中国石化
SINOPEC

中石化石油工程技術服務股份有限公司
Sinopec Oilfield Service Corporation

(Stock Code　A Share : 600871 ;　H Share : 1033)

2022
Annual Report

IMPORTANT NOTE

1. The Board and the Supervisory Committee of the Company and its directors, supervisors and senior management warrant that there are no false representations, misleading statements or material omissions in this annual report ("Annual Report") and individually and jointly accept full responsibility for the authenticity, accuracy and completeness of the information contained in this Annual Report.

2. The 2022 Annual Report has been approved at the fourteenth meeting of the tenth session of the Board. A total of 8 directors of the Company attended the meeting. Mr. Wei Ran, director of the Company, was absent from the meeting due to other working arrangements, and had authorized Mr. Chen Xikun, director of the Company, to attend the meeting and to exercise his right on his behalf.

3. The financial statements of the Company for 2022, which have been prepared in accordance with the PRC Accounting Standards for Business Enterprises ("PRC ASBE") and International Financial Reporting Standards ("IFRS") have been audited by BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited, respectively. Both auditors have issued standard unqualified opinions on the financial statements.

4. Mr. Chen Xikun, Chairman of the Board, Mr. Yuan Jianqiang, General Manager, Mr. Cheng Zhongyi, Chief Financial Officer and Mr. Yang Yulong, Manager of the Asset and Accounting Department of the Company warranted the authenticity, accuracy and completeness of the financial statements contained in the Annual Report.

5. Consideration of the profit distribution proposal or the reserve capitalization proposal by the Board during the reporting period.

   In 2022, after the audit by BDO China Shu Lun Pan Certified Public Accountants LLP and prepared in accordance with the PRC ASBE, the net profit attributable to shareholders of the Company is RMB463,814,000 (in accordance with the IFRS, the net profit attributable to shareholders of the Company is RMB571,615,000), and the parent company's undistributed profit at the end of 2022 is RMB-1,946,364,000. Since the undistributed profit of the parent company at the end of the year is negative, the Board recommends that no cash dividend distribution be made for the financial year 2022, nor the capital reserve conversion to share capital. The proposal is subject to consideration at the general meeting.

6. Due to the uncertainty of the forward-looking statement about the future plan and development strategy in the Annual Report, the future plans involved in these forward-looking statements do not represent any guarantee made by the Company to the investors. Investors are advised to exercise caution when making investments.

7. There was no appropriation of funds by the controlling shareholder of the Company and its connected parties for non-operation purpose.

8. The Company did not provide external guarantees made in violation of required decision-making procedures.

9. There is no situation where more than half of the directors of the Company cannot guarantee the authenticity, accuracy and completeness of the Company's 2022 annual report.

10. There are no significant risks that need to be prompted in the Company.

Contents

Section I Definitions

In this Annual Report, unless the context otherwise requires, the following expressions shall have the following meanings:

Company	Sinopec Oilfield Service Corporation, a joint stock limited company incorporated in the PRC whose A Shares are traded on the SSE (Stock code 600871) and H Shares are listed on the Main Board of HKSE (Stock code 1033)
Group	The Company and its subsidiaries
Board	The board of directors of the Company
Supervisory Committee	the supervisory committee of the Company
Articles of Association	The articles of association of the Company, as amended, modified or supplemented from time to time
CPC	China Petrochemical Corporation, a wholly State-owned company established in the PRC and the controlling shareholder of the Company
Sinopec	China Petroleum & Chemical Corporation, a joint stock limited company established in the PRC and listed on the Main Board of HKSE and SSE, the subsidiary of CPC
A Shares	Outstanding shares of the Company which are listed on the SSE and par value per share is RMB1.00
H Shares	Overseas listed foreign share(s) each which is (are) listed on the Main Board of HKSE and par value per share is RMB1.00
SSE	Shanghai Stock Exchange
HKSE	The Stock Exchange of Hong Kong Limited
Listing Rules	the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited
Model Code	Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix 10 of the Listing Rules
CSRC	China Securities Regulatory Commission
Century Bright Company	Sinopec Century Bright Capital Investment, Ltd.
SOSC	Sinopec Oilfield Service Co., Ltd., the subsidiary of the Company
Qi Xin Gong Ying Scheme	Qi Xin Gong Ying Scheme for the management of the Company
Carbon Technology Company	Sinopec Carbon Industry Technology Co., Ltd., a shareholding company of the Company
Nanjing Chemical Company	Sinopec Nanjing Chemical Industries Corporation
UNIPEC	China International United Petroleum & Chemicals Co., Ltd.
Nanjing Engineering	Sinopec Nanjing Engineering Co., Ltd.
Shanghai Engineering	Sinopec Shanghai Engineering Co., Ltd.
Geophysical exploration, geophysical	A method and theory of exploration the underground mineral and researching the geological formations by using physics principles. Such as seismic exploration, electrical and magnetism exploration
Drilling	The engineering of drilling formations down to a certain depth by using the mechanical equipment, and finally forming a cylindrical hole
CCUS	Carbon capture, utilization and storage
Logging	Collecting, analyzing and interpreting data related to the geological characteristics and hydrocarbon potential of the area obtained downhole by using special tools or equipment and technology
Mud logging	Recording and acquiring the information during the drilling process. Mud logging is the basic technique in oil and gas exploration and production activities, and is the most timely and most direct way to find and evaluate the reservoir. It has the characters of timely and various to acquire the downhole information
Downhole operation service	Providing all oil and gas wellbore operations for oil and gas field exploration and development, except drilling, logging and recording, mainly including oil and gas testing, acid fracturing, workover and completion etc.
Two dimensional geophysical	A method for seismic data gathering by using a set of sound source and one or more collection point; 2D is generally used for drawing geographical structure for a preliminary analysis
Three dimensional geophysical	A method for seismic data gathering by using two sets of sound source and two or more collection point; 3D is generally used for acquiring sophisticated seismic data, and improving the chances of successful drilling to the oil and gas wells

Section I Definitions

HSE	Health, safety and environment management system
LPR	The loan interest rate announced by the People's Bank of China
CNPC	China National Petroleum Corporation
CNOOC	China National Offshore Oil Corporation
Four improvements	The improvement of the quality, service speed, efficiency and production
PipeChina	China Oil & Gas Pipeline Network Corporation
CNSPC	SINOPEC Star Petroleum Co.,Ltd
PRC	People's Republic of China
Hong Kong	Hong Kong Special Administrative Region of the People's Republic of China

Section II Company Profile and Principal Financial Indicators

1. Company Information

Company's Chinese Name	中石化石油工程技術服務股份有限公司
Abbreviation of the Company's Chinese name	石化油服
Company's English name	Sinopec Oilfield Service Corporation
Abbreviation of the Company's English name	SSC
Legal representative	Chen Xikun

2. Contact Information

	Secretary to the Board	Company Secretary/Securities Affairs Representative
Name	Cheng Zhongyi	Shen Zehong
Address	Office of the Board, #9 Jishikou Road, Changyang District, Beijing, China.	
Telephone	86-10-59965998	
Fax	86-10-59965997	
Email	ir.ssc@sinopec.com	

3. Company Profile

Registered address	No.22 Chaoyangmen North Street, Chaoyang District, Beijing, PRC
Historical changes of registered address	The Company's registered address was changed to No.22 Chaoyangmen North Street, Chaoyang District, Beijing, PRC from Yizheng City, Jiangsu Province, PRC in June, 2016
Office address	No.9 Jishikou Road, Chaoyang District, Beijing, PRC
Post Code of Office address	100728
Company Internet Website	http://ssc.sinopec.com
E-mail	ir.ssc@sinopec.com

4. Disclosing information and inspection place

Domestic Newspapers disclosing information	China Securities, Shanghai Securities News, Securities Times
Websites designated by stock exchange to publish the annual report	http://www.sse.com.cn http://www.hkexnews.hk
Place where the Annual Report available for inspection	Office of the Board

5. Stock Briefs

Share Type	Place of listing	Stock name	Stock Code	Stock name before altering
A Share	SSE	SINOPEC SSC	600871	–
H Share	HKSE	SINOPEC SSC	01033	–

Section II Company Profile and Principal Financial Indicators

6. Other related Information

Domestic Auditors	Name	BDO China Shu Lun Pan Certified Public Accountants LLP
	Address	4th Floor, 61 Nanjing East Road, Shanghai
	Signing accountants	Jin Chunhua, Miao Song
Overseas Auditors	Name	BDO Limited
	Address	25th Floor, Wing On Centre, 111 Connaught Road, Central, Hong Kong
	Signing accountants	Chen Zihong
Name of the domestic Legal advisor	Beijing Haiwen & Partners	
Address	20/F, Fortune Financial Center, 5 Dong San Huan Central Road, Chaoyang District, Beijing	
Name of the overseas Legal advisor	Zhong Lun Law Firm	
Address	4/F, Jardine House, 1 Connaught Place, Central, Hong Kong	
Share registrars and transfer office	A Share	China Securities Registration and Clearing Corporation Limited Shanghai Branch
	Address	No.188 Yanggao South Road, China (Shanghai) Pilot Free Trade Zone
	H Share	Hong Kong Registrars Limited
	Address	Rooms 1712-1716, 17th Floor, Hopewell Centre, 183 Queen's Roads East, Hong Kong

7. The financial principal information and financial indicators of the Company in the last 3 years (Extracted from the financial statements prepared in accordance with the PRC ASBE)

(1) Principal financial data

Unit: RMB'000

	For the year ended 31 December 2022	For the year ended 31 December 2021	Increase/(Decrease) (%)	For the year ended 31 December 2020
Operating income	**73,772,688**	69,533,053	6.1	68,073,394
Operating profit ("-" for losses)	**732,392**	347,678	110.7	283,335
Profit before income tax ("-" for losses)	**729,361**	490,522	48.7	348,054
Net profit attributable to equity shareholders of the Company ("-" for losses)	**463,814**	179,791	158.0	78,978
Net profit deducted extraordinary gain and loss attributable to equity shareholders of the Company ("-" for losses)	**377,363**	-100,263	Not applicable	-266,915
Net cash inflow from operating activities ("-" for outflow)	**4,197,869**	6,206,909	-32.4	4,471,820

	As at 31 December 2022	As at 31 December 2021	Year-on-year change (%)	As at 31 December 2020
Net assets attributable to shareholders of the Company	**7,427,319**	6,861,517	8.2	6,722,866
Total assets	**71,200,517**	64,052,447	11.2	61,091,195

(2) Principal financial indicators

Unit: RMB'000

	For the year ended 31December 2022	For the year ended 31 December 2021	Year-on-year change (%)	For the year ended 31 December 2020
Basic earnings per share (RMB) ("-" for losses)	**0.024**	0.009	166.7	0.004
Diluted earnings per share (RMB) ("-" for losses)	**0.024**	0.009	166.7	0.004
Basic earnings per share deducted extraordinary gain and loss (RMB) ("-" for losses)	**0.020**	-0.005	Not applicable	-0.014
Weighted average return on net assets (%)	**6.54**	2.64	Increased by 3.90 percentage points	1.16
Weighted average return on net assets deducted extraordinary gain and loss (%)	**5.32**	-1.47	Increased by 6.79 percentage points	-3.92

Explanations of the principal financial information and financial indicators of the Company in the last 3 years.

☐ Applicable √ Not Applicable

8. Differences between the financial statements of the Company prepared in accordance with PRC ASBE and IFRSs

Unit: RMB'000

	Net profit ("-" for losses) attributable to owners of the Company		Net assets attributable to owners of the Company	
	2022	2021	**For the year ended 31 December 2022**	For the year ended 31 December 2021
PRC ASBE	**463,814**	179,791	**7,427,319**	6,861,517
Difference items and amount:				
Special reserve	**107,801**	-39,341		–
IFRS	**571,615**	140,450	**7,427,319**	6,861,517

Explanation of differences between domestic and foreign accounting standards:

(a) Special reserve

In accordance with the PRC ASBE, the safety production expenses withdrawn in accordance with national regulations are recorded in the current profit and loss and separately reflected in the special reserve in the owner's equity. When expenses related to production safety are incurred, the special reserve is directly offset. When using fixed assets related to production safety, the special reserve shall be written off according to the cost of forming the fixed assets, and the accumulated depreciation of the same amount shall be confirmed, and the relevant assets will no longer be depreciated in future periods. In accordance with the IFRS, expense expenditures are included in profit or loss when incurred, capital expenditures are recognized as fixed assets when incurred, and depreciation is accrued according to the corresponding depreciation method.

9. Quarterly Financial Data of 2022 (Prepared in accordance with PRC ASBE)

Unit: RMB'000

	The first quarter (January~March)	The second quarter (April~June)	The third quarter (July~September)	The fourth quarter (October~December)
Operating income	15,347,614	17,801,038	17,806,415	22,817,621
Net profit attributable to equity shareholders of the Company ("-" for loss)	68,290	131,978	76,106	187,440
Net profit deducted extraordinary gain and loss attributable to equity shareholders of the Company ("-" for loss)	49,132	94,870	29,120	204,241
Net cash inflow from operating activities ("-" for outflow)	-902,539	364,613	-435,970	5,171,765

Explanations of the differences between the quarterly data and the data in the disclosed periodically report

☐ Applicable √ Not Applicable

10. Extraordinary gain and loss items and amounts (Extracted from the financial statements prepared in accordance with PRC ASBE)

Unit: RMB'000

Extraordinary gain and loss item	2022	2021	2020
Gain and loss on disposal of non-current assets	**-6,205**	88,723	5,961
Government grants recognised in profit or loss during the year	**104,391**	123,873	293,684
Gain and loss from debt restructuring	**18,157**	29,404	53,960
In addition to the company normal business related effective hedging business, holding transactional financial assets, derivative financial assets, transactional financial liabilities, the fair value of profits and losses, and the disposal of transactional financial assets, derivative financial assets, transactional financial liabilities, derivative financial liabilities and other creditor's rights investment of investment income	**798**	–	–
Other non-operating income and expenses excluding the aforesaid items	**-7,642**	107,666	64,719
Tax effect	**-23,048**	-69,612	-72,431
Total	**86,451**	280,054	345,893

11. Items measured by fair value

Unit: RMB'000

Item	Balance for the year ended 31 December 2021	Balance for the year ended 31 December 2022	The change during the period	Affected amount of profit during the period
Other benefits tools	21,760	134,492	112,732	500
Receivables financing	1,295,971	1,468,340	172,369	–
Total	1,317,731	1,602,832	285,101	–

12. Financial information extracted from the financial statements prepared in accordance with IFRSs

Unit: RMB'000

	As at 31 December				
	2022	2021	2020	2020	2018
Total assets	**71,200,517**	64,052,447	61,091,195	62,069,378	60,904,715
Total liabilities	**63,773,198**	57,190,930	54,368,329	55,305,506	55,126,305
Equity attributable to owners of the Company	**7,427,319**	6,861,517	6,722,866	6,763,872	5,778,410
Net assets per share attributable to owners of the Company (RMB)	**0.39**	0.36	0.35	0.36	0.30
Equity ratio of owners	**10.43%**	10.71%	11.00%	10.90%	9.49%
Return on net assets	**7.70%**	2.05%	(0.53%)	14.59%	4.16%

	For the year ended 31 December				
	2022	2021	2020	2019	2018
Revenue	**73,772,688**	69,533,053	68,073,394	69,870,147	58,409,078
Profit/(Loss) before income tax	**837,162**	451,181	233,339	1,428,397	613,769
Income tax expense	**265,547**	310,731	269,076	441,524	373,581
Profit/(Loss) attributable to owners of the Company	**571,615**	140,450	(35,737)	986,873	240,188
Basic and diluted earnings/(loss) per share (RMB)	**0.030**	0.007	(0.002)	0.052	0.013

Section III Chairman's Statement

Dear Shareholders,

On behalf of the Board, I would like to express my sincere gratitude to our shareholders and people from all walks of life for your interest and support to the Company.

In 2022, in the face of the complex and changeable severe situation, the Company focused on the primary task of pursuing high-quality development, comprehensively deepened technological innovation, reform innovation and management innovation, made new progress and achievements in various works, and overfulfilled our annual goals and tasks. In 2022, the Company's consolidated revenue under PRC ASBE amounted to RMB73.77 billion, a year-on-year increase of 6.1%, the best level since the "13th Five-Year Plan"; the net profit attributable to the shareholders of the Company amounted to RMB460 million, a year-on-year increase of 158.0%.

In 2022, the Company seized the opportunity brought by high oil prices and market recovery, insisted on prioritizing benefits, and actively explored internal and external markets. As a result, both quality and efficiency of the three major markets were improved and the amount of newly signed contracts reached RMB81 billion, a year-on-year increase of RMB10.1 billion. For the market of CPC, we deeply promoted the Four Improvements and the Five Megatrends, efficiently boosted exploration and development, and signed up new contracts of RMB50.4 billion. For domestic external markets, we strengthened "China-China cooperation", optimized market layout, and signed up new contracts of RMB15 billion, which continued to concentrate on high-quality large-scale markets. For overseas markets, we insisted on supporting excellent and strong businesses, promoted quality improvement and upgrading, and signed up new contracts of RMB15.6 billion, which further consolidated our high-quality overseas markets.

In 2022, the Company continued to increase its investments in scientific research by focusing on breakthroughs in key core technologies and strived to build up ourselves as a world-class technology guided oil service company. In the year, we were granted 787 patent authorizations, and undertook 579 projects, which is a new record. Our Type I rotary steerable system reached international advanced level in overall. Our drilling and completion technology for ultra-long horizontal wells for shale gas set new records continuously in the length of the horizontal section of shale gas wells in the PRC. The Shengli shale oil trial well group made breakthroughs continuously in technical and cyclical indicators. The Sinopec Oilfield Integrated Cloud Platform (SICP) was put into operation and the well site integrated decision-making command centers, the MRO Internet of Things and other digital facilities were integrated and reinforced, which improved our project-based management efficiency and decision-making quality.

In 2022, the Company further promoted reform and optimization and the three-year reform-deepening campaign for state-owned enterprises ended with high quality. As a result, the governance system and system construction and the governance capabilities of the Company continued to be improved, and the Company was granted a number of honors in the capital market, such as the Most Socially Responsible Listed Company in 2022 by Capital Strength, the China Ethical Enterprise Award for Top 100 Listed Companies in China, the Most Socially Responsible Listed Company by the Public Praise List of Listed Companies in China and the Best Board of Directors of Listed Companies in China. Meanwhile, the Company accelerated the construction of a new project-based management system supported by "two pools, two warehouses and one platform" and continued to enhance resource sharing and online information sharing; optimized its top-level design and promoted the development of its featured businesses; comprehensively strengthened its operation and management, implemented measures to reduce costs and expenses, coordinated and optimized the operation of domestic and foreign funds, reinforced the settlement and clearance of account receivables and inventories, and carried out special governance campaign on project management.

Section III Chairman's Statement

In 2022, the Company was committed to safe operation and green development by adhering to the concept of sustainable development and continuously improving the ESG management system. While promoting the low-carbon development of its existing businesses, the Company established a new energy research and development center to strengthen the research and development of low-carbon technology, invested in Carbon Technology Company, and actively participated in the expansion into emerging markets such as CCUS, geothermal energy, coal-bed methane and hydrogen energy. We actively participated in the construction of public welfare and infrastructure projects, with an aim to make contributions to local social and economic development and improve the livelihood of the people in the locality of our projects.

Looking forward to 2023, there will be opportunities and challenges. As international oil prices remain high, foreign oil companies increase their upstream capital investments and domestic oil companies further promote the "Seven-year Action Plan" to ensure national energy security, the oil service industry will step into an upward cycle of prosperity. In the long run, the energy revolution and information revolution will promote the green development and digital transformation of the oilfield service business, and international oilfield service companies will accelerate their transformation into comprehensive energy technology service companies. Meanwhile, due to the challenges brought by low oil prices and cold winter, the Company's system and mechanism became more complete, its structural layout became more reasonable, its resource allocation became more efficient, breakthroughs were made in key technologies, and core equipment was updated and upgraded at a faster pace, which laid a solid foundation for the future development of the Company.

In 2023, the Company will thoroughly study and follow the spirit of the 20th National Congress of the Communist Party of China and the important instructions of General Secretary Xi Jinping given during his visit to Shengli Oilfield, adhere to the development concept of "serving customers, supporting oil and gas, leading technology and creating value", focus on high-quality large-scale markets, precisely optimize resource allocation, strengthen scientific and technological research, and strive to reach a new level and make new achievements in the new journey of promoting high-quality development and building up a world-class technology guided oil service company.

Firstly, we will focus on high-quality and large-scale markets and support high-quality development with high-quality markets. Our planned newly signed contract value for 2023 is over RMB78 billion. For the market of CPC, we will keep up with the deployment of exploration and development and dynamically adjust the size of our team to efficiently ensure the implementation of projects. For the domestic external markets, we will vigorously expand the markets of CNPC, CNOOC and PipeChina to improve market concentration and capabilities to create benefits. For overseas markets, we will strive to achieve new improvements in target markets such as Saudi Arabia, Kuwait and Ecuador, and make new breakthroughs in high-end technical services, integrated reservoir services, fracturing and general contracting projects, so as to achieve the goals of "Going Out" with a higher quality.

Secondly, we will anchor on our self-reliance and self-improvement in science and technology and drive high-quality development with high-quality innovation. We will increase investments in scientific research, optimize the layout of research and development, devise innovative management mechanism, and build a strong scientific research team. We will fight for breakthroughs in key and core technologies and fully support the efforts to seek "deep-field" and "deep-sea" exploration and development. We will improve the efficiency of our scientific technologies and continue to improve the efficiency and brand influence of our key product lines. We will vigorously promote the integration of informatization and industrialization, consolidate and expand the results of the SICP platform, iteratively upgrade the wellsite integrated decision-making and command center, and make active efforts to establish a digital oil service and a smart enterprise.

Thirdly, we will continue to optimize our systems and mechanisms to promote high-quality development through high-quality reforms. We will fully implement the project-based management system supported by "two pools, two warehouses and one platform", and comprehensively improve the centralized management, control and deployment of core elements and resources. We will vigorously promote the regional integration of project departments and the merger of homogeneous businesses to better stimulate the creativity of our employees at all levels. We will insist on supporting excellent and strong businesses, accelerate the cultivation of "strong, refined, unique, superior and specialized" businesses with development potential and economies of scale, and continue to enhance the concentration of featured and competitive businesses.

Fourthly, we will make deployment for the development of "dual-carbon" businesses and enable high-quality development through high-quality transformation. We will actively plan for the future, increase investments in the research and development of new energy technology R&D centers, carry out research on cutting-edge technologies in the field of new energy, participate in "dual-carbon" businesses such as CCUS by leveraging the platform of Carbon Technology Company, devise innovative systems and mechanisms, and expand into wind energy, geothermal energy, environmental protection, underground coal gasification and other emerging business fields.

The future is promising. The Board and I believe that through the joint efforts of the Board, the Supervisory Committee, the management and all the staff, coupled with the support of our shareholders and the wider community, the way for high-quality development of the Company will become wider and better. We will keep advancing at a faster pace to be a world class leading technology-guided oil service company and create more value for shareholders and the society.

Chen Xikun

Chairman

Beijing, China

28 March 2023

Section IV Report of the Board

1. Discussion and analysis of operation during the reporting period

Financial figures, except where specifically noted, contained herein have been extracted from the consolidated financial statements prepared in accordance with the PRC ASBE.

Annual Results

In 2022, the Company actively grasped the favorable opportunities of oil and gas exploration and development investment increase, took the initiative to overcome adverse factors such as raw material prices increased and oilfield service prices had not yet recovered, insisted on cost reduction and efficiency management, promoted the development of science and technology innovation, intensified the market development and transformation of scientific research achievements, focused on optimal allocation of resources, clung to team ability building, to ensure safe production in a smooth and orderly manner, business performance to achieve greater grown, and profit foundation was further consolidated.

In 2022, the Company's consolidated revenue was RMB73.77 billion, representing a year-on-year increase of 6.1%, and net profit attributable to shareholders of the Company amounted to RMB460 million, representing a year-on-year increase of 158.0%. Basic earnings per share was RMB0.024, representing a year-on-year increase of RMB0.015.

Operation Review

In 2022, the Company seized the opportunities brought by high oil prices and market recovery and insisted on optimizing existing businesses and exploring incremental businesses. As a result, both quality and efficiency of the three major markets improved with complementary advantages. The total cumulative amount of newly signed contracts reached RMB81 billion, representing a year-on-year increase of 14.2%, the best level since the "13th Five-Year" Plan, of which the newly signed contracts in the China Petrochemical Corporation's market amounted to RMB50.4 billion, representing a year-on-year increase of 13.5%; the newly signed contracts in domestic external markets amounted to RMB15 billion, representing a year-on-year increase of 17.2%; the newly signed contracts in overseas markets amounted to RMB15.6 billion, a year-on-year increase of 13.9%. As the Company provided good and efficient engineering and technical services, we undertook 579 projects throughout the year, that is another new record, and successively made breakthroughs in a number of our core technologies. New progress was made in resource coordination and optimization, the construction of our project-based management system entered the stage of full implementation and generated preliminary results, and our legitimate and compliant corporate governance and reinforced management reached a new level. The quality, health, safety and environmental protection situation of the Company remained stable with steady progress, and the main production and operation indicators of the Company grew steadily.

1. Geophysical services

In 2022, the Company's operation revenue from the principal business of geophysical service was RMB4.76 billion, an increase of 2.0% from RMB4.66 billion in the same period of the previous year. The completed 2D seismic exploration accumulated for 4,936 kilometers in the year, an increase of 86.0% than the previous year; while the 3D seismic exploration accumulated for 15,790 square kilometers, a decrease of 5.3% than the previous year. The pass rate of 2D and 3D records was 100%, and the proportion of our seismic data acquired with first grade quality was 3.2 percent points higher than required by the contracts. Geophysical technologies such as single-point high-density acquisition, full-node acquisition and well-seismic joint excitation were fully applied, and the level of digitalization and intelligence continued to improve. Our high-efficiency acquisition technology for broadband vibroseis reached international advanced level. The domestic external seismic exploration markets grew significantly, new businesses relating to fracturing monitoring, Beidou application, energy conservation and environmental protection developed rapidly, and the amount of newly signed contracts reached RMB490 million, representing a year-on-year increase of 38.7% and the best record in our history.

2. Drilling service

In 2022, the Company's operation revenue from the principal business of drilling service was RMB36.81 billion, an increase of 11.3% from RMB33.08 billion in the same period of the previous year. Our completed drilling footage reached 9,980 kilometers, representing a year-on-year increase of 9.1%. The Company coordinated and optimized the team and upgraded the core equipment, and we made every effort to promote the improvement of the quality, service speed, efficiency and production, i.e., the Four Improvements, in "Northwest China, North China, Northeast China and Sichuan", achieving the average drilling cycle and the time on complicated failures reducing by 8.6% and 29.5%, respectively. We completed drilling of 12 high-yield wells, including Shunbei 803X well and Shunbei 21X well, of daily production in thousand ton per well and a group of very potential oil or gas discovery wells, facilitated the implementation of 200 million-ton oil and gas enrichment zones, and all 8 single wells of Shengli shale oil produced more than 10,000 tons of cumulative production, which provided strong engineering technical support for China Petrochemical Corporation to achieve stable oil production, increase of gas production and cost reduction. Domestic market with external advantages became more concentrated. In the markets of CNPC, CNOOC, PipeChina, 112 professional teams were shortlisted, and wellbore professional team signed RMB8.35 billion new contracts, representing a year-on-year increase of 26.7%.

3. Logging/Mud logging service

In 2022, the Company's operation revenue from the principal business of logging and mud logging service was RMB3.26 billion, an increase of 1.6% from RMB3.21 billion in the same period of the previous year. Our completed logging projects had a total of 279,300,000 standard meters, an increase of 4.3% than the previous year. Our completed mud logging projects had a total of 8,400 kilometers, a decrease of 8.4% than the previous year. The pass rate of logging and mud logging data was 100% and the one-time success rate of logging was above 97%. The Company consistently improved our logging and mud logging service capabilities, promoted logging and mud logging integration interpretation and the service capabilities of the full life cycle of oil reservoirs, and established an integrated standard team of directional drilling, logging and rotary steering to ensure the efficient operation of key projects such as the Deep Land Project and Shengli shale oil.

