on the SEC regulations, adjustments or differentials to product prices, geological structural and isochore maps, well logs, core analyses, and pressure measurements. Ryder Scott reviewed such factual data for its reasonableness; however, we have not conducted an independent verification of the data furnished by Pan American. We consider the factual data used in this report appropriate and sufficient for the purpose of preparing the estimates of reserves and future net revenues herein.

In summary, we consider the assumptions, data, methods and analytical procedures used in this report appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate to prepare the estimates of reserves herein.

***Future Production Rates***

For wells currently on production, our forecasts of future production rates are based on historical performance data. If no production decline trend has been established, future production rates were generally projected based upon analogue well behavior. If a decline trend has been established, this trend was used as the basis for estimating future production rates.

Test data and other related information were used to estimate the anticipated initial production rates for those wells or locations that are not currently producing. For reserves not yet on production, sales were estimated to commence at an anticipated date furnished by Pan American. Wells or locations that are not currently producing may start producing earlier or later than anticipated in our estimates due to unforeseen factors causing a change in the timing to initiate production. Such factors may include delays due to weather, the availability of rigs, the sequence of drilling, completing and/or recompleting wells and/or constraints set by regulatory bodies.

The future production rates from wells currently on production or wells or locations that are not currently producing may be more or less than estimated because of changes including, but not limited to, reservoir performance, operating conditions related to surface facilities, compression and artificial lift, pipeline capacity and/or operating conditions, producing market demand and/or allowables or other constraints set by regulatory bodies.

***Hydrocarbon Prices***

The hydrocarbon prices used herein are based on SEC price parameters using the average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements. For hydrocarbon products sold under contract, the contract prices, including fixed and determinable escalations, exclusive of inflation adjustments, were used until expiration of the contract. Upon contract expiration, the prices were adjusted to the 12-month unweighted arithmetic average as previously described.

Pan American furnished us with the above mentioned average prices in effect on December 31, 2019. These initial SEC hydrocarbon prices were determined using the 12-month average first-day-of-the-month benchmark prices appropriate to the geographic area where the hydrocarbons are sold. These benchmark prices are prior to the adjustments for differentials as described herein. The table below summarizes the “benchmark prices” and “price reference” used for the geographic area included in the report. In certain geographic areas, the price reference and benchmark prices may be defined by contractual arrangements.

The product prices that were actually used to determine the future gross revenue for each property reflect adjustments to the benchmark prices for gravity, quality, local conditions, gathering and transportation fees and/or distance from market, referred to herein as “differentials.” The differentials used in the preparation of this report were furnished to us by Pan American. The differentials furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by Pan American to determine these differentials.

Certain gas prices for programs that incentivize investment in the development of production of natural gas from unconventional reservoirs were provided by Pan American based on governmental price allowances for such gas. These price allowances are approved by the Argentine government on a case by case basis. The government considers price allowances for projects that motivate a company to increase production above a baseline as an incentive to produce incremental gas that receives a higher price. When these programs were enacted, gas was in short supply in Argentina. Such higher gas price allowances under programs designated as “Resolución 419/17” by the Argentine government are being paid for certain volumes of gas delivered by Pan American from certain properties that meet these higher gas price criteria. In all cases where we have used Resolucion 419/17 prices, Pan American has informed us that such prices either are currently in effect or have reasonable expectation of being received in the future.

In addition, the table below summarizes the net volume weighted benchmark prices adjusted for differentials and referred to herein as the “average realized prices.” The average realized prices shown in the table below were determined from the total future gross revenue and the total net reserves by category for the geographic area and presented in accordance with SEC disclosure requirements for the geographic area included in the report.

Geographic Area	Product	Price Reference	Average Benchmark Prices	Average Proved Realized Prices	Average Probable Realized Prices	Average Possible Realized Prices
Argentina	Oil/Condensate	WTI	\$55.69/bbl	\$53.91/bbl	\$54.10/bbl	\$54.07/bbl
	LPG	Various Contracts	N/A	\$28.83/bbl	\$29.38/bbl	\$29.38/bbl
	Gas	Various Contracts	N/A	\$3.74/Mcf	\$3.59/Mcf	\$3.62/Mcf

The effects of derivative instruments designated as price hedges of oil and gas quantities are not reflected in our individual property evaluations.

While it may reasonably be anticipated that the future prices received for the sale of production and the operating costs and other costs relating to such production may also increase or decrease from existing levels, such changes were omitted from consideration in making this evaluation.

**Costs**

Operating costs for the contract areas and wells in this report were furnished by Pan American and are based on the operating expense reports of Pan American and include only those costs directly applicable to the contract areas or wells. The operating costs include a portion of general and administrative costs allocated directly to the contract areas and wells. The operating costs furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the operating cost data used by Pan American. No deduction was made for loan repayments, interest expenses, or exploration and development prepayments that were not charged directly to the contract areas or wells.

Development costs were furnished to us by Pan American and are based on authorizations for expenditure for the proposed work or actual costs for similar projects. The development costs furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of these costs. The estimated net cost of abandonment after salvage was included for properties where abandonment costs net of salvage were material. The estimates of the net abandonment costs furnished by Pan American were accepted without independent verification.

The proved, probable and possible non-producing reserves and the proved, probable and possible undeveloped reserves in this report have been incorporated herein in accordance with Pan American's plans to develop these reserves as of December 31, 2019. The implementation of Pan American's development plans as presented to us and incorporated herein is subject to the approval process adopted by Pan American's management. As the result of our inquiries during the course of preparing this report, Pan American has informed us that the development activities included herein have been subjected to and received the internal approvals required by Pan American's management at the appropriate local, regional and/or corporate level. In addition to the internal approvals as noted, certain development activities may still be subject to specific partner AFE processes, Joint Operating Agreement (JOA) requirements or other administrative approvals external to Pan American. Pan American has assured us of their intent, commitment, and ability to proceed with the development activities included in this report. Pan American has provided written documentation supporting their commitment to proceed with the development activities as presented to us. Additionally, Pan American has informed us that they are not aware of any legal, regulatory, or political obstacles that would significantly alter their plans. While these plans could change from those under existing economic conditions as of December 31, 2019, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in making this evaluation.

According to the SEC Regulations Part 210.4-10(a) (31), "undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time frame." In accordance with SPE-PRMS guidelines, "a reasonable time frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. While 5 years is recommended as a benchmark, a longer time frame could be applied where, for example, development of an economic project is deferred at the option of the producer for, among other things, market-related reasons, or to meet contractual or strategic objectives." Certain material probable and possible undeveloped reserves are forecast to be developed beyond the five-year time frame in this report due to

various strategic and operational considerations including capacity planning, the complex scheduling of development in the remote offshore Argentina environment, rig scheduling and/or prioritizing of projects. Furthermore, Pan American has also assured us that for the evaluated properties, any development initiated beyond "a reasonable time frame" is in accordance with the above mentioned guidelines.

Current costs were held constant throughout the life of the properties.

***Standards of Independence and Professional Qualification***

Ryder Scott is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1937. Ryder Scott is employee-owned and maintains offices in Houston, Texas; Denver, Colorado; and Calgary, Alberta, Canada. We have approximately eighty engineers and geoscientists on our permanent staff. By virtue of the size of our firm and the large number of clients for which we provide services, no single client or job represents a material portion of our annual revenue. We do not serve as officers or directors of any privately-owned or publicly-traded oil and gas company and are separate and independent from the operating and investment decision-making process of our clients. This allows us to bring the highest level of independence and objectivity to each engagement for our services.

Ryder Scott actively participates in industry-related professional societies and organizes an annual public forum focused on the subject of reserves evaluations and SEC regulations. Many of our staff have authored or co-authored technical papers on the subject of reserves related topics. We encourage our staff to maintain and enhance their professional skills by actively participating in ongoing continuing education.

Prior to becoming an officer of the Company, Ryder Scott requires that staff engineers and geoscientists have received professional accreditation in the form of a registered or certified professional engineer's license or a registered or certified professional geoscientist's license, or the equivalent thereof, from an appropriate governmental authority or a recognized self-regulating professional organization. Regulating agencies require that, in order to maintain active status, a certain amount of continuing education hours be completed annually, including an hour of ethics training. Ryder Scott fully supports this technical and ethics training with our internal requirement mentioned above.

We are independent petroleum engineers with respect to Pan American and CNOOC Limited. Neither we nor any of our employees have any financial interest in the subject properties and neither the employment to do this work nor the compensation is contingent on our estimates of reserves for the properties which were reviewed.

The results of this study, presented herein, are based on technical analysis conducted by teams of geoscientists and engineers from Ryder Scott. The professional qualifications of the undersigned, the technical person primarily responsible for overseeing, reviewing and approving the evaluation of the reserves information discussed in this report, are included as an attachment to this letter.

**Terms of Usage**

This report was prepared for the exclusive use and sole benefit of CNOOC Limited and may not be put to other use without our prior written consent for such use. The data and work papers used in the preparation of this report are available for examination by authorized parties in our offices. Please contact us if we can be of further service.

Very truly yours,

**RYDER SCOTT COMPANY, L.P.**  
TBPE Firm Registration No. F-1580

/s/ Anna Milena Hardesty     [seal]

Anna Milena Hardesty, P.E.  
TBPE License No. 65320  
Senior Vice President

/s/ Timothy W. Smith     [seal]

Timothy W. Smith, P.E.  
TBPE License No. 70195  
Senior Vice President

AMH-TWS (GR)/pl

**CNOOC ENERGY USA, L.L.C.**

**Estimated  
Future Reserves  
Attributable to Certain  
Leasehold and Royalty Interests**

**SEC Parameters**

**As of  
December 31, 2019**

/s/ Gabrielle Morrow

Gabrielle Morrow, P. E.  
TBPE License No. 109935  
Senior Vice President

[SEAL]

**RYDER SCOTT COMPANY, L.P.**  
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February 28, 2020

CNOOC Limited  
c/o Suite 2300, 500 Centre St. S.  
Calgary, Alberta T2G 1A6  
Canada

Ladies and Gentlemen:

At the request of CNOOC Limited (CNOOC), Ryder Scott Company, L.P. (Ryder Scott) has conducted a reserves audit of the estimates of the proved reserves attributable to certain leasehold and royalty interests of CNOOC Energy U.S.A. LLC (CEU) as of December 31, 2019 prepared by CEU's engineering and geological staff based on the definitions and disclosure guidelines of the United States Securities and Exchange Commission (SEC) contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register (SEC regulations). CNOOC indirectly retains 100 percent ownership of CEU. Our reserves audit, completed on January 3, 2020 and presented herein, was prepared for public disclosure by CNOOC in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC regulations. The estimated reserves shown herein represent CEU's estimated net reserves attributable to the leasehold and royalty interests in certain properties owned by CEU and reviewed by Ryder Scott as of December 31, 2019. The properties reviewed by Ryder Scott incorporate CEU reserves determinations and are located in the states of Colorado, Texas, and Wyoming.

The properties covered by Ryder Scott's review account for 100 percent of the total net proved liquid hydrocarbon reserves and 100 percent of the total net proved gas reserves of CEU as of December 31, 2019. CNOOC has represented that these properties represent 4 percent of its total company proved reserves on an equivalent barrel basis as of December 31, 2019. The portions reviewed by Ryder Scott as determined by various metrics are as follows:

Portions Reviewed CNOOC Limited			
	<u>Developed</u>	<u>Undeveloped</u>	<u>Total</u>
Net Liquid Reserves	6.0%	2.6%	4.1%
Net Gas Reserves	6.4%	2.3%	3.8%
Net Liquid Equivalent Reserves	6.0%	2.5%	4.0%

As prescribed by the Society of Petroleum Engineers in Paragraph 2.2(f) of the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (SPE auditing standards), a reserves audit is defined as "the process of reviewing certain of the pertinent facts interpreted and assumptions made that have resulted in an estimate of reserves and/or Reserves Information prepared by others and the rendering of an opinion about (1) the appropriateness of the methodologies employed; (2) the adequacy and quality of the data relied upon; (3) the depth and thoroughness of the reserves estimation process; (4) the classification of reserves appropriate to the relevant definitions used; and (5) the reasonableness of the estimated reserve quantities and/or Reserves Information." Reserves Information may consist of various estimates pertaining to the extent and value of petroleum properties.

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Based on our review, including the data, technical processes and interpretations presented by CEU, it is our opinion that the overall procedures and methodologies utilized by CEU in preparing their estimates of the proved reserves as of December 31, 2019 comply with the current SEC regulations and that the overall proved reserves for the reviewed properties as estimated by CEU are, in the aggregate, reasonable within the established audit tolerance guidelines of 10 percent as set forth in the SPE auditing standards.

The estimated reserves presented in this report are related to hydrocarbon prices. CEU has informed us that in the preparation of their reserves and income projections, as of December 31, 2019, they used average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements, as required by the SEC regulations. Actual future prices may vary considerably from the prices required by SEC regulations that were used in this report. The recoverable reserves volumes and the income attributable thereto have a direct relationship to the hydrocarbon prices actually received; therefore, volumes of reserves actually recovered may differ significantly from the estimated quantities presented in this report. The net reserves as estimated by CEU attributable to CNOOC’s interest in properties that we reviewed are summarized below:

**SEC PARAMETERS**  
CNOOC Net Reserves  
CEU's Estimate of Certain CEU Leasehold and Royalty Interests  
As of December 31, 2019

	Proved		
	Developed Producing	Undeveloped	Total Proved
<b><i><u>Audited by Ryder Scott</u></i></b>			
<b><i><u>Net Reserves</u></i></b>			
Oil/Condensate – MBarrels	76,115	40,589	116,704
Plant Products – MBarrels	24,236	12,925	37,161
Gas – MMcf	203,495	120,324	323,819
Total Oil Equivalents – MBOE	134,267	73,568	207,835

\* 6 Mcf = 1 bbl liquid equivalent

Liquid hydrocarbons are expressed in standard 42 U.S. gallon barrels and shown herein as thousands of barrels (MBarrels). All gas volumes are reported on an “as sold basis” expressed in millions of cubic feet (MMcf) at the official temperature and pressure bases of the areas in which the gas reserves are located. The net reserves are also shown herein on an equivalent unit basis wherein natural gas is converted to oil equivalent using a factor of 6,000 cubic feet of natural gas per one barrel of oil equivalent. MBOE means thousands of barrels of oil equivalent.

**Reserves Included in This Report**

In our opinion, the proved reserves presented in this report conform to the definition as set forth in the Securities and Exchange Commission’s Regulations Part 210.4-10(a). An abridged version of the SEC reserves definitions from 210.4-10(a) entitled “PETROLEUM RESERVES DEFINITIONS” is included as an attachment to this report.

The various proved reserves status categories are defined in the attachment entitled “PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES” in this report. There are no proved developed non-producing reserves included herein.

Reserves are “estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.” All reserves estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-categorized as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. At CEU's request, this report addresses only the proved reserves attributable to the properties reviewed herein.

Proved oil and gas reserves are “those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward.” The proved reserves included herein were estimated using deterministic methods. The SEC has defined reasonable certainty for proved reserves, when based on deterministic methods, as a “high degree of confidence that the quantities will be recovered.

Proved reserves estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change. For proved reserves, the SEC states that “as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to the estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.” Moreover, estimates of proved reserves may be revised as a result of future operations, effects of regulation by governmental agencies or geopolitical or economic risks. Therefore, the proved reserves included in this report are estimates only and should not be construed as being exact quantities, and if recovered, could be more or less than the estimated amounts.

**Audit Data, Methodology, Procedure and Assumptions**

The estimation of reserves involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities in accordance with the definitions set forth by the Securities and Exchange Commission’s Regulations Part 210.4-10(a). The process of estimating the quantities of recoverable oil and gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods; (2) volumetric-based methods; and (3) analogy. These methods may be used individually or in combination by the reserves evaluator in the process of estimating the quantities of reserves. Reserves evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated and the stage of development or producing maturity of the property.

In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of this data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator. When a range in the quantity of reserves is identified, the evaluator must determine the uncertainty associated with the incremental quantities of the reserves. If the reserves quantities are estimated using the deterministic incremental approach, the uncertainty for each discrete incremental quantity of the reserves is addressed by the reserves category assigned by the evaluator. Therefore, it is the categorization of reserves quantities as proved, probable and/or possible that addresses the inherent uncertainty in the estimated quantities reported. For proved reserves, uncertainty is defined by the SEC as reasonable certainty wherein the “quantities actually recovered are much more likely to be achieved than not.” The SEC states that “probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.” The SEC states that “possible reserves are those additional reserves that are less certain to be recovered than probable reserves and the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves.” All quantities of reserves within the same reserves category must meet the SEC definitions as noted above.