4. Downhole operation service

In 2022, the Company's operation revenue in downhole operation was RMB9.37 billion, a decrease of 0.2% from RMB9.38 billion in the same period of the previous year. It completed downhole operation for 6,868 wells, a decrease of 3.6% than the previous year. The pass rate of one-time downhole special operation was 99.7%. The Company continued to improve service support capabilities for downhole operation and reservoir operation. The fracturing construction efficiency in key regions in "Northwest China, North China, Northeast China and Sichuan" was improved by 15.6%. The electric drive factory fracturing process was promoted in the Fuling shale gas field and Shengli shale oil block. The Jiaoye 12 platform set 5 records including the largest number of fracturing wells on a single platform for shale gas development in China. We made multiple breakthroughs in the cooperative development of difficult-to-recover reserves, completed the production target of 18 wells with 7 wells in Xinchang West Sichuan, helping tight gas reservoirs achieve high production with few wells.

5. Engineering and construction service

In 2022, the Company's operation revenue in engineering and construction service was RMB17.44 billion, an increase of 4.3% from RMB16.71 billion in the same period of the previous year. In 2022, the cumulative value of newly signed contracts was RMB25.3 billion, an increase of 42.1% than the same period of the previous year. The Dongying crude oil depot relocation project undertaken by the Company has built the first green and low-carbon intelligent oil depot in China, and built a high-quality demonstration project. The Company completed high-quality key projects such as the south main line, the south section of the east main line of Shandong pipeline network, the inter-plant pipeline corridor of Tahe Refinery and the Binhai LNG supporting gas transmission pipeline, demonstrating our ability and edges in increasing oil and gas production and reserves and constructing large-scale projects. Tremendous achievement was made in our EPC sector. We were awarded 39 EPC tender projects in the year, which is a new record, with contract value of RMB9.28 billion. We continued our expansion in PipeChina's market, forming a large-scale and efficient market base, with newly signed contracts amounting to RMB5.2 billion, and achieving steady progress.

International business

In 2022, the Company's operation revenue in international business service was RMB13.01 billion, an increase of 36.7% from RMB9.52 billion in the same period of the previous year. The revenue contributed by the international business accounted for 18.0% of the total revenue, with a year-on-year increase of 4 percentage points. In 2022, the Company resumed its growth momentum in overseas markets, and won bids and signed a number of new high-quality long-term projects in key markets such as Saudi Arabia, Kuwait, Uganda, Mexico and Ecuador. The oilfield comprehensive service projects are stable and improving. In the Saudi Arabia market, the Company signed contracts with Saudi Aramco again for six unconventional gas well drilling rigs, and won the bid for the Baker Hughes oil well drilling rig subcontracting project and the Saudi Aramco water well drilling project. In the Kuwait market, the Company won the bid for 14 developed well drilling and repair rigs of and 1 deep well drilling rig project of Kuwait Petroleum (KOC), with a contract period of 5+1 years, with a total amount of approximately US$830 million. In the Ecuadorian market, the Company signed a new contract for drilling and completion lump sum projects in SACHA oilfield, Halliburton drilling services and other projects. For the geophysical business, the Company won the bid for the 2D seismic acquisition and processing project of YPFB Company in Bolivia, which is the first geophysical project for external tender of the country since 2018. For engineering construction business, the Company and TOTALENERGIES EP Uganda Limited entered into a general contracting project for the oil & gas collection and transportation system of Uganda's TILENGA with a contract value of US$611 million. It is the largest single construction project contracted by the Company overseas.

Technology research & development

In 2022, the Company continued to increase its investment in scientific research and overcoming difficulties, won 29 science and technology awards at the provincial and ministerial level, applied for 979 patents, and was licensed 787 patents, hitting record highs over the years. Firstly, breakthroughs were achieved in key and core technologies. Type I rotary steering system reached the international advanced level as a whole, and high-temperature electrical imaging logging device and high-temperature MWD became mature and finalized, supporting the exploration and development of "deep engineering". Secondly, special technology updates were accelerated, such as Shunbei ultra-deep drilling and completion optimized the speed-up technology version 2.0, 22 deep wells drilled above 8,000 meters; Yuanshen No.1 well drilling and completion to 8,866 meters, vertical well in the Sichuan Basin with the deepest record and Jiaoye 18-S12HF well with a horizontal section of 4,286 meters making a record for the longest horizontal section of a shale gas well in China. Thirdly, the industrialization of products moved forward to a large scale. High-end equipment industrial base was completed and put into operation and the expansion of chemical additive production base was completed and put into production. Fourthly, the informalization construction was accelerated and expanded. The Company's integrated cloud platform was launched, and the integration and application of digital industries such as the well site integrated decision-making command center was deepened, enabling project-based management efficiency and decision-making quality to be greatly improved.

Internal reform and management

In 2022, the Company continued to deepen internal reform and empower high-quality development with high-quality reforms. Firstly, the project-based management system was basically established. The Project-based Management Measures of the Company and its supporting systems at all levels were formulated, and the construction of the project-based management system entered the stage of full implementation and achieved initial results. Secondly, the effective results in coordinating and optimizing the resource allocation were achieved with transferring of 75 drilling (repaired) machines among its subsidiaries successively completed and more than 30 materials, equipment, and logistics bases optimized and shared. Thirdly, top-level design for the development of special business was completed, providing guidance for strengthening development of special business with scale economics and potentials. Fourthly, the quality of operation and management was constantly improved, strengthening the analysis of economic activities, enhancing the cost management in the whole process and for the whole chain and reducing cost and expenses of RMB530 million throughout the year.

Capital expenditures

In 2022, the Company had a capital expenditure of RMB5.23 billion. Focusing on the improvement of exploration and development service capabilities and market competitiveness in 2022, the Company increased investment in equipment, actively optimized the equipment structure. The Company increased the investment in drilling rig upgrades and electric fracturing equipment, continually promoted the standardized construction of drilling sites and downhole operation sites; and increased the investment in equipment required for overseas high-quality markets to further enhance our competitiveness in the high-end business market. Throughout the year, the investment was mainly made for transformation and modification of 53 drilling rigs, 32 sets of fracturing trucks (crowbars), 185,000 seismic acquisition equipment, 10 sets of automatic welding equipment, 10 sets of rotary steering devices, 6 sets of devices for high-temperature measurement and control while drilling, 2 sets of coiled tubing equipment and investment projects such as safety hazard management and environmental protection.

2. The industry situation of the Company in the reporting period

In 2022, the global economic growth momentum declined, geopolitical fluctuations intensified, the Chinese economy resisted pressure, and the total economic volume reached a new level. The annual Gross Domestic Product (GDP) increased by 3.0% year on year, the international crude oil price showed a volatile upward trend, with the average spot price of Brent crude oil was $98.96/barrel, up 39.7% compared with 2021. Rising international oil prices have helped oil companies continue to increase investment in upstream exploration and development, and the oilfield service industry continues to recover. Benefiting from the continuous promotion of the “seven-year Action Plan” for increasing oil and gas storage and production, the domestic oil and gas production has increased steadily, and the domestic oilfield service market has maintained a good trend of recovery. Affected by this, the company’s main professional workload and the team use rate has increased.

3. The business situation of the Company in the reporting period

With more than 60 years of business operation and rich experience in project execution, the Company is the largest, integrated, and professional oilfield service provider in China and a leader in providing integrated and full industrial-chain services covering the whole life cycle of oil and gas field exploration. By the end of 2022, the Company provided oilfield services in 76 basins and 561 blocks in more than 20 provinces in China, while its overseas business keeps growing in more than 30 countries and regions.

The Company has five major business sectors – geophysics, drilling, logging & mud logging, downhole operation service and engineering construction, covering the full industrial-chain from exploration, drilling, completion, oil and gas production, collection and transportation, and well abandonment.

The Company has a technological R&D supporting system covering the full industrial-chain from oil and gas exploration to production and is able to provide integrated services in high-acid oil & gas, tight oil & gas, shale gas and heavy oil reservoirs. The Company was awarded National Prize for Progress in Science and Technology and the Golden Prize of National High-Quality Project for the Sichuan-Eastern China Natural Gas Transmission Pipeline project. The Company has shale gas oilfield supporting technologies featuring five technological series of drilling, logging, fracturing and testing, equipment manufacturing, and engineering and construction at shallow shale gas reservoirs above 3,500 meters with most key and core technologies localized, making the Company a national leader in this respect.

Committed to the vision of “leading technology, creating value, supporting oil and gas, serving customers”, the Company will vigorously promote its specialized, market-oriented, distinctive, high-end and international business. It will expand its business from onshore to offshore fields, from domestic to international markets, from conventional to unconventional fields, and from single engineering service to integrated reservoir services in order to realize its corporate vision – a world-class integrated oilfield service provider.

4. Analysis on core competitiveness in the reporting period

The Company has the service ability to cover the full industrial-chain of oilfield service. As of the end of 2022, there were 641 land drilling rigs (including 334 rigs above 7,000 meters), 12 offshore drilling platforms, 59 seismograph hosts, 133 imaging logging systems, 521 integrated logging tools, and 302 sets of 2500 above fracturing trucks, 75 workover rigs above 750HP, 1,567 drilling, geophysical and other professional teams. It can provide the full range of services from exploration, development and production for oilfields and bring value to oil companies. The Company has been the largest onshore drilling contractor of Saudi Aramco, Kuwait Petroleum and Ecuadorian National Petroleum Corporation for many years, and Algeria's largest international geophysical contractor status.

The Company is the large-scale integrated provider of petroleum engineering services and integrated oilfield technical services in China, with over 60 years of experiences for oilfield service and strong execution capabilities. Its representative projects include Puguang gas field, Fuling shale gas, Yuanba gas field, Tahe oilfield, Shunbei oil and gas field etc.

The Company has advanced exploration and development technologies as well as strong R&D abilities. It has a number of advanced technologies with proprietary intellectual property rights, such as shale gas, highly acidic oil and gas reservoirs, and ultra-deep well drilling, etc. which can bring sustainable high added-value to its services.

The Company has the experienced management as well as highly efficient and well-organized operation team.

The Company has a stable and growing client base. It has the solid client base such as Sinopec Group in China, and the growing number of clients overseas.

5. Statement of main business during the reporting period

(1) Main business analysis

A. The analysis table of changes related to the income statement and cash flow statement

	2022	2021	The rate of change
	RMB'000	RMB'000	(%)
Operating revenue	**73,772,688**	69,533,053	6.1
Operating cost	**68,003,487**	64,520,925	5.4
Selling and distribution expenses	**75,044**	80,463	-6.7
General and administrative expenses	**2,303,286**	2,184,739	5.4
Financial expenses	**627,596**	864,135	-27.4
Research and development expenditures	**1,838,968**	1,669,706	10.1
Net cash inflow from operating activities	**4,197,869**	6,206,909	-32.4
Net cash inflow from investing activities	**-3,951,162**	-3,253,443	Not applicable
Net cash inflow from financing activities	**-1,051,249**	-1,948,207	Not applicable

The change in operating income was mainly due to increases in exploration and development workload.

The change in operating costs was mainly due to increases in operating income which led to increases in operating costs.

The change in selling and distribution expenses was mainly due to a decrease in rental fees and travel expenses for developers in the external market.

The change in general and administrative expenses was mainly due to increases in labor costs such as social security and depreciation of right-of-use assets.

The change in financial expense was mainly due to the appreciation of the US dollar and related currencies increased exchange earnings.

The change in research and development expenditure was mainly due to an increase in investment for overcoming technological difficulties and key core technologies.

The change in net cash inflow from operating activities was mainly due to business owner's fund settlement was not in place.

The change in net cash inflow from investing activities was mainly due to an increase in investment for equipment and share a stake in Carbon Technology Company.

The change in net cash inflow from financing activities was mainly due to cash flow from operating activities narrowed and loan scale increased year-on-year.

The detailed description of material change in Company business type, profit composition or source of profit

☐ Applicable √ Not Applicable

B. Income and cost analysis

a. Statement of operation by industry and products

Industry	Operating income for 2022	Operating cost for 2022	Gross profit margin	Increase or decrease in operating income as compared with last year	Increase or decrease in operating cost as compared with last year	Gross profit margin compared with last year
	RMB'000	RMB'000	(%)	(%)	(%)	
Geophysical	**4,756,990**	**4,460,591**	6.2	2.0	0.9	Increased by 1 percentage points
Drilling	**36,814,540**	**34,576,025**	6.1	11.3	9.4	Increased by 1.6 percentage points
Logging/Mud logging	**3,257,608**	**2,688,410**	17.5	1.6	3.8	Decreased by 1.8 percentage points
Downhole operation	**9,366,492**	**8,727,331**	6.8	-0.2	1.6	Decreased by 1.7 percentage points
Engineering and construction	**17,436,238**	**15,917,549**	8.7	4.3	3.9	Increased by 0.3 percentage points
Other	**851,576**	**838,332**	1.6	-26.8	-28.2	Increased by 1.9 percentage points
Total	**72,483,444**	**67,208,238**	7.3	6.3	5.5	Increased by 0.7 percentage points

b. Operating income by regions

Region	Operating income for 2022	Operating cost for 2022	Gross profit margin	Change in operating income as compared with last year	Change in operating cost as compared with last year	Gross profit margin compared with last year
	RMB'000	RMB'000	(%)	(%)	(%)	
Mainland China	**59,469,940**	**55,708,205**	6.3	1.3	1.3	–
Hong Kong, Macau, Taiwan, and overseas	**13,013,504**	**11,500,033**	11.6	36.7	32.2	Increased by 3 Percentage points

c. **Cost analysis**

Product	Item of costs structure	Amount in 2022	Percentage of amount in 2022 in total cost	Amount in 2021	Percentage of amount in 2021 in total costs	Year-on-year change
		RMB'000	(%)	RMB'000	(%)	(%)
Geophysical Service	Raw materials	369,170	8.3	360,696	8.2	2.3
	Fuel and power	198,665	4.5	171,526	3.9	15.8
	Employees costs	1,436,185	32.2	1,391,831	31.5	3.2
	Depreciation and amortization	418,229	9.4	415,543	9.4	0.6
	Subcontracting costs and outsourcing services expenditures	292,005	6.5	309,038	7.0	-5.5
	Others	1,746,337	39.1	1,773,443	40	-1.5
	Sub-total	4,460,591	100	4,422,077	100	0.9
Drilling Service	Raw materials	7,289,226	21.1	6,556,042	20.7	11.2
	Fuel and power	1,855,796	5.4	1,457,078	4.6	27.4
	Employees costs	8,047,819	23.3	7,634,999	24.2	5.4
	Depreciation and amortization	3,398,938	9.8	3,202,990	10.1	6.1
	Subcontracting costs and outsourcing services expenditures	3,520,525	10.2	2,990,013	9.5	17.7
	Others	10,463,721	30.2	9,755,986	30.9	7.3
	Sub-total	34,576,025	100	31,597,108	100	9.4
Logging/Mud logging Service	Raw materials	648,943	24.1	637,641	24.6	1.8
	Fuel and power	40,293	1.5	32,997	1.3	22.1
	Employees costs	1,455,415	54.1	1,370,048	52.9	6.2
	Depreciation and amortization	287,729	10.7	258,712	10.0	11.2
	Subcontracting costs and outsourcing services expenditures	86,980	3.2	90,578	3.5	-4
	Others	169,050	6.4	199,426	7.7	-15.2
	Sub-total	2,688,410	100	2,589,402	100	3.8
Downhole operation service	Raw materials	1,946,196	22.3	2,178,138	25.4	-10.6
	Fuel and power	574,255	6.6	433,204	5.0	32.6
	Employees costs	1,562,112	17.9	1,480,582	17.2	5.5
	Depreciation and amortization	751,079	8.6	795,195	9.3	-5.5
	Subcontracting costs and outsourcing services expenditures	1,971,001	22.6	1,740,128	20.3	13.3
	Others	1,922,688	22	1,963,780	22.8	-2.1
	Sub-total	8,727,331	100	8,591,027	100	1.6
Engineering and construction service	Raw materials	3,145,124	19.8	3,498,080	22.8	-10.1
	Fuel and power	293,058	1.8	177,891	1.2	64.7
	Employees costs	2,416,070	15.2	2,341,518	15.3	3.2
	Depreciation and amortization	301,420	1.9	290,967	1.9	3.6
	Subcontracting costs and outsourcing services expenditures	2,271,402	14.3	2,017,271	13.2	12.6
	Others	7,490,475	47	6,992,784	45.6	7.1
	Sub-total	15,917,549	100	15,318,511	100	3.9

d. Changes in the equity of major subsidiaries during the reporting period led to changes in the scope of mergers

☐ Applicable √ Not Applicable

e. Changes in business, products or services during the reporting period

☐ Applicable √ Not Applicable

f. Information about major customer and major suppliers

During the reporting period, the aggregate operating revenue from the top five largest customers was RMB61,279,205,000 accounting for 83.1% of the Company's total operating revenue in 2022. Among the operating revenue form the top five largest customers, sales amount of related parties was RMB50,892,066,000, accounting for 69.0% of the Company's total operating revenue in 2022. The operating revenue of the top five customers in 2022 are as follows:

Number	Name of client	Amount	Percentage to operating income
		(RMB'000)	(%)
1	CPC and its subsidiaries	**47,105,168**	63.9
2	SAUDI ARABIAN OIL COMPANY	**4,607,731**	6.2
3	PipeChina	**3,786,898**	5.1
4	CNPC	**2,948,942**	4.0
5	KUWAIT OIL COMPANY	**2,830,466**	3.8
Total		**61,279,205**	83.1

During the reporting period, the aggregate purchase amount from the top five largest suppliers was RMB15,666,963,000, accounting for 26.8% of the Company's total purchase amounts in 2022. Among the purchase amount form the top five largest suppliers, purchase amount of related parties was RMB14,386,350,000, accounting for 24.6% of the Company's total purchase amount in 2022. Purchase amount from the largest supplier accounted for 22.3% of the total purchase amount of the Company. The largest supplier was China Petrochemical Corporation and its subsidiaries.

During the reporting period, except the disclosure information about the connected transactions with controlling shareholder and its subsidiaries in the part of "Information on connected transactions" in "Significant Events", the directors, supervisors of the Company and their close contacts or any other shareholders holding over 5% of shares of the Company are not found having any equity interest in the above main customers and suppliers.

During the reporting period, procurement proportion from an individual supplier exceeded 50% of the total and the existence of a new supplier among the top five suppliers or relying on a small number of suppliers exists.

☐ Applicable √ Not Applicable

C. Expense

Item	2022	2021	Year-on-year change	Reason for change
	RMB'000	RMB'000	(%)	
General and administrative expenses	**2,303,286**	2,184,739	5.4	Mainly due to increases in labor costs such as social security and depreciation of right-of-use assets
Selling and distribution expenses	**75,044**	80,463	-6.7	Mainly due to a decrease in rental fees and travel expenses for developers in the external market
Financial cost	**627,596**	864,135	-27.4	Mainly due to the appreciation of the US dollar and related currencies increased exchange earnings
Credit impairment loss	**-75,530**	22,492	-435.8	Mainly due to the recovery of receivables turned back to the bad debt provision
Asset impairment loss	**99,883**	-2,826	Not applicable	Mainly due to the provision for impairment of contract assets of the Ecuador Banya Duri Company
Income tax expenses	**265,547**	310,731	-14.5	Mainly due to the increase in the proportion of R&D expenses and tax preferential policies in the fourth quarter

D. Statement of research and development expenditure

a. research and development expenditure

Unit: RMB'000

Expenditure research and development expenditure for 2022	1,838,968
Capitalized research and development expenditure for 2022	–
Total research and development expenditure for 2022	1,838,968
Percentage of total research and development expenditure in operating income (%)	2.49
The proportion of R&D investment of capital (%)	–

In 2022, the Company's research and development expenditure was RMB1,838,968,000, representing an increase of 10.1 percent as compared with RMB1,669,706,000 in last year. It is mainly due to the increase in technology investment in key technologies such as drilling measurement and control, high temperature and high pressure logging.

b. R&D personnel status sheet

Number of R&D personnel in Company	3,406
Percentage of R&D personnel number in the total personnel number of the Company (%)	5.1

Academic structure of R&D personnel	
Education level	**Number of personnel**
Doctor degree	69
Postgraduate degree	662
Undergraduate degree	2,113
Junior college education	298
High school and below	264

Age structure of R&D personnel	
Age structure	**Number of personnel**
Under 30 years old (not include 30)	280
30-40 years old (include 30, not include 40)	962
40-50 years old (include 40, not include 50)	1,148
50-60 years old (include 50, not include 60)	984
60 years old and above	32

E. Changes in cash flow statement items

Unit: RMB'000

Item	2022	2021	Increased/ decreased by	Change (%)	Reason for change
Net cash inflow from operating activities	4,197,869	6,206,909	Inflow decreased by 2,009,040	Inflow decreased by 32.4%	Mainly due to business owner's fund settlement was not in place
Net cash inflow from investing activities ("-" for outflow)	-3,951,162	-3,253,443	Outflow increased by 697,719	Not Applicable	Mainly due to an increase in investment for equipment and share a stake in Carbon Technology Company
Net cash inflow from financing activities	-1,051,249	-1,948,207	Outflow decreased by 896,958	Not Applicable	Mainly due to cash flow from operating activities narrowed and loan scale increased year-on-year

(2) Explanations of significant changes in profit led by the non-core business

☐ Applicable √ Not Applicable

(3) Statement of assets and liabilities analysis

a. Assets and liabilities

Item	Amount at 31 December, 2022	Percentage of amount at 31 December, 2022 in total assets	Amount at 31 December, 2021	Percentage of amount at 31 December, 2021 in total assets	Changes from the end of the preceding year to the end of this year
	RMB'000	(%)	RMB'000	(%)	(%)
Cash at bank and on hand	1,838,229	2.6	2,508,224	3.9	-26.7
Accounts receivable	10,537,217	14.8	8,151,019	12.7	29.3
Accounts receivable financing	1,468,340	2.1	1,295,971	2.0	13.3
Inventories	1,116,341	1.6	1,088,304	1.7	2.6
Contract assets	15,613,899	21.9	13,546,895	21.1	15.3
Other current assets	2,362,863	3.3	2,238,006	3.5	5.6
Long-term equity investments	50,215	0.1	47,048	0.1	6.7
Investment in other equity instruments	134,492	0.2	21,760	0.0	518.1
Fixed assets	24,896,607	35.0	23,461,781	36.6	6.1
Construction in progress	467,385	0.7	668,364	1.0	-30.1
Right-of-use assets	1,012,350	1.4	720,938	1.1	40.4
Intangible assets	481,490	0.7	506,596	0.8	-5.0
Long-term deferred and prepaid expenses	7,255,439	10.2	6,595,930	10.3	10.0
Short-term borrowings	17,923,208	25.2	17,520,091	27.4	2.3
Notes Payable	7,990,225	11.2	8,334,086	13.0	-4.1
Accounts Payable	25,601,228	36.0	21,556,262	33.7	18.8
Contract liabilities	5,115,819	7.2	3,547,938	5.5	44.2
Other payables	2,728,144	3.8	2,355,823	3.7	15.8
Non-current liabilities due within one year	1,517,190	2.1	296,045	0.5	412.5
long-term borrowings	480,557	0.7	1,554,686	2.4	-69.1
Lease liabilities	497,045	0.7	390,866	0.6	27.2
Long-term payables	74,657	0.1	28,885	0.0	158.5
Deferred income	11,576	0.0	9,288	0.0	24.6
Other comprehensive income	5,232	0.0	-3,823	0.0	Not applicable
Special reserves	326,983	0.5	219,182	0.3	49.2
Taxes payable	998,894	1.4	737,725	1.2	35.4
Deferred income tax liabilities	63,367	0.1	9,438	0.0	571.4

Reasons for the changes:

(1) Investment in other equity instruments increased by RMB112,732,000 compared with the end of the previous year, mainly due to the acquisition of equity interest in Sinopec Carbon Industry Technology Co., Ltd.

(2) Construction in progress decreased by RMB200,979,000 compared with the end of the previous year, mainly due to 12,000 HP Multipurpose Workboat and construction drilling rigs in Uganda recorded as fixed assets.

(3) Right-of-use assets increased by RMB291,412,000 compared with the end of the previous year, mainly due to the valuation of lease assets under new leases with related parties recorded by the Company.

(4) Contract liabilities increased by RMB1,567,881,000 compared with the end of the previous year, mainly due to the receipt of prepayment for new projects in 2022.

(5) Non-current liabilities maturing within one year increased by RMB1,221,145,000 compared with the end of the previous year, mainly due to the reclassification of long-term borrowings maturing within one year.

(6) Long-term borrowings decreased by RMB1,074,129,000 compared with the end of the previous year, mainly due to the reclassification of long-term borrowings maturing within one year.

(7) Long-term payables increased by RMB45,772,000 compared with the end of the previous year, mainly due to the increase in the safety and insurance fund for hidden danger management projects.

(8) Other comprehensive income increased by RMB9,055,000 compared with the end of the previous year, mainly due to disposal of equity interest in Sinopec & Tharwa Drilling Company and other comprehensive income transferred to retained earnings.

(9) Special reserves increased by RMB107,801,000 compared with the end of the previous year, mainly due to the increase in provision for special reserves resulted from the increased income.

(10) Taxes payable increased by RMB261,169,000 compared with the end of the previous year, mainly due to the increase in value-added tax payable resulted from the increased operating revenue.

(11) Deferred income tax liabilities increased by RMB53,929,000 compared with the end of the previous year, mainly due to the preferential policy for full pre-tax deduction of newly purchased equipment enjoyed by the high-tech enterprises in the fourth quarter.

b. Statement of overseas assets

The amount of overseas assets is RMB21,374,460,000, accounting for 30.0% of total assets.

Relevant instructions on the relatively high proportion of overseas assets

√ Applicable ☐ Not Applicable

Unit: RMB'000

Overseas assets	Forming reason	Operation pattern	Operating income in this reporting period	Net profit in this reporting period
Drilling machines, well repair machines, geophysical collection instruments, ground construction equipments, engineering receivables, monetary funds, etc.	Undertake overseas oilfield engineering projects	Self-operation	13,013,504	825,564

c. Limitation of main assets by the end of the reporting period

√ Applicable ☐ Not Applicable

On 31 December 2022, the Company's funds with restricted use such as margin deposit, etc. was RMB37,079,000 (On 31 December 2021: RMB32,918,000).

(4) Analysis of the industry operation information

1. Market of crude oil and natural gas

In 2022, domestic crude oil output continued to rebound, and natural gas production continued to increase. Oil and gas companies continued to increase their efforts in exploration and development, expand reserves and production, and improve oil and gas self-sufficiency. According to the data provided by National Bureau of Statistics, the crude oil output was 204.67 million ton during the year, an increase of 2.9% as compared with the previous year, rising to more than 200 million tons for the first time since 2016. Natural gas production was 217.8 billion cubic meters, an increase of 6.4% as compared with the previous year. It was also the sixth year in a row with additional production over 10 billion cubic meters.

In 2022, the growth rate of demand for domestic refined oil and natural gas declined. The processing volume of domestic crude oil was 675.9 million tons during the year, a year-on-year decrease of 3.4%. According to the data provided by the National Development and Reform Commission, domestic refined oil consumption was 345 million ton during the year, a year-on-year increase of 0.9%, of which consumption of gasoline decreased by 4.6% year-on-year, consumption of diesel oil increased by 11.8% year-on-year and jet fuel decreased by 32.4% year-on-year. The apparent natural gas consumption in the country was 366.3 billion cubic meters during the year, a year-on-year decrease of 1.7%.

2. The capital expenditure in exploration and exploitation of domestic and overseas companies

In 2022, with the intensified geopolitical fluctuations and tightened fundamentals of oil supply and demand, the international oil price generally fluctuated upwards. Driven by high oil price and increased production of oil and gas, the overall investment scale in exploration and exploitation of international oil companies significantly increased. In order to ensure national energy security, domestic oil companies kept putting forward the "Seven-Year Action Plan" which continued to encourage expansion in reserves and production by increasing capital expenditures for upstream exploration and exploitation. For example, Sinopec recorded the capital expenditure of RMB83.2 billion for exploration and exploitation in 2022, a year-on-year increase of 22.2% and CNOOC estimated its capital expenditure for exploration and development was RMB100 billion in 2022, increased by 14.2% compared with RMB87.59 billion in 2021.

3. Business information in oilfield service industry

In 2022, the global oilfield service industry as a whole showed a recovery trend, but the state of market supply exceeding demand still exists. Oilfield service prices have not yet returned to the previous level. At the same time, due to the adjustment of relevant local material and personnel control policies, it has brought challenges to the company's material supply guarantee and engineering construction operations. Benefits from the continuous promotion of rising international oil prices and the action of increasing storage and production under the national energy security strategy, the domestic oil service market has maintained steady growth.

(5) Analysis of investments

1. Significant equity investment

Unit: RMB'000

The invested company	Main business	Whether the target the main investment business	The way of invest	Amount	Shareholding ratio	merge	Subject	Source of funds	Partners	Term	Progress	Impact of profit and loss of the current period	Litigation	Date of disclosure	Index of disclosure
Carbon Technology Company	Research and development of carbon emission reduction, carbon conversion, carbon capture and storage technology	No	New establishment	125,000	5%	No	Investment in other equity instruments	Own funds	Sinopec, Nanjing Chemical Company, UNIPEC, Nanjing Engineering, Shanghai Engineering	Long term	Completed	–	No	July 29, 2022	China Securities Journal, Shanghai Securities News, Securities Times
Total	/	/	/	125,000	/	/	/	/	/	/	/	–	/	/	/

2. Significant non-equity investment

During the reporting period, no significant non-equity investment items of the Company occurred.

3. Information of financial assets measured at fair value

☐ Applicable √ Not Applicable

4. Specific progress of major asset reorganization and integration during the reporting period.

☐ Applicable √ Not Applicable

(6) Sales of major assets and equity

During the reporting period, no sales of major assets and equity of the Company occurred.

(7) Information on the Company's subsidiaries and shareholding companies

Name of company	Registered capital	Shareholding percentage	Amount of total assets	Amount of total liabilities	Amount of total net assets	Amount of net profit	Main Business
		%	RMB'000	RMB'000	RMB'000	RMB'000	
Sinopec Shengli Oil Engineering Company Limited	RMB 700,000,000	100	11,307,101	11,033,996	273,105	101,772	Petroleum engineering technical service
Sinopec Zhongyuan Oil Engineering Company Limited	RMB 450,000,000	100	12,719,269	12,496,410	222,859	-81,445	Petroleum engineering technical service
Sinopec Jianghan Oil Engineering Company Limited	RMB 250,000,000	100	4,751,150	3,484,135	1,267,015	85,128	Petroleum engineering technical service
Sinopec Southwest Oil Engineering Company Limited	RMB 300,000,000	100	5,729,067	2,335,077	3,393,990	1,249	Petroleum engineering technical service
Sinopec North China Oil Engineering Company Limited	RMB 890,000,000	100	4,616,234	2,715,675	1,900,559	20,089	Petroleum engineering technical service
Sinopec East China Oil Engineering Company Limited	RMB 860,000,000	100	4,440,527	3,885,828	554,699	5,625	Petroleum engineering technical service
Sinopec Offshore Oilfield Services Company	RMB 2,000,000,000	100	4,173,103	463,965	3,709,138	11,123	Offshore Oil Engineering Technology Service
Sinopec International Petroleum Service Corporation	RMB 700,000,000	100	2,721,304	1,648,457	1,072,847	30,073	Petroleum engineering technical service
Sinopec Oil Engineering and Construction Corporation	RMB 500,000,000	100	22,281,621	21,602,219	679,402	212,349	Construction
Sinopec Oil Engineering Geophysical Company Limited	RMB 300,000,000	100	4,884,052	4,593,575	290,477	6,939	Geophysical exploration
Sinopec Jingwei Company Limited	RMB 1,000,000,000	100	4,612,619	3,335,590	1,277,029	220,070	Testing, logging and locating service

Name of company	Revenue	Operating profit
	RMB'000	RMB'000
Sinopec Shengli Oil Engineering Company Limited*	14,872,074	143,608
Sinopec Zhongyuan Oil Engineering Company Limited*	11,375,191	-17,690
Sinopec Jianghan Oil Engineering Company Limited*	5,625,903	69,133
Sinopec Southwest Oil Engineering Company Limited*	5,606,569	6,276
Sinopec North China Oil Engineering Company Limited*	4,258,890	37,319
Sinopec East China Oil Engineering Company Limited*	4,048,663	-168
Sinopec Offshore Oilfield Services Company*	1,710,519	10,286
Sinopec International Petroleum Service Corporation*	1,734,309	94,402
Sinopec Oil Engineering and Construction Corporation*	17,514,627	238,572
Sinopec Oil Engineering Geophysical Company Limited*	4,656,818	67,462
Sinopec Jingwei Company Limited	5,276,843	232,787

Note: 1.Sinopec Oilfield Service Co., Ltd., a wholly-owned subsidiary of the Company, is in the process of liquidation and cancellation.
2.The workload in northwest industrial zone, the main effective market of Sinopec Zhongyuan Oil Engineering Company Limited declined greatly, and the decline in income failed to effectively spread the fixed cost, resulting in the current operating loss.

(8) Information on the structured subjects controlled by the Company

☐ Applicable √ Not Applicable

6. Discussion and analysis on the Company's business in the future

(1) Competitive Structure and Development Trend

Looking ahead to 2023, the downward risks of the world economy will increase, the unstable, uncertain and unpredictable external environment becomes normal, China's economy has strong resilience, great potential and sufficient vitality, the effect of various policies continues to show, the economic operation is expected to recover; the geopolitical risk premium is still high, the fundamental tension of oil supply and demand may continue, and the international oil prices will remain high throughout the year. Driven by high oil prices and oil and gas production, the global upstream exploration and development investment scale will increase, oilfield service market continues to recover, at the same time to ensure national energy security, domestic oil company will further increase production "seven years action plan", continue to increase the intensity of oil and gas resources exploration and development, will promote the domestic oilfield service market continue to grow.

(2) Operation Plans in 2023

In 2023, in the face of complex and changeable market situation, the Company will continue to play a comprehensive oil and gas service ability and characteristic technology advantage, carry out "high quality development action" activities, to improve engineering service ability to work as the main line, and make every effort to do a good job of service, extension, technology innovation, reform, optimization, strict management, safety, environmental protection and other key work, high quality development, speed up the construction of world-class technology leading oil service company. The Company plans to sign new contract to reach a yearly value of over RMB78 billion, in which RMB49 billion will be from China Petrochemical Corporation's internal market, RMB14 billion from domestic external market, and RMB15 billion from overseas market. The Company puts emphasis on the following aspects:

1. Geophysical service

In 2023, the Company will boost efforts in R&D and update of key geophysical equipment, enrich information-based and intelligent quality control methods, improve the integrated capabilities of data collection, processing and interpretation, and promote oil companies conducting more geophysical exploration by using high-quality seismic data; vigorously develop its new business strengths such as surveying and mapping geographic information, wellbore seismic, pipeline detection, energy conservation and environmental protection, and strive to achieve rapid scale expansion; promote the three-year action plan for Beidou application, and accelerate the research and development of core technologies, application platforms, software and hardware devices, to promote the application of Beidou technology in a wider range and more scenarios, and continuously improve its voice and market share in the industry. The Company plans to complete annual acquisition of 2D seismic data of 5,090 kilometers and 3D of 16,000 sq. kilometers in 2023.

2. Drilling service

In 2023, the Company will continue to increase investment in core equipment under the deployment and implementation plan for exploration and exploitation of China Petrolchemical Corporation, comprehensively improve service support capabilities, and make every effort to solve the bottleneck technical problems that restrict exploration and development work, to minimize complex failures, and strive to make the well drilling fast, drilling well, and more high-yield wells, further shorten the annual drilling cycle by 5%, further reduce the time on complicated failures by 10%, and achieve a team utilization rate of more than 85%. In the domestic external market, with the goal of improving quality and efficiency, the Company will vigorously expand high-quality markets such as CNPC, CNOOC and PipeChina, actively promote local coalbed methane and other unconventional and non-oil businesses to achieve growth amid stability. The Company plans to complete drilling footage accumulated for 10,000 kilometers in 2023.

3. Logging/Mud logging service

In 2023, the Company will continue to give full play to its integrated advantages, innovate service models, improve the "four mechanisms" of visits and feedbacks, market dynamic evaluation, key project tracking and hierarchical management to improve market expansion capabilities; refine the internal market of China Petrolchemical Corporation, catch up with its exploration and exploitation deployment, take full advantages of integration of measurement, recording and guidance, intervene in advance and actively cooperate to provide integrated solutions for exploration and exploitation; optimize domestic external markets, strengthen the whole project process management for pre-assessment, in-process supervision and post-event evaluation, and cultivate emerging markets in the fields of deep coalbed methane, geothermal, salinization, etc. The Company plans to complete logging footage accumulated for 267,200 kilometers in 2023, while the mud logging footage accumulated for 8,280 kilometers.

4. Downhole operation service

In 2023, the Company will continue to strengthen the protection for the exploration and development of oil and gas resources, strive to promote the three-dimensional development of shale gas in Sichuan Basin, and focus on ensuring the production capacity of “three high” oil and gas wells in the southwest and northwest industrial zones and expansion in tight oil and gas reserves and production in Ordos Basin. The fracturing construction efficiency will be further improved by 10%. We will continue to expand the oil, local shale gas and coalbed methane markets in China, and strive to achieve new bases for expansion in reserves and production; improve the cooperative development of difficult-to-use blocks such as eastern Shengli, western Sichuan tight gas, southern Sichuan shale gas and southern Hebei tight oil, and actively explore new cooperative development model of shale oil. The Company plans to complete downhole operation service of 6,070 well times.

5. Engineering and construction service

In 2023, the Company will take full advantage of specialization and integration, refine measures to overcome difficulties, improve risk prevention and control mechanism, comprehensively increase its market share, maintain a high-quality market, and ensure efficiency at the source. In the internal market of China Petrochemical Corporation, it will improve the service quality, and focus on the development and construction of Leikoupo group gas reservoir in the Western Sichuan Gas Field, and the acidic moisture boosting project in the main body of the Puguang Gas Field, natural gas processing station in Shunbei Second Zone and other project construction; leverage the EPC advantages of long-distance pipelines to expand the domestic long-distance pipeline engineering market, and focus on the second phase of Sichuan-Eastern China Natural Gas Transmission Pipeline, west section of the four line of Western-Eastern China Natural Gas Transmission Pipeline, and Sino-Russian Far East Natural Gas Transmission Pipeline; seize the opportunity of new energy development and strengthen market expansion of large LNG storage tanks, CCUS, green power hydrogen production, maritime wind power and hydrogen transmission. In 2023, the Company plans to sign new contracts valued RMB22.5 billion and complete contracts valued RMB17.5 billion.

6. International business

In 2023, the Company will focus on economic benefits, continue to increase the deployment and development of target markets such as Saudi Arabia, Kuwait, Ecuador, Mexico, and Uganda, and strive to achieve new breakthroughs in fracturing, heavy oil large package, general contracting projects and high-end technical service, and closely follow up to the progress control and management of key projects and operation and management of oil reservoir projects. In the Saudi market, it will follow up the upstream and midstream cooperation opportunities for unconventional gas fields, expand ground business such as long-distance transmission pipelines, municipal roads and bridges, and pay attention to engineering construction opportunities related to energy transformation such as CCUS, hydrogen energy, photovoltaics, and wind power. In the Kuwait market, it will focus on bidding work for drilling rigs tendering project, organize start-up of 14 drilling and repair projects of developed wells, supporting equipment, delivery and start-up of 90D deep well drilling rigs, pay attention to the bidding information of lump sum projects in the southern oil area. In the Ecuador market, it will do a good job in operation and management of drilling and completion contract project, promote the development of professional technical services such as solids control, well logging, well mud logging, and drilling fluid with lump sum services, follow up extension of SACHA drilling and completion general contract project, and promote renewal of contract. In the Uganda market, it will implement operation for oil and gas gathering and transmission project and drilling rig service project, track and develop the follow-up projects. In 2023, the Company plans to sign new contracts valued US dollar 2.14 billion and complete contracts valued US dollar 1.89 billion.

7. Technology development

In 2023, the Company will continue to increase investment in scientific research, optimize research and development layout, innovate management mechanism, build a strong scientific research team, and systematically improve ability of scientific research and development as well as innovation and efficiency. Concentrated on the battle of core technology, it will strengthen the research and development of high-temperature and high-deflection rotary steering, accelerate localization of high-end equipment such as 200°C high-temperature MWD, and support exploration and development toward “deep engineering” and “deep sea engineering”; iteratively upgrade integrated and supporting technologies for ultra-deep drilling and shale oil and gas, accelerate breakthrough of cutting-edge technologies such as intelligent drilling and completion, and solve core engineering technical problems; focus on improving the level of technological efficiency, continue to expand application scale of self-developed technologies such as rotary guidance and pipe string automation equipment, and accelerate commercial application of self-research products; focus on promoting informatization construction, consolidate and expand the SICP platform achievements under the direction of smart oilfield services, iteratively upgrade the well site integrated decision-making command center, and strive to create new kinetic energy and new advantages of digital economy that support the current and lead the future.

8. Internal reform and management

In 2023, the Company will continue to optimize its systems and mechanisms to open a new horizon for development with new breakthroughs in reform. Firstly, it will fully implement a project-based management system supported by “two pools, two banks and one platform” to further break down management barriers, flatten management hierarchy, promote the concentration of core resources such as talents, funds, equipment, materials and information on projects, and comprehensively enhance its ability to control and deploy core elements and resources in a centralized manner. Secondly, it will deepen the integration and optimization of internal resources by optimizing the layout of project departments in key regions in “Northwest China, North China, Northeast China and Sichuan” and continually promoting homogeneous integration of technical services with living logistics business in key regions in Northwest China and Southwest China, to improve support effectiveness of regional resources. Thirdly, it will implement classified and graded management of project departments and project managers, strictly assess projects, give uncapped rewards for over-paid profits on a pro rata basis, and deduct achievement in case of losses on a pro rata basis without a minimum guarantee, thus fully inspiring the vitality to create benefits at all levels. Fourthly, it will promote the development of featured businesses by leveraging its comparative advantages to support better and stronger businesses, accelerating the cultivation of “strong, fine, unique, superior and professional” businesses with development potential and economies of scale that focuses on businesses such as fine pressure control and pressurized operations, and constantly improving the concentration of featured and advantageous businesses.

9. Capital expenditures

In 2023, the Company plans to arrange capital expenditure on fixed assets of RMB5.1 billion. The Company will continue to promote the renewal and upgrading of electrification, automation and networking of drilling rigs with 26 drilling rigs to be renewed and reconstructed; optimize the structure of fracturing equipment, and promote the renewal and deployment of high-power, large-displacement and high-pressure conventional fracturing equipment and electric fracturing equipment with 20 fracturing trucks (skids) to be purchased; promote the upgrading and iteration of rotary guidance instruments, strengthen the deployment of high-temperature and high-pressure drilling instruments and integrated loggers; and promote the extension of wired and land geophysical prospecting equipment towards wireless and shallow sea operations as well as the enhancement of equipment level; promote the configuration of automation equipment for engineering construction with 5 sets of automatic welding equipment to be purchased; and purchase construction equipment that meets project needs based on the bidding of conventional and unconventional gas well drilling, deep well drilling and workovers, geophysical prospecting acquisition and other projects in Saudi Arabia, Kuwait and other markets.

(3) Potential risks

In the course of its production and operation, the Company actively took various measures to avoid and mitigate various types of risks. However, in practice, it may not be possible to prevent all risks and uncertainties completely.

A. Market competition risk

Due to the geopolitical conflicts, the uncertainty of the global economy continues. The complex and volatile international political and economic situation has a profound impact on global oil and gas exploration activities, bringing many uncertain and unstable factors to the oilfield service industry. At the same time, the current oilfield service market competition pattern without fundamental change, there are still oversupply situation, plus there may be some countries or regions to the local oilfield service industry market protection, energy service market still taces greater operating pressure, market competition risk is still the company needs to face the risk.

B. Health, safety and environmental protection risk

Petrochemical services involve certain risks, which may cause unexpected or dangerous incidents such as personal injury or death, property damage, environmental damage and disruption to operations, etc. In light of Chinese and other countries' governments making tougher supervision requirements in environmental protection, if the Company causes environmental pollution caused by accidents in its operation, it will stand trial and pay compensation. As its operation expands, hazard risks faced by the Company also increase accordingly. Further, new regulations promulgated by the state in recent years set out higher standards for production safety. In addition, natural disasters such as earthquake and typhoon as well as emergency public health events may cause losses to properties and personnel of the Company, and may affect the normal operations of the Company. The Company has implemented strict HSE management system and used its best endeavors to avoid the occurrence of accidents. However, the Company cannot completely avoid potential financial losses caused by such contingent incidents.

C. Overseas operation risk

The Company has business in many foreign countries, and will increase communication with territorial governments, enterprises and staff. Due to the influence of geopolitics, economy, religion, humanity, policy changes, legal differences and other conditions, including political instability, fiscal instability and tax policies, barriers to entry, contract breaches, tax and legal disputes, commercial leaks, technical equipments and information capabilities cannot meet competitive needs, etc., the risks of the company's overseas business development and operations may increase.

D. Exchange rate risk

Because the Company holds US dollar debts and conducts business in many countries and regions abroad, involving the income and expenditure activities of multiple currencies, the exchange rate fluctuation of the RMB against the relevant foreign currency and the exchange rate between currencies will affect the Company's operating costs. Through regular research and analysis of exchange rate trends, the Company reduces exchange risk exposure and controls exchange rate risk.

7. Statements for the Company failed to disclose information in accordance with the standards due to special reasons such as non-applicability, national or business secrets, etc.

☐ Applicable √ Not Applicable

8. Assets, liabilities, equity and cash flow (extracted from the financial statements prepared in accordance with IFRS)

The Group's main sources of funds are operating activities, short-term and long-term borrowings, and the main uses of funds are operating expenses, capital expenditures and repayment of short – and long-term borrowings.

(1) Assets, liabilities and equity analysis

	As at 31 December 2022	As at 31 December 2021	The rate of change
	RMB'000	RMB'000	%
Total assets	**71,200,517**	64,052,447	11.2
Current assets	**36,587,579**	31,752,732	15.2
Non-current assets	**34,612,938**	32,299,715	7.2
Total liabilities	**63,773,198**	57,190,930	11.5
Current liabilities	**62,519,653**	55,020,881	13.6
Non-current liabilities	**1,253,545**	2,170,049	-42.2
Total equity attributable to owners of the Company	**7,427,319**	6,861,517	8.2

Total assets were RMB71,200,517,000, representing an increase of RMB7,148,070,000 from that at the end of 2021, of which: current assets were RMB36,587,579,000, representing an increase of RMB4,834,847,000 from that at the end of 2021. The increase was mainly due to an increase in accounts receivable of RMB2,386,198,000, an increase in contract assets of RMB2,090,961,000, and an increase of RMB851,235,000 in prepaid accounts and other receivables. Non-current assets were RMB34,612,938,000, representing an increase of RMB2,313,223,000 from that at the end of 2021, which was mainly due to the combined impact of the increase in the property, plant and equipment of RMB1,507,371,000, and the increase of RMB660,137,000 in other long-term assets due to the purchase of special tools for petroleum engineering.

Total liabilities were RMB63,773,198,000, representing an increase of RMB6,582,268,000 from that at the end of 2021, of which: current liabilities were RMB62,519,653,000, an increase of RMB7,498,772,000 as compared with the end of 2021, which was mainly due to comprehensive impact of an increase in notes and trade payables of RMB3,701,105,000, an increase in contract liabilities of RMB1,567,881,000, an increase in other payables of RMB564,221,000, and an increase in short-term borrowings of RMB1,624,362,000. Non-current liabilities were RMB1,253,545,000, a decrease of RMB916,504,000 compared with the end of 2021, which was mainly due to the decrease of long-term borrowings of RMB967,948,000.

Total equity attributable to owners of the Company was RMB7,427,319,000, an increase of RMB565,802,000 as compared with the end of 2021, mainly due to the gains attributable to equity holders of the Company in 2022 achieved RMB571,615,000.

As at 31 December 2022, the ratio of total liabilities to total assets was 89.6%, and 89.3% as at 31 December 2021.

(2) Cash flow analysis

The main items of cash flow of the Group in 2022 and 2021 showed in the following table.

Main items of cash flow	2022	2021
	RMB'000	RMB'000
Net cash (outflow)/inflow from operating activities	**4,197,869**	6,206,909
Net cash (outflow)/inflow from investing activities	**(3,951,162)**	(3,253,443)
Net cash (outflow)/inflow from financing activities	**(1,051,249)**	(1,948,207)
(Decrease)/Increase in cash and cash equivalents	**(804,542)**	1,005,259
Effect of exchange rate changes	**130,386**	(53,305)
Cash and cash equivalents at the beginning of the year	**2,475,306**	1,523,352
Cash and cash equivalents at the end of the year	**1,801,150**	2,475,306

During the year ended 31 December 2022, the Group's net cash inflow from operating activities was RMB4,197,869,000, representing a decrease of cash inflow by RMB2,009,040,000 as compared with last year. This was mainly due to business owner's fund settlement was not in place.

During the year ended 31 December 2022, the Group's net cash outflow from investing activities was RMB3,951,162,000, an increase of cash outflow by RMB697,719,000 as compared with last year. It was mainly due to an increase in investment for equipment and share a stake in Carbon Technology Company.

During the year ended 31 December 2022, the Group's net cash inflow from financing activities was RMB1,051,249,000, presenting an increase of cash inflow by RMB896,958,000 compared with last year. This was mainly due to cash flow from operating activities narrowed and loan scale increased year-on-year.

(3) Bank and affiliated company borrowings

As at 31 December 2022, the Company's bank and affiliated borrowings were RMB19,403,765,000 (31 December 2021: RMB19,074,777,000). These borrowings included the short-term borrowings in RMB17,923,208,000, and the long-term borrowings due more than one year of RMB1,480,557,000; the fixed-rate loans were RMB1,000,000,000 and the floating rate loans were RMB18,403,765,000. As at 31 December 2022, the balance of RMB borrowings accounted for approximately 88.1% and the balance of US dollar borrowings accounted for 11.9%.

(4) Gearing ratio

As at 31 December 2022, the gearing ratio of the Group was 71.5% (31 December 2021: 71.6%). The gearing ratio is computed as the following formula: (liability with interest – cash & cash equivalents)/(liability with interest – cash & cash equivalents + shareholders' equity)

9. The required information disclosure according to the Listing Rules

(1) Assets pledge

As at year ended 31 December 2022, there was no pledge on the Group's assets.

(2) Foreign Exchange Risk Management

It is set forth in note 41 of the financial statements prepared in accordance with the IFRSs of the Annual Report.

(3) Financial Summary

A summary of the results and of the assets and liabilities of the Company for the last five financial years (extracted from the financial statements prepared in accordance with the IFRSs) is set forth in the section on "Company Profile and Principal Financial Indicators" of the Annual Report.

A summary of the results and of the assets and liabilities of the Company for the last three financial years (extracted from the financial statements prepared in accordance with the PRC Accounting Standards for Business Enterprises) is set forth in the section on "Company Profile and Principal Financial Indicators" of the Annual Report.

(4) Reserves

Changes in reserves of the Company during the reporting period are set forth in note 29 of the financial statements prepared in accordance with the IFRSs of the Annual Report.

(5) Fixed assets

Movements in fixed assets of the Group, during the reporting period, are set forth in note 17 of the financial statements prepared in accordance with the IFRSs of the Annual Report.

(6) Bank loans and other borrowings

Details of bank loans and other borrowings of the Company as at 31 December 2022 are set out in note 34 of the financial statements prepared in accordance with the IFRSs of the Annual Report.

(7) Retirement plan

Particulars of the retirement plan operated by the Group are set forth in note 16 of the financial statements prepared in accordance with the IFRSs of the Annual Report.

(8) Income tax

As of the twelve months ended 31 December 2022, the Company's incoming tax was RMB265,547,000 (2021: RMB310,731,000). The main reason for the change of the tax amount is due to due to the increase in the proportion of the additional deduction of R&D expenses and the phased preferential tax policies in the fourth quarter. In addition, the Group has paid tax in the countries and regions where it has businesses.

(9) Capitalized Interest

For the year ended 31 December 2022, there was no capitalized interest of the Company.

(10) Donations

During the reporting period, the Group donated approximately RMB1,764,000.

(11) The Company's environmental policy and performance

(1) The Company's environmental policy: guided by the construction of ecological civilization and green low-carbon strategy, the Company continues to carry out clean production, energy saving and emission reduction, carbon asset inventory and verification, and the "Energy Efficiency Doubling" plan, and in-depth implementation of the clear water blue sky environmental protection special action. The effectiveness of energy and environmental work continued to improve.

(2) In 2022, the Company was not included in the list of companies with serious pollution published by the Chinese environmental protection department, and there will be no major environmental protection or other major social safety issues.

(3) The Company has established a comprehensive environmental impact assessment system to further strengthen environmental management and control. In 2022, the Company did not have any environmental pollution accidents.

(12) Compliance with laws and regulations

(1) For details of the relevant laws and regulations that have a significant impact on the Company, please refer to the Company's disclosure of major laws and regulations in the regulatory summary in Appendix I to the circular on the SSE's website www.sse.com.cn and HKSE's website dated 27 October 2014, in relation to this major asset reorganization.

(2) In 2022, the Company strictly complied with the relevant laws and regulations that have a significant impact on the Company, and did not receive complaints, fines or sanctions for violating major laws and regulations.

(13) Key employees, customers and suppliers of the company

(1) Employees, customers and suppliers of the Company have no significant influence on the prosperity of the Company.

(2) For details, please refer to item (1) B. (f) of subsection 5 "Statement of main business during the reporting period" in this section.

(14) Management contract

During the reporting period, the Company has not signed or has any contracts for the management and administration of the whole or any important business.

(15) Pre-emptive rights

There are no provisions for preemptive rights in the Company's Articles of Association or PRC laws.

(16) Share repurchase, sale and redemption

The Company has not repurchased, sold or redeemed any of the Company's listed shares during the twelve months ended 31 December 2022.

(17) Directors' interests in competing businesses

Some directors of the Company hold positions in China Petrochemical Corporation and its subsidiaries. For details, please refer to the item 4 "Information on directors, supervisors and senior management holding positions" of section 5 "Corporate Governance" of the Annual Report.

(18) Directors' interests in contracts

No director had a material interest, either directly or indirectly, in any contract of significant to the business of the Group to which the Company or any of its holding companies, subsidiaries or fellow subsidiaries was a party during the reporting period.

(19) Directors' service contracts

No Director has a service contract with the Company or any of its subsidiaries which is not terminated by the Company within one year without payment of compensation, other than statutory compensation.

(20) Permitted indemnity provisions

During the reporting period, the Company has purchased liability insurance for all directors to minimize their losses that may arise from the performance of their duties. The permitted indemnity provisions are provided in such directors' liability insurance in respect of potential liability and costs associated with legal proceedings that may be brought against such directors for negligent acts in the performance of their duties.

(21) Equity-linked agreement

For the year ended 31 December 2022, the Company has not entered into any equity-linked agreement.

On Behalf of the Board

Chen Xikun

Chairman

Beijing, PRC, 28 March 2023

Section V Corporate Governance

1. Information on Corporate Governance

During the reporting period, the Company strictly complied with domestic and overseas regulatory requirements and regularly continued to operations. In accordance with the Articles of Association, relevant laws, regulations, and securities regulatory rules in the place listed, and combined with the actual situation of the Company, the Company continuously improves and effectively implements the work system and related work processes of the Board and its professional committees. The Company's Supervisory Committee operates in accordance with the law, committed to its duties, is diligent and dedicated, and strictly follows the regulatory requirements. The Supervisory Committee held meetings as scheduled to review and pass relevant proposals, and expressed opinions and suggestions of the Supervisory Committee in a timely manner. At the same time, the Supervisory Committee promoted and improved the Company's various operations and management tasks.