Estimates of reserves quantities and their associated reserves categories may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of reserves quantities and their associated reserves categories may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

The proved reserves, prepared by CEU, for the properties that we reviewed were estimated by performance methods and analogy. Approximately 99 percent of the proved producing reserves attributable to producing wells and/or reservoirs that we reviewed were estimated by performance methods. These performance methods include, but may not be limited to, decline curve analysis which utilized extrapolations of historical production and pressure data available through December 2019, in those cases where such data were considered to be definitive. The data utilized in this analysis were furnished to Ryder Scott by CEU or obtained from public data sources and were considered sufficient for the purpose thereof. The remaining 1 percent of the proved producing reserves that we reviewed were estimated by analogy. These methods were used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as a basis for the reserves estimates was considered to be inappropriate.

One hundred percent of the proved undeveloped reserves that we reviewed were estimated by the analogy method. The data utilized from the analogues were considered sufficient for the purpose thereof.

To estimate economically recoverable proved oil and gas reserves, many factors and assumptions are considered including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on current costs and SEC pricing requirements, and forecasts of future production rates. Under the SEC regulations 210.4-10(a)(22)(v) and (26), proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. While it may reasonably be anticipated that the future prices received for the sale of production and the operating costs and other costs relating to such production may increase or decrease from those under existing economic conditions, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in conducting this review.

As stated previously, proved reserves must be anticipated to be economically producible from a given date forward based on existing economic conditions including the prices and costs at which economic producibility from a reservoir is to be determined. To confirm that the proved reserves reviewed by us meet the SEC requirements to be economically producible, we have reviewed certain primary economic data utilized by CEU relating to hydrocarbon prices and costs as noted herein.

Data used in this audit were obtained from reviews with CEU personnel, CEU files, from records on file with the appropriate regulatory agencies, and from public sources. In the preparation of this report Ryder Scott has relied, without independent verification, upon such information furnished by CEU with respect to property interests, production from such properties, current costs of operation and development, prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. Furthermore, if in the course of our examination something came to our attention which brought into question the validity or sufficiency of any of such information or data, we did not rely on such information or data until we had satisfactorily resolved our questions relating thereto or had independently verified such information or data. A field examination of the properties was not considered necessary for the purposes of this report. CEU did not place any limitations on the Ryder Scott work performed.

The hydrocarbon prices furnished by CEU for the properties reviewed by us are based on SEC price parameters using the average prices during the 12-month period prior to the “as of date” of this report, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period, unless prices were defined by contractual arrangements. For hydrocarbon products sold under contract, the contract prices, including fixed and determinable escalations exclusive of inflation adjustments, were used until expiration of the contract. Upon contract expiration, the prices were adjusted to the 12-month unweighted arithmetic average as previously described.

The initial SEC hydrocarbon prices in effect on December 31, 2019 for the properties reviewed by us were determined using the 12-month average first-day-of-the-month benchmark prices appropriate to the geographic area where the hydrocarbons are sold. These benchmark prices are prior to the adjustments for differentials as described herein. The table below summarizes the “benchmark prices” and “price reference” used by CEU for the geographic areas reviewed by us. In certain geographic areas, the price reference and benchmark prices may be defined by contractual arrangements.

The product prices which were actually used by CEU to determine the future gross revenue for each property reviewed by us reflect adjustments to the benchmark prices for gravity, quality, local conditions, and/or distance from market, referred to herein as “differentials.” The differentials used by CEU were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by CEU.

The table below summarizes CEU's net volume weighted benchmark prices adjusted for differentials for the properties reviewed by us and referred to herein as CEU's “average realized prices.” The average realized prices shown in the table below were determined from CEU's estimate of the total future gross revenue before production taxes for the properties reviewed by us and CEU's estimate of the total net reserves for the properties reviewed by us for the geographic area. The data shown in the table below is presented in accordance with SEC disclosure requirements for each of the geographic areas reviewed by us.

Geographic Area	Product	Price Reference	Average Benchmark Prices	Average Realized Prices
North America				
United States	Oil/Condensate	WTI Cushing	\$55.69/BBL	\$59.82/BBL
	Plant Products	Mont Belvieu	\$23.13/BBL	\$16.89/BBL
	Gas	Henry Hub	\$2.58/MMBTU	\$2.75/MCF

*\*NGL price based upon the Mt. Belvieu benchmarks for each NGL constituent multiplied by the fractional component.*

The effects of derivative instruments designated as price hedges of oil and gas quantities are not reflected in CEU's individual property evaluations.

Accumulated gas production imbalances, if any, were not taken into account in the proved gas reserves estimates reviewed. The proved gas volumes presented herein do not include volumes of gas consumed in operations as reserves.

Operating costs furnished by CEU are based on the operating expense reports of CEU and include only those costs directly applicable to the leases or wells for the properties reviewed by us. The operating costs include a portion of general and administrative costs allocated directly to the leases and wells. For operated properties, the operating costs include an appropriate level of corporate general administrative and overhead costs. The operating costs for non-operated properties include the COPAS overhead costs that are allocated directly to the leases and wells under terms of operating agreements. The operating costs furnished by CEU were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by CEU. No deduction was made for loan repayments, interest expenses, or exploration and development prepayments that were not charged directly to the leases or wells.

Development costs furnished by CEU are based on authorizations for expenditure for the proposed work or actual costs for similar projects. The development costs furnished by CEU were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the data used by CEU. The estimated net cost of abandonment after salvage was included by CEU for properties where abandonment costs net of salvage were material. CEU's estimates of the net abandonment costs were accepted without independent verification.

The proved undeveloped reserves for the properties reviewed by us have been incorporated herein in accordance with CEU's plans to develop these reserves as of December 31, 2019. The implementation of CEU's development plans as presented to us is subject to the approval process adopted by CEU's management. As the result of our inquiries during the course of our review, CEU has informed us that the development activities for the properties reviewed by us have been subjected to and received the internal approvals required by CEU's management at the appropriate local, regional and/or corporate level. In addition to the internal approvals as noted, certain development activities may still be subject to specific partner AFE processes, Joint Operating Agreement (JOA) requirements or other administrative approvals external to CEU. CEU has provided written documentation supporting their commitment to proceed with the development activities as presented to us. Additionally, CEU has informed us that they are not aware of any legal, regulatory, or political obstacles that would significantly alter their plans. While these plans could change from those under existing economic conditions as of December 31, 2019, such changes were, in accordance with rules adopted by the SEC, omitted from consideration in making this evaluation.

Current costs used by CEU were held constant throughout the life of the properties.

CEU's forecasts of future production rates are based on historical performance from wells currently on production. If no production decline trend has been established, future production rates were adjusted for the effects of curtailment where appropriate and tied to analog performance data. An estimated rate of decline was then applied until depletion of the reserves. If a decline trend has been established, this trend was used as the basis for estimating future production rates.

Test data and other related information were used by CEU to estimate the anticipated initial production rates for those wells or locations that are not currently producing. For reserves not yet on production, sales were estimated to commence at an anticipated date furnished by CEU. Wells or locations that are not currently producing may start producing earlier or later than anticipated in CEU's estimates due to unforeseen factors causing a change in the timing to initiate production. Such factors may include delays due to weather, the availability of rigs, the sequence of drilling, completing and/or recompleting wells and/or constraints set by regulatory bodies.

The future production rates from wells currently on production or wells or locations that are not currently producing may be more or less than estimated because of changes including, but not limited to, reservoir performance, operating conditions related to surface facilities, compression and artificial lift, pipeline capacity and/or operating conditions, producing market demand and/or allowables or other constraints set by regulatory bodies.

CEU's operations may be subject to various levels of governmental controls and regulations. These controls and regulations may include, but may not be limited to, matters relating to land tenure and leasing, the legal rights to produce hydrocarbons, drilling and production practices, environmental protection, marketing and pricing policies, royalties, various taxes and levies including income tax and are subject to change from time to time. Such changes in governmental regulations and policies may cause volumes of proved reserves actually recovered and amounts of proved income actually received to differ significantly from the estimated quantities.

The estimates of proved reserves presented herein were based upon a review of the properties in which CEU owns an interest; however, we have not made any field examination of the properties. No consideration was given in this report to potential environmental liabilities that may exist nor were any costs included by CEU for potential liabilities to restore and clean up damages, if any, caused by past operating practices.

Certain technical personnel of CEU are responsible for the preparation of reserves estimates on new properties and for the preparation of revised estimates, when necessary, on old properties. These personnel assembled the necessary data and maintained the data and workpapers in an orderly manner. We consulted with these technical personnel and had access to their workpapers and supporting data in the course of our audit.

CEU has informed us that they have furnished us all of the material accounts, records, geological and engineering data, and reports and other data required for this investigation. In performing our audit of CEU's forecast of future proved production, we have relied upon data furnished by CEU with respect to property interests owned, production and well tests from examined wells, normal direct costs of operating the wells or leases, other costs such as transportation and/or processing fees, ad valorem and production taxes, recompletion and development costs, development plans, abandonment costs after salvage, product prices based on the SEC regulations, adjustments or differentials to product prices, geological structural and isochore maps, well logs, core analyses, and pressure measurements. Ryder Scott reviewed such factual data for its reasonableness; however, we have not conducted an independent verification of the data furnished by CEU. We consider the factual data furnished to us by CEU to be appropriate and sufficient for the purpose of our review of CEU's estimates of reserves. In summary, we consider the assumptions, data, methods and analytical procedures used by CEU and as reviewed by us appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate under the circumstances to render the conclusions set forth herein.

**Audit Opinion**

Based on our review, including the data, technical processes and interpretations presented by CEU, it is our opinion that the overall procedures and methodologies utilized by CEU in preparing their estimates of the proved reserves as of December 31, 2019 comply with the current SEC regulations and that the overall proved reserves for the reviewed properties as estimated by CEU are, in the aggregate, reasonable within the established audit tolerance guidelines of 10 percent as set forth in the SPE auditing standards. Ryder Scott found the processes and controls used by CEU in their estimation of proved reserves to be effective and, in the aggregate, we found no bias in the utilization and analysis of data in estimates for these properties.

We were in reasonable agreement with CEU's estimates of proved reserves for the properties which we reviewed; although in certain cases there was more than 10 percent variance between CEU's estimates and our estimates due to a difference in interpretation of data or due to our having access to data which were not available to CEU when its reserves estimates were prepared. However notwithstanding, it is our opinion that on an aggregate basis the data presented herein for the properties that we reviewed fairly reflects the estimated net reserves owned by CEU.

**Standards of Independence and Professional Qualification**

Ryder Scott is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1937. Ryder Scott is employee-owned and maintains offices in Houston, Texas; Denver, Colorado; and Calgary, Alberta, Canada. We have approximately eighty engineers and geoscientists on our permanent staff. By virtue of the size of our firm and the large number of clients for which we provide services, no single client or job represents a material portion of our annual revenue. We do not serve as officers or directors of any privately-owned or publicly-traded oil and gas company and are separate and independent from the operating and investment decision-making process of our clients. This allows us to bring the highest level of independence and objectivity to each engagement for our services.

Ryder Scott actively participates in industry-related professional societies and organizes an annual public forum focused on the subject of reserves evaluations and SEC regulations. Many of our staff have authored or co-authored technical papers on the subject of reserves related topics. We encourage our staff to maintain and enhance their professional skills by actively participating in ongoing continuing education.

Prior to becoming an officer of the Company, Ryder Scott requires that staff engineers and geoscientists have received professional accreditation in the form of a registered or certified professional engineer's license or a registered or certified professional geoscientist's license, or the equivalent thereof, from an appropriate governmental authority or a recognized self-regulating professional organization. Regulating agencies require that, in order to maintain active status, a certain amount of continuing education hours be completed annually, including an hour of ethics training. Ryder Scott fully supports this technical and ethics training with our internal requirement mentioned above.

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RYDER SCOTT COMPANY PETROLEUM CONSULTANTS

We are independent petroleum engineers with respect to CEU. Neither we nor any of our employees have any financial interest in the subject properties, and neither the employment to do this work nor the compensation is contingent on our estimates of reserves for the properties which were reviewed.

The results of this audit, presented herein, are based on technical analysis conducted by teams of geoscientists and engineers from Ryder Scott. The professional qualifications of the undersigned, the technical person primarily responsible for overseeing, reviewing and approving the review of the reserves information discussed in this report, are included as an attachment to this letter.

***Terms of Usage***

The results of our third party audit, presented in report form herein, were prepared in accordance with the disclosure requirements set forth in the SEC regulations and intended for public disclosure as an exhibit in filings made with the SEC by CNOOC Limited.

CNOOC makes periodic filings on Form 20-F with the SEC under the 1934 Exchange Act. Furthermore, CNOOC has certain registration statements filed with the SEC under the 1933 Securities Act into which any subsequently filed Form 20-F is incorporated by reference. We have consented to the incorporation by reference in the registration statements on Form F-3 of CNOOC of the references to our name as well as to the references to our third party report for CNOOC, which appears in the December 31, 2019 annual report on Form 20-F of CNOOC. Our written consent for such use is included as a separate exhibit to the filings made with the SEC by CNOOC.

We have provided CEU with a digital version of the original signed copy of this report letter. In the event there are any differences between the digital version included in filings made by CNOOC and the original signed report letter, the original signed report letter shall control and supersede the digital version.

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RYDER SCOTT COMPANY PETROLEUM CONSULTANTS

The data and work papers used in the preparation of this report are available for examination by authorized parties in our offices. Please contact us if we can be of further service.

Very truly yours,

**RYDER SCOTT COMPANY, L.P.**  
TBPE Firm Registration No. F-1580

/s/ Gabrielle Morrow

Gabrielle Morrow, P.E.  
TBPE License No. 109935  
Senior Vice President

[SEAL]

GM (LPC)/pl

cc: Mr. Yong Wang, CEU Reserves Engineer  
Mr. Todd Nicol, CEU Asset Manager  
Ms. Cassidy Fuller, Deloitte LLP

**Professional Qualifications of Primary Technical Person**

The conclusions presented in this report are the result of technical analysis conducted by teams of geoscientists and engineers from Ryder Scott Company, L.P. Gabrielle Guerre Morrow was the primary technical person responsible for overseeing the estimate of the reserves prepared by Ryder Scott presented herein.

Mrs. Morrow, an employee of Ryder Scott Company, L.P. (Ryder Scott) since 2009, is a Senior Vice President responsible for coordinating and supervising staff and consulting engineers of the company in ongoing reservoir evaluation studies worldwide. Before joining Ryder Scott, Mrs. Morrow served in a number of reservoir engineering positions with ExxonMobil. For more information regarding Mrs. Morrow's geographic and job specific experience, please refer to the Ryder Scott Company website at [www.ryderscott.com/Company/Employees](http://www.ryderscott.com/Company/Employees).

Mrs. Morrow earned a Bachelor of Science degree in Mechanical Engineering from Kansas State University in 2005. She was given the department awards, Most Outstanding Engineer and Extraordinary Leadership & Service, upon completion of her degree. Mrs. Morrow is a registered Professional Engineer in the State of Texas. She is also a member of the Society of Petroleum Engineers, where she has served on the Gulf Coast Section Board of Directors for the previous 5 years.

In addition to gaining experience and competency through prior work experience, the Texas Board of Professional Engineers requires a minimum of fifteen hours of continuing education annually, including at least one hour in the area of professional ethics, which Mrs. Morrow fulfills. As part of her 2019 continuing education hours, Mrs. Morrow attended 2 hours of formalized training from various professional society presentations specifically relating to the definitions and disclosure guidelines contained in the United States Securities and Exchange Commission Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register. Mrs. Morrow attended an additional 15 hours of formalized in-house training as well as 5 hours of formalized external training during 2019 covering such topics as the SPE/WPC/AAPG/SPEE Petroleum Resources Management System, reservoir engineering, geoscience and petroleum economics evaluation methods, procedures and software and ethics for consultants.

Based on her educational background, professional training and more than 10 years of practical experience in the estimation and evaluation of petroleum reserves, Mrs. Morrow has attained the professional qualifications as a Reserves Estimator set forth in Article III of the "Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information" promulgated by the Society of Petroleum Engineers as of February 19, 2007.

PETROLEUM RESERVES DEFINITIONS

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

PREAMBLE

On January 14, 2009, the United States Securities and Exchange Commission (SEC) published the “Modernization of Oil and Gas Reporting; Final Rule” in the Federal Register of National Archives and Records Administration (NARA). The “Modernization of Oil and Gas Reporting; Final Rule” includes revisions and additions to the definition section in Rule 4-10 of Regulation S-X, revisions and additions to the oil and gas reporting requirements in Regulation S-K, and amends and codifies Industry Guide 2 in Regulation S-K. The “Modernization of Oil and Gas Reporting; Final Rule”, including all references to Regulation S-X and Regulation S-K, shall be referred to herein collectively as the “SEC regulations”. The SEC regulations take effect for all filings made with the United States Securities and Exchange Commission as of December 31, 2009, or after January 1, 2010. Reference should be made to the full text under Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) for the complete definitions (direct passages excerpted in part or wholly from the aforementioned SEC document are denoted in italics herein).

*Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.* All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves and may be further sub-classified as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. Under the SEC regulations as of December 31, 2009, or after January 1, 2010, a company may optionally disclose estimated quantities of probable or possible oil and gas reserves in documents publicly filed with the SEC. The SEC regulations continue to prohibit disclosure of estimates of oil and gas resources other than reserves and any estimated values of such resources in any document publicly filed with the SEC unless such information is required to be disclosed in the document by foreign or state law as noted in §229.1202 Instruction to Item 1202.

Reserves estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change.

Reserves may be attributed to either natural energy or improved recovery methods. Improved recovery methods include all methods for supplementing natural energy or altering natural forces in the reservoir to increase ultimate recovery. Examples of such methods are pressure maintenance, natural gas cycling, waterflooding, thermal methods, chemical flooding, and the use of miscible and immiscible displacement fluids. Other improved recovery methods may be developed in the future as petroleum technology continues to evolve.

Reserves may be attributed to either conventional or unconventional petroleum accumulations. Petroleum accumulations are considered as either conventional or unconventional based on the nature of their in-place characteristics, extraction method applied, or degree of processing prior to sale. Examples of unconventional petroleum accumulations include coalbed or coalseam methane (CBM/CSM), basin-centered gas, shale gas, gas hydrates, natural bitumen and oil shale deposits. These unconventional accumulations may require specialized extraction technology and/or significant processing prior to sale.

Reserves do not include quantities of petroleum being held in inventory.

Because of the differences in uncertainty, caution should be exercised when aggregating quantities of petroleum from different reserves categories.

**RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(26) defines reserves as follows:

**Reserves.** *Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.*

Note to paragraph (a)(26): *Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (i.e., potentially recoverable resources from undiscovered accumulations).*

**PROVED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(22) defines proved oil and gas reserves as follows:

**Proved oil and gas reserves.** *Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.*

(i) *The area of the reservoir considered as proved includes:*

(A) *The area identified by drilling and limited by fluid contacts, if any, and*

(B) *Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.*

- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.*
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.*
- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:*
  - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and*
  - (B) The project has been approved for development by all necessary parties and entities, including governmental entities.*
- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.*

PETROLEUM RESERVES STATUS DEFINITIONS AND GUIDELINES

As Adapted From:  
RULE 4-10(a) of REGULATION S-X PART 210  
UNITED STATES SECURITIES AND EXCHANGE COMMISSION (SEC)

and

2018 PETROLEUM RESOURCES MANAGEMENT SYSTEM (SPE-PRMS)  
Sponsored and Approved by:  
SOCIETY OF PETROLEUM ENGINEERS (SPE)  
WORLD PETROLEUM COUNCIL (WPC)  
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS (AAPG)  
SOCIETY OF PETROLEUM EVALUATION ENGINEERS (SPEE)  
SOCIETY OF EXPLORATION GEOPHYSICISTS (SEG)  
SOCIETY OF PETROPHYSICISTS AND WELL LOG ANALYSTS (SPWLA)  
EUROPEAN ASSOCIATION OF GEOSCIENTISTS & ENGINEERS (EAGE)

Reserves status categories define the development and producing status of wells and reservoirs. Reference should be made to Title 17, Code of Federal Regulations, Regulation S-X Part 210, Rule 4-10(a) and the SPE-PRMS as the following reserves status definitions are based on excerpts from the original documents (direct passages excerpted from the aforementioned SEC and SPE-PRMS documents are denoted in italics herein).

**DEVELOPED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(6) defines developed oil and gas reserves as follows:

*Developed oil and gas reserves are reserves of any category that can be expected to be recovered:*

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and*
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.*

**Developed Producing (SPE-PRMS Definitions)**

While not a requirement for disclosure under the SEC regulations, developed oil and gas reserves may be further sub-classified according to the guidance contained in the SPE-PRMS as Producing or Non-Producing.

**Developed Producing Reserves**

*Developed Producing Reserves are expected quantities to be recovered from completion intervals that are open and producing at the effective date of the estimate.*

*Improved recovery reserves are considered producing only after the improved recovery project is in operation.*

**Developed Non-Producing**

*Developed Non-Producing Reserves include shut-in and behind-pipe Reserves.*

**Shut-In**

*Shut-in Reserves are expected to be recovered from:*

- (1) completion intervals that are open at the time of the estimate but which have not yet started producing;*
- (2) wells which were shut-in for market conditions or pipeline connections; or*
- (3) wells not capable of production for mechanical reasons.*

**Behind-Pipe**

*Behind-pipe Reserves are expected to be recovered from zones in existing wells that will require additional completion work or future re-completion before start of production with minor cost to access these reserves.*

*In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.*

**UNDEVELOPED RESERVES (SEC DEFINITIONS)**

Securities and Exchange Commission Regulation S-X §210.4-10(a)(31) defines undeveloped oil and gas reserves as follows:

*Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.*

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.*
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.*
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.*

**Independent Letter**

**The Greater Angostura Fields  
Block 2C, Trinidad & Tobago  
Estimated Proved Reserves and Financial Data,  
Based on SEC Rules**

Prepared for

**CNOOC Limited**

**as of 31 December 2019**

**March 2020**

This summary letter is based on Gaffney, Cline & Associates' official report and has been provided at the request of CNOOC Limited.

[www.gaffney-cline.com](http://www.gaffney-cline.com)

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**CNOOC Limited**  
No. 25, Chaoyangmenbei Dajie  
Dongcheng District  
Beijing 100010, P.R. China

Gentlemen,

**Independent Letter**

**The Greater Angostura Fields  
Block 2C, Trinidad & Tobago  
Estimated proved Reserves and Financial Data, Based on SEC Rules  
as of 31 December 2019**

At the request of CNOOC Limited (CNOOC), Gaffney, Cline & Associates (GCA) has prepared an independent estimate of the proved reserves and financial data attributable to certain participating interests owned by CNOOC as of 31 December 2019. The reserves and income data were estimated based on Rules of the United States Securities and Exchange Commission (SEC) contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released 14 January 2009 in the Federal Register, including all references to Regulation S-X and Regulation S-K (SEC Rules). GCA's independent study, completed on 27 February 2020 and summarized herein, was prepared for public disclosure by CNOOC in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC Rules. In GCA's opinion, the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose and have been carried out in line with the SEC Oil and Gas Reserves Definitions attached hereto an Appendix.

The subject properties in Block 2C are located 24 miles offshore east coast of Trinidad & Tobago. Based on information provided by CNOOC, the Proved reserves estimates for properties evaluated by GCA for this report represent approximately 0.18 percent of CNOOC's total net proved reserves as at 31 December 2018. GCA is not in a position to verify this statement as it was not requested to review all CNOOC's other oil and gas assets.

GCA prepared an independent assessment of the reserves based on data and interpretations provided by CNOOC. GCA reviewed the well and reservoir performances employing Decline Curve Analysis (DCA) and material balance techniques. Economic models were constructed based on terms of the PSC as provided by CNOOC, in order to calculate CNOOC's Net Entitlement volumes, which are made up of CNOOC's share of contractors revenue (Petroleum Cost Recovery and Profit Oil) converted to volumetric equivalents.

Based on the 2019 sales price data (January through December) provided by CNOOC, it was noted that the price averaged around US\$59.26/Bbl for the period quoted, on an unweighted average basis. The average Brent price for the same months in 2019 was US\$57.93/Bbl; equating to an average of US\$1.33/Bbl premium to Brent for Block 2C crude. Based on an SEC Brent price of US\$62.53/stb this results in an average sales price of US\$63.86/stb, which has been assumed to remain constant for the duration of the project life.

The gas price forecast, based on the 2019 sales data (January through December) provided by CNOOC, was estimated at US\$2.25/MMBtu, on an unweighted average basis, and this price was maintained for the life of the fields considered in this report. GCA has assumed that 1 Mcf can be converted to 1 MMBtu.

Actual future prices may vary significantly from the prices required by SEC Rules; therefore, volumes of reserves actually recovered and the amounts of income actually received may differ significantly from the estimated quantities presented in this report. The results of this study are summarized in the following table. Reserves net to CNOOC are quoted as Net Entitlement Reserves reflecting the terms of the PSC.

Estimated Net Reserves and Financial Data  
as of 31 December 2019

	Proved			
	Developed		Undeveloped	Total Proved
	Producing	Non-Producing		
Net Reserves				
Oil/Condensate – Mstb	479	-	-	479
Gas – MMscf	53,449	-	-	53,449
Income Data (M\$)				
Future Gross Revenue	\$118,092	-	-	\$118,092
Deductions	\$62,306	-	-	\$62,306
Future Net Income (FNI)	\$55,786	-	-	\$55,786
Discounted FNI @ 10%	\$42,205	-	-	\$42,205

Liquid hydrocarbons are expressed in thousands of standard (42 gallon) barrels (Mstb). All gas volumes are reported on an “as sold basis” expressed in millions of cubic feet (MMscf) at standard temperature (60 °F) and pressure (14.7 psia). In this report, the revenues, deductions and income data are expressed in thousands of US dollars (M\$).

The future gross revenue represents CNOOC’s net entitlement under the PSC (Cost Recovery plus Profit Share). Deductions represent CNOOC’s 12.5% share of project Capital Expenditure, Operating Expenditure and Abandonment Costs (ABEX). Future Net Income represents CNOOC’s Profit Share, net of ABEX, under the terms of the PSC.

The results included herein were prepared in accordance with the disclosure requirements set forth in the SEC Rules and intended for public disclosure as an exhibit in filings made with the SEC by CNOOC.

Basis of Opinion

This document reflects GCA's informed professional judgment based on accepted standards of professional investigation and, as applicable, the data and information provided by CNOOC, the limited scope of engagement, and the time permitted to conduct the evaluation.

In line with those accepted standards, this document does not in any way constitute or make a guarantee or prediction of results, and no warranty is implied or expressed that actual outcome will conform to the outcomes presented herein. GCA has not independently verified any information provided by, or at the direction of, CNOOC, and has accepted the accuracy and completeness of this data. GCA has no reason to believe that any material facts have been withheld, but does not warrant that its inquiries have revealed all of the matters that a more extensive examination might otherwise disclose.

The opinions expressed herein are subject to and fully qualified by the generally accepted uncertainties associated with the interpretation of geoscience and engineering data and do not reflect the totality of circumstances, scenarios and information that could potentially affect decisions made by the report's recipients and/or actual results. The opinions and statements contained in this report are made in good faith and in the belief that such opinions and statements are representative of prevailing physical and economic circumstances.

In the preparation of this report, GCA has used definitions contained within Part 210 Rule 4-10(a) of Regulation S-X of the US Securities and Exchange Commission (see **Appendix I**).

There are numerous uncertainties inherent in estimating reserves and resources, and in projecting future production, development expenditures, operating expenses and cash flows. Oil and gas resources assessments must be recognized as a subjective process of estimating subsurface accumulations of oil and gas that cannot be measured in an exact way. Estimates of oil and gas resources prepared by other parties may differ, perhaps materially, from those contained within this report.

The accuracy of any resource estimate is a function of the quality of the available data and of engineering and geological interpretation. Results of drilling, testing and production that post-date the preparation of the estimates may justify revisions, some or all of which may be material. Accordingly, resource estimates are often different from the quantities of oil and gas that are ultimately recovered, and the timing and cost of those volumes that are recovered may vary from that assumed.

Oil and condensate volumes are reported in millions (10<sup>6</sup>) of barrels at stock tank conditions (MMstb). Natural gas volumes have been quoted in billions (10<sup>9</sup>) of standard cubic feet (Bscf). Standard conditions are defined as 14.7 psia and 60° Fahrenheit.

GCA prepared an independent assessment of the reserves based on data and interpretations provided by CNOOC.

**Definition of Reserves**

Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce, or a revenue interest in, the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.

GCA is not aware of any potential changes in regulations applicable to these fields that could affect the ability of CNOOC to produce the estimated reserves.

Reserves are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by development and production status. All categories of reserves volumes quoted herein have been derived within the context of an economic limit test (ELT) assessment (pre-tax and exclusive of accumulated depreciation amounts) prior to any Net Present Value (NPV) analysis.

Reserves net to CNOOC are quoted as Net Entitlement Reserves, reflecting the terms of the applicable Production Sharing Contract (PSC). Lease fuel has been excluded from the reserve volumes.

GCA has not undertaken a site visit and inspection because it was not necessary and not required within the scope of work. As such, GCA is not in a position to comment on the operations or facilities in place, their appropriateness and condition, or whether they are in compliance with the regulations pertaining to such operations. Further, GCA is not in a position to comment on any aspect of health, safety, or environment of such operation.

This report has been prepared based on GCA's understanding of the effects of petroleum legislation and other regulations that currently apply to these properties. However, GCA is not in a position to attest to property title or rights, conditions of these rights (including environmental and abandonment obligations), or any necessary licenses and consents (including planning permission, financial interest relationships, or encumbrances thereon for any part of the appraised properties).

**Use of Net Present Values**

It should be clearly noted that the Net Present Values (NPV) contained herein do not represent a GCA opinion as to the market value of the subject property, nor any interest in it.

In assessing a likely market value, it would be necessary to take into account a number of additional factors including reserves risk (i.e., that Proved and/or Probable and/or Possible reserves may not be realized within the anticipated timeframe for their exploitation); perceptions of economic and sovereign risk, including potential change in regulations; potential upside; other benefits, encumbrances or charges that may pertain to a particular interest; and, the competitive state of the market at the time. GCA has explicitly not taken such factors into account in deriving the NPV's presented herein.

Qualifications

In performing this study, GCA is not aware that any conflict of interest has existed. As an independent consultancy, GCA is providing impartial technical, commercial, and strategic advice within the energy sector. GCA's remuneration was not in any way contingent on the contents of this report.

In the preparation of this document, GCA has maintained, and continues to maintain, a strict independent consultant-client relationship with CNOOC. Furthermore, the management and employees of GCA have no interest in any of the assets evaluated or are related with the analysis performed, as part of this report.

Staff members who prepared this report hold appropriate professional and educational qualifications and have the necessary levels of experience and expertise to perform the work.

The technical person primarily responsible for overseeing this estimate is Mr. Peter A. Adam. Mr. Adam holds a BSc (Hons) in Engineering, is a member of the Society of Petroleum Engineers and a member of Indonesian Petroleum Association (IPA), is a very experienced Reservoir Engineer and Asset Manager with over 25 years' background in in Field Development Planning, Reservoir Management, Reserves Assessment, Asset Valuations, Economic Analysis and People Development. He has a long history of volunteering for leadership positions within SPE and the IPA, and the recipient of SPE Regional and International awards.

This letter should not be used for purposes other than those for which it is intended. This letter should not be reproduced, either in whole or part, without the written permission of GCA. CNOOC will obtain GCA's prior written or email approval for the use with third parties and context of the use with third parties of any results, statements or opinions expressed by GCA to CNOOC, which are attributed to GCA. Such requirement of approval shall include, but not be confined to, statements or references in documents of a public or semi-public nature such as loan agreements, prospectuses, reserve statements, websites, press releases, etc.

As independent reserve engineers/advisors for CNOOC, GCA hereby confirms that it has granted and not withdrawn its consent to the references to GCA and to the inclusion of information contained in our report entitled "Executive Report for Reserves Estimation of the Greater Angostura Fields in Block 2C, Trinidad & Tobago as at 31 December 2019" dated 27 February 2020 prepared for CNOOC, and to the annexation of our report as an exhibit in CNOOC's annual report on Form 20-F for the fiscal year ended 31 December 2019.

Yours faithfully,

**GAFFNEY, CLINE & ASSOCIATES (CONSULTANTS) PTE LTD**

/s/ Hu Yundong

Project Manager  
Dr Hu Yundong, *Senior Advisor*

/s/ Peter A. Adam

Reviewed by  
Peter A. Adam, *Principle Advisor*

Appendix I SEC  
Reserves Definitions

U.S. SECURITIES AND EXCHANGE COMMISSION (SEC)  
MODERNIZATION OF OIL AND GAS REPORTING<sup>[1]</sup>

Oil and Gas Reserves Definitions and Reporting

(a) **Definitions**

(1) Acquisition of properties. Costs incurred to purchase, lease or otherwise acquire a property, including costs of lease bonuses and options to purchase or lease properties, the portion of costs applicable to minerals when land including mineral rights is purchased in fee, brokers' fees, recording fees, legal costs, and other costs incurred in acquiring properties.