During the reporting period, the actual situation of corporate governance complied with the requirements of the normative documents on the governance of listed companies issued by the local regulator authorities and stock exchanges. In order to further improve the construction of the board, the Board established the nomination committee and formulated the Terms of References of Nomination Committee. The Company strengthened the construction of basic corporate governance system, and formulated the Working Rules of the General Manager, the Administrative Measures for the Authorization of the Board of Directors, the Chairman's Special Meeting System and the General Manager's Office System, which clarified the boundaries of responsibilities and improved the operation mechanism.

The Company stayed focus on information disclosure and strictly discloses information in a timely and compliant manner in strict accordance with the requirements and procedures of the regulatory rules of the place where our shares are listed. During the reporting period, the Company completed information disclosure timely, truly, accurately and completely to ensure that all shareholders enjoy equal access to the relevant information of the Company and continuously improved the transparency of corporate governance. The Company paid attention to investors communication, maintained positive interaction with investors, and made new achievements in investor relations. The compliance awareness of directors, supervisors and senior managers had strengthened, at the same time the Company carefully organized the performance training of directors, supervisors and senior managers.

During the reporting period, the Company carried out inside information and insider management in accordance with regulatory requirements and company regulations, continuously optimized the inside information management mechanism, improved the compliance awareness of insiders of inside information, and did a good job in insider registration. During the reporting period, there was no insiders' trading of Company's stock by using inside information.

In strict accordance with the requirements of relevant laws and regulations including "Company Law", "the Securities Law", "Administrative Measures for the Disclosure of Information of Listed Companies", domestic and overseas listing rules, the Company will continuously perfect management system of the Company, improve the standard operation and management level of the Company, protect the interests of the Company and all the shareholders and promote the sustainable and healthy development of the Company.

2. The specific measures taken by the controlling shareholder and the de facto controller of the Company to ensure the independence of the Company's assets, personnel, finance, organization and business, as well as the solutions, work progress and follow-up work plan adopted to avoid affecting the independence of the Company

☐ Applicable √ Not Applicable

The situation with the controlling shareholder, actual controller and its controlling unit in the same or similar industry, the influence of competition in the same industry or significant changes in such competition on the Company and resolutions have already taken or will be taken, and the progress of the resolution

☐ Applicable √ Not Applicable

3. Summary of Shareholders' Meetings

During the reporting period, the Company held the annual general meeting for the year 2021, the first A shareholders class meeting for 2022 and the first H shareholders class meeting for 2022 on 26 May 2022 in Beijing. Details are as follows:

Name of meeting	Date of meeting	Website designated for searching the resolutions	Domestic disclosure date of resolutions	Resolutions
The annual general meeting for the year 2021	26 May 2022	www. sse.com.cn www.hkexnews.hk	27 May 2022	1. The Report of the Board of the Directors of the Company for the year 2021. 2. The Report of the Supervisory Committee of the Company for the year 2021. 3. The audited financial statements and the auditor's report of the Company for the year 2021. 4. The profit distribution plan of the Company for the year 2021. 5. To re-appoint BDO China Shu Lun Pan Certified Public Accountants LLP as the domestic auditor and internal control auditor of the Company for the year 2022 and to re-appoint BDO Limited as the international auditor of the Company for the year 2022. 6. To consider and approve the annual cap of continuing related transactions between the Company and China Oil&Gas Pipeline Network Corporation for 2022. 7. To consider and approve the election of Mr. Wang Jun as a non-employee representative supervisor of the tenth session of the supervisory committee of the Company. 8. To consider and approve provision of guarantee for wholly owned subsidiaries and joint venture. 9. To approve the authorisation to the Board to repurchase domestic shares and/or overseas listed foreign shares of the Company.
The first A shareholders class meeting for 2022	26 May 2022	www. sse.com.cn www.hkexnews.hk	27 May 2022	To approve the authorisation to the Board to repurchase domestic shares and/or overseas listed foreign shares of the Company.
The first H shareholders class meeting for 2022	26 May 2022	www. sse.com.cn www.hkexnews.hk	27 May 2022	To approve the authorisation to the Board to repurchase domestic shares and/or overseas listed foreign shares of the Company.

4. Information about directors, supervisors and senior management

(1) Information on the changes of shareholdings and the remuneration of Directors, Supervisors and senior management

Name	Position	Gender	Age	The beginning of the term	The end of the term	Number of shares at the beginning of the year	Number of shares at the end of the year	Reason for change	Salaries from the Company during reporting period (RMB) (before taxation)	Whether get payment from related party of the Company
Chen Xikun	Chairman	male	58	19 December 2019	1 February 2024	0	0	No Change	944,500	No
	Executive Director			8 February 2018						
Yuan Jianqiang	General Manager	male	59	20 May 2019	1 February 2024	0	0	No Change	944,500	No
	Executive Director			26 June 2019						
Lu Baoping	Non-Executive Director	male	61	8 February 2018	1 February 2024	0	0	No Change	35,000-	Yes
Fan Zhonghai	Non-Executive Director	male	57	8 February 2018	1 February 2024	0	0	No Change	–	Yes
Wei Ran	Non-Executive Director	male	55	20 June 2018	1 February 2024	0	0	No Change	–	No
Zhou Meiyun	Non-Executive Director	male	53	2 February 2021	1 February 2024	0	0	No Change	–	Yes
Chen Weidong	Independent Non-Executive Director	male	67	20 June 2018	1 February 2024	0	0	No Change	200,000	No
Dong Xiucheng	Independent Non-Executive Director	male	61	20 June 2018	1 February 2024	0	0	No Change	200,000	No
Zheng Weijun	Independent Non-Executive Director	male	56	2 February 2021	1 February 2024	0	0	No Change	200,000	No
Wang Jun	Chairman of the Supervisory Committee	male	55	26 May 2022	1 February 2024	0	0	No Change	458,675	No
Du Jiangbo	Supervisor	male	58	16 June 2015	1 February 2024	0	0	No Change	–	Yes
Zhang Qin	Supervisor	female	60	9 February 2015	1 February 2024	0	0	No Change	–	Yes
Sun Yongzhuang	Employee Representative Supervisor	male	57	2 February 2021	1 February 2024	0	0	No Change	873,200	No
Zhang Bailing	Employee Representative Supervisor	male	57	2 February 2021	1 February 2024	0	0	No Change	799,900	No
Du Guangyi	Employee Representative Supervisor	male	59	2 February 2021	1 February 2024	0	0	No Change	974,600	No
Zhang Yongjie	Deputy General Manager	male	59	9 February 2015	1 February 2024	0	0	No Change	949,500	No
Zhang Jinhong	Deputy General Manager	male	59	28 April 2015	1 February 2024	0	0	No Change	931,591	No
Cheng Zhongyi	Chief Financial Officer	male	46	27 April 2021	1 February 2024	0	0	No Change	799,591	No
	Secretary to the Board			3 August 2021						
Du Kun	Deputy General Manager	male	44	27 October 2022	1 February 2024	0	0	No Change	128,941	No
Sun Bingxiang	Deputy General Manager	male	51	3 August 2021	1 February 2024	50,300	50,300	No Change	787,591	No
Ma Xiang	Former Chairman of the Supervisory Committee	male	61	19 December 2019	29 March 2022	0	0	No Change	215,971	No
Zhang Jianbo	Former Supervisor	male	60	8 February 2018	13 February 2023	0	0	No Change	–	Yes
Zuo Yaojiu	Former Deputy General Manager	male	60	27 June 2017	21 December 2022	0	0	No Change	887,885	No
Zhang Jiankuo	Former Deputy General Manager	male	48	29 October 2020	28 June 2022	0	0	No Change	393,796	No

Note:

1. Mr. Chen Xikun, Mr. Yuan Jianqiang, Mr. Sun Yongzhuang, Mr. Zhang Bailing, Mr. Du Guangyi, Mr. Zhang Yongjie, Mr. Zhang Jinhong, Mr. Cheng Zhongyi, Mr. Sun Bingxiang and Mr. Zuo Yaojiu all received 12 months of salary in 2022. Mr. Lu Baoping received 7 months of subsidy in 2022. Mr. Wang Jun started to serve as chairman of the Supervisory Committee on 26 May 2022 and received 7 months of salary in 2022. Mr. Du Kun started to serve as deputy general manager of the Company on 27 October 2022 and received 2 months of salary in 2022.
2. Mr. Ma Xiang resigned as chairman of the Supervisory Committee on 29 March 2022 and received 3 months of salary in 2022. Mr. Zhang Jiankuo resigned as deputy general manager of the Company on 28 June 2022 and received 6 months of salary in 2022.
3. Mr. Chen Weidong, Mr. Dong Xiucheng and Mr. Zheng Weijun all received 12 months of director's fee in 2022.

Section V Corporate Governance

Information about current directors, supervisors and senior management

Director

Mr. CHEN Xikun#, aged 58, Chairman, Party Secretary. Mr Chen is a professor-level senior accountant with a master degree. In January 2003, he was appointed as the chief accountant of Sinopec Jiangsu Oilfield Branch Company; in April 2006, he was appointed as deputy manager and chief accountant of Sinopec Shengli Oilfield Branch Company; in December 2008, he was appointed as deputy general manager and chief accountant of Sinopec Shengli Oilfield Branch Company; in December 2011, he was appointed as chief accountant of Sinopec Exploration & Production Department; since March 2015, he acted as deputy general director of Sinopec Exploration & Production Department; from June 2015 to June 2018, he acted as director of Sinopec Oilfield Equipment Corporation; from June 2017 to February 2018, he was appointed as executive deputy general manager of the Company; in January 2018, he was appointed as the secretary of CPC Committee of the Company. Since February 2018, he has been appointed as the director of the Company. From February 2018 to May 2019, he has been appointed as deputy general manager of the Company. Since May 2019, he has been appointed as the Vice Chairman of the Board. Since December 2019, he has been appointed as the Chairman of the Board. And in February 2021, he renewed the Chairman of the Board.

Mr. YUAN Jianqiang#, aged 59, general manager, executive director. Mr. Yuan is a professor-level senior engineer with a Ph. D degree. He has been working for Henan Petroleum Exploration Administration of China Petrochemical Corporation as the deputy general manager and general manager of Drilling Company; in January 2008, he was appointed as deputy director of Henan Petroleum Exploration Administration of China Petrochemical Corporation; since December 2012, he acted as the executive director and general manager of Sinopec Henan Oil Engineering Company Limited; since June 2016, he acted as the executive director and general manager of Sinopec Huadong Oil Engineering Company Limited; from July 2017, he acted as the chairman and the secretary of CPC Committee of Sinopec Oilfield Equipment Corporation. Since May 2019, he has been appointed as the general manager of the Company. Since June 2019, he has been appointed as the executive director of the Company. And in February 2021, he renewed the executive director and the general manager of the Company.

Mr. LU Baoping*, aged 61, non-executive director. Mr. Lu is a professor-level senior engineer with a Ph.D. degree. In September 2001, he was appointed as deputy general manager of Sinopec Star Petroleum Co., Ltd. In June 2003, he was appointed as deputy manager of Sinopec International Petroleum Exploration and Production Corporation. From April 2009 to May 2022, he has been served as the president of Sinopec Petroleum Engineering Technology Research Institute. Since October 2017, he has been served as executive director and the general manager of Sinopec Petroleum Engineering Technology Research Institute Limited Corporation. From November 2021 to May 2022, he has been served as the chairman and the general manager of Sinopec Petroleum Engineering Technology Research Institute Limited Corporation. From December 2012 to September 2014, he was appointed as deputy manager of SOSC. From August 2016 to December 2017, he was served as deputy manager of the Company. Since February 2018, he has been appointed as the non-executive director of the Company. And in February 2021, he renewed the non-executive director of the Company.

Mr. FAN Zhonghai*, aged 57, non-executive director. Mr. Fan is a professor-level senior engineer with a master degree. Mr. Fan joined the Henan Petroleum Exploration Bureau in 1989 and was appointed as deputy chief geologist, chief geologist and Vice Dean of Research Institute of Petroleum Exploration and Development of Henan Petroleum Exploration Bureau consecutively. In September 2000, he was appointed as deputy chief geologist of Henan Petroleum Exploration Bureau of China Petrochemical Corporation. In November 2001, he was appointed as general manager of Henan Oilfield Branch Company of China Petrochemical Corporation In June 2016, he was appointed as Deputy Director of Petroleum Exploration & Development Research Department of China Petrochemical Corporation. Since December 2019, he has been appointed as the Deputy Manager of Petroleum Exploration & Development Research Department of Sinopec. Since February 2018, he has been appointed as the non-executive Director of the Company. And in February 2021, he renewed the non-executive director of the Company.

Mr. WEI Ran*, aged 55, non-executive director. Mr. Wei is a Senior Economist and obtained a master degree in Finance from Maastricht School of Management. Mr. Wei has successively served as the deputy head and the deputy general manager of Credit Department, vice president of Hunan Branch, general manager of Investment Management Department and general manager of Business Development and Innovation Department of the Export-Import Bank of China. Since April 2016, he has served as general manager of China Chengtong Fund Management Co., Ltd., since September 2016, he has served concurrently as secretary to the board of China Structural Reform Fund Co., Ltd., and since September 2022, he has served as chairman and general manager of China Chengtong Fund Management Co., Ltd. From June 2018, he has been appointed as the non-executive director of the Company. And in February 2021, he renewed the non-executive director of the Company.

Mr. ZHOU Meiyun*, aged 53, non-executive director. Mr. Zhou is a professor-level senior accountant with a master degree. Mr. Zhou joined the Shanghai Petrochemical General Plant in 1991 and served successively as the head, assistant to the director, deputy director, and director of the Finance Department of Sinopec Shanghai Petrochemical Co., Ltd. (hereinafter referred to as Shanghai Petrochemical); he was appointed as director of Finance Department of Shanghai Secco Petrochemical Co., Ltd. in May 2011; served as deputy general manager and Chief Financial Officer of Shanghai Petrochemical in February 2017; executive director of Shanghai Petrochemical in June 2017, chairman of China Jinshan United Trading Co., Ltd. in July 2017, and general counsel of Shanghai Petrochemical Corporation in May 2019; Since September 2020, he has been appointed as deputy general manager of the Finance Department of China Petrochemical Corporation. Since May 2022, he has been appointed as deputy chairman and general manager of Sinopec Capital Co., Ltd., since December 2022, he has served concurrently as deputy general manager of Capital and Finance Department of China Petrochemical Corporation. Since February 2021, he has been appointed as the non-executive director of the Company.

Executive Director
* Non-executive Director

Mr. CHEN Weidong+, aged 67, independent non-executive director. Mr. Chen obtained a master degree in Economic Law from China University of Political Science and Law. In 1982, Mr. Chen joined China National Offshore Oil Corporation ("CNOOC") and successively served as deputy manager of Exploration Department of CNOOC, general manager of China Offshore Geophysical Company Limited under CNOOC, as well as executive vice president and secretary to the Board, chief strategy officer of China Oilfield Services Limited, etc. Since May 2017, he has served as the Dean of Beijing Zhongguancun Smart Energy Technology Innovation Institute. Since June 2018, he has been appointed as the independent non-executive director of the Company. And in February 2021, he renewed the independent non-executive director of the Company.

Mr. DONG Xiucheng+, aged 61, independent non-executive director. Mr. Dong currently is a Professor and Ph.D. Supervisor of International Trade and Economics School of University of International Business and Economics, and concurrently serves as vice president of China Petroleum Circulation Association, Vice Chairman of Energy Resources System Engineering Branch of Systems Engineering Society of China, member of the Price Expert Advisory Committee of National Development and Reform Commission and Distinguished Expert of National Energy Administration, etc. In 1985, Mr. Dong joined the Business Administration School of China University of Petroleum (Beijing) and he has been successively promoted as a Lecturer, Associate Professor and Professor, during which period he also served as Assistant Dean and secretary of the Party Committee and other administrative positions. Since October 2017, he has served as a Professor and Ph.D. Supervisor in the International Trade and Economics School of University of International Business and Economics. Since June 2018, he has been appointed as the independent non-executive director of the Company. And in February 2021, he renewed the independent non-executive director of the Company.

Mr. ZHENG Weijun+, aged 56, independent non-executive director, graduated from MBA. Mr Zheng is a certified public accountant, certified tax agent, senior accountant, senior member of the Chinese Institute of Certified Public Accountants, a leading talent in the national certified public accountant industry of the Ministry of Finance and an extracurricular tutor for master's degree students in the college of accounting, Central University of Finance and Economics. Mr. Zheng served as a full-time member of the 13th, 14th and 15th Main Board Issuance Review Committee of the China Securities Regulatory Commission, and a member of the Professional Ethics Standards Committee and Professional Technical Steering Committee of the Chinese Institute of Certified Public Accountants. Since November 2001, he has been a partner and member of management committee of ShineWing Certified Public Accountants. Since September 2017, he served as an independent director of Beijing Kangtuo Infrared Technology Co., Ltd. Since July 2021, he served as an independent director of Shanghai Yaopi Glass Group Co., Ltd. Since February 2021, he has been appointed as the independent non-executive director of the Company.

Supervisor

Mr. Wang Jun, aged 55, chairman of the Supervisory Committee. Mr. Wang is a professor-level senior engineer with a master degree. In May 2007, he was appointed as the secretary of Communist Party Committee of Bohai Drilling Company of Shengli Petroleum Administration Bureau of China Petrochemical Corporation. In April 2015, he was appointed as the deputy secretary of Committee for Discipline Inspection and director of Inspection Department of Shengli Petroleum Administration Bureau of China Petrochemical Corporation. In August 2017, he was appointed as the deputy secretary of Communist Party Committee, secretary of Committee for Discipline Inspection, Chairman of Labour Union and Supervisor of Sinopec Shengli Oil Engineering Limited Company. Since January 2022, he has been appointed as the deputy secretary of the Communist Party Committee, secretary of the Commission for Discipline Inspection and chairman of the Labour Union of the Company. Since May 2022, he has been appointed as the chairman of the Supervisory Committee.

Mr. DU Jiangbo, aged 58, supervisor of the Company. Mr. Du is a professor-level Senior Economist with a M.A. degree. In September 2006, he was appointed as head of the Legal Affairs Division of Headquarters of Sichuan-East China Gas Transmission Construction project. In November 2010, he was appointed as deputy director of the Legal Affairs Division of China Petrochemical Corporation; and in March 2015, he was appointed as director of the Legal Affairs Department of China Petrochemical Corporation. In December 2019, he was appointed as deputy general manager of business reform and Legal Affairs Department of China Petrochemical Corporation. Since December 2021, he was appointed as general manager of business reform and Legal Affairs Department of China Petrochemical Corporation. Since May 2022, he has served concurrently as chief legal counsel of China Petrochemical Corporation. Since June 2015, he has been appointed as supervisor of the Company. And in February 2021, he has been appointed again as supervisor of the Company.

Ms. ZHANG Qin, aged 60, supervisor of the Company. Ms. Zhang is a professor-level senior administration engineer with a master degree. In December 1998, she was appointed as head of the political Work Department, Propaganda Office of China Petrochemical Corporation; in January 2009, she was appointed as the direct deputy secretary of CPC Committee, and the direct secretary of Discipline Inspection Committee of China Petrochemical Corporation; and from March 2015, she was appointed as the deputy director of the Political Work Department (administrative office of CPC Committee) of China Petrochemical Corporation. From December 2019 to January 2023, she was appointed as deputy director of Political Work Department of China Petrochemical Corporation. Since September 2014, she has been serving as a supervisor of SOSC. Since February 2015, she has been appointed as supervisor of the Company. And in February 2021, he renewed supervisor of the Company.

Mr. SUN Yongzhuang, aged 57, employee representative supervisor. Mr. Sun is a professor-level senior administration engineer with a doctoral degree. In June 2004, he served as the manager of the Second Downhole Operation Company of Sinopec Shengli Petroleum Administration Bureau; in June 2008, he served as the general manager of Sinopec Shengli Oilfield Co., Ltd. Dongsheng Jinggong Petroleum Development Group Co., Ltd.; in January 2013, he served as Sinopec Shengli Deputy General Manager of Petroleum Engineering Co., Ltd.; in December 2018, he served as general manager of Sinopec Shengli Petroleum Engineering Co., Ltd.; from December 2020, he served as executive director, party secretary and general manager of Sinopec Shengli Petroleum Engineering Co., Ltd. Since January 2022, Mr. Sun has been appointed as executive director and party secretary of Sinopec Shengli Petroleum Engineering Co., Ltd. Since February 2021, he has been appointed as the employee representative supervisor of the Company.

+ Independent non-executive Director

Mr. ZHANG Bailing, aged 57, employee representative supervisor. Mr. Zhang is a professor-level senior administration engineer with a doctoral degree. Since December 2003, he has successively served as the director of the dispatching department, the director of the production operation department of the Sinopec Southwest Oil and Gas Branch, and the director of the West Sichuan Gas Production Plant; in July 2011, he served as the deputy chief engineer of the Sinopec Southwest Oil and Gas Branch and the Yuanba Project Department. From August 2012 to November 2020, he served as deputy general manager of Sinopec Southwest Oil and Gas Branch; in March 2017, he served as secretary of the Party Committee of Sinopec Southwest Petroleum Engineering Co., Ltd.; in August 2017, he served as secretary of the Party Committee and deputy general manager of Sinopec Southwest Petroleum Engineering Co., Ltd.; in May 2020, he served as executive director and party secretary of Sinopec Southwest Petroleum Engineering Co., Ltd.; from November 2020, he served as executive director and party secretary of Sinopec Zhongyuan Petroleum Engineering Co., Ltd. Since February 2021, he has been appointed as the employee representative supervisor of the Company.

Mr. DU Guangyi, aged 59, employee representative supervisor. Mr. Du is a professor-level senior administration engineer with a doctoral degree. From December 2001 to June 2017, he served as deputy director of Sinopec Zhongyuan Petroleum Exploration Bureau; in January 2013, he served as party secretary of Sinopec Zhongyuan Petroleum Engineering Co., Ltd.; from March 2016, he served as executive director and general manager of Sinopec Zhongyuan Petroleum Engineering Co., Ltd.; in June 2017, he served as executive director and general manager of Sinopec Petroleum Engineering Construction Co., Ltd.; in June 2019, he served as chairman and party secretary of Sinopec Petroleum Machinery Co., Ltd.; in November 2020, he served as executive director and party secretary of Sinopec Petroleum Engineering Construction Co., Ltd. From September 2014 to June 2017, he served as the employee representative supervisor of the Company; Since February 2021, he has been appointed as the employee representative supervisor of the Company again.

Senior management

Mr. ZHANG Yongjie, aged 59, deputy general manager. Mr. Zhang is a senior engineer with a master degree. In April 2002, he was appointed as deputy general manager and general manger of the Foreign Trade and Economic Corporation under Zhongyuan Petroleum Exploration Administration of China Petrochemical Corporation; in December 2003, he was appointed as deputy general manager of Sinopec International Petroleum Service Corporation; and in November 2010, he was appointed as director and general manager of Sinopec International Petroleum Service Corporation; in August 2013, he was appointed as executive director and general manager of Sinopec International Petroleum Service Corporation. In March 2018, he was appointed concurrently as secretary of CPC Committee of Sinopec International Petroleum Service Corporation. Since June 2012, Mr. Zhang has acted as deputy general manager of SOSC. Since February 2015, he has been appointed as deputy general manager of the Company. And in February 2021, he renewed deputy general manager of the Company.

Mr. ZHANG Jinhong, aged 59, deputy general manager. Mr. Zhang is a professor-level senior accountant, master degree. In October 2000, he was appointed as the vice chief accountant and manager of drilling department of Jiangsu Petroleum Exploration Bureau of Sinopec Group; in July 2004, he was appointed as the vice chief accountant and manager of the engineering technology management department; in June 2008, he was appointed as the vice director of Huadong Bureau of Sinopec Group; in December 2012, he was appointed as the executive director, general manager and party secretary of Sinopec Huadong Oilfield Service Corporation. In June 2018, he was appointed as director of Sinopec Oilfield Equipment Corporation. Since April 2015, he has been appointed as deputy general manager of the Company. Since September 2020, he has appointed as the chief expert of China Petrochemical Corporation in the field of petroleum engineering (efficient drilling technology). And in February 2021, he was appointed again as deputy general manager of the Company.

Mr. CHENG Zhongyi, aged 46, chief financial officer and secretary to the Board. Mr. Cheng is a senior accountant with a master degree in Engineering. In January 2015, he served as deputy director of financial planning department and chief financial officer of overseas engineering management center of Sinopec Shengli Oil Engineering Company Limited. In October 2017, he served as director of financial planning department of Sinopec Shengli Oil Engineering Company Limited. In April 2018, he served as chief financial officer of Sinopec Oil Engineering Geophysical Company Limited. In May 2020, he served as deputy general manager of Sinopec Shared Services Company Limited. In April 2021, he served as the chief financial officer of the Company, and in August 2021, he served as the secretary to the Board.

Mr. Du Kun, aged 44, deputy general manager. Mr. Du is a senior engineer with a master degree. In November 2015, he was appointed as the manager of management department in Yan'an Project of Sinopec Shengli Oil Engineering Company Limited (as deputy mid-level position). In August 2017, he served as the manager of management department in Fuling Project of Sinopec Shengli Oil Engineering Company Limited (as deputy mid-level position). In July 2018, he served as the manager and deputy secretary of the Communist Party Committee of Southwest branch and manager of management department in Fuling Project of Sinopec Shengli Oil Engineering Company Limited. In December 2020, he served as the deputy general manager of Sinopec Shengli Oil Engineering Company Limited. Since October 2022, he was appointed as deputy general manager of the Company.

Mr. SUN Bingxiang, aged 51, deputy general manager. Mr. Sun is a senior engineer with a master degree. In April 2009, he was appointed as deputy head of general management division of the engineering and technology department of headquarters of Sichuan-East China Gas Transmission Construction project. In February 2011, he served as deputy head of technology information division of petroleum engineering management department of China Petrochemical Corporation. In November 2012, he served as deputy manager of technology development department of Sinopec Oilfield Service Co., Ltd. In January 2018, he served as deputy manager of technology information department of the Company. In August 2018, he served as deputy manager (treated as principal middle-level management) of technology information department of the Company. In July 2020, he served as manager of technology information department of the Company, and in August 2021, he served as the deputy general manager of the Company.

(2) Information on directors, supervisors and senior management holding positions

a. Positions in shareholders

Name	Name of corporate shareholders	Position held in corporate shareholders	The starting date of term in office	The termination date of term in office
Zhou Mei yun	CPC	Deputy general manager of Finance Department	September 2020	May 2022
	CPC	Deputy Chairman and General Manager of Sinopec Capital Co., Ltd.	May 2022	–
	CPC	Deputy General Manager of Capital and Finance Department	December 2022	–
Du Jiangbo	CPC	General manager of business reform and Legal Affairs Department	December 2021	–
	CPC	Chief Legal Counsel	May 2022	
Zhang Qin	CPC	Deputy Director of the Political Work Department	December 2019	January 2023
Zhang Jianbo	CPC	Deputy Director of the Office of the Supervisory Administration	May 2020	January 2023

b. Positions in other enterprises

Name	Name of other enterprises	Position held in other enterprises	Beginning date of term	End date of term
Lu Baoping	Sinopec Petroleum Engineering Technology Research Institute	President	April 2009	May 2022
Fan Zhonghai	Sinopec	Deputy Manager of Petroleum Exploration & Development Research Department	December 2019	–
Zhang Jinhong	Sinopec Oilfield Equipment Corporation	Director	June 2018	September 2024
Cheng Zhongyi	Sinopec Finance Co., Ltd.	Supervisor	May 2021	–
Sun Bingxiang	Sinopec Petroleum Engineering Technology Research Institute Limited Corporation	Director	November 2021	–

(3) Remuneration of the Company's directors, supervisors and senior management

Decision procedure of the remuneration of directors, supervisors and senior management	The remuneration of directors and supervisors in 2022 is submitted to the general meeting of shareholders after being approved by the remuneration committee of the Board and the Board. The remuneration of senior management is approved by the Board after approved by the remuneration committee of the Board.
The basis of remuneration determination of directors, supervisors and senior management	Decided by the duties and responsibilities of directors, supervisors and senior management, and by the performance of the Company.
The information of payable remuneration of directors, supervisors and senior management	RMB10,725,241
As to the end of reporting period, the actual obtained remuneration of the directors, supervisors and senior management.	RMB10,725,241

(4) Information on the change of company's directors, supervisors and senior management

Name	Position	Change	Reasons for change
Ma Xiang	Chairman of the Supervisory Committee	Resigned	Age
Wang Jun	Supervisor	Elected	Elected by the general meeting
Wang Jun	Chairman of the Supervisory Committee	Elected	Elected by the Supervisory Committee
Zhang Jiankuo	Deputy General Manager	Resigned	Change of work
Du Kun	Deputy General Manager	Appointment	Appointed by the Board
Zuo Yaojiu	Deputy General Manager	Resigned	Age
Zhang Jianbo	Supervisor	Resigned	Age

On 29 March 2022, Mr. Ma Xiang resigned as the chairman of the Supervisory Committee and Supervisor of the Company due to his age. Upon the election of the annual general meeting for the year 2021, Mr. Wang Jun was elected as non-employee representative Supervisor of the tenth session of the Supervisory Committee of the Company.

On 26 May 2022, the Company held the tenth meeting of the tenth session of the Supervisory Committee and Mr. Wang Jun was elected as the chairman of the tenth session of the Supervisory Committee, with a term of office commenced from 26 May 2022 to the date when the term of the tenth session of the Supervisory Committee expires.

On 28 June 2022, Mr. Zhang Jiankuo resigned as the Deputy General Manager of the Company due to change in his work position.

On 27 October 2022, the Company held the thirteenth meeting of the tenth session of the Board. The Board appointed Mr. Du Kun as the deputy general manager of the Company as nominated by the general manager, and his term of office commenced from 27 October 2022 to the date when the term of the tenth session of the Board expires.

Mr. Zuo Yaojiu resigned as the deputy general manager of the Company due to his age on 21 December 2022.

Mr. Zhang Jianbo resigned as the Supervisor of the Company due to his age on 13 February 2023.

The Company expresses its sincere gratitude to Mr. Ma Xiang, Mr. Zhang Jiankuo, Mr. Zuo Yaojiu and Mr. Zhang Jianbo for their hard work and important contributions during their tenure.

(5) Information of any punishment by securities regulators in the last three years

☐ Applicable √ Not Applicable

5. Summary of Board Meetings during the report period

Name of meeting	Date of meeting	Resolutions
The eighth meeting of the tenth session of the Board	29 March 2022	The meeting approved: 1. The Report of the Board of the Directors of the Company for the year 2021. 2. The completeness of goal tasks for 2021 and the work arrangements for 2022. 3. The profit distribution plan of the Company for 2021. 4. The daily related transactions of the Company in 2021. 5. The financial report for the year 2021. 6. Remuneration to the directors, supervisors and senior managers for 2021. 7. The annual report of the Company for the year 2021 and the abstract of the annual report. 8. The Environment, Safety and Governance Report of the Company for 2021. 9. The internal control assessment report for 2021. 10. Establishment of the nomination committee under the tenth session of the Board and the Working Rules of the Nomination Committee. 11. Proposed amendments to the internal control handbook (2022). 12. To re-appoint BDO China Shu Lun Pan Certified Public Accountants LLP as the domestic auditor and internal control auditor of the Company for the year 2022 and to appoint BDO Limited as the international auditor of the Company for the year 2022. 13. Measures for the management of total salaries. The remuneration of domestic and overseas accounting firms and the internal control accounting firm. 14. The annual cap of continuing related transactions between the Company and China Oil&Gas Pipeline Network Corporation for 2022. 15. The nomination of Mr. Wang Jun as a non employee representative supervisor of the tenth session of the supervisory committee of the Company. 16. The provision of guarantee for wholly owned subsidiaries and joint venture. 17. Proposed the authorisation to the Board to repurchase domestic shares and/or overseas listed foreign shares of the Company. 18. Appoint the authorized representative of the transfer company's dividend distribution account funds in Bank of China (HK) Trust Co., Ltd. 19. Risk assessment report of financial business in deposits and loans associated with the Company and Sinopec Finance Co., Ltd., Century Bright Company. 20. Convening the annual general meeting for the year 2021, the first A shareholders class meeting for 2022 and the first H shareholders class meeting for 2022 of the Company.
The ninth meeting of the tenth session of the Board	26 April 2022	The meeting approved: 1.2022 first quarterly results of the Company. 2. Formulation of the Working Rules of the General Manager, the Administrative Measures for the Authorization of the Board of Directors, the Chairman's Special Meeting System and the General Manager's Office System 3. The proposal of 2021 annual business performance assessment results, annual performance bonus and term incentive fulfillment plan of the managers of the Company.
The tenth meeting of the tenth session of the Board	10 June 2022	The meeting approved: 1. The proposal on signing the 2022 business performance assessment responsibility letter for management members. 2. The proposal on formulating the Implementation Rules for the Foreign Donation Management of Sinopec Oilfield Service Corporation.
The eleventh meeting of the tenth session of the Board	28 July 2022	The meeting approved: 1. The proposal on a wholly-owned subsidiary of the Company, Sinopec Oil Engineering and Construction Corporation participates in the establishment of the Sinopec Carbon Industy Technology Co., Ltd. 2. The proposal on canceling the wholly-owned subsidiary Sinopec Oilfield Service Co., Ltd. by two means of free transfer and dissolution.
The twelfth meeting of the tenth session of the Board	25 August 2022	The meeting approved; 1. 2022 interim report of the Company and the summary of interim report. 2. 2022 interim financial report. 3. The proposal on no dividend distribution for mid of 2022. 4. Risk assessment report of financial business in deposits and loans associated with the Company and Sinopec Finance Co., Ltd., Century Bright Company.
The thirteenth meeting of the tenth session of the Board	27 October 2022	The meeting approved: 1. The third quarter report of the Company for 2022. 2. The proposal to appoint Mr. Du Kun as deputy general manager of the Company.

6. Performance of the Directors

(1) The Directors' attendance at the Board Meetings and Shareholders' Meetings

		Attendance at shareholders' meetings						Attendance at shareholders' general meetings
Name of Director	Whether as Independent Director	Supposed Number of times for attending at meetings of the Board during the year	Number of times for attending in person (no. of times)	Attendance by correspondence (no. of times)	Attendance by proxy (no. of times)	Absence (no. of times)	Whether not attending in person for two consecutive times	Number of times for attending at shareholders' general meetings
Chen Xikun	No	6	6	4	0	0	No	3
Yuan Jianqiang	No	6	6	4	0	0	No	3
Lu Baoping	No	6	5	4	1	0	No	0
Fan Zhonghai	No	6	6	4	0	0	No	0
Wei Ran	No	6	5	4	1	0	No	0
Zhou Meiyun	No	6	6	4	0	0	No	3
Chen Weidong	Yes	6	6	4	0	0	No	3
Dong Xiucheng	Yes	6	6	4	0	0	No	3
Zheng Weijun	Yes	6	6	4	0	0	No	3

The Board meetings held during the year (No. of times)	6
Including: meetings held on site (No. of times)	2
Meetings held by correspondence (No. of times)	4
Meetings held by correspondence on site and by correspondence (No. of times)	0

(2) The information of the objections proposed by the directors

During the reporting period, the Company's directors did not raise objections against the proposals of the meetings of Board in 2022 or the proposals which does not require the review on the board meetings.

The detail information related to the performance of the independent directors is published in the report of the Company's independent directors 2022 on the websites of SSE and HKSE.

7. Information about special committees under the Board

(1) Members of special committee under the Board

Name of special committee	Name of members
Strategy Committee	Director: Mr. Chen Xikun Commissioners: Mr. Yuan Jianqiang, Mr. Lu Baoping, Mr. Fan Zhonghai, Mr. Dong Xiucheng
Audit Committee	Director: Mr. Zheng Weijun Commissioners: Mr. Zhou Meiyun, Mr. Chen Weidong, Mr. Dong Xiucheng
Remuneration Committee	Director: Mr. Chen Weidong Commissioners: Mr. Fan Zhonghai, Mr. Dong Xiucheng, Mr. Zheng Weijun
Nomination Committee	Director: Mr. Dong Xiucheng Commissioners: Mr. Chen Xikun, Mr. Chen Weidong, Mr. Zheng Weijun

(2) 7 meetings were held in the reporting period

Name of meeting	Date of meeting	Resolutions
The fifth audit committee meeting of the tenth session of the board	21 January 2022	Approved the audit plan for 2021 annual financial report made by BDO China Shu Lun Pan Certified Public Accountants LLP, accounting firm of the Company, and approved performance predecrease announcement for the year 2021.
The sixth audit committee meeting of the tenth session of the board	25 March 2022	Approved the financial report for the year 2021, the profit distribution plan of the Company for 2021, the internal control assessment report for 2021, amendments to the internal control handbook (2022), re-appoint BDO China Shu Lun Pan Certified Public Accountants LLP as the domestic auditor and internal control auditor of the Company for the year 2022 and to appoint BDO Limited as the international auditor of the Company for the year 2022, the annual cap of continuing related transactions between the Company and China Oil&Gas Pipeline Network Corporation for 2022 and the performance report of audit committee in 2021.
The seventh audit committee meeting of the tenth session of the board	23 August 2022	Approved 2022 interim report of the Company and the proposal on no dividend distribution for mid of 2022.
The eighth audit committee meeting of the tenth session of the board	27 October 2022	Approved the third quarter financial statement of the Company for 2022.
The third remuneration committee meeting of the tenth session of the board	25 March 2022	Approved remuneration of directors, supervisors and senior managers, measures for the management of total salaries of the Company, and the performance report of remuneration committee for the year 2021.
The fourth remuneration committee meeting of the tenth session of the board	10 June 2022	Approved the proposal on signing the 2022 business performance assessment responsibility letter for management members.
The first nomination committee meeting of the tenth session of the board	27 October 2022	Approved the proposal to appoint Mr. Du Kun as deputy general manager of the Company.

The audit committee made significant suggestions as follows:

a. To further reduce the gearing ratio of the Company. Although the Company has achieved continuous profitability in recent years, its gearing ratio remains at a high level of around 90%. The Company will reduce the overall debt and improve its cash flow condition by increasing profits, reducing costs, putting more efforts to recover accounts receivable and inventory, and optimizing the debt structure.

b. Secondly, the Company should strengthen tax planning, and actively strive for the tax rebate policy. We suggested the Company increases tax planning, especially to intensify overseas tax policy research, researching on key business countries, hiring specialized agencies to assist in when it is necessary, on the basis of the compliance tax in accordance with the law to reduce tax burden, at the same time actively study the latest national stay for tax rebate policy, actively strive for subsidiary local government support, as much as possible for VAT tax refund, reduce to take up tax funds.

c. Thirdly, pay attention to the progress of energy transformation of oil companies, grasp the trend of green development, and actively plan how to use the opportunities of energy transformation to promote the development of the company. In the current “two-carbon” background, green development is the trend of the times, energy transformation is not only inevitable, but also needs a process. It is suggested that the company keep up with the progress of the energy transformation of the oil company, actively give full play to its technical advantages in CCUS and engineering construction, take advantage of the opportunity of participating in the carbon science company, increase the development of CCUS related business, and plan the development opportunities in hydrogen energy, photovoltaic and other new energy business.

d. Fourthly, to continue to pay attention to foreign exchange risks and rationally use financial derivatives to effectively prevent exchange rate fluctuations.

(3) Statements on objected matters

☐ Applicable √ Not Applicable

8. The information on the existence of risk found by the Supervisory Committee

The Supervisory Committee has no objection on the supervised matters during the reporting period.

9. Information on the personnel of the Company and its subsidiaries

(1) Personnel information

The number of the Company' serving staff	126
The number of the Company's main subsidiaries' serving staff	66,666
The total number of the serving staff	66,792
The number of retired staff whose expense should be born by the Company and its subsidiaries	18,108
Professional composition	
Type of Professional	**Number of the staff**
Production Staff	36,293
Technical Staff	20,589
Researcher	3,406
Financial Staff	1,727
Market and Administrative Staff	3,670
Others	1,107
Total	66,792
Education	
Type	**Number of the staff**
Master or above	2,524
Bachelor	23,035
Junior college	13,319
Others	27,914
Total	66,792
Gender	
Male	57,679
Female	9,113
Total	66,792

(2) Remuneration Policies

The Company's Remuneration Distribution system consists of mid/long-term incentives and short-term incentives which include basic salary, allowance, monthly and annual performance bonuses. The Company has established differentiation incentive scheme based on different positions and different kinds of professionals, not only to create a fair competition environment but also give full play to the incentive and restraint role of performance appraisal, aiming at stimulating employees' creativity and keeping the remuneration in reasonable income difference.

(3) Training plan

Committed to staff training, the Company has established a differentiated and multi-tiered training management system which focuses on promoting staff fulfillment of responsibilities and talent building. Centered on central tasks in production and operation, the Company carries out the management, professional skills staff, operating skills staff and international staff training programs, highlights trainings in key positions such as domestic and international market development, project managers, conducts training for transferred employees and ability trainings, and make effective use of various trainings such as on-job training, off-job training and online training to improve the ability of employees to perform their duties and realize the mutual development of employees and the Company.

(4) Labor outsourcing

☐ Applicable √ Not Applicable

10. Profit Distribution Plan for Ordinary Shares or Plan to Convert Surplus Reserves into Share Capital

(1) Formulation, implementation or adjustment of dividend policy

The Company's current dividend policy is as follows: during the reporting period, under the situation of: 1) Company's profit gaining, 2) the Company's positive accumulated undistributed profit and 3) the Company's cash flow meets the requirement of its normal operation and sustainable development, then the Company shall have the dividends and the annual dividends shall not be less than 40% of the current net profit attributed to the Company shareholders. The specific amount of dividends shall be proposed by the Board of Directors of the Company, and be finally approved by the General Meeting. During the process of enacting and executing of the Company's dividend policy, the independent directors fulfilled their responsibilities following the corresponding obligations, which fully reflected the opinions and demands of minority shareholders and protected their legitimate rights and interests.

Due to the negative of the Company's undistributed profits at the end of 2022, the Board suggested no cash dividends and no capital reserve conversion to equity. The proposal still needs to be approved by shareholders' meeting. All of independent directors of the Board agreed the profit distribution plan above, and expressed independent opinion. The Company would strictly implement its dividend policy in Articles of Association, and as soon as the achievement of capability for cash dividends, the Company will perform decision-making process in accordance with relevant provisions. And independent directors will play their roles to safeguard the legitimate rights and interests of the minority shareholders.

(2) Special statement on cash dividend policy

√ Applicable ☐ Not Applicable

Whether the cash dividend policy in accordance with the rules of Articles of Association or resolutions of shareholders' meeting	√Yes ☐No
Whether the dividend standard is accurate and clear	√Yes ☐No
Completeness of relevant decision making procedures	√Yes ☐No
Whether the independent directors of the board undertake their responsibilities	√Yes ☐No
Whether give chance to minority shareholders for expressing opinions and fully protect their rights	√Yes ☐No

(3) If the Company records profits and the parent company records a positive distribution of profit available to shareholders of ordinary shares during the reporting period but there is no proposal for cash dividend for ordinary shares, the Company shall disclose the reasons and the usage of the undistributed profits and the usage plan in details

☐ Applicable √ Not Applicable

11. The status and effect of Company's share incentive plan, share option scheme for employees and other employee incentives

☐ Applicable √ Not Applicable

12. Information on share option held by current directors and senior management

(1) Share option held by current directors and senior management

☐ Applicable √ Not Applicable

(2) Qi Xin Gong Ying Scheme participated by Directors, Supervisors and senior management

On 25 January 2018, the Company non-publicly issued 1,503,568,702 and 23,148,854 shares of restricted-sale A shares to the China Petrochemical Corporation and the Qi Xin Gong Ying Scheme respectively. Qi Xin Gong Ying Scheme is managed by Changjiang Pension Insurance Co., Ltd., and its shares shall be subscribed by certain Directors, Supervisors, senior management and other core management personnel of the Company. The number of subscribers shall not exceed 198, and the subscription amount is RMB60.65 million in total. The subscription price for each scheme share under Qi Xin Gong Ying Scheme is RMB1.00. The duration of Qi Xin Gong Ying Scheme is 48 months commencing from 25 January 2018, and the first 36 months shall be the lock-up period and the last 12 months shall be the unlocking period. On 25 January 2021, the lock-up period of 23,148,854 A shares held by Qixin Gong Ying Scheme with limited selling conditions ended and was listed for trading. In 2021, a total of 11,574,427 A shares were sold through centralized bidding by Qi Xin Gong Ying Scheme, and 11,574,427 A shares were also held at the end of the reporting period.

In Qi Xin Gong Ying Scheme, the Company's directors, supervisors and senior management subscribed for a total of 5.15 million units, accounting for approximately 8.5% of the total unit of the scheme. The total number of directors, supervisors and senior management of the Company who subscribed for the Qi Xin Gong Ying Scheme was 15 persons. For details of the participation of the incumbent and former Directors, Supervisors and senior management of the Company in the Qi Xin Gong Ying Scheme, see the following table.

Name	Position	Subscription scheme amount under Qi Xin Gong Ying Scheme (RMB)	Subscription scheme shares under Qi Xin Gong Ying Scheme (unit)	Subscription Price (RMB/A Share)	Subscription amount of A share (share)
Chen Xikun	Chairman, Secretary of Party Committee	400,000	400,000	2.62	152,671
Wang Jun	Chairman of Supervisory Committee	300,000	300,000	2.62	114,503
Sun Yongzhuang	Employee Representative Supervisor	300,000	300,000	2.62	114,503
Zhang Bailing	Employee Representative Supervisor	350,000	350,000	2.62	133,587
Du Guangyi	Employee Representative Supervisor	350,000	350,000	2.62	133,587
Zhang Yongjie	Deputy General Manager	350,000	350,000	2.62	133,587
Zhang Jinhong	Deputy General Manager	350,000	350,000	2.62	133,587
Sun Qingde	Former Deputy Chairman、General Manager	400,000	400,000	2.62	152,671
Li Wei	Former Chairman of the Supervisory Committee	350,000	350,000	2.62	133,587
Huang Songwei	Former Supervisor	350,000	350,000	2.62	133,587
Zhang Hongshan	Former Supervisor	350,000	350,000	2.62	133,587
Zuo Yaojiu	Former Deputy General Manager	350,000	350,000	2.62	133,587
Li Tian	Former Chief Financial Officer	350,000	350,000	2.62	133,587
Zhang Jiankuo	Former Deputy General Manager	300,000	300,000	2.62	114,503
Li Honghai	Former Secretary to the Board	300,000	300,000	2.62	114,503
Total	/	5,150,000	5,150,000	–	1,965,637

(3) Directors', Supervisors' and Chief Executive's interests in the shares of the Company

As at 31 December 2022, the Company's deputy general manager Mr. Sun Bingxiang held 50,300 A shares of the Company. Save as disclosed above and Qi Xin Gong Ying Scheme disclosed above, none of the Directors, Supervisors or other senior management of the Company had any interest or short positions in any shares, underlying shares or debentures of the Company or any of its associated corporations within the meaning of Part XV of the SFO, as recorded in the registry by the Company pursuant to Section 352 of the SFO or as otherwise notified to the Company and the HKSE pursuant to the Model Code.

(4) Directors' and Supervisors' service contracts

Each Directors and supervisors entered into a service contract with the Company. Main contents are set out below:

a. More details about the expired date of the terms of Directors in the tenth session of the Board and the Supervisors in tenth session of Supervisory Committee, please see the section in "Information on the changes of shareholdings and the remuneration of Directors, Supervisors and senior management"

b. The remuneration for the tenth session of executive directors, chairman of supervisory committee Mr. Wang Jun and the employee representative supervisors under the service contract shall be determined in accordance with relevant national regulations and the Company's senior management remuneration implementation measures. It is provided in the measures for implementation of remuneration packages for senior management of the Company that the remuneration consists of a basic salary, performance bonus and mid-and-long term incentives, with specific functions and responsibilities of the management members and performance of the Company as a whole being taken into account. An independent non-executive Director entitled to a director's fee of RMB200,000 per annum (pre-tax). Non-executive directors and Mr. Du Jiangbo, Mr. Zhang Jianbo and Ms. Zhang Qin, who are non-employee representative supervisors shall not receive any remuneration from the Company.

   In addition, the Company has purchase liability insurance for the Directors and Supervisors in order to safeguard the interests of the Directors and Supervisors. The permissible compensation provisions are set out in the liability insurance policy for Directors, which will indemnify Directors for costs associated with potential legal proceedings arising from negligence in the performance of their duties.

   No Director or Supervisor has entered into a service contract with the Company which is not terminated by the Company within one year without payment of compensation (except for statutory compensation).

(5) Directors' interests in competing businesses

Some directors of the Company hold positions in China Petrochemical Corporation and its subsidiaries. For details, please refer to this section "Information on directors, supervisors and senior management holding positions" of the report.

(6) Directors' and Supervisors' interests in contracts

No contract of significance to which the Company, its parent companies or any of their subsidiaries was a party, in which a Director or Supervisor of the Company had a material interest, directly or indirectly, subsisted at the end of the year or at any time during the year.

(7) Special treatment to Directors, Supervisors and Senior Management

There has been no special treatment granted to the directors, supervisors or senior management during the reporting period.

(8) Regarding the performance evaluation for senior management, and the establishment and implementation of stimulating mechanism during the reporting period

Under the guidance of the annual operation and management target set by the Board, Remuneration and Assessment Committee of the Company effectively appraised and inspected the performance of senior management, submitted it to the Board of the Company for consideration, and has been working hard to establish and optimize evaluation criteria and a stimulating and binding mechanism for senior management.During the reporting period, the Company continued to implement the tenure system and contractual management for the members of the management team. In accordance with relevant business indicators in 2022, the Company settled office and annual performance assessment responsibility letter of manager members in 2022, and approved by the tenth meeting of the tenth session of the Board.

13. Institute and execute situation about internal control system during the reporting period:

In 2022, the Company kept improving the internal control system and risk management system, and made the operation of the internal control system effective by way of strengthening risk assessment, optimizing the business process, control and continuously enhancing supervision. The Board will take responsibility for establishing and maintaining sufficient internal control of financial report, and the annual review of the Company's risk management and internal control system. The supervisory committee conduct supervision on the Board about establishment and implement of internal control. Managers take charge of organizing routine operation of internal control. In 2022, the Board assessed internal control of the Company during the past year, in accordance with "basic norms of enterprise internal control", "application guidelines of enterprises internal control", "evaluation guidelines of enterprises internal control" and concluded that there is no important deficiency or significant deficiencies till 31 December 2022. The internal control system of the Company's financial report is sound and effective.

The Board approved the Company's 2022 annual self-assessment of internal control on 28 March 2023. Please visit the website of HKSE or the website of the Shanghai Stock Exchange for details of the report. All members of the Board ensure that this report is true, accurate and complete and there is no false records, misleading statements or major omissions.

Description about major defects of the internal control during the reporting period

☐ Applicable √ Not Applicable

14. Statement on manage and control subsidiaries

☐ Applicable √ Not Applicable

15. Information about the audit report of internal control

Whether disclose the audit report of internal control: yes

BDO China Shu Lun Pan Certified Public Accountants LLP audited the Company's internal control till 31 December 2022 and issued a standard unqualified audit report on internal control. For detailed information, please refer to the 2022 annual internal control audit report disclosed on 28 March 2023.

Section V Corporate Governance

16. Compliance with Corporate Governance Code Practices of HKSE

As at 31 December 2022, the Company has been in strict compliance with the code provisions of Corporate Governance Code of HKSE, and has applied principles recorded in the Corporate Governance Code to enterprise governance and general practice. The details are as follows:

A.1 The Board

(1) The Board meets regularly to fulfill their responsibilities. The Board held six meetings in 2022, including four regular meetings. The Directors' attendance of the Board meetings is set forth in item 6 "Performance of the Directors" of this section.

(2) All Directors can raise matters in the agenda for the Board meetings and have the right to ask for more related documents.

(3) The notice has been given 14 days before regular meetings and the notice of the other Board meetings has usually been given 10 days before.

(4) The Board Secretary records and keeps the minutes of the Board meetings and meetings of Board Committees. The Articles of Association regulates the contents of the minutes, and the procedure that the minutes should be sent to all Directors for their comment and signature after the Board meetings.

(5) The Board Secretary continuously provides service for the Directors and reminds all Directors in order to ensure them to follow all applicable rules and regulations of domestic and overseas regulatory authorities.

A.2 Chairman and Chief Executive Officer

(1) Mr. Chen Xikun was elected as Chairman of the Company by the Board. Mr. Yuan Jianqiang was appointed as General Manager of the Company by the Board. The responsibilities between Chairman and General Manager are set out clearly in the Articles of Association. There are no financial, business, domestic or other important relation among the directors, senior managements and main shareholders in the Company.

(2) Procedures to acquire necessary information for decision were regulated in the "the Rules and Procedures for the Board" of the Company. Directors can require General Manger or relevant departments through General Manger to provide information and explanation necessary for making decision. If necessary, Independent Directors can consult independent professionals and the Company should pay the relevant expenses.

(3) The chairman advocates the culture of open and active discussion, encourages directors to fully conduct in-depth discussions on major decisions of the company at the board meetings, and promote the maintenance of a good relationship among directors. The chairman pays attention to the communication with the independent non-executive directors, and meets with the independent non-executive directors alone once a year to communicate about the Company's development strategy, corporate governance, operation and management, etc.

A.3 The Board composition

(1) The Board of the Company consists of 9 members with extensive professional and management experiences. Among the 9 members, there are 2 executive directors, 4 non-executive directors and 3 independent non-executive directors. The independent non-executive directors represent one third of the Board. The company's executive directors and non-executive directors have extensive management experiences in petrochemical and large-sized enterprises; Independent non-executive directors have working background as well-known finance experts with rich experience in international capital management and investment and in energy research. The composition of the Board is reasonable and diversified.

(2) The Company has received from each independent non-executive director a letter of confirmation regarding its compliance with relevant independence requirements set out in Rule 3.13 of the Hong Kong Listing Rules. The Company considers that each of the independent non-executive directors is independent. The composition and operation mechanism of the board of directors of the Company can guarantee the board of directors to obtain independent and objective opinions. For example, the company stipulates that related transactions, profit distribution, selection of directors and other matters shall get prior approval or independent opinions of the independent non-executive directors. The board evaluates the effectiveness of the relevant mechanism each year.

(3) The independent non-executive directors are identified in all corporate communications in which also listed all the directors' names. The list of the current Directors of the Company had been published on its website and the HKSE's website.

A.4 Appointment, re-election and removal

(1) All Directors are elected by shareholders' general meetings for a term of not more than 3 years. A Director may serve consecutive terms if re-elected upon the expiration of the term. The Board has no right to appoint temporary directors.

(2) The term of office of Independent Directors shall not be more than 6 years. The term of the independent non-executive directors is set forth in the section 4 "Information about directors, supervisors and senior management" of this Annual Report.

(3) For the newly appointed directors, the company arranges professional consultants, prepares detailed information, informs them of the regulatory rules of each listed place, and reminds them of their rights, responsibilities and obligations as directors.

A.5 Nomination Committee

(1) The Nomination Committee of the Company consists of four directors, of which the chairman is Mr. Dong Xiucheng, an independent non-executive director, and the members are Mr. Chen Xikun, the Chairman of the Board, Mr. Chen Weidong and Mr. Zheng Weijun, the independent non-executive directors. The Nomination Committee mainly provides suggestions on the Board's size and composition and the selecting standards, procedures, and candidates for directors and senior management; and reviews the structure, size and diversity of the Board on an annual basis, to ensure the composition of the Board is in accordance with the Listing Rules. The Terms of References of Nomination Committee was published on the websites of the Company and Hong Kong Stock Exchange, providing the role and authorization of the Nomination Committee and setting out the procedure for the nomination of directors of the Company. When nominating candidates for directors, the Nomination Committee mainly considers the skills, knowledge, experience and qualifications of the candidates, and also assesses his or her time and energy available for the position, and the Board diversity policy. During the reporting period, the Nomination Committee held 1 meeting.