(2) Analogous reservoir. Analogous reservoirs, as used in resources assessments, have similar rock and fluid properties, reservoir conditions (depth, temperature, and pressure) and drive mechanisms, but are typically at a more advanced stage of development than the reservoir of interest and thus may provide concepts to assist in the interpretation of more limited data and estimation of recovery. When used to support proved reserves, an "analogous reservoir" refers to a reservoir that shares the following characteristics with the reservoir of interest:

- (i) Same geological formation (but not necessarily in pressure communication with the reservoir of interest);
- (ii) Same environment of deposition;
- (iii) Similar geological structure; and
- (iv) Same drive mechanism.

Instruction to paragraph (a)(2): Reservoir properties must, in the aggregate, be no more favorable in the analog than in the reservoir of interest.

(3) Bitumen. Bitumen, sometimes referred to as natural bitumen, is petroleum in a solid or semi-solid state in natural deposits with a viscosity greater than 10,000 centipoise measured at original temperature in the deposit and atmospheric pressure, on a gas free basis. In its natural state it usually contains sulfur, metals, and other non-hydrocarbons.

(4) Condensate. Condensate is a mixture of hydrocarbons that exists in the gaseous phase at original reservoir temperature and pressure, but that, when produced, is in the liquid phase at surface pressure and temperature.

(5) Deterministic estimate. The method of estimating reserves or resources is called deterministic when a single value for each parameter (from the geoscience, engineering, or economic data) in the reserves calculation is used in the reserves estimation procedure.

(6) Developed oil and gas reserves. Developed oil and gas reserves are reserves of any category that can be expected to be recovered:

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.

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<sup>1</sup> Extracted from 17 CFR Parts 210, 211, 229, and 249 [Release Nos. 33-8995; 34-59192; FR-78; File No. S7-15-08] RIN 3235-AK00].

(7) Development costs. Costs incurred to obtain access to proved reserves and to provide facilities for extracting, treating, gathering and storing the oil and gas. More specifically, development costs, including depreciation and applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:

- (i) Gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines, and power lines, to the extent necessary in developing the proved reserves.
- (ii) Drill and equip development wells, development-type stratigraphic test wells, and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment, and the wellhead assembly.
- (iii) Acquire, construct, and install production facilities such as lease flow lines, separators, treaters, heaters, manifolds, measuring devices, and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems.
- (iv) Provide improved recovery systems.

(8) Development project. A development project is the means by which petroleum resources are brought to the status of economically producible. As examples, the development of a single reservoir or field, an incremental development in a producing field, or the integrated development of a group of several fields and associated facilities with a common ownership may constitute a development project.

(9) Development well. A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

(10) Economically producible. The term economically producible, as it relates to a resource, means a resource which generates revenue that exceeds, or is reasonably expected to exceed, the costs of the operation. The value of the products that generate revenue shall be determined at the terminal point of oil and gas producing activities as defined in paragraph (a)(16) of this section.

(11) Estimated ultimate recovery (EUR). Estimated ultimate recovery is the sum of reserves remaining as of a given date and cumulative production as of that date.

(12) Exploration costs. Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects of containing oil and gas reserves, including costs of drilling exploratory wells and exploratory-type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to in pail as prospecting costs) and after acquiring the property. Principal types of exploration costs, which include depreciation and applicable operating costs of support equipment and facilities and other costs of exploration activities, are:

- (i) Costs of topographical, geographical and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews, and others conducting those studies. Collectively, these are sometimes referred to as geological and geophysical or "G&G" costs.

- (ii) Costs of carrying and retaining undeveloped properties, such as delay rentals, ad valorem taxes on properties, legal costs for title defense, and the maintenance of land and lease records.
  - (iii) Dry hole contributions and bottom hole contributions.
  - (iv) Costs of drilling and equipping exploratory wells.
  - (v) Costs of drilling exploratory-type stratigraphic test wells.
- (13) Exploratory well. An exploratory well is a well drilled to find a new field or to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, a service well, or a stratigraphic test well as those items are defined in this section.
- (14) Extension well. An extension well is a well drilled to extend the limits of a known reservoir.
- (15) Field. An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. There may be two or more reservoirs in a field which are separated vertically by intervening impervious strata, or laterally by local geologic barriers, or by both. Reservoirs that are associated by being in overlapping or adjacent fields may be treated as a single or common operational field. The geological terms "structural feature" and "stratigraphic condition" are intended to identify localized geological features as opposed to the broader terms of basins, trends, provinces, plays, areas-of-interest, etc.
- (16) Oil and gas producing activities.
- (i) Oil and gas producing activities include:
    - (A) The search for crude oil, including condensate and natural gas liquids, or natural gas ("oil and gas") in their natural states and original locations;
    - (B) The acquisition of property rights or properties for the purpose of further exploration or for the purpose of removing the oil or gas from such properties;
    - (C) The construction, drilling, and production activities necessary to retrieve oil and gas from their natural reservoirs, including the acquisition, construction, installation, and maintenance of field gathering and storage systems, such as:
      - (1) Lifting the oil and gas to the surface; and
      - (2) Gathering, treating, and field processing (as in the case of processing gas to extract liquid hydrocarbons); and
    - (D) Extraction of saleable hydrocarbons, in the solid, liquid, or gaseous state, from oil sands, shale, coalbeds, or other nonrenewable natural resources which are intended to be upgraded into synthetic oil or gas, and activities undertaken with a view to such extraction.
- Instruction 1 to paragraph (a)(16)(i): The oil and gas production function shall be regarded as ending at a "terminal point", which is the outlet valve on the lease or field storage tank. If unusual physical or operational circumstances exist, it may be appropriate to regard the terminal point for the production function as:
- a. The first point at which oil, gas, or gas liquids, natural or synthetic, are delivered to a main pipeline, a common carrier, a refinery, or a marine terminal; and

- b. In the case of natural resources that are intended to be upgraded into synthetic oil or gas, if those natural resources are delivered to a purchaser prior to upgrading, the first point at which the natural resources are delivered to a main pipeline, a common carrier, a refinery, a marine terminal, or a facility which upgrades such natural resources into synthetic oil or gas.

Instruction 2 to paragraph (a)(16)(i): For purposes of this paragraph (a)(16), the term saleable hydrocarbons means hydrocarbons that are saleable in the state in which the hydrocarbons are delivered.

- (ii) Oil and gas producing activities do not include:
- (A) Transporting, refining, or marketing oil and gas;
  - (B) Processing of produced oil, gas or natural resources that can be upgraded into synthetic oil or gas by a registrant that does not have the legal right to produce or a revenue interest in such production;
  - (C) Activities relating to the production of natural resources other than oil, gas, or natural resources from which synthetic oil and gas can be extracted; or
  - (D) Production of geothermal steam.

(17) Possible reserves. Possible reserves are those additional reserves that are less certain to be recovered than probable reserves.

- (i) When deterministic methods are used, the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves. When probabilistic methods are used, there should be at least a 10% probability that the total quantities ultimately recovered will equal or exceed the proved plus probable plus possible reserves estimates.
- (ii) Possible reserves may be assigned to areas of a reservoir adjacent to probable reserves where data control and interpretations of available data are progressively less certain. Frequently, this will be in areas where geoscience and engineering data are unable to define clearly the area and vertical limits of commercial production from the reservoir by a defined project.
- (iii) Possible reserves also include incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than the recovery quantities assumed for probable reserves.
- (iv) The proved plus probable and proved plus probable plus possible reserves estimates must be based on reasonable alternative technical and commercial interpretations within the reservoir or subject project that are clearly documented, including comparisons to results in successful similar projects.
- (v) Possible reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from proved areas by faults with displacement less than formation thickness or other geological discontinuities and that have not been penetrated by a wellbore, and the registrant believes that such adjacent portions are in communication with the known (proved) reservoir. Possible reserves may be assigned to areas that are structurally higher or lower than the proved area if these areas are in communication with the proved reservoir.

- (vi) Pursuant to paragraph (a)(22)(iii) of this section, where direct observation has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves should be assigned in the structurally higher portions of the reservoir above the HKO only if the higher contact can be established with reasonable certainty through reliable technology. Portions of the reservoir that do not meet this reasonable certainty criterion may be assigned as probable and possible oil or gas based on reservoir fluid properties and pressure gradient interpretations.

(18) Probable reserves. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.

- (i) When deterministic methods are used, it is as likely as not that actual remaining quantities recovered will exceed the sum of estimated proved plus probable reserves. When probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the proved plus probable reserves estimates.
- (ii) Probable reserves may be assigned to areas of a reservoir adjacent to proved reserves where data control or interpretations of available data are less certain, even if the interpreted reservoir continuity of structure or productivity does not meet the reasonable certainty criterion. Probable reserves may be assigned to areas that are structurally higher than the proved area if these areas are in communication with the proved reservoir.
- (iii) Probable reserves estimates also include potential incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than assumed for proved reserves.
- (iv) See also guidelines in paragraphs (a)(17)(iv) and (a)(17)(vi) of this section.

(19) Probabilistic estimate. The method of estimation of reserves or resources is called probabilistic when the full range of values that could reasonably occur for each unknown parameter (from the geoscience and engineering data) is used to generate a full range of possible outcomes and their associated probabilities of occurrence.

(20) Production costs.

- (i) Costs incurred to operate and maintain wells and related equipment and facilities, including depreciation and applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities, they become part of the cost of oil and gas produced. Examples of production costs (sometimes called lifting costs) are:
  - (A) Costs of labor to operate the wells and related equipment and facilities.
  - (B) Repairs and maintenance.
  - (C) Materials, supplies, and fuel consumed and supplies utilized in operating the wells and related equipment and facilities.

- (D) Property taxes and insurance applicable to proved properties and wells and related equipment and facilities.
- (E) Severance taxes.
- (ii) Some support equipment or facilities may serve two or more oil and gas producing activities and may also serve transportation, refining, and marketing activities. To the extent that the support equipment and facilities are used in oil and gas producing activities, their depreciation and applicable operating costs become exploration, development or production costs, as appropriate. Depreciation, depletion, and amortization of capitalized acquisition, exploration, and development costs are not production costs but also become part of the cost of oil and gas produced along with production (lifting) costs identified above.
- (21) Proved area. The part of a property to which proved reserves have been specifically attributed.
- (22) Proved oil and gas reserves. Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.
  - (i) The area of the reservoir considered as proved includes:
    - (A) The area identified by drilling and limited by fluid contacts, if any, and
    - (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.
  - (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
  - (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
  - (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
    - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and

- (B) The project has been approved for development by all necessary parties and entities, including governmental entities.
- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.
- (23) Proved properties. Properties with proved reserves.
- (24) Reasonable certainty. If deterministic methods are used, reasonable certainty means a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. A high degree of confidence exists if the quantity is much more likely to be achieved than not, and, as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.
- (25) Reliable technology. Reliable technology is a grouping of one or more technologies (including computational methods) that has been field tested and has been demonstrated to provide reasonably certain results with consistency and repeatability in the formation being evaluated or in an analogous formation.
- (26) Reserves. Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.
- Note to paragraph (a)(26): Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (*i.e.*, absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (*i.e.*, potentially recoverable resources from undiscovered accumulations).
- (27) Reservoir. A porous and permeable underground formation containing a natural accumulation of producible oil and/or gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs.
- (28) Resources. Resources are quantities of oil and gas estimated to exist in naturally occurring accumulations. A portion of the resources may be estimated to be recoverable, and another portion may be considered to be unrecoverable. Resources include both discovered and undiscovered accumulations.
- (29) Service well. A well drilled or completed for the purpose of supporting production in an existing field. Specific purposes of service wells include gas injection, water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for in-situ combustion.

(30) Stratigraphic test well. A stratigraphic test well is a drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Such wells customarily are drilled without the intent of being completed for hydrocarbon production. The classification also includes tests identified as core tests and all types of expendable holes related to hydrocarbon exploration. Stratigraphic tests are classified as “exploratory type” if not drilled in a known area or “development type” if drilled in a known area.

(31) Undeveloped oil and gas reserves. Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.

(32) Unproved properties. Properties with no proved reserves.

## **Independent Letter**

### **The Missan Oil Fields In Eastern Iraq Estimated Proved Reserves and Financial Data, Based on SEC Rules**

Prepared for

**CNOOC Limited**

as of 31 December 2019

**March 2020**

This summary letter is based on Gaffney, Cline & Associates' official report and has been provided at the request of CNOOC Limited.

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**CNOOC Limited**  
No. 25, Chaoyangmenbei Dajie  
Dongcheng District  
Beijing 100010, P.R. China

Gentlemen,

**Independent Letter**

**The Missan Oil Fields in Eastern Iraq  
Estimated proved Reserves and Financial Data, Based on SEC Rules  
as of 31 December 2019**

At the request of CNOOC Limited (CNOOC), Gaffney, Cline & Associates (GCA) has prepared an independent estimate of the proved reserves and financial data attributable to certain participating interests owned by CNOOC as of 31 December 2019. The reserves and income data were estimated based on Rules of the United States Securities and Exchange Commission (SEC) contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released 14 January 2009 in the Federal Register, including all references to Regulation S-X and Regulation S-K (SEC Rules). GCA's independent study, completed on 27 February 2020 and summarized herein, was prepared for public disclosure by CNOOC in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC Rules. In GCA's opinion, the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose and have been carried out in line with the SEC Oil and Gas Reserves Definitions attached hereto as an Appendix.

The subject properties of the Missan Oil Fields (Missan) are located in eastern Iraq, 350 km southeast of Baghdad. Based on information provided by CNOOC, the Proved reserves estimates for properties evaluated by GCA for this report represent approximately 0.99 percent of CNOOC's total net proved reserves as of 31 December 2019. GCA is not in a position to verify this statement as it was not requested to review all CNOOC's other oil and gas assets.

CNOOC have signed a 20-year Technical Service Contract (TSC) with the Missan Oil Company of the Iraqi Ministry of Oil (MOC) for the rehabilitation of production and enhanced recovery of petroleum from Missan. CNOOC is the lead contractor of, and holds a 63.75% participating interest in, the project.

The oil reserves and financial data reported herein were estimated on the basis of SEC Rules. GCA has classified as Reserves those hydrocarbon volumes that would be economically recoverable as a result of implementing the Rehabilitation Plan only.

In line with the foregoing, the statement of reserves, presented herein, is economically recoverable as a result of implementing the 2020 well drilling schedule and WO operation plans, not including any volumes that could be produced as a result of further development under the ERP which are currently classified as Contingent Resources. Details of the ERP have not been provided to GCA at this stage. Therefore, GCA's estimates included in this report are limited to volumes classified as Reserves. As such, the volumes actually recovered under the enlarged plan are expected to be significantly greater than those presented.

Under the terms of the TSC, the Contractor is entitled to use any quantity of Associated Gas from the oil reservoirs necessary for Petroleum Operations and for power generation. However, all Associated Gas that is not used in Petroleum Operations or for power generation "shall be delivered unprocessed to MOC". Thus, the contractor has no entitlement to any gas reserves.

Economic models were constructed based on terms of the TSC as provided by CNOOC and the current performance of the TSC, in order to calculate CNOOC's Net Entitlement volumes, which are made up of CNOOC's share of Service Fees (Petroleum Cost Recovery and Remuneration Fees) plus Supplementary Fees, converted to volumetric equivalents.

The oil price used in the cashflow analysis was determined by calculating the average quality differential between the SEC Brent price (the average first-day-of-the-month Brent Crude price for each month in 2019) and the Iraq average oil price as published by the State Oil Marketing Organization of Iraq (SOMO) for each month in 2019 and applying the average differential to the SEC Brent price. Based on the data made available to GCA for January to December 2019, the 2019 average differential to SEC Brent was a US\$1.68/stb discount. Based on an SEC Brent price of US\$62.53/stb this results in an average sales price of US\$60.85/stb, which has been assumed to remain constant for the duration of the project life.

Future capital costs were derived from the 2020 development plan prepared by CNOOC for the field. Recent historical operating expense data were utilised as the basis for operating cost projections. GCA found that CNOOC has projected sufficient capital investments and operating expenses to produce economically the projected volumes recoverable from the 2020 - 2021 development activities.

Actual future prices may vary significantly from the prices required by SEC Rules; therefore, volumes of reserves actually recovered and the amounts of income actually received may differ significantly from the estimated quantities presented in this report. The results of this study are summarized in the following table. Reserves net to CNOOC are quoted as Net Entitlement Reserves reflecting the terms of the TSC.

Liquid hydrocarbons are expressed in thousands of standard (42 gallon) barrels (Mstb). In this report, the revenues, deductions and income data are expressed in thousands of US dollars (M\$).

The future gross revenue represents CNOOC's net entitlement share of Service Fees (Petroleum Cost Recovery plus Remuneration Fees) due under the Technical Service Contract (TSC). Deductions represent CNOOC's 85% (i.e. 63.75%/75% of total project) share of project Capital Expenditure, Operating Expenditure, contractual Supplementary Costs, State partner 'carry' and Training Fees. Future Net Income represents CNOOC's Future Gross Revenue less costs incurred, and on a post-tax basis, under the terms of the TSC.

Estimated Net Reserves and Financial Data  
as of 31 December 2019

	Proved			
	Developed		Undeveloped	Total Proved
	Producing	Non-Producing		
Net Reserves				
Oil/Condensate – Mstb	22,987	3,527	24,777	51,291
Income Data (M\$)				
Future Gross Revenue	\$1,398,743	\$214,629	\$1,507,670	\$3,121,042
Deductions	\$959,874	\$202,743	\$1,429,796	\$2,592,413
Future Net Income (FNI)	\$438,870	\$11,886	\$77,874	\$528,630
Discounted FNI @ 10%	\$400,381	\$6,473	\$34,067	\$440,920

The results included herein were prepared in accordance with the disclosure requirements set forth in the SEC Rules and intended for public disclosure as an exhibit in filings made with the SEC by CNOOC.

Basis of Opinion

This document reflects GCA's informed professional judgment based on accepted standards of professional investigation and, as applicable, the data and information provided by CNOOC, the limited scope of engagement, and the time permitted to conduct the evaluation.

In line with those accepted standards, this document does not in any way constitute or make a guarantee or prediction of results, and no warranty is implied or expressed that actual outcome will conform to the outcomes presented herein. GCA has not independently verified any information provided by, or at the direction of, CNOOC, and has accepted the accuracy and completeness of this data. GCA has no reason to believe that any material facts have been withheld, but does not warrant that its inquiries have revealed all of the matters that a more extensive examination might otherwise disclose.

The opinions expressed herein are subject to and fully qualified by the generally accepted uncertainties associated with the interpretation of geoscience and engineering data and do not reflect the totality of circumstances, scenarios and information that could potentially affect decisions made by the report's recipients and/or actual results. The opinions and statements contained in this report are made in good faith and in the belief that such opinions and statements are representative of prevailing physical and economic circumstances.

In the preparation of this report, GCA has used definitions contained within Part 210 Rule 4-10(a) of Regulation S-X of the US Securities and Exchange Commission (see **Appendix I**).

There are numerous uncertainties inherent in estimating reserves and resources, and in projecting future production, development expenditures, operating expenses and cash flows. Oil and gas resources assessments must be recognized as a subjective process of estimating subsurface accumulations of oil and gas that cannot be measured in an exact way. Estimates of oil and gas resources prepared by other parties may differ, perhaps materially, from those contained within this report.

The accuracy of any resources estimate is a function of the quality of the available data and of engineering and geological interpretation. Results of drilling, testing and production that post-date the preparation of the estimates may justify revisions, some or all of which may be material. Accordingly, resource estimates are often different from the quantities of oil and gas that are ultimately recovered, and the timing and cost of those volumes that are recovered may vary from that assumed.

Oil and condensate volumes are reported in thousands of standard barrels at stock tank conditions (Mstb). Standard conditions are defined as 14.7 psia and 60° Fahrenheit.

GCA prepared an independent assessment of the reserves based on data and interpretations provided by CNOOC.

**Definition of Reserves**

Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce, or a revenue interest in, the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.

GCA is not aware of any potential changes in regulations applicable to these fields that could affect the ability of CNOOC to produce the estimated reserves.

Reserves are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by development and production status. All categories of reserves volumes quoted herein have been derived within the context of an economic limit test (ELT) assessment (pre-tax and exclusive of accumulated depreciation amounts) prior to any Net Present Value (NPV) analysis.

Reserves net to CNOOC are quoted as Net Entitlement Reserves, reflecting the terms of the applicable Technical Service Contract (TSC). Lease fuel has been excluded from the reserve volumes.

GCA has not undertaken a site visit and inspection because it was not necessary and not required within the scope of work. As such, GCA is not in a position to comment on the operations or facilities in place, their appropriateness and condition, or whether they are in compliance with the regulations pertaining to such operations. Further, GCA is not in a position to comment on any aspect of health, safety, or environment of such operation.

This report has been prepared based on GCA's understanding of the effects of petroleum legislation and other regulations that currently apply to these properties. However, GCA is not in a position to attest to property title or rights, conditions of these rights (including environmental and abandonment obligations), or any necessary licenses and consents (including planning permission, financial interest relationships, or encumbrances thereon for any part of the appraised properties).

Use of Net Present Values

It should be clearly noted that the Net Present Values (NPV) contained herein do not represent a GCA opinion as to the market value of the subject property, nor any interest in it.

In assessing a likely market value, it would be necessary to take into account a number of additional factors including reserves risk (i.e., that Proved and/or Probable and/or Possible reserves may not be realized within the anticipated timeframe for their exploitation); perceptions of economic and sovereign risk, including potential change in regulations; potential upside; other benefits, encumbrances or charges that may pertain to a particular interest; and, the competitive state of the market at the time. GCA has explicitly not taken such factors into account in deriving the NPVs presented herein.

Qualifications

In performing this study, GCA is not aware that any conflict of interest has existed. As an independent consultancy, GCA is providing impartial technical, commercial, and strategic advice within the energy sector. GCA’s remuneration was not in any way contingent on the contents of this report.

In the preparation of this document, GCA has maintained, and continues to maintain, a strict independent consultant-client relationship with CNOOC. Furthermore, the management and employees of GCA have no interest in any of the assets evaluated or are related with the analysis performed, as part of this report.

Staff members who prepared this report hold appropriate professional and educational qualifications and have the necessary levels of experience and expertise to perform the work.

The technical person primarily responsible for overseeing this estimate is Mr. Peter A. Adam. Mr. Adam holds a BSc (Hons) in Engineering, is a member of the Society of Petroleum Engineers and a member of Indonesian Petroleum Association (IPA), is a very experienced Reservoir Engineer and Asset Manager with over 25 years’ background in in Field Development Planning, Reservoir Management, Reserves Assessment, Asset Valuations, Economic Analysis and People Development. He has a long history of volunteering for leadership positions within SPE and the IPA, and the recipient of SPE Regional and International awards.

This letter should not be used for purposes other than those for which it is intended. This letter should not be reproduced, either in whole or part, without the written permission of GCA. CNOOC will obtain GCA’s prior written or email approval for the use with third parties and context of the use with third parties of any results, statements or opinions expressed by GCA to CNOOC, which are attributed to GCA. Such requirement of approval shall include, but not be confined to, statements or references in documents of a public or semi-public nature such as loan agreements, prospectuses, reserve statements, websites, press releases, etc.

As independent reserve engineers/advisors for CNOOC, GCA hereby confirms that it has granted and not withdrawn its consent to the references to GCA and to the inclusion of information contained in our report entitled “Executive Report for Reserves Estimation of the Missan Oil Fields in Eastern Iraq as of 31 December 2019” dated 27 February 2020 prepared for CNOOC, and to the annexation of our report as an exhibit in CNOOC’s annual report on Form 20-F for the fiscal year ended 31 December 2019.

Yours faithfully,  
**Gaffney, Cline & Associates (Consultants) Pte Ltd**

/s/ Hu Yundong

\_\_\_\_\_  
Project Manager  
Dr Hu Yundong, *Senior Advisor*

/s/ Peter A. Adam

\_\_\_\_\_  
Reviewed by  
Peter A. Adam, *Principle Advisor*

**Appendix I** SEC Reserves Definitions

Appendix I  
SEC Reserves Definitions

U.S. SECURITIES AND EXCHANGE COMMISSION (SEC)  
MODERNIZATION OF OIL AND GAS REPORTING<sup>1</sup>

Oil and Gas Reserves Definitions and Reporting

(a) **Definitions**

(1) Acquisition of properties. Costs incurred to purchase, lease or otherwise acquire a property, including costs of lease bonuses and options to purchase or lease properties, the portion of costs applicable to minerals when land including mineral rights is purchased in fee, brokers' fees, recording fees, legal costs, and other costs incurred in acquiring properties.

(2) Analogous reservoir. Analogous reservoirs, as used in resources assessments, have similar rock and fluid properties, reservoir conditions (depth, temperature, and pressure) and drive mechanisms, but are typically at a more advanced stage of development than the reservoir of interest and thus may provide concepts to assist in the interpretation of more limited data and estimation of recovery. When used to support proved reserves, an "analogous reservoir" refers to a reservoir that shares the following characteristics with the reservoir of interest:

- (i) Same geological formation (but not necessarily in pressure communication with the reservoir of interest);
- (ii) Same environment of deposition;
- (iii) Similar geological structure; and
- (iv) Same drive mechanism.

Instruction to paragraph (a)(2): Reservoir properties must, in the aggregate, be no more favorable in the analog than in the reservoir of interest.

(3) Bitumen. Bitumen, sometimes referred to as natural bitumen, is petroleum in a solid or semi-solid state in natural deposits with a viscosity greater than 10,000 centipoise measured at original temperature in the deposit and atmospheric pressure, on a gas free basis. In its natural state it usually contains sulfur, metals, and other non-hydrocarbons.

(4) Condensate. Condensate is a mixture of hydrocarbons that exists in the gaseous phase at original reservoir temperature and pressure, but that, when produced, is in the liquid phase at surface pressure and temperature.

(5) Deterministic estimate. The method of estimating reserves or resources is called deterministic when a single value for each parameter (from the geoscience, engineering, or economic data) in the reserves calculation is used in the reserves estimation procedure.

(6) Developed oil and gas reserves. Developed oil and gas reserves are reserves of any category that can be expected to be recovered:

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and

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<sup>1</sup> Extracted from 17 CFR Parts 210, 211, 229, and 249 [Release Nos. 33-8995; 34-59192; FR-78; File No. S7-15-08] RIN 3235-AK00].

- (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.
- (7) Development costs. Costs incurred to obtain access to proved reserves and to provide facilities for extracting, treating, gathering and storing the oil and gas. More specifically, development costs, including depreciation and applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:
- (i) Gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines, and power lines, to the extent necessary in developing the proved reserves.
  - (ii) Drill and equip development wells, development-type stratigraphic test wells, and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment, and the wellhead assembly.
  - (iii) Acquire, construct, and install production facilities such as lease flow lines, separators, treaters, heaters, manifolds, measuring devices, and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems.
  - (iv) Provide improved recovery systems.
- (8) Development project. A development project is the means by which petroleum resources are brought to the status of economically producible. As examples, the development of a single reservoir or field, an incremental development in a producing field, or the integrated development of a group of several fields and associated facilities with a common ownership may constitute a development project.
- (9) Development well. A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.
- (10) Economically producible. The term economically producible, as it relates to a resource, means a resource which generates revenue that exceeds, or is reasonably expected to exceed, the costs of the operation. The value of the products that generate revenue shall be determined at the terminal point of oil and gas producing activities as defined in paragraph (a)(16) of this section.
- (11) Estimated ultimate recovery (EUR). Estimated ultimate recovery is the sum of reserves remaining as of a given date and cumulative production as of that date.
- (12) Exploration costs. Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects of containing oil and gas reserves, including costs of drilling exploratory wells and exploratory-type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to in pail as prospecting costs) and after acquiring the property. Principal types of exploration costs, which include depreciation and applicable operating costs of support equipment and facilities and other costs of exploration activities, are:
- (i) Costs of topographical, geographical and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews, and others conducting those studies. Collectively, these are sometimes referred to as geological and geophysical or "G&G" costs.

- (ii) Costs of carrying and retaining undeveloped properties, such as delay rentals, ad valorem taxes on properties, legal costs for title defense, and the maintenance of land and lease records.
  - (iii) Dry hole contributions and bottom hole contributions.
  - (iv) Costs of drilling and equipping exploratory wells.
  - (v) Costs of drilling exploratory-type stratigraphic test wells.
- (13) Exploratory well. An exploratory well is a well drilled to find a new field or to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, a service well, or a stratigraphic test well as those items are defined in this section.
- (14) Extension well. An extension well is a well drilled to extend the limits of a known reservoir.
- (15) Field. An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. There may be two or more reservoirs in a field which are separated vertically by intervening impervious strata, or laterally by local geologic barriers, or by both. Reservoirs that are associated by being in overlapping or adjacent fields may be treated as a single or common operational field. The geological terms "structural feature" and "stratigraphic condition" are intended to identify localized geological features as opposed to the broader terms of basins, trends, provinces, plays, areas-of-interest, etc.
- (16) Oil and gas producing activities.
- (i) Oil and gas producing activities include:
    - (A) The search for crude oil, including condensate and natural gas liquids, or natural gas ("oil and gas") in their natural states and original locations;
    - (B) The acquisition of property rights or properties for the purpose of further exploration or for the purpose of removing the oil or gas from such properties;
    - (C) The construction, drilling, and production activities necessary to retrieve oil and gas from their natural reservoirs, including the acquisition, construction, installation, and maintenance of field gathering and storage systems, such as:
      - (1) Lifting the oil and gas to the surface; and
      - (2) Gathering, treating, and field processing (as in the case of processing gas to extract liquid hydrocarbons); and
    - (D) Extraction of saleable hydrocarbons, in the solid, liquid, or gaseous state, from oil sands, shale, coalbeds, or other nonrenewable natural resources which are intended to be upgraded into synthetic oil or gas, and activities undertaken with a view to such extraction.

Instruction 1 to paragraph (a)(16)(i): The oil and gas production function shall be regarded as ending at a "terminal point", which is the outlet valve on the lease or field storage tank. If unusual physical or operational circumstances exist, it may be appropriate to regard the terminal point for the production function as:

- a. The first point at which oil, gas, or gas liquids, natural or synthetic, are delivered to a main pipeline, a common carrier, a refinery, or a marine terminal; and
- b. In the case of natural resources that are intended to be upgraded into synthetic oil or gas, if those natural resources are delivered to a purchaser prior to upgrading, the first point at which the natural resources are delivered to a main pipeline, a common carrier, a refinery, a marine terminal, or a facility which upgrades such natural resources into synthetic oil or gas.

Instruction 2 to paragraph (a)(16)(i): For purposes of this paragraph (a)(16), the term saleable hydrocarbons means hydrocarbons that are saleable in the state in which the hydrocarbons are delivered.

- (ii) Oil and gas producing activities do not include:
  - (A) Transporting, refining, or marketing oil and gas;
  - (B) Processing of produced oil, gas or natural resources that can be upgraded into synthetic oil or gas by a registrant that does not have the legal right to produce or a revenue interest in such production;
  - (C) Activities relating to the production of natural resources other than oil, gas, or natural resources from which synthetic oil and gas can be extracted; or
  - (D) Production of geothermal steam.
- (17) Possible reserves. Possible reserves are those additional reserves that are less certain to be recovered than probable reserves.
  - (i) When deterministic methods are used, the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves. When probabilistic methods are used, there should be at least a 10% probability that the total quantities ultimately recovered will equal or exceed the proved plus probable plus possible reserves estimates.
  - (ii) Possible reserves may be assigned to areas of a reservoir adjacent to probable reserves where data control and interpretations of available data are progressively less certain. Frequently, this will be in areas where geoscience and engineering data are unable to define clearly the area and vertical limits of commercial production from the reservoir by a defined project.
  - (iii) Possible reserves also include incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than the recovery quantities assumed for probable reserves.
  - (iv) The proved plus probable and proved plus probable plus possible reserves estimates must be based on reasonable alternative technical and commercial interpretations within the reservoir or subject project that are clearly documented, including comparisons to results in successful similar projects.
  - (v) Possible reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from proved areas by faults with displacement less than formation thickness or other geological discontinuities and that have not been penetrated by a wellbore, and the registrant believes that such adjacent portions are in communication with the known (proved) reservoir. Possible reserves may be assigned to areas that are structurally higher or lower than the proved area if these areas are in communication with the proved reservoir.