(2) The Company understands and acknowledges the benefit of diversifying the Board members, and considers it as a key factor to achieve strategic goals, maintain competitive advantages and complete sustainable development of the Company. On the first meeting of the eighth session of the Board held on 9 February 2015, the Company has approved the Board Diversity Policy of the Company. Such policy provided that the Company shall consider the diversity of Board members from multiple aspects when setting the composition of Board members, including but not limited to gender, age, cultural and educational background, region, professional experience, skills, knowledge, service tenure and other regulatory requirements of the listed venues of the Company. At present, all of directors of the Board have extensive working experience, and their expertise not only includes management in petrochemical enterprises, but also includes economics, accounting and finance, which can help the Board to make scientific decision. However, all of the directors are male. In the future, the Company will add at least one female director to the Board based on a comprehensive consideration of talents, skills and experiences required for the Board's overall operation, which is expected be achieved by the time of the Board's renewal in February 2024. With respect to candidates of directors, the Board and the Nomination Committee will, as and when necessary, seek assistance of industry self-regulatory associations, professional recommendations and other channels to identify potential female directors. The Board will continue to increase the proportion of female directors if suitable candidates are available in the future.

The Company is committed to building a gender-diverse and equal opportunity workplace and plans to actively recruit female employees to increase the diversity of its workforce and provide equal employment opportunities and an environment where all employees can have the space to fully develop their careers featuring their individual characteristics and values. Considering the overall low percentage of female employees in our industry, the percentage of female employees in our Company is 13.6% in 2022. The Company will continue to adhere to the principle of gender equality and ensure that female employees enjoy equal labor rights and social security rights as male employees. For details, please refer to the Company's 2022 Environmental, Social and Governance (ESG) Report.

A.6 Responsibilities of Directors

(1) All the non-executive directors have the same authorities as the executive directors. In addition, the nonexecutive directors, especially the independent non-executive directors are entitled to certain specific authorities. The Articles of Association and the Rules and Procedures for the Board clearly specify for the authorities of directors including independent non-executive directors, which are published on the website http://ssc.sinopec.com.

(2) Each of the directors was able to devote sufficient time and efforts to handling the matters of the Company. Directors shall abstain from voting at the Board meeting due to conflicts of interests.

(3) Each of the directors confirmed that he or she has complied with the Model Code during the reporting period. In addition, the Company formulated the "Rules Governing Shares Held by Company Directors, Supervisors and Senior Manager and changes in shares" and the "Model Code of Securities Transactions by Company Employees" (no less exacting than the Model Code above) to regulate the activities of China Petrochemical Corporation's personnel in purchase and sale of the securities of the Company.

(4) The Company has arranged trainings for directors and provided relevant training fees. In reporting period, the Company's directors participated in professional training persistently, developing their knowledge and skills to ensure that they can hold comprehensive information and make contribution to the Company as required by the Board. The Company's directors and supervisors mainly attended the training courses by way of watching video or reading articles, which organized by China Listed Company Association, Beijing Listed Company Association and SSE, the non-executive independent directors participated in other relevant follow-up training. In addition, the Company also provided information for directors regularly about updated ongoing responsibility of Listed Company directors of the Board, and introduced the Group's business operation information through monthly report.

Statement on participation in training for the current directors of the board of the Company

Name	Position	Corporate governance or rules updated		Accountancy/finance/corporate governance and business operation situation	
		Reading	Attend training or meeting	Reading	Going for research
Chen Xikun	Chairman of the board	√	√	√	√
Yuan Jianqiang	Executive director of the board General manager	√	√	√	√
Lu Baoping	Non-executive director	√	√	√	√
Fan Zhonghai	Non-executive director	√	√	√	√
Wei Ran	Non-executive director	√	√	√	√
Zhou Meiyun	Non-executive director	√	√	√	√
Chen Weidong	Independent non-executive director	√	√	√	√
Dong Xiucheng	Independent non-executive director	√	√	√	√
Zheng Weijun	Independent non-executive director	√	√	√	√

A.7 Supply of and access to information

(1) The Company provides information relating to business operation of the Company regularly, to help Directors to understand the Company's operation. Where any director requires information, the Company will supply the related materials in a timely manner.

(2) All Directors usually acquire adequate information 3 working days before the Board meetings which can help them to make accurate decisions.

(3) The Board Secretary provides sustainable services for all Directors. Directors can review all Board documents and relevant information at all times.

B. Remuneration of Directors and Senior Management

(1) The company has set up the Remuneration Committee. The Remuneration Committee under the tenth session of the Board consists of independent non-executive Director Mr. Chen Weidong as the Head, the non-executive director Mr. Fan Zhonghai and the independent non-executive directors Dong Xiucheng and Zheng Weijun as members, and they have made the rules. The Remuneration Committee has its working rules which can be found in the website of the company or the Hong Kong Stock Exchange. During the reporting period, the Remuneration Committee held 2 meetings.

(2) Pursuant to the principles approved by the shareholders' general meeting, the Service Contract which was entered into between the Company and each Director or Supervisor, the proposal raised by the Remuneration Committee and with reference to the operating results, the Board considered and approved the remuneration of the Directors, Supervisors and Senior Management. The details of the remuneration of the Directors during the reporting period are set forth in this section 4 "Information about directors, supervisors and senior management."

(3) The Remuneration Committee acquires authorization from the Board to formulate and review the compensation policies and assessment matters of the directors, supervisors and senior managers of the Company. It can make recommendations to the Board, ensuring that the personnel concerned are properly remunerated according to the Company's strategy and long-term and short-term performance. The members of Remuneration Committee can consult Chairman or General Manager, and can consult independent professionals and the Company shall pay the relevant expenses.

C. Accountability and audit

C.1 Financial reporting

(1) The Company assures that the senior management has provided adequate financial information to the Board and the Audit Committee.

(2) The Directors are responsible for preparing the accounts for every fiscal year, which can give a view of the state of affairs of the Company as at 31 December 2022 and of the Company's profit and cash flows for the year. The Directors has selected the appropriate accounting policies to carry out, made prudent and reasonable judges and estimates, and prepared accounts on a going concern basis. The Board and all directors warranted that there were no material omissions, or misrepresentations or misleading statements contained in the annual report, and jointly and severally accepted full responsibility for the authenticity, accuracy and integrity of the content.

(3) Required under the Listing Rules by HKSE, the Company announces and publishes the annual reports, interim reports, quarterly reports and other share price-sensitive affairs timely and accurately.

(4) The external auditors of the Company made a statement about their reporting responsibilities in the auditor's report contained in the financial statements.

C.2 Risk management and internal control

(1) The Company has set up and kept improving risk management and internal control system to guard against the operational, financial and compliance risks. The system aims to manage risks and cannot ensure the elimination of risks that fail to achieve business objectives, and there can only be no reasonable but absolute guarantee of major misrepresentations or losses. The Board is the decision-making body of internal control and risk management, and takes responsibility for examining the effect of internal control system and risk management procedures. The Board and the audit committee receive documents about internal control and risk management from the Company's management regularly (at least once a year). Significant issues about internal control and risk management will be reported to the Board and the audit committee. The Company has set up the internal audit department, which is equipped with sufficient professional staff. Internal control & management department and internal audit department report to the audit committee regularly (at least twice a year).

(2) As for internal control, the Company adopts the international internal control frame structure proposed by the Committee of Sponsoring Organizations of The National Commission of Fraudulent Financial Reporting. Based on the Articles of Association and current management system, and combined with domestic and foreign supervisory regulations, the Company made the internal control manual and continuously improved it, and realized total-factor internal control of internal environment, risk evaluation, control activities, information & communication, and internal supervision. Meanwhile, the Company continuously supervised and evaluated its internal control, included the corporate and regional companies into the internal control and evaluation scope by comprehensive inspections such as periodic test, self-examination, audit examination, etc., and made internal control evaluation report. The Board reviews internal control evaluation report annually. For the information about the internal control during the reporting period, please refer to 2022 Internal Control Evaluation Report Prepared by the Company.

The Company developed and implemented Information disclosure system and insider registration system. The Company assessed the implement of system periodically and disclosed it according to related regulations. For detailed information about information disclosure system, please refer to the website of the Company.

(3) As for the risk management, the Company adopts the enterprise risk management frame made by the Committee of Sponsoring Organizations of The National Commission of Fraudulent Financial Reporting. It developed risk management system and established risk management organization system. The Company organizes annual risk evaluation every year, recognizes significant risks, implements responsibilities for risk management, makes corresponding strategies and measures for significant risks based on internal control system, and tracks the implement of corresponding measures for significant risks on a regular basis, in order to make sure that the Company's significant risks can get enough attention, supervision and response.

(4) During the reporting period, the Board of the Company assessed internal control and risk management, and the board of directors considers that the Company's resources, employee calendar and experience related to accounting, internal audit, financial reporting functions, and environmental, social and governance performance and reporting are sufficient, the training courses and related budgets accepted by relevant employees are sufficient, and the Company's internal control and risk management are effective.

C.3 The Audit Committee

(1) The tenth session of the Company's Audit Committee consists of independent non-executive director Mr. Zheng Weijun as the Head, non-executive director Mr. Zhou Meiyun, and independent non-executive directors Mr. Chen Weidong and Mr. Dong Xiucheng as the members. As verified, none of them had served as a partner or former partner in our current auditing firm.

(2) The Company has published the terms of reference of the Audit Committee. According to the terms of reference, the Audit Committee assists the Board in financial reports, risk management and internal control. The terms of reference are available for inspection at the website of the Company and the Hong Kong Stock Exchange for reference.

(3) The Audit Committee may consult independent professionals. Reasonable costs arising from or in connection with such consultation are borne by the Company. The working expenses of the committee are included in the budget of the Company. Meanwhile, according to the Company policies, the senior management and relevant departments of the Company shall actively cooperate with the Audit Committee.

(4) During the reporting period, the Audit Committee held 4 meetings and reviewed the Company's 2021 financial report, 2022 semi-annual financial report, 2022 first quarter report and 2022 third quarter report. The Audit Committee review opinions were given at the meetings and submitted to the Board after signed by members. During the reporting period, the Board and the Audit Committee did not have any different opinion.

As recommended by the tenth audit meeting of the tenth session of the Board, the fourteenth meeting of the tenth session Board of Directors of the Company has resolved to appoint BDO China Shu Lun Pan Certified Public Accountants LLP ("BDO China") and BDO Limited as the Company's domestic and international auditors for 2023 again, and to appoint BDO China as the internal control auditor of the Company for the year 2023 again. Such proposed appointment of auditors of the Company is subject to approval by the shareholders of the Company at the 2022 annual general meeting.

An analysis of remuneration in respect of audit services is set forth in item 6 of the "Significant Events" section in this Annual Report.

D. Delegation by the Board

(1) On 26 April 2022, the ninth meeting of the tenth session of the Board approved the Company's Administrative Measures for the Authorization of the Board of Directors, which clearly stipulates the basic scope, basic procedures, supervision and change, and responsibilities of the power grant of the board of directors. For details, please refer to the "Announcement on the ninth meeting of the tenth session of the Board" (P. 2022-016) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 27 April 2022 and on www.hkexnews.hk on 26 April 2022.

(2) The Strategy and Investment Committee, the Audit Committee, the Remuneration Committee and the Nomination Committee under the Board have the specific authority and duties delegated by the Board, and should report to the Board.

(3) The Board, the senior management and each committee under the Board have specific authority and duties, which are set forth in the Articles of Association, the Rules and Procedures for shareholders' general meeting, and the Rules and Procedures for the Board. The Board leads management directly or indirectly through its committees, including the ways of setting strategies and supervising management's implementation. The Board supervises the performance of finance and business operation of the Company, reviews the remuneration policy and appointment program, and ensures that the Company formulating effective corporate governance and social responsibility policies. The Company has effective internal controlling and risks management system, senior management is responsible for the daily management of the Company's business under the leading of the general manager, besides, executes strategies which approved by the Board.

(4) The attendance record of the tenth session of the Board's Committee meeting during the reporting period is as follows.

The Audit Committee

Name	Attended in person	Attended by proxies	Times of absence
Zheng Weijun	4	–	–
Zhou Meiyun	4	–	–
Chen Weidong	4	–	–
Dong Xiucheng	4	–	–

The Remuneration Committee

Name	Attended in person	Attended by proxies	Times of absence
Chen Weidong	2	–	–
Fan Zhonghai	2	–	–
Dong Xiucheng	2	–	–
Zheng Weijun	2	–	–

The Nomination Committee

Name	Attended in person	Attended by proxies	Times of absence
Dong Xiucheng	1	–	–
Chen Xikun	1	–	–
Chen Weidong	1	–	–
Zheng Weijun	1	–	–

E. Communication with shareholders

(1) Shareholders who individually or jointly hold more than 10% of the total number of shares with voting rights issued by the Company may request the Board to convene a general meeting of shareholders in writing; the detailed contact information are set in section "Company Profile and Principal Financial Indicators – Contact Information" in this report. If the Board fails to agree to the shareholders' request to convene the meeting in accordance with the Rules of Procedure of the shareholders' meeting, shareholders may convene and hold a meeting, and the reasonable expenses incurred by the Company shall be borne by the Company. The foregoing provisions are based on the premise that the contents of the shareholders' meeting proposal shall fall within the scope of the general meeting of shareholders, have clear issues and specific resolutions, and comply with the relevant provisions of laws, administrative regulations and the Articles of Association.

(2) When the Company convened a general meeting of shareholders, shareholders who hold more than 3% of the total number of shares with voting rights of the Company, either individually or in combination, may submit an interim proposal 10 days before the general meeting of shareholders.

(3) During the reporting period, the Chairman should propose a separate resolution in respect of each substantially separate issue at a shareholders' general meeting. All resolutions are voted by ballots, so that the interests of all shareholders could be guaranteed. When the Company is to hold a shareholders' general meeting, it shall issue a written notice 45 days prior to the meeting (the day of meeting not included) informing all the registered shareholders.

(4) The circulars to the shareholders of the Company set forth in detail the rights of the shareholders who are entitled to attend the shareholders' general meetings, the agenda and the voting procedures. The shareholders of the Company can raise concerns or require to check records to the board at any time. The detailed contact information are set in section "Company Profile and Principal Financial Indicators – Contact Information" in this report. The policy for shareholders' contaction could ensure that they get same and complete information of the Company in time, and the policy would be reviewed regularly to ensure its effectiveness.

(5) Chairman attends the shareholders' general meetings as president. The members of the Board, the senior management attend the shareholders' general meetings to respond to the inquiries from the shareholders. The auditors of the Company also attend the 2021 annual general meetings.

F. Company Secretary

(1) The Company Secretary of the Company is approved by HKSE and is nominated by the Chairman and appointed by the Board and is responsible to the Company and the Board. The secretary makes recommendation to the Board in respect of corporate governance, reports to the chairman on the governance of the board of directors, and arranges the induction training and professional development of directors. All directors can receive advice and services from the Company Secretary.

(2) The Company Secretary actively participates in career development trainings. The Company Secretary, Mr. Shen Zehong has participated in the professional trainings organized by the Hong Kong Institute of Chartered Secretaries and has already been trained over 15 hours during the reporting period.

G. Investor relations

(1) The Company attaches great importance to investor relations work. The management leads the team to introduce roadshows to investors every year, introducing the Company's development strategy, production and operation performance and other issues of concern to investors; the Company set up a person responsible for communication with investors. Under the regulatory requirements, the Company strengthen communication with investors by holding meetings with institutional investors, setting up investor hotlines and communicating via online platforms.

Section VI Environmental and Social Responsibility

1. Environmental Information

Whether to establish an environmental protection mechanism	Yes (HSE management system)
Invest in environmental protection funds during the reporting period (unit: RMB'000)	1,159,307

(1) Description of the environmental protection of listed companies and their subsidiaries that belong to heavily polluting industries stipulated by the national environmental protection department

☐ Applicable √ Not applicable

(2) Description of the environmental protection situation of companies other than key pollutants

√ Applicable ☐ Not applicable

A. Administrative penalty due to environmental protection problems

☐ Applicable √ Not applicable

B. Other disclosure environmental information refers to heavily polluting industries

The Company adheres to the development philosophy of safety, environmental protection and green and low-carbon, and under the management of relevant systems such as the Environmental Protection Management Regulations, the Pollution Prevention Management Regulations, the Radiation Management Regulations and the Energy Saving Management Regulations, the Company strictly complies with environmental protection regulations and requirements of the emission standards and international conventions in the countries where it operates. For hazardous waste, the Company conducts recycling and treatment by delivering the waste to the entities with treatment qualifications.

Currently, the pollutants discharged by the Company mainly include exhaust gas, domestic sewage, general industrial solid waste, and hazardous waste, etc. Exhaust gas includes diesel engine exhaust and gas fuel exhaust, and the emission indicators have met the local standards and requirements; domestic sewage includes the domestic sewage from fixed places and the domestic sewage from mobile construction sites, and the domestic sewage from fixed production sites is transferred to municipal pipeline network for centralized treatment, and the domestic sewage from mobile construction sites is recycled after on-site pre-treatment; general industrial solid waste is mainly waste water-based drilling waste mud and debris, packaging barrels, rubber parts, anti-seepage film, etc; hazardous waste mainly includes waste oil-based drilling chips, waste mineral oil, waste oil barrels, oil-containing sludge, etc., all of which are disposed of by qualified environmental protection service providers. We issued the Notice on Special Supervision of Solid Hazardous Waste Management at Production Sites, and comprehensively carried out self-examination, self-correction and special supervision for general solid waste, hazardous waste, and etc. In whole year of 2022, all pollutants generated by the Company were disposed of in accordance with the law, including 22,000 tons of general solid waste, 4000 tons of hazardous waste, 535,000 square meters of domestic sewage, and 786,000 square meters of drilling wastewater.

The Company strengthened on-site energy efficiency management, implemented energy conservation and clean production technical measures, and vigorously implemented energy efficiency improvement projects. In whole year of 2022, the comprehensive energy consumption for RMB10,000 industrial output value was 0.201 tons of standard coal, representing a year-on-year decrease of 14.1%. At the same time, the Company actively organized the establishment of green project companies and the creating activities of green grassroots, the logging and mud logging major has re-revised the green grassroots creation evaluation index with the project department as the unit. 885 teams initiated the creating activities of green grassroots, 843 teams passed the acceptance on green grassroots, the pass rate is 95.3%, increased 114 teams and 47 environmental toilets in 2022, environmental toilets amounted to 826 sets in total. The drilling teams have been basically equipped, the on-site usage and effect are good, and the working and living environment of employees has been further improved. A total of 3 subsidiaries were first established through green enterprises, and 7 subsidiaries have passed the review of green enterprises, of which 3 subsidiaries have been reviewed and rated as file A, and 4 have been reviewed and evaluated as B.

The Company has established an environmental emergency management system, improved the environmental emergency network, prepared and timely revised the environmental emergency plans according to the risk assessment results, and filed the environmental emergency plan according to the requirements. The Company has also established emergency rescue teams and conduct regular emergency plan training and drills.

C. Relevant information conducive to ecological protection, pollution prevention and control, and environmental responsibility

√ Applicable ☐ Not applicable

In accordance with the Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste and other relevant laws and regulations, the Company revised the indicators for establishment, review and evaluation of green enterprises, supervised its subsidiaries to update and improve the establishment plan and evaluation and assessment mechanism of green enterprises in accordance with their own actual situation, assume responsibilities, standardize the process, and strictly inspect and accept, so as to speed up the acceptance of green grassroots and implement green grassroots construction with quality and quantity. The Company organized all enterprises to create green grassroots benchmark teams according to conditions in the construction area, forming demonstration models, carrying out internal exchanges and observations, and promoting the overall improvement of the quality of green grassroots construction.

In order to continuously safeguard air quality and implement the relevant work requirements of the State, the Company organized 6 subsidiaries to strictly implement air quality safeguard work plans in key areas. In the corresponding areas, grease and fume purification facilities have been installed in staff canteens, the renewal of network power installations and the upgrading of drilling rigs electrification have been completed, diesel trucks operating under National III emission standards or below have been phased out, generator sets for drilling which cannot meet stable emission standards have been phased out, dust suppression measures have been taken at relevant drilling operation sites, and the warehousing, transportation and construction of radioactive sources are controllable and under control.

The Company carried out environmental protection standardization construction of wells, comprehensively analyzed and identifies environmental risks in the whole process of onshore drilling and underground operations, formulates and implements targeted environmental risk prevention and control measures. We adhered to source control, strictly implement the process control and pollutant prevention and control management from the aspects of strengthening drilling fluid and underground fracturing and drainage, standardizing the monitoring of the whole process of solid and dangerous waste disposal, eliminating substandard discharge equipment, strictly implementing noise monitoring and rectification to prevent disturbing people, so as to improve the essential environmental protection level of the whole process of the whole business.

D. Measures and effects on the Company to reduce the carbon emissions

Whether to take carbon reduction measures	Yes
Reduce the equivalent of carbon dioxide emissions	1.1 million tons
Types of carbon reduction measures (such as the use of clean energy to generate electricity, the use of carbon reduction technology in the production process, the development and production of new products that help carbon reduction, etc.)	Replace diesel power through network power devices and electric fracturing pry applications, reduce diesel consumption, and implement energy efficiency improvement projects such as the renewal and transformation of the power distribution system and the energy-saving transformation of steam injection boilers to achieve energy conservation and emission reduction.

Specific instructions

√ Applicable ☐ Not applicable

The company accurately analyzes the key points of high carbon emissions in the process of oil drilling construction, pays close attention to the source control, and the supporting scale of network power devices continues to improve. The process of "oil to electricity" continues to deepen. In the process of actively promoting electrification transformation, in addition to edge wells and remote wells, the domestic market has basically realized Group is an auxiliary clean energy utilization model. In 2022, in combination with the actual production, the company's subsidiaries continued to increase the self-owned rate of network electric devices, promoting the electrification of fracturing construction and energy-saving projects such as energy-saving technology transformation. The energy utilization efficiency continued to improve. A total of 1,090 network electric drilling rigs were drilled, with 4,771,000 meters, 1676 floors of electric fracturing construction were made. Five energy efficiency improvement projects were promoted, such as the update and transformation of the power distribution system and the energy-saving transformation of steam injection boilers. A total of 367,000 tons of standard coal was saved and reducing carbon dioxide equivalent by 1.1 million tons.

2. Information of social responsibility work

(1) Whether to disclose the social responsibility report, sustainable development report or ESG report separately

√ Applicable ☐ Not applicable

This content please refers to the "2022 Environmental, Social and Governance (ESG) report" of the Company.

(2) Details information

√ Applicable ☐ Not applicable

External donations and public welfare projects	Amounts/Contents	Statement
Total investment (RMB'000)	1764.1	1. Donated 664,100 yuan to the Central Rural Fund of Thailand to support the construction of roads and the installation of drainage systems in local communities in Thailand, and solved the long-stricken problem of road area water for local people. 2. Sponsor RMB1.1 million to Saudi Aramco to participate in and support Saudi Aramco Iktva Forum and Exhibition.
Funds (RMB'000)	1764.1	–
Material discounts (RMB'000)	–	–
Beneficial number of people	About 20,000 people	No

3. Poverty alleviation program launched by the Company

☐ Applicable √ Not applicable

Section VII Significant Events

1. Performance of undertaking

(1) The special undertakings made by the Company, the actual controller, shareholders, related parties, acquirer and other associated parties and the performance of such undertakings for the year ended 31 December 2022:

Undertaking Background	Undertaking Type	Undertaking party	Undertaking	Date and duration of the Undertaking	Whether there is a performance period	Whether the undertaking has been strictly fulfilled
Undertaking regarding the material assets reorganization	To solve horizontal competition	China Petrochemical Corporation	The Non-Competition Undertaking 1. China Petrochemical Corporation undertook that it would not engage with the Company's production and business activities in competition, and will ensure its subsidiaries not to engage with the Company's production and business activities in competition through exercise of its shareholder rights. 2. After the material assets reorganization, if Sinopec Star's new business opportunity has any direct or indirect competition with the Company's main business, priorities of the above-mentioned opportunity will be given to the Company. 3. After the material assets reorganization, if China Petrochemical Corporation and its subsidiaries' new business opportunity has any direct or indirect competition with the Company's main business, priorities of the above-mentioned opportunity will be given to the Company. If China Petrochemical Corporation intends to transfer, sell, lease, license or otherwise transfer or permit to use any of the above business which would result in the competition with the Company's main business, priorities of the above-mentioned opportunity will be given to the Company for avoiding the competition. 4. China Petrochemical Corporation consent that it will bear and pay damages to the listed companies caused by its violation of the commitment.	Date of undertaking: 12 September 2014 Duration: long term	No	During the reporting period, China Petrochemical Corporation did not act contrary to the undertaking.
Undertaking regarding the Material Assets Reorganization	To solve connected transactions	China Petrochemical Corporation	The Undertaking of Regulating the connected transaction: China Petrochemical Corporation and its other controlling companies will regulate its/their connected transactions with the Company. For the connected transactions with reasonable grounds, China Petrochemical Corporation and its controlling Company's will sign the standard agreement of connected transactions, and will fulfill the obligations of the program for approval and information disclosure, in accordance with the provisions of relevant laws and regulations, and the Company's Articles of Association. The confirmation price related to the connected transaction will follow the principle of fair, reasonable and impartial.	Date of undertaking: 12 September 2014 Duration long term	No	During the reporting period, China Petrochemical Corporation did not act contrary to the promise.
Undertaking regarding the Material Assets Reorganization	Others	China Petrochemical Corporation	Issued "The China Petrochemical Corporation commitment letter regarding to the regulating of connected transaction and maintaining the independence of the Company": 1. China Petrochemical Corporation and its controlling companies guarantee the maintaining of the separation from the Company's asset, personnel, finance, organization and business, strictly comply with the relevant provisions regarding to the listed Company's independency of CSRC. China Chemical Corporation will not utilize, control or violate the Standardized operation program of the listed company, not intervene the Company's operating decisions, and not jeopardize the legitimate rights and interests of the Company and its shareholders. 2. China Petrochemical Corporation and its controlling companies guarantee not to illegally use the funds of the Company and its holding Company. 3. If China Petrochemical Corporation violate the above commitment, it would undertake the law and compensate the losses caused to the Company.	Date of undertaking: 12 September 2014 Duration: long term	No	During the reporting period, China Petrochemical Corporation did not act contrary to the promise.

(2) The existence of earnings forecast about the Company's assets and projects, and the reporting period is still in the earnings forecast period, the information about whether the Company's assets or projects achieved the original earning forecast and its reasons.

☐ Achieved ☐ Not Achieved √ Not Applicable

(3) The completion of performance pledges and impact on goodwill impairment tests

☐ Applicable √ Not applicable

2. Occupancy of fund for non-operating purpose by the controlling shareholders and other related parties during the reporting period

☐ Applicable √ Not applicable

3. Illegal guarantee

☐ Applicable √ Not applicable

4. Explanation of the Company on non-standard opinion given by the auditors

☐ Applicable √ Not applicable

5. Analysis and explanation of the Company on the reasons and impact of the changes in accounting policy, accounting estimation and corrections to material accounting errors

(1) Analysis and explanation of the reasons and effects of changes in accounting policies and accounting estimates

√ Applicable ☐ Not applicable

A. Changes in significant accounting policies

a. Implementation of the Interpretation No. 15 to the Accounting Standards for Business Enterprises

On 30 December 2021, the Ministry of Finance issued the Interpretation No. 15 to the Accounting Standards for Business Enterprises (CK [2021] No. 35, hereinafter referred to as the "Interpretation No. 15").