- (vi) Pursuant to paragraph (a)(22)(iii) of this section, where direct observation has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves should be assigned in the structurally higher portions of the reservoir above the HKO only if the higher contact can be established with reasonable certainty through reliable technology. Portions of the reservoir that do not meet this reasonable certainty criterion may be assigned as probable and possible oil or gas based on reservoir fluid properties and pressure gradient interpretations.
- (18) Probable reserves. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.
- (i) When deterministic methods are used, it is as likely as not that actual remaining quantities recovered will exceed the sum of estimated proved plus probable reserves. When probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the proved plus probable reserves estimates.
  - (ii) Probable reserves may be assigned to areas of a reservoir adjacent to proved reserves where data control or interpretations of available data are less certain, even if the interpreted reservoir continuity of structure or productivity does not meet the reasonable certainty criterion. Probable reserves may be assigned to areas that are structurally higher than the proved area if these areas are in communication with the proved reservoir.
  - (iii) Probable reserves estimates also include potential incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than assumed for proved reserves.
  - (iv) See also guidelines in paragraphs (a)(17)(iv) and (a)(17)(vi) of this section.
- (19) Probabilistic estimate. The method of estimation of reserves or resources is called probabilistic when the full range of values that could reasonably occur for each unknown parameter (from the geoscience and engineering data) is used to generate a full range of possible outcomes and their associated probabilities of occurrence.
- (20) Production costs.
- (i) Costs incurred to operate and maintain wells and related equipment and facilities, including depreciation and applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities, they become part of the cost of oil and gas produced. Examples of production costs (sometimes called lifting costs) are:
    - (A) Costs of labor to operate the wells and related equipment and facilities.
    - (B) Repairs and maintenance.
    - (C) Materials, supplies, and fuel consumed and supplies utilized in operating the wells and related equipment and facilities.

(D) Property taxes and insurance applicable to proved properties and wells and related equipment and facilities.

(E) Severance taxes.

- (ii) Some support equipment or facilities may serve two or more oil and gas producing activities and may also serve transportation, refining, and marketing activities. To the extent that the support equipment and facilities are used in oil and gas producing activities, their depreciation and applicable operating costs become exploration, development or production costs, as appropriate. Depreciation, depletion, and amortization of capitalized acquisition, exploration, and development costs are not production costs but also become part of the cost of oil and gas produced along with production (lifting) costs identified above.

(21) Proved area. The part of a property to which proved reserves have been specifically attributed.

(22) Proved oil and gas reserves. Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

- (i) The area of the reservoir considered as proved includes:
  - (A) The area identified by drilling and limited by fluid contacts, if any, and
  - (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.
- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
  - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and

(B) The project has been approved for development by all necessary parties and entities, including governmental entities.

- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

(23) Proved properties. Properties with proved reserves.

(24) Reasonable certainty. If deterministic methods are used, reasonable certainty means a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. A high degree of confidence exists if the quantity is much more likely to be achieved than not, and, as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.

(25) Reliable technology. Reliable technology is a grouping of one or more technologies (including computational methods) that has been field tested and has been demonstrated to provide reasonably certain results with consistency and repeatability in the formation being evaluated or in an analogous formation.

(26) Reserves. Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.

Note to paragraph (a)(26): Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (*i.e.*, absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (*i.e.*, potentially recoverable resources from undiscovered accumulations).

(27) Reservoir. A porous and permeable underground formation containing a natural accumulation of producible oil and/or gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs.

(28) Resources. Resources are quantities of oil and gas estimated to exist in naturally occurring accumulations. A portion of the resources may be estimated to be recoverable, and another portion may be considered to be unrecoverable. Resources include both discovered and undiscovered accumulations.

- (29) Service well. A well drilled or completed for the purpose of supporting production in an existing field. Specific purposes of service wells include gas injection, water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for in-situ combustion.
- (30) Stratigraphic test well. A stratigraphic test well is a drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Such wells customarily are drilled without the intent of being completed for hydrocarbon production. The classification also includes tests identified as core tests and all types of expendable holes related to hydrocarbon exploration. Stratigraphic tests are classified as "exploratory type" if not drilled in a known area or "development type" if drilled in a known area.
- (31) Undeveloped oil and gas reserves. Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.
- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
  - (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.
  - (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.
- (32) Unproved properties. Properties with no proved reserves.

January 31, 2020

CNOOC Limited  
No. 25, Chaoyangmenbei Dajie  
Dongcheng District  
Beijing 100010, P.R. China

Gentlemen:

As per your request, RPS has prepared an estimate of the proved reserves, future production and income attributable to certain leasehold interests owned by CNOOC Limited as of December 31, 2019. The reserves and income data were estimated based on the definitions and disclosure guidelines of the United States Securities and Exchange Commission (SEC) contained in Title 17, Code of Federal Regulations, Modernization of Oil and Gas Reporting, Final Rule released January 14, 2009 in the Federal Register, including all references to Regulation S-X and Regulation S-K (SEC regulations).

Our third party revision, completed on January 31, 2020 and presented herein, was prepared for public disclosure by CNOOC Limited in filings made with the SEC in accordance with the disclosure requirements set forth in the SEC regulations.

The estimated reserves and future net income amounts presented in this report, as of December 31, 2019, are based on the reserve estimate review that RPS performed for PAE’s year-end 2019 reserve report. In our opinion, the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose.

CNOOC Limited holds 50% interest in Bidas Corporation and Bidas Corporation holds 50% interests in PAE. Therefore CNOOC Limited, through Bidas Corporation, owns 25% of participating interests in PAE. The subject properties are located in Argentina and Bolivia, South America. The properties evaluated by RPS account for a portion of CNOOC Limited’s total net proved reserves as of December 31, 2019.

	Area	CNOOC Limited Net WI %
ARGENTINA	Cerro Dragon	25.00%
	Anticlinal Funes	17.50%
	Estancia la Escondida	6.25%
	Piedra Clavada	25.00%
	Koluel Kaike	25.00%
	Acambuco	13.00%
BOLIVIA	Caipipendi	6.25%

Based on information provided by CNOOC, the third party estimate conducted by RPS addresses 5.50% (five point fifty percent) of the Total Proved reserves of CNOOC on a barrel oil equivalent basis (BOE).

The estimated reserves and future net income amounts presented in this report, as of December 31, 2019, are related to hydrocarbon prices. Actual future prices may vary significantly from the prices required by SEC regulations; therefore, volumes of reserves actually recovered and the amounts of income actually received may differ significantly from the estimated quantities presented in this report. The results of this study are summarized in the following table.

SEC PARAMETERS

Estimated Net CNOOC Limited Reserves and Income Data As of December 31, 2019

NET REMAINING RESERVES		Total Argentina	Total Bolivia	Total
Oil/Condensate/ Gasoline Mbbbl	Proved			
	Developed	129,290	3,314	132,604
	Undeveloped	104,524	444	104,968
	Total Proved	233,814	3,758	237,572
GAS MMcf * includes sales & field usage	Proved			
	Developed	208,792	113,216	322,008
	Undeveloped	87,649	14,355	102,004
	Total Proved	296,441	127,571	424,012
GAS Sales MMcf	Proved			
	Developed	111,391	111,565	222,956
	Undeveloped	39,806	14,146	53,952
	Total Proved	151,197	125,711	276,908

Mbbbl = Thousand (10<sup>3</sup>) Barrels; MM cf = Million (10<sup>6</sup>) Cubic Feet

INCOME DATA (MUSS)		Total Argentina	Total Bolivia	Total
Future Net Revenue	Proved			
	Developed	6,673,335	223,873	6,897,208
	Undeveloped	5,247,983	40,271	5,288,254
	Total Proved	11,921,318	264,144	12,185,462
OPEX & CAPEX	Proved			
	Developed	2,782,184	108,321	2,890,505
	Undeveloped	1,969,282	24,142	1,993,424
	Total Proved	4,751,466	132,463	4,883,929
Operating Expenses	Proved			
	Developed	2,383,485	100,011	2,483,496
	Undeveloped	1,037,501	8,949	1,046,450
	Total Proved	3,420,986	108,960	3,529,946
Capital Expenditures	Proved			
	Developed	398,699	8,310	407,009
	Undeveloped	931,781	15,193	946,974
	Total Proved	1,330,480	23,503	1,353,983
Future Net Income (FNI)	Proved			
	Developed	3,891,150	115,551	4,006,701
	Undeveloped	3,278,700	16,129	3,294,829
	Total Proved	7,169,850	131,680	7,301,530
Discounted FNI @ 10 %	Proved			
	Developed	1,928,782	77,669	2,006,451
	Undeveloped	1,012,508	2,261	1,014,769
	Total Proved	2,941,290	79,930	3,021,220

MUSS = Thousand (10<sup>3</sup>) US Dollars



Note: Hydrocarbon liquids are crude oil, condensate and gasoline which are reported in thousands (103) stock tank barrels (Mbbbl). The Condensate and Gasoline estimates are volumes captured during field separation and gas plant processing in the field. The natural gas reserves reported include gas sales and fuel gas. These volumes are reported in million (106) cubic feet (MMcf) at standard conditions of 14.7 psia and 600 Fahrenheit.

In this report, the revenues, deductions and income data are expressed as thousands of U.S. dollars (M\$).

Note: Values by property are shown in Table 1 included in the report.

Note: The future gross revenue is after the deduction of royalty and turnover taxes in Argentina. The deductions also account for the joint venture (JV) terms PAE has with Petrominera del Chubut S.E. (PMC), new JV partner in the Anticlinal Funes field, in which PAE carries all the investments and cost, in return receives a greater share of the production until reimbursed. In Bolivia royalty IDH and YPFB part has been also subtracted.

The deductions incorporate the normal direct costs of operating the wells, recompletion costs, development costs, certain abandonment costs, which are shown as “other” deductions. The future net income is before the deduction of foreign government income taxes and general administrative overhead, and has not been adjusted for outstanding loans that may exist, nor does it include any adjustment for cash on hand or undistributed income.

The discounted future net income shown above was calculated using a discount rate of 10 percent per annum compounded monthly. Future net income was discounted at four other discount rates which were also compounded monthly. These results are shown in summary form as follows:

Total Proved Discounted Future Net Income As of December 31, 2019			
Discount Rate (Percent)	Argentina (MUSS)	Bolivia (MUSS)	Total (MUSS)
7.0%	\$ 3,688,473	\$ 91,690	\$ 3,780,163
8.0%	\$ 3,409,277	\$ 87,493	\$ 3,496,770
9.0%	\$ 3,161,715	\$ 83,581	\$ 3,245,296
10.0%	\$ 2,941,290	\$ 79,930	\$ 3,021,220
11.0%	\$ 2,744,250	\$ 76,519	\$ 2,820,769

The results shown above are presented for your information and should not be construed as our estimate of fair market value.



Reserves Included in This Report

The proved reserves included herein conform to the definition as set forth in the Securities and Exchange Commission’s Rules and Regulations Part 210.4-10(a). An abridged version of the SEC reserves definitions from Part 210.4-10(a) entitled “Petroleum Reserves Definitions” is included as an attachment to this report.

The various proved reserve status categories are defined under the attachment entitled “Petroleum Reserves Definitions” in this report. The proved developed non-producing reserves included herein consist of the shut-in and behind-pipe categories.

Reserves are “estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations.” All reserve estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. The relative degree of uncertainty may be conveyed by placing reserves into one of two principal classifications, either proved or unproved. Unproved reserves are less certain to be recovered than proved reserves, and may be further sub-classified as probable and possible reserves to denote progressively increasing uncertainty in their recoverability. At CNOOC Limited’s request, this report addresses only the proved reserves attributable to the properties evaluated herein.

Proved reserve estimates will generally be revised only as additional geologic or engineering data become available or as economic conditions change. For proved reserves, the SEC states that “as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to the estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease”. Moreover, estimates of proved reserves may be revised as a result of future operations, effects of regulation by governmental agencies or geopolitical or economic risks. Therefore, the proved reserves included in this report are estimates only and should not be construed as being exact quantities, and if recovered, the revenues therefrom, and the actual costs related thereto, could be more or less than the estimated amounts.

Fields located in each contract area have been on production for a number of years and have a significant volume of remaining reserves. An important and extensive development drilling program has been historically maintained for several years, and has been predicted to be continued for developing oil and gas locations, and waterflooding projects in the following years at similar activity levels as in the last years. Given the reservoir performance to date and known information, it is expected that the drilling will be successful and oil production will increase considerably as the program proceeds.



For Cerro Dragón, Piedra Clavada and Koluel Kaike areas there are volumes of Proved Undeveloped Reserves associated with Proved Locations that have been booked for more than 5 years. PAE's continued development activities over the years have created new opportunities that have delayed drilling some of the existing Proved locations. All Proved locations are planned to be drilled in the following 5 years in each area.

The proved reserves reported herein are limited to the period prior to expiration of current contracts providing the legal rights to produce, or a revenue interest in such production, unless evidence indicates that contract renewal is reasonably certain. Furthermore, properties in the different countries may be subjected to significantly varying contractual fiscal terms that affect the net revenue to CNOOC Limited for the production of these volumes. The prices and economic return received for these net volumes can vary significantly based on the terms of these contracts.

Estimates of Reserves

The estimation of reserves involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities in accordance with the definitions set forth by Part 210.4-10(a). The process of estimating the quantities of recoverable oil and gas reserves relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods; (2) volumetric-based methods; and (3) analogy. These methods may be used singularly or in combination by the reserve evaluator in the process of estimating the quantities of reserves. Reserve evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated and the stage of development or producing maturity of the property.

These performance methods include, but may not be limited to, decline curve analysis and material balance which utilized extrapolations of historical production and pressure data available through December 31, 2019 in those cases where such data were considered to be definitive. The volumetric method, analogy or a combination of methods were used where there were inadequate historical performance data to establish a definitive trend and where the use of production performance data as a basis for the reserve estimates was considered to be inappropriate. The volumetric analysis utilized pertinent well and seismic data supplied to RPS by PAE that were available through December 31, 2019. The data utilized from the analogues as well as the well and seismic data incorporated into our volumetric analysis were considered sufficient and appropriate for the purpose thereof.

In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of this data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator.

When a range in the quantity of reserves is identified, the evaluator must determine the uncertainty associated with the incremental quantities of the reserves. Therefore, it is the classification of reserve quantities as proved, probable and/or possible that addresses the inherent uncertainty in the estimated quantities reported. All quantities of reserves within the same reserve class must meet the SEC definitions.

To estimate economically recoverable proved oil and gas reserves and related future net cash flows, we consider many factors and assumptions including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data that cannot be measured directly, economic criteria based on current costs and SEC pricing requirements, and forecasts of future production rates.

PAE has made all of the material accounts, records, geological and other data required for this investigation available to us. In preparing our forecast of future proved production and income, we have relied upon data furnished by PAE, CNOOC's Limited joint venture partner. RPS considers the factual data used in this report appropriate and sufficient for the purpose of preparing the estimates of reserves and future net revenues herein.

Estimates of reserves quantities and their associated reserve class and categories may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of reserves quantities and their associated reserve class and categories may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

In summary, we consider the assumptions, data, methods and analytical procedures used in this report appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate to prepare the estimates of reserves herein. The proved reserves included herein were determined in conformance with SEC regulations. In our opinion, the proved reserves presented in this report comply with the definitions, guidelines and disclosure requirements as required by the SEC regulations.

Future Production Rates

For wells currently on production, our forecasts of future production rates are based on historical performance data. If no production decline trend has been established, future production rates were held constant, or adjusted for the effects of curtailment where appropriate, until a decline in ability to produce was anticipated, in which case an estimated rate of decline was then applied to depletion of the reserves.



If a decline trend has been established, this trend was used as the basis for estimating future production rates.

Test data and other related information were used to estimate the anticipated initial production rates for those wells or locations that are not currently producing. For reserves not yet on production, sales were estimated to commence at an anticipated date furnished by PAE. Wells or locations that are not currently producing may start producing earlier or later than anticipated in our estimates due to unforeseen factors causing a change in the timing to initiate production. Such factors may include delays due to weather, the availability of rigs, the sequence of drilling, completing and/or recompleting wells and/or constraints set by regulatory bodies.

The future production rates from wells currently on production or wells or locations that are not currently producing may be more or less than estimated because of changes including, but not limited to, reservoir performance, operating conditions related to surface facilities, compression and artificial lift, pipeline capacity and/or operating conditions, producing market demand and/or allowable or other constraints set by regulatory bodies.

Hydrocarbon Prices

The hydrocarbon liquid prices for the export and local market used in the preparation of this report are based on the average prices during the 12-month period for the year 2019, determined as the unweighted arithmetic averages of the prices in effect on the first-day-of-the-month for each month within such period. Natural gas prices are based on existing gas contracts, and on the reasonable expectation that such gas contracts, will be extended to the entire life of the concession. For economic runs the gas price used was estimated based on production forecast weighted average taking into consideration both available markets; Residential and Industrial.

Actual future prices may vary significantly from the prices required by SEC regulations; therefore, volumes of reserves actually recovered and the amounts of income actually received may differ significantly from the estimated quantities presented in this report.

The product prices that were actually used to determine the future gross revenue for each property reflect adjustments to the benchmark prices for gravity, quality, local conditions, gathering and transportation fees and/or distance from market, referred to herein as “differentials.” The differentials used in the preparation of this report were furnished by PAE and reviewed by RPS for their reasonableness.

Costs

Operating costs for the leases and wells in this report are based on the operating expense reports of PAE and include only those costs directly applicable to the leases or wells. The operating costs include a portion of general and administrative costs allocated directly to the leases and wells. The operating costs furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of the operating cost data used by PAE. No deduction was made for loan repayments, interest expenses or exploration and development prepayments that were not charged directly to the leases or wells.

Development costs were furnished to us by PAE and are based on authorizations for expenditure for the proposed work or actual costs for similar projects. The development costs furnished to us were accepted as factual data and reviewed by us for their reasonableness; however, we have not conducted an independent verification of these costs. The estimates of the net abandonment costs furnished by PAE were accepted without independent verification. Current costs used by PAE were held constant throughout the life of the properties.

Standards of Independence and Professional Qualification

RPS is a multi-disciplinary consultancy, providing technical, commercial and project management support services in the fields of operations, geoscience, engineering and health, safety and environment to the energy sector worldwide. RPS’s clients around the world include governments, national oil companies, integrated majors, independents, and start-ups, legal and financial institutions.

RPS USA is part of the larger UK based RPS Group plc that employs nearly 5,000 staff based in offices located in the UK, Ireland, the Netherlands, USA, Canada, Australia and Brazil.

As an independent and experienced consultancy company with a global capability, RPS is well qualified to provide both technical and economic assessments of reserves/resources, prospect evaluation, field discoveries and producing fields. In the Oil and Gas Sector, RPS personnel have provided Competent Persons reports for inclusion in both public and private circulars for funding purposes. We have provided investors with confidential valuations and assessments during mergers and acquisitions. Asset appraisal and valuation have always been a core element of RPS consulting business.

As indicated above, this study was based on data supplied by PAE. The supplied information was reviewed for reasonableness from a technical perspective. As is common in oil field situations, basic physical measurements taken over time cannot be verified independently in retrospect. As such, beyond the application of normal professional judgment, such data must be accepted as representative.

The opinions and interpretations presented in this report represent our best technical interpretation of the data made available to us. However, due to the uncertainty inherent in the estimation of all sub-surface parameters, we cannot and do not guarantee the accuracy or correctness of any interpretation and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Except for the provision of professional services on a fee basis, RPS does not have a commercial arrangement with any other person or company involved in the interests that are the subject of this report.



RPS personnel who prepared this report are degreed professionals with the appropriate qualifications and experience to complete the estimate work. RPS and its staff do not claim expertise in accounting, legal and environmental matters, and opinions on such matters do not form part of this report.

Terms of Usage

The results of our third party study, presented in report form herein, were prepared in accordance with the disclosure requirements set forth in the SEC regulations and intended for public disclosure as an exhibit in filings made with the SEC by CNOOC Limited.

Very truly yours,

RPS

/s/ Victor Wayne Taylor [seal]

Victor Wayne Taylor  
PE License# 71417  
Principal Engineer

**DeGolyer and MacNaughton**  
5001 Spring Valley Road  
Suite 800 East  
Dallas, Texas 75244

January 23, 2020

CNOOC Limited  
c/o Suite 2300, 500 Centre St. S.  
Calgary, Alberta, Canada  
T2G 1A6

**Re: Report of Third Party for CNOOC Limited's interest in the Liza Field Offshore Guyana**

Ladies and Gentlemen:

Pursuant to your request, this report of third party presents a reserves audit, as of December 31, 2019, of the estimated net proved oil, condensate, natural gas liquids (NGL), and gas reserves of the Liza field located offshore Guyana with interests represented to be held by CNOOC Limited (CNOOC). This reserves audit was completed on January 23, 2020. CNOOC has represented that these properties account for approximately 1 percent on a net equivalent barrel basis of CNOOC's net proved reserves as of December 31, 2019, and that the net proved reserves estimates have been prepared in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the Securities and Exchange Commission (SEC) of the United States. We have reviewed information provided by CNOOC Petroleum Guyana Limited (CPG), a subsidiary of CNOOC, that it represents to be CNOOC's estimates of the net reserves, as of December 31, 2019, for the same properties as those which we evaluated. This report was prepared in accordance with guidelines specified in Item 1202 (a)(8) of Regulation S–K and is to be used for inclusion in certain SEC filings by CNOOC.

Reserves estimates included herein are expressed as net reserves as represented by CPG. Gross reserves are defined as the total estimated petroleum remaining to be produced from this field after December 31, 2019. Net reserves are defined as that portion of the gross reserves attributable to the interests held by CNOOC after deducting all interests held by others.

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The Liza field in which CNOOC holds an interest is subject to the terms of a Petroleum Agreement between the Government of the Cooperative Republic of Guyana and the joint venture participants. The terms of these agreements generally allow for working interest participants to be reimbursed for portions of capital costs and operating expenses and to share in the profits. The reimbursements and profit proceeds are converted to a barrel of oil equivalent or cubic foot of gas equivalent by dividing by product prices to estimate the "entitlement reserves." These entitlement reserves are equivalent in principle to net reserves and are used to calculate an equivalent net share, termed an "entitlement interest." In this report, CNOOC reserves or interest in these properties subject to this production sharing agreement is the entitlement based on CNOOC's working interest.

Estimates of reserves should be regarded only as estimates that may change as production history and additional information become available. Not only are such estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Information used in this reserves audit was obtained from reviews with CPG personnel and from CPG files. In the preparation of this report we have relied upon such information furnished by CPG with respect to the property interests being evaluated, production from such properties, current costs of operation and development, current prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. Furthermore, if in the course of our examination something came to our attention that brought into question the validity or sufficiency of any such information or data, we did not rely on such information or data until we had satisfactorily resolved our questions relating thereto or had independently verified such information or data. In our opinion, the adequacy and quality of the data provided to us were sufficient for us to conduct this reserves audit. A field examination of the properties was not considered necessary for the purposes of this report.

**Definition of Reserves**

Petroleum reserves estimated by CNOOC included in this report are classified as proved. Only proved reserves have been evaluated for this report. Reserves classifications used by CNOOC in this report are in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the SEC. Reserves are judged to be economically producible in future years from known reservoirs under existing economic and operating conditions and assuming continuation of current regulatory practices using conventional production methods and equipment. In the analyses of production-decline curves, reserves were estimated only to the limit of economic rates of production under existing economic and operating conditions using prices and costs consistent with the effective date of this report, including consideration of changes in existing prices provided only by contractual arrangements but not including escalations based upon future conditions. The petroleum reserves are classified as follows:

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*Proved oil and gas reserves* – Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

- (i) The area of the reservoir considered as proved includes: (A) The area identified by drilling and limited by fluid contacts, if any; and, (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.
  - (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
  - (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
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- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
  - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and, (B) The project has been approved for development by all necessary parties and entities, including governmental entities.
- (v) Existing economic and operating conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

*Developed oil and gas reserves* – Developed oil and gas reserves are reserves of any category that can be expected to be recovered:

- (i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and
  - (ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.
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*Undeveloped oil and gas reserves* – Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances justify a longer time.
- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in Rule 4-10(a)(2) of Regulation S-X, or by other evidence using reliable technology establishing reasonable certainty.

**Methodology and Procedures**

Estimates of reserves were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with the reserves definitions of Rules 4–10(a) (1)–(32) of Regulation S–X of the SEC and with practices generally recognized by the petroleum industry as presented in the publication of the Society of Petroleum Engineers entitled “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (revised June 2019) Approved by the SPE Board on 25 June 2019.” The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

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Based on the current stage of field development, production performance, the development plans provided by CPG on behalf of CNOOC, and analyses of areas offsetting existing wells with test or production data, reserves were classified as proved.

The proved undeveloped reserves estimates were based on opportunities identified in the plan of development provided by CPG on behalf of CNOOC.

CPG has represented that CNOOC's senior management is committed to the Liza Phase 1 and Phase 2 development plan provided by CPG on behalf of CNOOC and that CNOOC has the financial capability to execute the development plan, including the drilling and completion of wells and the installation of equipment and facilities.

The volumetric method was used to estimate the original oil in place (OOIP). Structure maps were prepared to delineate each reservoir, and isopach maps were constructed to estimate reservoir volume. Electrical logs, radioactivity logs, core analyses, and other available data were used to prepare these maps as well as to estimate representative values for porosity and water saturation.

Estimates of ultimate recovery were obtained after applying recovery factors to OOIP. These recovery factors were based on consideration of the type of energy inherent in the reservoirs, analyses of the petroleum, the structural positions of the properties, and the production histories. When applicable, material balance and other engineering methods were used to estimate recovery factors based on an analysis of reservoir performance, including production rate, reservoir pressure, and reservoir fluid properties.

For cases where history-matched dynamic models were available and applicable, model results were used to estimate recovery factors and reserves production forecasts.

Petroleum reserves estimated by CNOOC and evaluated by DeGolyer and MacNaughton are classified as proved and are judged to be economically producible in future years from known reservoirs under existing economic and operating conditions and assuming the continuation of current regulatory practices using conventional production methods and equipment. Reserves were estimated only to the limit of economic production as defined under the Definitions of Reserves heading of this report and prior to the expiration of the 20-year production period of the Petroleum Agreement.

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Data provided by CPG from wells drilled through December 31, 2019, and made available for this reserves audit were used to prepare the reserves estimates herein. These reserves estimates were based on consideration of monthly production data available through December 31, 2019. Cumulative production, as of December 31, 2019, was deducted from the estimated gross ultimate recovery to estimate gross reserves.

Oil and condensate reserves estimated herein are those to be recovered by normal field separation. NGL reserves estimated herein include C<sub>5+</sub> and liquefied petroleum gas (LPG), which consists primarily of propane and butane fractions. NGL reserves are the result of low-temperature plant processing. Oil, condensate, and NGL reserves estimates included in this report are expressed in thousands of barrels (10<sup>3</sup>bbl). In these estimates, 1 barrel equals 42 United States gallons. For reporting purposes, oil and condensate reserves have been estimated separately and are presented herein as a summed quantity.

Currently, there are no plans to process produced gas to recover condensate or NGL; therefore, condensate and NGL reserves were estimated herein to be zero.

Gas quantities estimated herein are expressed as sales gas. Sales gas is defined as the total gas to be produced from the reservoirs, measured at the point of delivery, after reduction for fuel usage, flare, and shrinkage resulting from field separation and processing. Gas reserves estimated herein are reported as sales gas and are expressed in millions of cubic feet (10<sup>6</sup>ft<sup>3</sup>). Gas reserves estimated herein are expressed at a temperature base of 60 degrees Fahrenheit (°F) and at a pressure base of 14.7 pounds per square inch absolute (psia).

Gas quantities are identified by the type of reservoir from which the gas will be produced. Nonassociated gas is gas at initial reservoir conditions with no oil present in the reservoir. Associated gas includes both gas-cap gas and solution gas. Gas-cap gas is gas at initial reservoir conditions and is in communication with an underlying oil zone. Solution gas is gas dissolved in oil at initial reservoir conditions. All gas quantities estimated herein are associated solution gas.

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Currently, there is no market for gas sales from the Liza field; therefore, sales gas reserves were estimated herein to be zero.

At the request of CPG on behalf of CNOOC, sales gas reserves estimated herein were converted to oil equivalent using an energy equivalent factor of 6,000 cubic feet of gas per 1 barrel of oil equivalent. This conversion factor was provided by CPG on behalf of CNOOC.

**Primary Economic Assumptions**

This report has been prepared using initial prices, expenses, and costs provided by CPG on behalf of CNOOC in United States dollars (U.S.\$). Future prices were estimated using guidelines established by the SEC and the Financial Accounting Standards Board (FASB). The following economic assumptions were used for estimating the reserves reported herein:

*Oil Prices*

CPG, on behalf of CNOOC, has represented that the oil prices were based on a reference price, calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, unless prices are defined by contractual agreements. To account for quality and transportation costs, CPG, on behalf of CNOOC, provided price differentials to a Brent reference price of U.S.\$62.66 per barrel and the prices were held constant thereafter. The volume-weighted average price attributable to the estimated proved reserves over the life of the field was U.S.\$61.40 per barrel of oil.

*Operating Expenses, Capital Costs, and Abandonment Costs*

Estimates of operating expenses, provided by CPG on behalf of CNOOC and based on current expenses, were held constant for the lives of the properties. Future capital expenditures were estimated using 2019 values, provided by CPG on behalf of CNOOC, and were not adjusted for inflation. In certain cases, future expenditures, either higher or lower than current expenditures, may have been used because of anticipated changes in operating conditions, but no general escalation that might result from inflation was applied. Abandonment costs, which are those costs associated with the removal of equipment, plugging of wells, and reclamation and restoration associated with the abandonment, were provided by CPG on behalf of CNOOC and were not adjusted for inflation. Operating expenses, capital costs, and abandonment costs were considered, as appropriate, in determining the economic viability of undeveloped reserves estimated herein.

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In our opinion, the information relating to estimated proved reserves of oil, condensate, natural gas liquids, and gas contained in this report has been prepared in accordance with Paragraphs 932-235-50-4, 932-235-50-6, 932-235-50-7, and 932-235-50-9, of the Accounting Standards Update 932-235-50, *Extractive Industries – Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures* (January 2010) of the Financial Accounting Standards Board and Rules 4–10(a) (1)–(32) of Regulation S–X and Rules 302(b), 1201, 1202(a)(1), (2), (3), (4), (5), (8), and 1203(a) of Regulation S–K of the Securities and Exchange Commission, provided however, that estimates of proved developed and proved undeveloped reserves are not presented at the beginning of the year.

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Summary of Conclusions

CPG, on behalf of CNOOC, has represented that its estimated net proved reserves attributable to the evaluated properties were based on the definition of proved reserves of the SEC. The CNOOC net proved reserves attributable to the Liza field offshore Guyana, as of December 31, 2019, and which represent approximately 1 percent of total CNOOC net reserves on a net equivalent barrel basis, are summarized as follows, expressed in thousands of barrels (10<sup>3</sup>bbl), millions of cubic feet (10<sup>6</sup>ft<sup>3</sup>), and thousands of barrels of oil equivalent (10<sup>3</sup>boe):

	Estimated by CNOOC Net Proved Reserves as of December 31, 2019			
	Oil and Condensate (10 <sup>3</sup> bbl)	NGL (10 <sup>3</sup> bbl)	Sales Gas (10 <sup>6</sup> ft <sup>3</sup> )	Oil Equivalent (10 <sup>3</sup> boe)
Proved				
Developed	25,164	0	0	25,164
Undeveloped	48,345	0	0	48,345
Total	73,510	0	0	73,510

- Notes:
1. Sales gas reserves estimated herein were converted to oil equivalent using an energy equivalent factor of 6,000 cubic feet of gas per 1 barrel of oil equivalent.
  2. CNOOC has represented that the estimates of net proved reserves provided herein are accurate and that totals may vary due to rounding.

In comparing the detailed net proved reserves estimates prepared by DeGolyer and MacNaughton and by CNOOC, differences have been found, both positive and negative, when compared on the basis of net equivalent barrels. It is DeGolyer and MacNaughton's opinion that the net proved reserves estimates prepared by CNOOC on the properties evaluated and referred to above, when compared on the basis of net equivalent barrels, in aggregate, are reasonable because they reflect a difference of not more than plus or minus 10 percent from those prepared by DeGolyer and MacNaughton.

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CNOOC's reserves were estimated assuming the continuation of the current regulatory environment. Changes in the regulatory environment by host governments may affect the operating environment and oil and gas reserves estimates of industry participants. Such regulatory changes could include increased mandatory government participation in producing contracts, changes in royalty terms, cancellation or amendment of contract rights, or expropriation or nationalization of property. While the industry is subject to regulatory changes that could affect an industry participant's ability to recover its reserves, we are not aware of any such governmental actions which would restrict the recovery of the December 31, 2019, estimated reserves.

DeGolyer and MacNaughton is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. This report does not constitute a legal or accounting opinion. DeGolyer and MacNaughton does not have any financial interest, including stock ownership, in CNOOC or CPG. Our fees were not contingent on the results of our reserves audit. This report has been prepared at the request of CPG on behalf of CNOOC. DeGolyer and MacNaughton has used all assumptions, data, procedures, and methods that it considers necessary and appropriate to prepare this report.