① Accounting treatment of trial operation sales

Interpretation No. 15 specifies the accounting treatment and presentation of selling the products or by-products produced before the fixed assets reach the intended usable state or during the research and development process by an enterprise. It stipulates that the net amount after offsetting the cost from the sales related to the trial operation shall not be written off against the cost of fixed assets or R&D expenditure. This regulation comes into force on 1 January 2022, and retrospective adjustments shall be made for the trial sales that occurred between the beginning of the earliest period of financial statement presentation and 1 January 2022. This regulation had no material impact on the Company's financial position and operating results.

② Judgment on onerous contracts

Interpretation No. 15 clarifies that the "cost of performing the contract" considered by an enterprise when judging whether a contract constitutes an onerous contract shall include both the incremental cost of performing the contract and the apportioned amount of other costs directly related to performing the contract. This regulation comes into force on 1 January 2022. Enterprise shall implement this regulation for contracts that have not yet fulfilled all obligations on 1 January 2022, and the cumulative effect will be adjusted on the implementation date of the retained earnings at the beginning of the year and other related financial statement items, without adjusting the comparative financial statement data for the previous period. This regulation had no material impact on the Company's financial position and operating results.

b. Implementation of the Circular on Adjusting the Application Scope of the Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19

On 19 May 2022, the Ministry of Finance issued the Circular on Adjusting the Application Scope of the Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19 (CK [2022] No.13). The scope of Covid-19-related rental concessions that allow for the simplified approach has been adjusted again, removing the previous restriction that the simplified approach would only apply to concessions on lease payments due before 30 June 2022. Lessees and lessors may continue to elect to use the simplified approach specified in the Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19 for concessions on lease payments payable after 30 June 2022 that are directly attributable to the COVID-19 pandemic, while other applicable conditions remain unchanged.

The current period of the Company does not involve the relevant accounting treatment of the above-mentioned "Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19."

c. Implementation of the Interpretation No. 16 to the Accounting Standards for Business Enterprises

On 30 November 2022, the Ministry of Finance issued the Interpretation No. 16 to the Accounting Standards for Business Enterprises (CK [2022] No. 31, hereinafter referred to as the "Interpretation No. 16").

① Accounting treatment of the income tax impact of dividends relating to financial instruments classified as equity instruments by the issuer

Interpretation No. 16 specifies that for financial instruments classified as equity instruments by an enterprise, the income tax effect of dividends shall also be recognized upon recognition of dividends payable provided that the relevant dividend expenditure is deducted before the enterprise income tax in accordance with the relevant provisions of tax policies. The income tax effect of dividends shall be included in the current profit or loss or owners' equity item (including other comprehensive income) in the same accounting manner as the transaction or event that has generated distributable profit in the past.

This regulation comes into force on the date of issuance, and adjustments shall be made for dividends payable that occurred between 1 January 2022 and the effective date according to such regulation; retrospective adjustments shall be made for those that occurred before 1 January 2022 and the related financial instruments have not yet been derecognized as of 1 January 2022. The adoption of this regulation had no material impact on the Company's financial position and operating results.

② Accounting treatment of modification of cash-settled share-based payment into equity-settled share-based payment by an enterprise

Interpretation No. 16 clarifies that if the modification of the terms and conditions of cash-settled share-based payment agreement results in equity-settled share-based payment, on the date of modification (whether within the waiting period or after closing), such equity-settled share-based payment shall be measured at the then fair value of equity instruments granted, the services received shall be included in capital reserve, and liabilities recognized on the date of modification for cash-settled share-based payments shall be derecognized with the difference included in profit or loss for the period.

This regulation comes into force on the date of issuance, and adjustments shall be made for additional transactions arising between 1 January 2022 and the effective date according to such regulation; retrospective adjustments shall be made for those that occurred before 1 January 2022 and have not been treated according to such regulation. The cumulative effect will be adjusted on 1 January 2022 of the retained earnings and other related items, without adjusting the comparative financial statement data for the previous period. The adoption of this regulation had no material impact on the Company's financial position and operating results.

B. Changes in significant accounting estimates

There were no changes in the significant accounting estimates of the Company during the reporting period.

(2) Analysis and explanation of the Company on the reasons and impact of corrections to material accounting errors

☐ Applicable √ Not applicable

(3) Communication with former accounting firm

☐ Applicable √ Not applicable

6. The appointment and dismissal of the accounting firm

	Currently hired
The name of the domestic accounting firm	BDO China Shu Lun Pan Certified Public Accountants LLP
The remuneration of the domestic accounting firm	RMB6,050,000
The audit period for the domestic accounting firm	2 years
The name of the overseas accounting firm	BDO Limited
The remuneration of the overseas accounting firm	RMB1,150,000
The audit period for the overseas accounting firm	2 years

	Name	Remuneration
The internal control accounting firm	BDO China Shu Lun Pan Certified Public Accountants LLP	RMB1,300,000

The description for the appointment and dismissal of the auditor:

In 2021, the Company changed its domestic auditor and the international auditor from Grant Thornton (Special General Partnership) and Grant Thornton Hong Kong Limited to BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited.

After recommended by the eighth meeting of the tenth session of the board and approved by the annual general meeting for the year 2021, the Company re-appointed BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Limited as the domestic auditor and the international auditor of the Company for 2022. BDO China Shu Lun Pan Certified Public Accountants LLP was appointed as the internal control accounting firm of the Company for 2022 again at the same time.

Section VII Significant Events

7. Situation about confronting the risk of the suspension of listing

(1) Reasons which resulted in the suspension of listing

☐ Applicable √ Not applicable

(2) Corresponding measures to be taken by the Company

☐ Applicable √ Not applicable

(3) Situation about confronting the termination of listing and corresponding reasons

☐ Applicable √ Not applicable

8. Insolvency and restructuring

During the reporting period, the Company was not involved in any insolvency or restructuring matters.

9. Material litigation and arbitration

☐ In the reporting period, the Company had material litigation and arbitration

√ In the reporting period, the Company had no material litigation and arbitration

China National Chemical Engineering No. 11 Construction Co., Ltd. (中國化學工程第十一建設有限公司) (the"Applicant") entered into the "Works Contract for the Package C Construction of the Saudi Yanbu-Medina Phase III Pipeline Project (《沙特延布－麥迪那第三期管線項目 C 包施工工程合同》)" (the "Construction Works Contract") with Sinopec International Petroleum Services Corporation (中國石化集團國際石油工程有限公司), a wholly-owned subsidiary of the Company (the "International Services Corporation" or the "Respondent") on 16 August 2012. Pursuant to the Construction Works Contract, International Services Corporation subcontracted to the Applicant the construction of the "Package C Project" of the "Saudi Yanbu-Medina Phase III Pipeline Project." On 29 May 2018, the Applicant submitted to the China International Economic and Trade Arbitration Commission in Beijing the "Application for Arbitration" in respect of the contract dispute between the Applicant and the Respondent during the performance of the Construction Works Contract, requesting the Respondent to pay RMB456,810,240 for the project fee and the accrued interest, RMB145,968,410.5 for the loss due to stoppage of work and the accrued interest, RMB38,018,100 for the advance payment under the letter of guarantee and the accrued interest, and RMB500,000 for attorney fee and the arbitration fee for the case. The China International Economic and Trade Arbitration Commission accepted the case on 15 June 2018 and issued the "Notice of Arbitration for the Dispute Case of Project Contract No. P20180585 ([2018] China Trade Zhong Jing Zi No. 048223)."

As the case is still under trial, it is currently impossible to determine its impact on the current or future profits of the Company. The Company will make active response and safeguard the legitimate rights and interests of the Company.

For details, please refer to the "Announcement on a wholly-owned subsidiary involving arbitration" (P.2018-049) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 26 June 2018 and on www.hkexnews.hk on 25 June 2018.

On 16 August 2018, Sinopec (Brazil) Co., Ltd., an indirectly wholly-owned overseas subsidiary of the Company (the "Brazil Subsidiary") applied for judicial reorganization to the Third State Court of Commercial Enterprises in Rio de Janeiro, Brazil (the "Court of Rio") according to the relevant local laws in Brazil. On 31 August 2018, the Brazil Subsidiary received ruling from Court of Rio, approved Brazil subsidiary's entering into judicial reorganization and the law firm Nascimento & Rezende Advogados was appointed as the judicial reorganization manager by Court of Rio. For details, please refer to the "Announcement regarding the Proposed Judicial Reorganization by an indirectly wholly-owned overseas Subsidiary" (P. 2018-056) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 4 September 2018, and on www.hkexnews.hk on 3 September 2018.

On 15 July 2019 (Brazil time), the Brazil Subsidiary received a ruling from the Court of Rio on the approval of the judicial reorganization plan of the Brazil Subsidiary. For details, please refer to the "Announcement on Approval of Judicial Reorganization Plan of an Indirectly Wholly-owned Overseas Subsidiary by Overseas Court" (P.2019-032) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 19 July 2019, and on www.hkexnews.hk on 18 July 2019. After the judicial reorganization judge officially approved and published the reorganization scheme, the reorganization procedure entered into the execution stage with an execution period of two years. The Company actively and prudently pushes forward the judicial reorganization work in accordance with the general principles of "strengthening organization, detailing measures, being active and prudent,and putting risks under control," actively communicates and cooperates with all parties concerned, and pays creditors in accordance with regulations and the restructuring plan. Large-scale payment has been basically completed. At present, the judicial reorganization procedure is still being carried out in an orderly and steady manner.

Due to the impact of the local judicial procedures, certain labour-related lawsuits and a few lawsuits with suppliers, service providers and subcontractors remain unsettled, and the obligations prescribed by the Judicial Reorganization Plan are not fully performed. We have fulfilled our obligations in accordance with the regulations and the judicial reorganization plan, and the implementation work has been recognized by the judicial reorganization administrator and the judicial reorganization judge. On 16 December 2022, the judicial reorganization judge announced a ruling acknowledging that we have fulfilled our obligations in the implementation stage of judicial reorganization. According to Brazilian judicial practice, there are usually creditors who raise objections or appeals. The judicial reorganization process continues until the objection or appeal is finally decided. For details, please refer to the "Announcement of the progress of Judicial Reorganization of an indirectly wholly-owned overseas Subsidiary" (P. 2021-024) disclosed in "China Securities Journal," "Shanghai Securities news," "Securities Times," and on www.sse.com.cn on 16 July 2021, and on www.hkexnews.hk on 15 July 2021.

On 8 October 2014, the Ecuador Banya Duri Company (厄瓜多爾斑尼亞杜麗公司), an indirectly wholly-owned subsidiary of the Company (the "Banya Duri Company") entered into the Contract for I-L-Y Oilfield Comprehensive Service Projects in Ecuador (the "I-L-Y Oilfield Projects Contract") with Corporacion Estatal Petrolera Ecuatoriana (the "PAM"). The Banya Duri Company is a project company established by the Company in Ecuador to engage in I-L-Y oilfield comprehensive service with 90% and 10% of its shares held by Sinopec International Petroleum Service Corporation (中國石化集團國際石油工程有限公司), a wholly-owned subsidiary of the Company, and Sinopec International Petroleum Service Corporation Ecuador Subsidiary respectively. During the implementation of the projects, the parties had disputes on the payments for some increased oil production. After repeated unsuccessful negotiations, in April 2019, the Banya Duri Company served the Notice of Application for Legal Arbitration to the PAM in relation to such contract disputes in accordance with the relevant provisions of the I-L-Y Oilfield Projects Contract, recommending the Permanent International Court of Arbitration in Hague as the arbitration institution to conduct arbitrations in accordance with the arbitration rules of the UNCITRAL Arbitration Rules (1976 Edition).the Banya Duri Company requests made by Banya Duri Company include: the PAM should pay an invoice amount of US$63.29 million for the increased oil production with interest, confirm the Y-12 well would operate with optimized production capacity and pay US$8.13 million, as well as pay the losses brought to the Applicant due to the default of the PAM and relevant charges for the legal arbitration. In August 2019, Banya Duri Company and PAM has each recommended one arbitrator and jointly appointed one presiding arbitrator to form the arbitration tribunal. In November 2020, PAM had submitted its Statement of Defense to the arbitral tribunal. From April to August in 2021, both sides completed the second round of defense and jurisdictional objection reply procedure. From 20 to 24 September 2021, both sides held a five-day hearing under the auspices of the arbitral tribunal, and completed opinions return after arbitral court on 25 October 2021.

On 22 February 2022, the Banya Duri Company received the following ruling on the arbitration: 1. The arbitration tribunal required PAM to compensate Banya Duri Company or payaccounts payable, tax, and fees for arbitration, experts and consultants, totaling approximately US$64 million to Banya Duri Company. 2. The arbitration tribunal did not support the arbitration request of Banya Duri Company for PAM to pay for the service fees of increased oil production incurred by the YNEB 12 well in the Y oilfield of US$7 million. 3. The arbitration required PAM to pay the default interest as determined and calculated in accordance with the arbitration ruling and relevant provisions of the Civil Code of Ecuador. The arbitration location of the arbitration was Chile. In accordance with the relevant laws on arbitration in Chile, PAM may apply to the courts of Chile to revoke the arbitration ruling.

On 11 August 2022, Ecuadorian time, Banya Duri Company received a notice from the Santiago court in Chile that PAM and its relevant parties had engaged a local law firm in Chile to submit an application to the court to revoke the Ruling primarily on the ground that the arbitration tribunal has no jurisdiction over this dispute with specific grounds including lack of specific arbitration agreement in respect of the disputes dealt with in the Ruling, which is beyond the scope of arbitration jurisdiction, the disagreement on the nature of the disputes in the Ruling as technical disputes or contract default disputes and suspected violation by the Ruling of, among other things, Chilean public policy. This application has been accepted, upon receiving the notice, Banya Duri Company has engaged a local law firm in Chile to provide litigation support in accordance with the requirements of the Chilean law, and to carry out the relevant litigation work in accordance with the relevant legal procedures. On 24 August 2022, Ecuador time, Banyaduri submitted a lawsuit defense on time to the court of Santiago, Chile, refuting the other party's arguments and clarifying our views. In late November 2022, the court in Santiago, Chile, submitted a notice of the court plan, but PAM applied for an extension of the court session, and is currently waiting for the court in Santiago, Chile, to determine the final date of the court session.

As the ruling has not yet been executed, there is uncertainty in its implementation As such, it is currently impossible to determine the impact of the Arbitration on the current or future profits of the Company. The Company has made a certain proportion of bad debt provision for the above accounts receivable according to their aging. The Company will make active response and safeguard the legitimate rights and interests of the Company. For details, please refer to the "Announcement on an Arbitration in relation to an Indirectly Wholly-owned Subsidiary" (P.2019-033) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 27 August 2019, and on www.hkexnews.hk on 26 August 2019, the "Announcement on an Arbitration in relation to an Indirectly Wholly-owned Subsidiary" (P.2022-005) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 26 February 2022, and on www.hkexnews.hk on 25 February 2022, the "Announcement on an Arbitration in relation to an Indirectly Wholly-owned Subsidiary" (P.2022-027) disclosed in "China Securities Journal," "Shanghai Securities News," "Securities Times," and on www.sse.com.cn on 16 August 2022, and on www.hkexnews.hk on 15 August 2022.

10. The punishment or rectification situation suffered by the Company or its directors, supervisors, senior management, controlling shareholders and actual controllers

During the reporting period, neither the Company nor its other directors, supervisors, senior management, controlling shareholders or actual controllers were subject to any investigation by relevant authorities or enforcement by judicial or disciplinary departments or subject to criminal liability, or subject to investigation or administrative penalty by the CSRC, or any denial of participation in the securities market or deemed unsuitability to act as directors thereby by other administrative authorities or any public criticisms made by a stock exchange.

11. The information on the integrity status of the Company and its controlling shareholders, actual controllers during the reporting period

During the reporting period, the Company and its controlling shareholders, actual controllers kept honest and faithful, and there was no occurrence of dishonesty.

12. Information on connected transactions

(1) The significant connected transactions relating to ordinary operation during the reporting period are as follows.

The nature of the transaction	Related parties	Amount of transaction RMB'000	Proportion of the same type of transaction (%)
Purchase of materials and equipments	China Petrochemical Corporation and its associates	12,181,320	32.3
Providing engineering services	China Petrochemical Corporation and its subsidiaries and/or associates	46,775,846	64.6
Providing engineering services	PipeChina	3,768,371	5.1
Receiving community services	China Petrochemical Corporation and its subsidiaries	41,602	100
Receiving integrated services	China Petrochemical Corporation and its subsidiaries	751,563	20.1
Providing of technology development services	China Petrochemical Corporation and its subsidiaries	278,469	92.7
Land and property lease expenses	China Petrochemical Corporation and its subsidiaries	607,928	52.1
Equipment rental expenses	China Petrochemical Corporation and its subsidiaries	422,645	40.2
Interest expenses	China Petrochemical Corporation and its associates	594,984	98.1
Loan obtained	China Petrochemical Corporation and its subsidiaries	44,571,010	100
Loan repaid	China Petrochemical Corporation and its subsidiaries	44,368,880	99.7
Safety production insurance fund expenses	China Petrochemical Corporation	80,200	100
Safety production insurance fund refund	China Petrochemical Corporation	112,657	100

The Company considers that it is necessary for the above connected transactions and selection of connected parties for transactions and the above transactions would continue to occur. The agreements of connected transaction are based on the needs of the Company's operation and production and actual market situation. Purchasing materials and equipment from China Petrochemical Corporation and its subsidiaries will ensure the stable and safe supply of the Company's raw materials. Providing engineering service to China Petrochemical Corporation and its subsidiaries is decided by the operating system of China's petroleum development and by the history of China Petrochemical Corporation's development, which also constitutes the Company's main business income source. The loan borrowed from China Petrochemical Corporation can satisfy the financial needs of the Company under the situation of the fund shortage, which therefore is beneficial to the Company. The pricing of the above transactions was mainly based on the market price or contract price determined through open bidding or negotiation, reflecting the principal of fairness, justice and openness, which is beneficial to the development of Company's main business, and ensure the maximization of the shareholder interests. The above connected transactions have no adverse effects on the profits of the Company or the independence of the Company.

The Company's independent non-executive Directors have reviewed all the Company's continuing connected transactions, and concluded that the transactions were entered into (i) in the ordinary and usual course of business of the Company; (2) based on the normal commercial terms, if there were no comparable items, no less favour than the terms provided to or received from an independent third party; (3) in accordance with the relevant agreements governing them in terms that are fair and reasonable, and in the interests of the Company's shareholders as a whole; (4) the annual transaction amount of the above connected transactions did not exceed the relevant annual cap of each kind of connected transactions as approved by the independent shareholders.

In accordance with Rule 14A.56 of the Hong Kong Listing Rules, the Company's auditor issued its unqualified opinion letter regarding the Company's disclosure of continuing connected transactions during the reporting period in which contained its findings and conclusions.

Please refer to Note 10 of this year's financial statements prepared in accordance with the PRC ASBE Standards for details of the related transactions conducted by the Company during the Reporting Period. Among them, the significant related party transactions with China Petrochemical Corporation and its associates also fall under the definition of connected transactions under Chapter 14A of the Hong Kong Listing Rules. During the reporting period, the connected transactions between the Company and China Petrochemical Corporation and its associates have complied with the disclosure requirements under Chapter 14A of the Hong Kong Listing Rules.

(2) Related transactions in the acquisition or sale of assets or equity

During the reporting period, the Company has no significant related transactions arising from the acquisition or sale of assets or equity.

(3) Material connected transactions of joint external investment

On 28 July 2022, Sinopec Oil Engineering and Construction Corporation ("Sinopec OEC"), a wholly-owned subsidiary of the Company, entered into the Promoter Agreement and the Articles of Association of Carbon Technology Company with Sinopec, Nanjing Chemical Company, UNIPEC, Nanjing Engineering and Shanghai Engineering. Pursuant to the Promoter Agreement, the parties will jointly promote and establish Carbon Technology Company by way of capital contribution. The registered capital of Carbon Technology Company will be RMB2.5 billion, for which, each of Sinopec and Nanjing Chemical Company shall contribute RMB1.15 billion and RMB850 million in cash, accounting for 46% and 34% of the registered capital of Carbon Technology Company, respectively; and each of Sinopec OEC, UNIPEC, Nanjing Engineering and Shanghai Engineering shall contribute RMB125 million in cash, each accounting for 5% of the registered capital of Carbon Technology Company. Sinopec OEC will pay the consideration for the transaction with its own funds. For details, please refer to the "Announcement on the related transaction formation of a joint venture" (P.2022-023) disclosed in "China Securities Journal", "Shanghai Securities News", "Securities Times", and on www.sse.com.cn on 29 July 2022, and the Announcement on "Connected Transaction Formation of a Joint Venture" on www.hkexnews.hk on 28 July 2022.

(4) Funds provided and debts with connected parties during the reporting period:

Unit: RMB'000

Connected parties	Funds provided to connected party			Funds provided to the Company by connected party		
	Opening balance	Occurrence amount	Closing balance	Opening balance	Occurrence amount	Closing balance
China Petrochemical Corporation and its subsidiaries	8,255,885	3,258,610	11,514,495	15,477,629	-8,380,201	7,097,428
Sinopec Finance Company Limited	–	–	–	4,550,000	11,545,000	16,095,000
Sinopec Century Bright Capital Investment Limited	–	–	–	1,970,091	-141,883	1,828,208
Total	8,255,885	3,258,610	11,514,495	21,997,720	3,022,916	25,020,636
Causes of connected claims and debts						Normal production and operation
Influence of connected claims and debts on the Company						No material adverse effect

(5) The finance business between the Company and the financial company with connected relationship, and the Company's controlling financial companies and related parties

A. Deposit business

Unit: RMB'000

Connected parties	Connected relation	Daily maximum deposit limit	Deposit rate	Beginning balance	For the twelve months ended 31 December 2022		Ending balance
					Total deposit in this period	Total withdrawl amount for this period	
Sinopec Finance Company Limited	Subsidiary of controlling shareholder	3,500,000	0.35%	902,678	340,366,824	341,221,971	47,531
Sinopec Century Bright Capital Investment Limited	Subsidiary of controlling shareholder		0.01%	690,991	18,555,062	18,443,953	802,100
Total	/	/	/	1,593,669	358,921,886	359,665,924	849,631

B. Loan business

Unit: RMB'000

Connected parties	Connected relation	Daily maximum deposit limit	Deposit rate scope	Beginning balance	For the twelve months ended 31 December 2022		Ending balance
					Total deposit in this period	Total withdrawl amount for the period	
Sinopec Finance Company Limited	Subsidiary of controlling shareholder	22,000,000	LPR-0.1%~0.65%	4,550,000	29,065,000	17,520,000	16,095,000
Sinopec Century Bright Capital Investment Limited	Subsidiary of controlling shareholder	510,000,000 US dollars	LIBOR+1.18%	1,970,091	4,506,010	4,647,894	1,828,208
Total	/	/	/	6,520,091	33,571,010	22,167,894	17,923,208

C. Credit extension and other finance business

Unit: RMB'000

Connected parties	Connected relation	Business Type	Total Amount	Actual Amount
Sinopec Finance Company Limited	Subsidiary of controlling shareholder	Guarantees and bill credit	11,800,000	8,380,127

13. Significant contracts and performance

(1) Trusteeship, sub-contracting and leasing

A. Trusteeship

□ Applicable √ Not applicable

B. Sub-contracting

□ Applicable √ Not applicable

C. Leasing

□ Applicable √ Not applicable

(2) Guarantee of the Company during the reporting period

√ Applicable ☐ Not applicable

Unit: RMB'000

External Guarantee provided by the Company (excluding Guarantees for Subsidiaries)														
Guarantor	Relationship with the listed company	Guaranteed person	Amount of guarantee	Date of guarantee (Agreement signing date)	The starting day	End date	Type of guarantee	Pledged thing	Whether the guarantee has been fulfilled	Whether the guarantee is overdue	Overdue amount	Counter-guarantee	Whether to guarantee the related party	Related relationship
The Company	itself	Mexico DS Company	1,914,917	17 June 2022	17 June 2022	The end time of annual meeting of shareholders for the year 2022	Parent company guarantee	No	No	No	Not Applicable	Yes	Yes	Joint venture

Total Amount of Guarantees during the Reporting Period (excluding Guarantees for Subsidiaries)	1,914,917
Total Balance of Guarantees at the end of the Reporting Period (A) (excluding Guarantees for Subsidiaries)	1,914,917
The Guarantee provided by the Company and its Subsidiaries to the Subsidiaries	
Total Amount of Guarantees paid to Subsidiaries during the Reporting Period	7,196,502
Total Balance of Guarantees to Subsidiaries at the end of the Reporting Period (B)	24,978,188
Total Company Guarantee (including Guarantee for Subsidiaries)	
Total Guarantees(A+B)	26,893,105
Total Amount of Guarantees as a Percentage of the Company's Net Asset (%)	362.1
Among them:	
Amount of Guarantees provided to Shareholders, Actual Controllers and their related Parties (C)	0
Debt Guarantees Amount directly or indirectly for the guaranteed Object whose asset-liability Ratio exceeds 70% (D)	9,356,190
The Amount of the total Guarantee exceeds 50% of the Net Assets (E)	23,179,446
Sum of the three Guarantees above (C+D+E)	32,535,636
Statement of Unexpired Guarantees as potential subject to Joint Liability	No
Guarantee Statement	The guarantees provided by the Company are all for the performance of the performance guarantee letters issued by the subsidiaries in the domestic and foreign contracts. The guarantee amount is within the amount approved by the annual general meeting of the Company for 2021.

On 29 March 2022, the eighth meeting of the tenth session of the Board of the Company considered and approved the resolution on provision of guarantee for wholly-owned subsidiaries and joint venture, and approved the Company to provide guarantee for wholly-owned subsidiaries and Mexico DS Company, a joint venture of the Company. Such resolution was considered and approved at the the general meeting for 2021 of the Company. For details, please refer to the "Announcement on provision of guarantee for wholly-owned subsidiaries and joint venture" (P.2022-014) disclosed in China Securities Journal, Shanghai Securities News, Securities Times and on www.sse.com.cn on 30 March 2022, and on www.hkexnews.hk on 29 March 2022.

On 17 June 2022, the Company, as guarantor, entered into the Guarantee Agreement with Mexican National Hydrocarbons Commission, as beneficiary, pursuant to which the Company has agreed to provide guarantee under the Production Sharing Contract for Mexico DS Company, to ensure that when Mexico DS Company loses contract performance capabilities, the Company will perform the contracts on its behalf to Mexican National Hydrocarbons Commission. The maximum amount of the joint and several guarantee liabilities undertaken by the Company during the guarantee period shall not exceed US$274,950,000, and the guarantee period commences from the date of approval by the shareholders at the 2021 annual general meeting until the conclusion of the 2022 annual general meeting of the Company. For details, please refer to the "Progress updated announcement on provision of guarantee for joint venture" (P.2022-021) disclosed in China Securities Journal, Shanghai Securities News, Securities Times and on www.sse.com.cn on 20 June 2022, and the "Discloseable transaction – provision of guarantee for joint venture" on www.hkexnews.hk on 19 June 2022.

The Company expects that it will continue to use the credit line granted by China Construction Bank Corporation to CPC after 5 November 2021 and CPC will continue to undertake the joint guarantee liability for the RMB300 million credit line jointly and severally. On 16 September 2021, the sixth meeting of the tenth session of the board considered and approved Resolution on Provision of Counter-guarantee to China Petrochemical Corporation by the Company, which approved the Company to provide corresponding counter-guarantee in respect of the joint guarantee liability under the financing credit line of no more than RMB300 million provided by China Petrochemical Corporation to the Company. Such resolution has been reviewed and approved by the the second extraordinary general meeting for 2021 of the Company. For details, please refer to the "Related party transaction announcement on provision of counter-guarantee to controlling shareholders by the Company" (P. 2021-037) disclosed in China Securities Journal, Shanghai Securities News, Securities Times and on www.sse.com.cn on 17 September 2021, and on www.hkexnews.hk on 16 September 2021.

On 31 December 2022, the balance of the counter-guarantee provided by the Company to China Petrochemical Corporation was RMB84 million.

(3) Entrusting others to manage cash assets

During the reporting period, no entrusted financing, entrusted loans, other investments and financing and derivatives investment items of the Company occurred.

(4) Other significant contract

During the reporting period, the Company did not enter into any other material contract which requires disclosure.