Submitted,

/s/ DeGolyer and MacNaughton

DeGOLYER and MacNAUGHTON  
Texas Registered Engineering Firm F-716

/s/ Thomas C. Pence, P.E

Thomas C. Pence, P.E.  
Senior Vice President  
DeGolyer and MacNaughton

[SEAL]

CC: Mr. Michael Guardia, Sr. Manager – Subsurface Technical, International Development (CNOOC International Limited)  
Mr. Keith Henderson, VP – International Developments, Global Exploration and International Developments (CNOOC International Limited)  
Ms. Cassidy Fuller, Deloitte LLP

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**CERTIFICATE of QUALIFICATION**

I, Thomas C. Pence, Petroleum Engineer with DeGolyer and MacNaughton, 5001 Spring Valley Road, Suite 800 East, Dallas, Texas, 75244 U.S.A., hereby certify:

1. That I am a Senior Vice President of DeGolyer and MacNaughton, which firm did prepare the report of third party dated January 23, 2020, on the proved reserves audit of certain properties attributable to CNOOC Limited, and that I, as Senior Vice President, was responsible for the preparation of this report of third party.
2. That I attended Texas A&M University, and that I graduated with a Bachelor of Science degree in Petroleum Engineering in 1982; that I am a Registered Professional Engineer in the State of Texas; that I am a member of the Society of Petroleum Engineers and that I have in excess of 37 years of experience in oil and gas reservoir studies and reserves audits.

[SEAL]

/s/ Thomas C. Pence, P.E.  
\_\_\_\_\_  
Thomas C. Pence, P.E.  
Senior Vice President  
DeGolyer and MacNaughton

\_\_\_\_\_



January 24, 2020

**CNOOC Limited**  
c/o Suite 2300, 500 Centre Street SE  
Calgary, Alberta, Canada  
T2G 1A6

**Re:       McDaniel & Associates - Report of Third Party for certain Canadian Oil Sands properties owned by CNOOC Limited**

Gentlemen:

Pursuant to your request, McDaniel & Associates Consultants Ltd. (“McDaniel”) has conducted an independent audit of CNOOC Limited’s (“CNOOC”) proved bitumen and synthetic crude oil reserves, as of December 31, 2019, for certain Canadian Oil Sands properties owned by CNOOC and managed by its wholly-owned subsidiary, CNOOC Petroleum North America ULC (“CPNA”), as shown in Table 1. CNOOC has represented that these properties account for 17 percent of its total company proved reserves on an equivalent barrel basis as of December 31, 2019, and that its reserves estimates have been prepared in accordance with the United States Securities and Exchange Commission (SEC) definitions. We have reviewed information provided to us by CPNA on behalf of CNOOC that it represents to be its estimates of the reserves, as of December 31, 2019, for the same properties as those which we audited. The completion date of our report is January 24, 2020. This report was prepared in accordance with guidelines specified in Item 1202(a)(8) of Regulation S-K and is to be used for inclusion in certain filings of the SEC.

Reserves included herein are expressed as reserves as represented by CNOOC. Gross reserves are defined as the total estimated petroleum to be produced from these properties after December 31, 2019. Working interest reserves are defined as that portion of the gross reserves attributable to the interests owned by CNOOC after deducting all working interests owned by others. Net reserves are defined as working interest reserves after the deduction of royalties.

Estimates of bitumen and synthetic crude oil should be regarded only as estimates that may change as further production history and additional information become available. Not only are such reserves estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Data used in this audit were obtained from reviews with CPNA personnel, CPNA files, from records on file with the appropriate regulatory agencies, and from public sources. In the preparation of this report we have relied, without independent verification, upon such information furnished by CPNA with respect to property interests, production from such properties, current costs of operation and development, prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. Furthermore, if in the course of our examination something came to our attention, which brought into question the validity or sufficiency of any of such information or data, we did not rely on such information or data until we had satisfactorily resolved our questions relating thereto or had independently verified such information or data. A field examination of the properties was not considered necessary for the purposes of this report.

**Methodology and Procedures**

The process of estimating reserves requires complex judgments and decision-making based on available geological, geophysical, engineering and economic data. To estimate the economically recoverable oil, synthetic crude oil and natural gas reserves, and related future net cash flows, we consider many factors and make assumptions including:

- expected reservoir characteristics based on geological, geophysical and engineering assessments;
- future production rates based on historical performance and expected future operating and investment activities;
- future oil and gas prices and quality differentials;
- assumed effects of regulation by governmental agencies; and
- future development and operating costs

Estimates of reserves were prepared using standard geological and engineering methods generally accepted by the petroleum industry as presented in the publication of the Society of Petroleum Engineers entitled “Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information (Revision as of February 19, 2007).” Generally accepted methods for estimating reserves include volumetric calculations, material balance techniques, production decline curves, pressure transient analysis, analogy with similar reservoirs, and reservoir simulation. The method or combination of methods used is based on professional judgment and experience.

Discovered oil and natural gas reserves are generally only produced when they are economically recoverable. As such, oil and gas prices, and capital and operating costs have an impact on whether reserves will ultimately be produced. As required by SEC rules, reserves represent the quantities that are expected to be economically recoverable using existing prices and costs. Estimates may change substantially as additional data from ongoing development activities and production performance becomes available and as economic conditions impacting oil and gas prices and costs change.



The proved reserves estimates in this report were based upon 2019 first-of-the month fiscal average pricing using benchmark pricing. Oil prices were primarily based upon West Texas Intermediate at Cushing crude oil benchmark of US\$55.69 per barrel and Western Canadian Select at Hardisty benchmark of US\$41.88 per barrel. Specific pricing for each field was adjusted for historical quality and transportation cost differentials, and for currency exchange rates. The resulting adjusted price is referred to as the “realized price.” For total proved reserves, the estimated realized prices were US\$32.09 per barrel of Bitumen and US\$54.99 per barrel of synthetic crude oil, based upon a volume weighted average of the properties evaluated.

Generally, operations are subject to various levels of government controls and regulations. These laws and regulations may include matters relating to land tenure, drilling, production practices, environmental protection, marketing and pricing policies, royalties, various taxes and levies including income tax, and foreign trade and investment, that are subject to change from time to time. Current legislation is generally a matter of public record, and additional legislation or amendments that will affect reserves or when any such proposals, if enacted, might become effective generally cannot be predicted. Changes in government regulations could affect reserves or related economics. In the regions that are currently being evaluated we believe we have applied existing regulations appropriately.

CNOOC Estimates

CPNA on behalf of CNOOC has represented that estimated proved reserves attributable to the audited properties are based on SEC definitions. CNOOC represents that its estimates of the reserves attributable to these properties represent 17 percent of its total company proved reserves after royalties on an equivalent basis and are as follows, expressed in thousands of barrels (Mbbl), and thousands of barrels of oil equivalent (Mboe):

CNOOC’s estimate of Reserves as of December 31, 2019  
Certain Canadian Fields Audited by McDaniel & Associates  
Oil Sands

CNOOC Reserves	Synthetic Crude Oil (Mbbl)	Bitumen (Mbbl)	Oil Equivalent (Mboe)
Working Interest Reserves (after royalties) – Net Reserves			
Proved	779,626	102,978	882,604

Note: Gas is converted to oil equivalent using a factor of 6,000 cubic feet of gas per 1 barrel of oil equivalent based on an energy equivalent basis.

Reserves Audit Opinion

McDaniel has used all data, assumptions, procedures and methods that it considers necessary to prepare this report.

In our opinion, the information relating to estimated proved reserves of bitumen and synthetic crude oil contained in this opinion has been prepared in accordance with Paragraphs 932-235-50-4, 932-235-50-6, 932-235-50-7 and 932-235-50-9 of the Accounting Standards Update 932-235-50, *Extractive Industries – Oil and Gas (Topic 932): Oil and Gas Reserve Estimation and Disclosures* (January 2010) of the Financial Accounting Standards Board and Rules 4–10(a) (1)–(32) of Regulation S–X and Rules 302(b), 1201, and 1202(a) (1), (2), (3), (4), (5), (8) of Regulation S-K of the Securities and Exchange Commission.

We have examined the assumptions, data, methods procedures and proved reserves estimates prepared by CPNA on behalf of CNOOC. In our opinion, the proved reserves for the reviewed properties as estimated by CNOOC are, in aggregate on the basis of equivalent barrels, reasonable because when compared to our estimates, or if we were to perform our own detailed estimates, reflect a difference of not more than plus or minus 10 percent.

The analyses of these properties, as reported herein, was conducted within the context of an audit of a distinct group of properties in aggregate as part of the total corporate level reserves. Extraction and use of these analyses outside of this context may not be appropriate without supplementary due diligence.

McDaniel is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world for over 60 years. McDaniel does not have any financial interest, including stock ownership, in CNOOC. Our fees were not contingent on the results of our evaluation. This letter report has been prepared at the request of CPNA on behalf of CNOOC.

This report was prepared by McDaniel & Associates Consultants Ltd. for the exclusive use of CNOOC. It is not to be reproduced, distributed, or made available, in whole or in part to any person, company, or organization other than CNOOC without the knowledge and consent of McDaniel & Associates Consultants Ltd. We reserve the right to revise any of the estimates provided herein if any relevant data existing prior to preparation of this report was not made available or if any data provided was found to be erroneous.

If there are any questions, please contact the writer directly at (403) 218-1397.

Sincerely,

**McDaniel & Associates Consultants Ltd.**

/s/ Jared W. B. Wynveen

Jared W. B. Wynveen, P. Eng.  
Executive Vice President

CC: Mr. Doug Huff, P.Eng., Sr. Manager – CPNA Reservoir Engineering, Resource Development  
Ms. Julia Daubaras, P.Eng., CNOOC International Reserves Analyst – Reserves Analyst  
Ms. Cassidy Fuller, Deloitte LLP

Table 1  
CNOOC Properties Audited by McDaniel & Associates  
Select Canadian Oil Sands Properties  
December 31, 2019

	BUSINESS UNIT	FIELD NAME
1	OIL SANDS	LONG LAKE
2	OIL SANDS	SYNCRUDE



CERTIFICATE OF QUALIFICATION

I, Jared W. B. Wynveen, Petroleum Engineer of 2200, 255 - 5th Avenue, S.W., Calgary, Alberta, Canada hereby certify:

1. That I am an Executive Vice President of McDaniel & Associates Consultants Ltd., APEGA Permit Number P3145, which Company did prepare, at the request of CNOOC Limited., the report entitled "Report of Third Party for certain Canadian Oil Sands properties owned by CNOOC Limited, As of December 31, 2019", dated January 24, 2020, and that I was involved in the preparation of this report. I am also registered as a Responsible Member as outlined by APEGA for McDaniel & Associates Consultant Ltd. APEGA Permit Number 3145.
2. That I attended the Queen’s University in the years 2002 to 2006 and that I graduated with a Bachelor of Science degree in Mechanical Engineering, that I am a registered Professional Engineer with the Association of Professional Engineers and Geoscientists of Alberta and that I have in excess of 10 years of experience in oil and gas reservoir studies and evaluations.
3. That I have no direct or indirect interest in the properties or securities of CNOOC Limited., nor do I expect to receive any direct or indirect interest in the properties or securities of CNOOC Limited, or any affiliate thereof.
4. That the aforementioned report was not based on a personal field examination of the properties in question, however, such an examination was not deemed necessary in view of the extent and accuracy of the information available on the properties in question.

/s/ Jared W. B. Wynveen [SEAL]

Calgary, Alberta  
Dated: January 24 , 2020





TBPE REGISTERED ENGINEERING FIRM F-1580  
1100 LOUISIANA SUITE 4600

HOUSTON, TEXAS 77002-5294

FAX (713) 651-0849  
TELEPHONE (713) 651-9191

Consent of Independent Consultant

We consent to the reference to our firm in the form and context in which they appear in this Annual Report on Form 20-F, and the inclusion of our reports herein for CNOOC Limited, and to the incorporation by the reference in any Registration Statement on Form F-3 and related Prospectus Supplements of CNOOC Limited for the registration of debt securities and guarantees previously filed with the Securities and Exchange Commission.

/s/ RYDER SCOTT COMPANY, L.P.

**RYDER SCOTT COMPANY, L.P.**  
TBPE Firm Registration No. F-1580

Houston, Texas  
March 10, 2020

SUITE 800, 350 7TH AVENUE, S.W.  
633 17TH STREET, SUITE 1700

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Gaffney, Cline & Associates  
(Consultants) Pte. Ltd.  
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#31-01C Fuji Xerox Towers  
Singapore 079907  
Telephone: +65 6225 6951

[www.gaffney-cline.com](http://www.gaffney-cline.com)

11 March 2020

**CNOOC Limited**  
No. 25, Chaoyangmenbei Daijie  
Dongcheng District  
Beijing 100010,  
P.R. China

Dear Sirs,

**Consent of Gaffney, Cline & Associates**

As independent reserve advisors for CNOOC Limited (CNOOC), Gaffney, Cline & Associates (GCA) hereby confirms that it has granted and not withdrawn its consent to the references to GCA and to the inclusion of information contained in our reports entitled “*Independent Letter –The Missan Oil Fields In Eastern Iraq Estimated Proved Reserves and Financial Data, Based on SEC Rules as of 31 December 2019*” and “*Independent Letter –The Greater Angostura Fields Block 2C, Trinidad & Tobago Estimated Proved Reserves and Financial Data, Based on SEC Rules as of 31 December 2019*” dated March 2020 prepared for CNOOC, and to the annexation of our reports as an exhibit on Form 20-F in CNOOC’s Annual Report pursuant to Section 13 or 15(d) of the Securities and Exchange Commission Act of 1934, and to the incorporation by the reference in any Registration Statement on Form F-3 and related Prospectus Supplements of CNOOC for the registration of debt securities and guarantees previously filed with the Securities and Exchange Commission.

Yours faithfully,

**Gaffney, Cline & Associates (Consultants) Pte Ltd**

/s/ Peter A. Adam

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Peter A. Adam, *Principal Advisor*

PAA/jbi/PS-19-2058 & PS-18-2059/L0041  
CNOOC Limited

UEN: 198701453N

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20405 Tomball Parkway,  
Suite 200  
Houston TX 77070  
T +1 281 448 6188

RPS Consent of Independent Consultant

We consent to the reference to our firm in the form and context in which they appear in this Annual Report on Form 20-F, and the inclusion of reports herein for CNOOC Limited, and to the incorporation by reference in any Registration Statement on Form F-3 and related Prospectus Supplements of CNOOC Limited for the registration of debt securities and guarantees previously filed with the Securities and Exchange Commission.

RPS

By: /s/ Toss Stubbs

Name: Toss Stubbs  
Title: Managing Director, Energy Nam / EVP Operations NAm

Houston, Texas  
March 16<sup>th</sup>, 2020



**Consent of Independent Consultant**

We consent to the reference to our firm in the form and context in which they appear in this Annual Report on Form 20-F, and the inclusion of our reports herein for CNOOC Limited, and to the incorporation by the reference in any Registration Statement on Form F-3 and related Prospectus Supplements of CNOOC Limited for the registration of debt securities and guarantees previously filed with the Securities and Exchange Commission.

**McDANIEL & ASSOCIATES CONSULTANTS LTD.**

By: /s/ Jared W. B. Wynveen  
Name: Jared W. B. Wynveen, P. Eng.  
Title: Executive Vice President

McDaniel & Associates Consultants Ltd.  
2200, Bow Valley Square 3  
255 - 5 Avenue S.W.  
Calgary, Alberta  
T2P 3G6 Canada

March 13, 2020

**DeGolyer and MacNaughton**  
5001 Spring Valley Road  
Suite 800 East  
Dallas, Texas 75244

**Consent of DeGolyer and MacNaughton**

We consent to the reference to DeGolyer and MacNaughton in the form and context in which it appears in the Annual Report on Form 20-F of CNOOC Limited, for the year ended December 31, 2019, to the inclusion herein of our report dated January 23, 2020, concerning our opinion on the proved reserves as of December 31, 2019, for CNOOC Limited, and to the incorporation by reference in any Registration Statement on Form F-3 and related Prospectus Supplements of CNOOC Limited for the registration of debt securities and guarantees previously filed with the Securities and Exchange Commission.

Very truly yours,

/s/ DeGolyer and MacNaughton

DeGOLYER and MacNAUGHTON  
Texas Registered Engineering Firm F-716

Dallas, Texas  
March 13, 2020

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Post-Effective Amendment No. 1 to Registration Statement No. 333-224357 on Form F-3 of our reports dated March 25, 2020 relating to the financial statements of CNOOC Limited and the effectiveness of CNOOC Limited's internal control over financial reporting appearing in this Annual Report on Form 20-F for the year ended December 31, 2019.

/s/ **Deloitte Touche Tohmatsu**  
*Certified Public Accountants*  
Hong Kong  
April 22, 2020

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