14. Other important matters that have a significant impact on investors' value judgments and investment decisions

☐ Applicable √ Not applicable

Section VIII Report of the Supervisory Committee

Dear Shareholders,

In 2022, the Supervisory Committee of the Company diligently discharged its duties, proactively and effectively conducted its work, and fully exercised its supervisory functions for the purpose of protecting the interests of the Company and the rights and interests of all shareholders, effectively safeguarding the legitimate rights and interests of the Company and its shareholders and employees, in accordance with the relevant provisions of the Company Law, the Securities Law and other laws and regulations, and the Articles of Association, the Rules of Procedures for the Supervisory Committee and other systems.

1. Composition of the Supervisory Committee during the reporting period

During the reporting period, the tenth session of the Supervisory Committee of the Company comprised 7 supervisors, being Wang Jun, the chairman of the Supervisory Committee, Du Jiangbo, Zhang jianbo and Zhang Qin, the supervisors, and Sun Yongzhuang, Zhang Bailing and Du Guangyi, the employee representative supervisors.

2. Work performed by the Supervisory Committee during the reporting period

During the reporting period, the Supervisory Committee of the Company strengthened its study and diligently performed duties as conferred by the Company Law, the Articles of Association and other laws and regulations, supervised and examined legitimate operations, financial status, connected transactions, implementation of the Board decision-making, construction of risk management and control system, and material operation and management of the Company; supervised the decision-making procedures and the performance of duties by directors and senior management of the Company. Details are as follows:

(1) Meetings of the Supervisory Committee

In 2022, the Supervisory Committee held 5 meetings, with 2 meetings held on-site and 3 meetings held by written resolution, at which a total of 15 resolutions were deliberated and approved as follows:

The 8th meeting of the tenth session of the Supervisory Committee was held by way of on-site on 29 March 2022. This meeting deliberated and approved 9 resolutions, including 2021 Supervisory Committee Work Report; 2021 Financial Report; 2021 Annual Report; the Resolution on 2021 Connected Transactions of the Company; 2021 Profit Distribution Plan; 2021 Internal Control Evaluation Report; the Proposal of Revising Internal Control Evaluation Handbook in 2022; the Resolution on Provision of Guarantee for Wholly-owned Subsidiaries and Joint Venture; and the Resolution on the Maximum Limit of Connected Transactions with China Oil & Gas Pipeline Network Corporation in 2022.

The 9th meeting of the tenth session of the Supervisory Committee was held by written resolution on 26 April 2022. This meeting deliberated and approved the 2022 First Quarterly Report.

The 10th meeting of the tenth session of the Supervisory Committee was held by written resolution on 26 May 2022. This meeting elected Mr. Wang Jun as the chairman of the tenth session of the Supervisory Committee of the Company.

The 11th meeting of the tenth session of the Supervisory Committee was held by way of on-site and live streaming on 25 August 2022. This meeting deliberated and approved resolutions, including 2022 Interim Report and its abstract; 2022 Interim Financial Report; and the Resolution to Undistributed 2022 Interim Dividend.

The 12th meeting of the tenth session of the Supervisory Committee was held by written resolution on 27 October 2022. This meeting deliberated and approved the 2022 Third Quarterly Report.

(2) Performance of supervisory duties

In 2022, the Supervisory Committee attended 3 general meetings and sat in on 2 Board meetings to supervise the decision-making procedures of the Board meetings in accordance with the Company Law, the Articles of Association, the Working Rules of the Supervisory Committee and other relevant laws and regulations. Through understanding and participating in the Company's major events, it supervised the compliance of directors and senior management with laws and regulations in performing their duties, fulfilled the necessary audit functions and played a statutory supervision role.

(3) Participation in various trainings

In 2022, the members of the Supervisory Committee of the Company actively participated in the professional trainings organized by regulatory authorities, with a total of 9 participations in various special trainings organized by the Beijing Listed Companies Association covering new securities law, macroeconomic situation, standards of listed companies, capital market operations and risk prevention and control. Through study, all supervisors updated their professional knowledge and skills required for the performance of duties, which has further strengthened their theoretical literacy and practical performance capabilities.

3. Opinions of the Supervisory Committee in 2022

In 2022, the Supervisory Committee earnestly performed its supervisory duties in a responsible attitude to the Company and its shareholders to supervise legitimate operations, financial status and investment of the Company and promote standardized operation of the Company in strict accordance with the Company Law, the Articles of Association, the Working Rules of the Supervisory Committee and other relevant laws and regulations. The Company actively participated in special trainings for listed companies to enhance the ability and competence of the Supervisory Committee members in performing their duties.

(1) Information on the standardized operations in accordance with the law

In 2022, the Supervisory Committee sat in on the Board meetings and general meetings of the Company according to law, strictly supervised the decision-making procedures of the Company and the performance of duties by directors and senior management where necessary, and supervised the whole process of significant matters. The Supervisory Committee is of the view that the decision-making procedures of the Company have strictly complied with the Company Law, the Securities Law and other laws and regulations as well as the relevant provisions of the Hong Kong Stock Exchange, the Shanghai Stock Exchange and the Articles of Association, the resolutions of the general meetings were conscientiously implemented, the external information disclosure was timely, accurate and complete, and no violation of laws, regulations, the Articles of Association or behavior that would damage the interests of the Company by the directors and senior management of the Company was found.

(2) Check the Company's financial situation

In 2022, the Company closely adhered to annual objectives and tasks to refine its work measures, and achieved positive results in budget guidance, lean capital management, cost and tax burden control, asset efficiency, risk prevention and control, thereby improving quality and efficiency and achieving steady growth. The Company continued to promote the settlement of key and knotty "two funds," formulated recovery measures based on "one case for one project" for key "two funds" projects that were included in the special supervision of the Company, strengthened daily management and control of "two funds," and enhanced its efforts in the recovery of funds. The financial statements audited by BDO China Shu Lun Pan Certified Public Accountants LLP and BDO Hong Kong Limited fairly reflected the financial position, results of operations and cash flows of the Company.

(3) Information of connected transactions

In 2022, the Company strictly complied with national laws and regulations, diligently ful-filled the regulatory requirements on connected transactions of the Hong Kong Stock Exchange and the Shanghai Stock Exchange and fully executed the agreements and contracts entered into with related parties. The transactions are fairly conducted and priced in compliant procedures. No behavior that would damage the interests of the Company and the rights and interests of shareholders was found.

(4) Establishment of internal control system

The Company established a standardized, comprehensive and effective internal control system that is oriented towards risk management and focuses on compliance management, covering various business fields, departments, positions, and all levels of subsidiaries. The Company carefully formulated and revised the implementation rules for internal control and the legal and normative guidelines for operation compliance, and continually improved the top-level design of internal control. Meanwhile, the Company strengthened quarterly internal control testing, annual internal control self-examination, daily risk monitoring, special risk investigation and compliance management supervision, thereby further enhancing the management level of risks, internal control and compliance, and did not find any major deficiencies or omissions in internal control.

In 2023, the Supervisory Committee will focus on its development strategy and key annual tasks, strictly perform its supervisory functions, strengthen its self-construction, continuously improve the supervision quality and its ability to perform duties, facilitate standardized operation of the Company, improve the corporate governance structure of the Company, safeguard the interests of the Company and its shareholders, and promote sustainable development of the Company.

Chairman of the Supervisory Committee

Wang Jun

Beijing, China

28 March 2023

Section IX Changes in Share Capital of Ordinary Shares and Information on Shareholders

1. Changes in Share Capital

(1) The chart of changes in Share Capital

A. The chart of changes in Share Capital

In the reporting period, the total number of shares and share capital structure of the Company have not change.

B. Note for the changes in share capital of ordinary shares

☐ Applicable √ Not applicable

C. The effects of changes in Share Capital of Ordinary Shares on the financial indicators of the Company such as earnings per share and net assets per share, in the previous year and the latest period

☐ Applicable √ Not applicable

D. Other content that the Company deems necessary or required by the securities regulator.

☐ Applicable √ Not applicable

(2) Changes in Shares with Selling Restrictions

☐ Applicable √ Not applicable

2. Share issue and listings

(1) Share issue at the end of the reporting period

During the reporting period, the Company did not issue shares, convertible corporate bonds, convertible bonds, corporate bonds or other derivative securities, nor did it enter into any equity-linked agreements.

(2) Changes in total ordinary shares and share structure and changes in the structure of assets and liabilities

☐ Applicable √ Not applicable

(3) Internal employee shares

The Company has not issued any internal employee shares till the end of the reporting period.

3. Information on Shareholders and the actual Controller

(1) Number of shareholders

Number of ordinary shareholders at the end of reporting period	117,845
Number of ordinary shareholders at the end of last month before the annual report's disclosure date	111,866
Number of preferred shareholders whose voting rights had been restored at the end of reporting period	0
Number of preferred shareholders whose voting rights had been restored at the end of last month before the annual report's disclosure date	0

As at 31 December 2022, the number of shareholders of the Company was 117,845, including 117,511 holders of A shares and 334 registered holders of H shares. The public float of the Company satisfied the requirements of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "Hong Kong Listing Rules").

(2) The shareholdings of the top ten shareholders and the shareholdings of the top ten tradable shareholders (or shareholders of shares without selling restrictions) of the Company

Shareholdings of the top ten shareholders Names of shareholders	Nature of shareholders	Changes of shareholdings 1 (shares)	Number of shares held at the end of the reporting period (shares)	Percentage to total share capital (%)	Number of shares with selling restrictions (shares)	Number of shares pledged or frozen
China Petrochemical Corporation[2]	State-owned legal person	0	10,727,896,364	56.51	0	0
Hong Kong Securities Clearing Company (Nominees) Limited ("HKSCC (Nominees) Limited")[3]	Overseas legal person	21,000	5,402,084,694	28.46	0	0
CITIC Corporation Limited	State-owned legal person	-90,343,400	584,813,200	3.08	0	0
Hong Kong Securities Clearing Company Limited[4]	Others	33,354,267	155,646,896	0.82	0	0
Agricultural Bank of China – China Securities 500 Trading Open Index Securities Investment Fund	Others	24,036,100	34,633,100	0.18	0	0
Anhui Yangguang Xintong Electronic Technology Corp., Ltd.	Non-state-owned legal person	19,500,000	22,500,000	0.12	0	0
Shanghai Tongneng Investment Holdings Co., Ltd.	Non-state-owned legal person	8,733,800	20,250,000	0.11	0	0
Li Feng	Domestic natural person	9,593,300	20,000,000	0.11	0	0
China Merchants Securities Co., Ltd. – Tianhong China Securities 500 Index Enhanced Securities Investment Fund	Others	17,422,900	17,422,900	0.09	0	0
Changjiang Pension Insurance Co.,Ltd. – Changjiang Shengshi Huazhang No.2 Community Pension Management Fund[5]	Others	0	11,574,427	0.06	0	0

Shareholdings of top ten tradable shareholders of shares without selling restrictions Name of shareholders	Number of shares without selling restrictions held at the end of the reporting period (shares)	Types of shares
China Petrochemical Corporation	10,727,896,364	A Share
HKSCC (Nominees) Limited	5,402,084,694	H Share
CITIC Corporation Limited	584,813,200	A Share
Hong Kong Securities Clearing Company Limited	155,646,896	A Share
Agricultural Bank of China – China Securities 500 Trading Open Index Securities Investment Fund	34,633,100	A Share
Anhui Yangguang Xintong Electronic Technology Corp., Ltd.	22,500,000	A Share
Shanghai Tongneng Investment Holdings Co., Ltd.	20,250,000	A Share
Li Feng	20,000,000	A Share
China Merchants Securities Co., Ltd. – Tianhong China Securities 500 Index Enhanced Securities Investment Fund	17,422,900	A Share
Changjiang Pension Insurance Co.,Ltd.-Changjiang Shengshi Huazhang No.2 Community Pension Management Fund	11,574,427	A Share
Statement on the related relationship or activities in concert among the above-mentioned shareholders	The Company is not aware of any related relationship or acting in concert among the above-mentioned shareholders.	
Statement on repurchasing of special accounts among top ten shareholders	No	
Statement on the entrustment and waiver of voting rights by the above mentioned shareholders	Not applicable	

Note:

1. As compared with the number of shares held as of 31 December 2021.
2. Apart from directly holding 10,727,896,364 A shares of the Company, China Petrochemical Corporation also held 2,595,786,987 H shares of the Company through its wholly-owned subsidiary, Century Bright Company. Therefore, China Petrochemical Corporation directly and indirectly holds 13,323,683,351 shares of the Company, which represents 70.18% of the total shares of the Company.
3. HKSCC (Nominees) Limited is a wholly-owned subsidiary of Hong Kong Exchanges and Clearing Limited, acting as an agent to hold H shares of the Company on behalf of other companies or individual shareholders.
4. Hong Kong Securities Clearing Company Limited is a wholly-owned subsidiary of the Hong Kong Exchanges and Clearing Limited, acting as a nominee holder to hold A shares of the Company in the Shanghai Stock Exchange on behalf of the investors of the Hong Kong Stock Exchange.
5. Changjiang Pension Insurance Co., Ltd held it on behalf of Qi Xin Gong Ying Scheme.

Number of top ten shareholders of shares with selling restrictions and restrictions conditions:

☐ Applicable √ Not applicable

(3) Strategic investors or general legal person became top ten shareholders of the Company due to distribution and sales of new shares

☐ Applicable √ Not applicable

4. Information on Controlling Shareholders and the de facto Controller of the Company

(1). Information on controlling shareholder

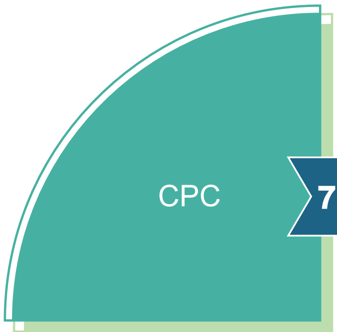
A. Legal Representative

Name of the holding shareholder	China Petrochemical Corporation
Legal representative	Ma Yongsheng
Date of establishment	14 September 1983
Organization number	9111000010169286X1
Registered capital	RMB326.547 billion
Principal activities	Through reorganization in 2000, CPC injected its principal petroleum and petrochemical operations into Sinopec, and retained operations in certain smaller scale petrochemical facilities and refineries, provision of well drilling services, oil testing services, in-well operation services, manufacture and maintenance of production equipment, engineering construction, water, electricity and other utility services and social services, etc.

CPC's subsidiaries and associates listed in domestic and overseas during the reporting period	Name of company	Number of share held (shares)	Shareholding (%)
	Sinopec	80,572,167,393	67.20%
	SINOPEC Engineering (Group) Co., Ltd	2,907,856,000	65.67%
	Sinopec Oilfield Equipment Corporation	456,756,300	48.54%
	China Merchants Energy Shipping Co., LTD	1,095,463,711	13.48%

Note: The number of shares directly held by CPC, does not include the number of shares held through its wholly-owned or holding subsidiaries.

B. The block diagram of the property and control relationship between the Company and the controlling shareholder



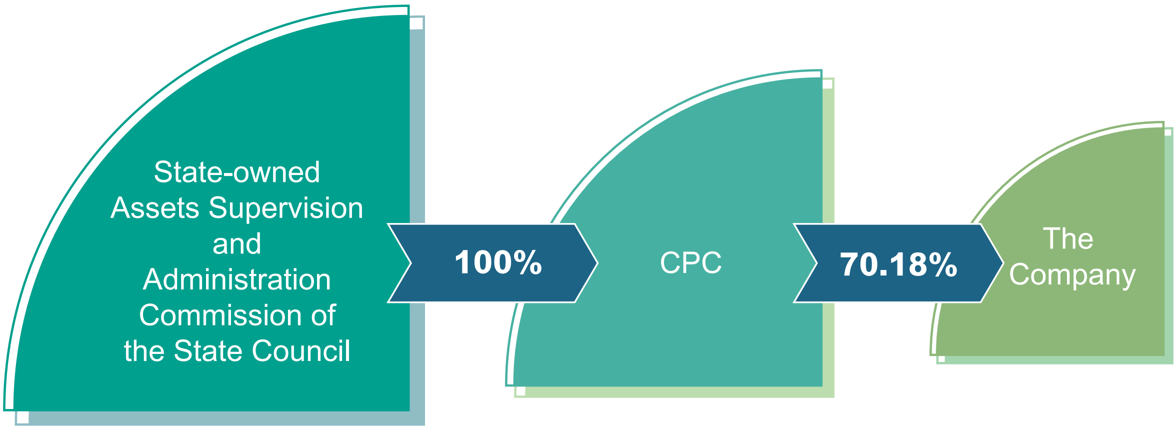
Note: Apart from directly holding 10,727,896,364 A shares of the Company, China Petrochemical Corporation also held 2,595,786,987 H shares of the Company through Century Bright Company. Therefore, China Petrochemical Corporation directly and indirectly held 13,323,683,351 shares of the Company, which represents 70.18% of the total issued shares of the Company.

(2) The de facto controller of the Company

A. Legal Representative

The de facto controller of the Company remains to be China Petrochemical Corporation. See more information in this section relating to controlling shareholder.

B. The diagram of the property and control relationship between the Company and the de facto controller



C. Other information about controlling shareholders and actual controller of the Company

☐ Applicable √ Not applicable

5. The cumulative number of pledged shares accounted for more than 80% of the number of shares of the Company held by controlling shareholders or the largest shareholder with its partner acting in concert

☐ Applicable √ Not applicable

6. Other Legal person shareholders that holding over 10% of the total shares of the Company

At the end of the reporting period, the Company has no other legal person shareholders that holding over 10% of the total shares of the Company.

7. Statement on shares reduced in restriction

☐ Applicable √ Not applicable

8. Execution of shares repurchase during the reporting period

☐ Applicable √ Not applicable

9. The interest or short position held by the substantial shareholders and other persons in the Company's shares or underlying shares

As at 31 December 2022, so far as the Directors, Supervisors and senior management of the Company are aware of, each of the following persons, not being a Director, Supervisor or senior management of the Company, had an interest in the Company's shares which is required to be disclosed to the Company and the HKSE under the provisions of Divisions 2 and 3 of Part XV of the Securities and Futures Ordinance ("SFO").

Name of shareholder	Number of share held (shares)	Percent of shareholding in the Company's total issued share capital (%)	Percent of shareholding in the Company's total issued domestic shares (%)	Percent of shareholding in the Company's total issued H shares (%)	Short position
China Petrochemical Corporation	10,727,896,364 (A Share)	56.51	79.06	Not Applicable	–
	2,595,786,987 (H Share)[1]	13.67	Not Applicable	47.94	–
China State-owned Enterprise Structural Adjustment Fund Co., Ltd.	719,174,495 (H Share)	3.79	Not Applicable	13.28	–

Note:

1. China Petrochemical Corporation held 2,595,786,987 H shares of the Company through its wholly owned subsidiary Century Bright Company. China Petrochemical Corporation is deemed to be interested in the H shares held by Century Bright Company.
2. China State-owned Enterprise Structural Adjustment Fund Co., Ltd. held 401,807,632 H shares of the Company through Yifangda Fund Management Co., Ltd., accounting for 7.42% of the total issued H shares of the Company, and 317,366,863 H shares of the Company through Huaxia Fund Management Co., Ltd., accounting for 5.86% of the total issued H shares of the Company.

Save as disclosed above and so far as the Directors, Supervisors and senior management of the Company are aware of, as at 31 December 2022, no other person had an interest or short position in the Company's shares or underlying shares (as the case may be) which are required to be disclosed to the Company and the HKSE under the provisions of Divisions 2 and 3 of Part XV of the SFO, or was otherwise a substantial shareholder (as such term is defined in the Hong Kong Listing Rules) of the Company.

10. Management contract

During the reporting period, the Company has not signed or has any contracts for the management and administration of the whole or any important business.

11. Priority purchase rights

There are no provisions for preemptive rights in the Company's Articles of Association or PRC laws.

12. Share sale and redemption

The Company has not sold or redeemed any of the Company's listed shares during the twelve months ended 31 December 2022.

Section X Financial Statements

PREPARED IN ACCORDANCE WITH PRC ACCOUNTING STANDARDS FOR BUSINESS ENTERPRISES

Auditors' Report

PCPAR [2023] No. ZK10033

To all shareholders of Sinopec Oilfield Service Corporation,

I. OPINION

We have audited the accompanying financial statements of Sinopec Oilfield Service Corporation, (hereafter referred to as "SSC" or "the Group"), including the consolidated and company balance sheet as at December 31, 2022, the consolidated and company income statement, the consolidated and company cash flow statement, the consolidated and company statement of changes in shareholders' equity for the year then ended and the relevant notes to the financial statements.

In our opinion, the accompanying financial statements are prepared in accordance with Accounting Standards for Business Enterprises. The financial position of SSC for the year ended 31 December 2022, and the results of its operations and cashflows for the year ended 31 December 2022 are fairly presented in all material respects.

II. BASIS FOR OPINION

We conducted our audit in accordance with Chinese Certified Public Accountants Auditing Standards. Our responsibilities under those standards are further described in the auditors' responsibilities for the audit of the financial statements section of our report. We are independent of the Group in accordance with the Code of Professional Conduct and Ethics for Chinese Certified Public Accountants, and we have fulfilled our other ethical responsibilities. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

III. KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements for the current period. The response to these matters is based on the overall audit of the financial statements and the formation of audit opinions. We do not express our opinions on these matters separately.

The key audit matters identified in our audit are summarized below:

<table>
<tr><th>Description of the matter</th><th>How our audit addressed the Key Audit Matter</th></tr>
<tr><td>I. Recognition of revenue and cost

The Group's revenue related to rendering of services and construction contracts is derived from provision of petroleum engineering and technical services to PRC and overseas petroleum exploration and development companies, including geophysics, drilling engineering, logging and mud logging, special downhole operations and engineering construction services.

The Group's petroleum engineering and technical services income would be recognized over a period of time. The recognition of related labor income and profits depends on management's estimation of the estimated total revenue of the contract and performance of the contract. The management of the Group adopts the expected value method according to the contract or the most likely amount to estimate the estimated total revenue of the contract, and evaluates the estimated total cost of the contract according to historical information and construction plan. The significant accounting estimates of management will be continuously evaluated and revised during the execution of the contract.

With the progress towards satisfaction of a performance obligation becomes certain, the Group should recognize revenue and costs in accordance with the progress of performance obligation being satisfied on the balance sheet date. The recognition of revenue and costs mainly depends on the management's critical estimation and judgments, including the estimated total revenue of the contract, estimated total cost, variable consideration, remaining contract costs, estimated progress and contract execution risk. Any alteration for the final progress billing or actual progress for performance obligation being satisfied, which would lead to the variance exists between the management's budgeted revenue and actual amount incurred. Therefore, we identified this matter as a key audit matter.

Refer to Note 3.24 (Revenue), Note 3.32.7 revenue recognition for related disclosures of accounting policy, significant accounting judgment and estimate about revenue recognition, other detailed information are set out in Note 5.36 and Note 15.6.</td><td>Our audit procedures for the recognition of revenue and cost include:

– We checked whether the accounting policies of recognizing revenue and costs are appropriately designed with relevant provisions of accounting standards in accordance with specific circumstances of the Group's business and contract terms.

– We have understood, evaluated and tested the design and implementation of key internal controls used by management to determine estimated contract revenue, estimated contract costs, actual costs incurred and contract remaining costs, and the progress of contract performance to confirm the effectiveness of internal controls.

– Through reviewing business contracts and interviews with management, we have understood and assessed the reasonableness of the basis and assumptions of estimated total revenue and estimated total cost. We have checked the consistency of the preparation and assumptions of various types of projects. We compared the cumulative cost as of December 31, 2022 to the estimated total cost, and checked the large cost recorded after the balance sheet date to analyze and evaluate the management's reasonableness of future workload and estimated residual cost of the contract.

– We have carried out sampling tests for the determination of contract performance progress, checked the main clauses in relevant business contracts and supporting documents such as settlement statements, acceptance sheets, or completion progress statistics issued by customers, and estimated the estimated revenue, estimated cost and gross profit of sub-projects. We have analyzed and calculated to confirm its rationality. In addition, sampling tests has been carried out for the correctness of amount and period of revenue recognition, analyzed whether it has been accurately confirmed on the balance sheet date according to the contract performance progress, and compared the budgeted cost with the actual total cost as of the balance sheet date on the basis of sampling to check whether there are cost overruns.</td></tr>
</table>

Description of the matter	How our audit addressed the Key Audit Matter
II. Measurement of expected credit losses of accounts receivable and contract assets The accounts receivable and contract assets of the Group (hereinafter referred to as "receivables") mainly come from related parties and other PRC and overseas petroleum exploration and development companies. On December 31,2022, the book value of accounts receivable of the Group was RMB12.94 billion, and the book value of contract assets was RMB15.82 billion, the accumulated expected credit losses for account receivables and impairment on contract assets amounted to RMB2.60 billion. The measurement of expected credit losses involves management's subjective judgment and is inherently uncertain. In determining the expected credit losses of receivables, the management needs to comprehensively assess the current credit rating of the counter-party, the experience of historical credit losses, and the current operating conditions, macroeconomic environment, external market environment, technical environment and changes in customer conditions, etc. Due to the inherent uncertainty of the expected credit loss measurement of the receivables, involving the subjective judgment of the management, and the amount of the receivables has a significant impact on the consolidated financial statements of the Group, we identified the measurement of expected credit losses of receivables as a key audit matter. Refer to Note 3.10 Financial instruments (Measurement of expected credit losses), Note 3.32.2 Measurement of expected credit loss of receivables for related disclosures of accounting policy, significant accounting judgment and estimate about Measurement of expected credit losses. Other detailed information is set out in Note 5.2 and Note 5.7.	Our audit procedures for the measurement of expected credit losses of accounts receivable and contract assets include: – We have understood and assessed the internal controls of the Group relating to the expected credit loss measurement. In addition, we tested the effectiveness of such internal controls. – We have reviewed the relevant considerations and objective evidence of the management's expected credit loss measurement, and evaluated the management's method and calculation which divide the receivables into several combinations by considering the actual amount of bad debts and the situation of similar receivables in the history, combined with factors such as customer credit and market environment. – For major customers whose balance of receivables is large or exceeds the credit period, we have gathered information about the debtor or its industry development status to identify whether there is any situation that affects the expected credit loss assessment results of receivables. – We have obtained ageing analysis of receivables as at 31 December 2022. We checked the supporting documents such as accounting vouchers and invoices. We also reviewed the key information such as aging analysis, overdue days, and relationship on sampling basis in order to ascertain the accuracy and classification on receivables. – We have arranged audit confirmation to those customers who have significant balance of accounts receivable, and compared the results for the returned confirmation with the Group's record. – We have recalculated the expected credit losses of the receivables and compared our calculations with the amount recorded by the Group. – We have evaluated the reasonableness of management's expected credit losses assessment by considering the customer's settlement subsequent to the reporting period.

IV. OTHER INFORMATION

The management of the Group (hereinafter referred to as the "Management") is responsible for other information. The other information comprises the information covered in the 2022 annual report of the Group but excludes the financial statements and our auditor's report.

Our opinion on the financial statements does not cover the other information, we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements, or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

V. RESPONSIBILITIES OF THE MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

The management of the Group (hereinafter referred to as "the Management") is responsible for preparing the financial statements in accordance with the requirements of Accounting Standards for Business Enterprises to achieve a fair presentation, and for designing, implementing, and maintaining internal control that is necessary to ensure that the financial statements are free from material misstatements, whether due to frauds or errors.

In preparing the financial statements, the Management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

VI. AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the audit standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken based on these financial statements.

As part of an audit in accordance with Auditing Standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

(1) Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

(2) Understand the internal control relevant to the audit to design audit procedures that are appropriate in the circumstances.

(3) Evaluate the appropriateness of accounting policies used by and the reasonableness of accounting estimates and related disclosures made by the Management.

(4) Conclude on the appropriateness of the Management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

(5) Evaluate the overall presentation (including the disclosures), structure and content of the financial statements, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

(6) We have acquired sufficient and proper audit evidence regarding financial information relating to entity or business activities of the Group to give the audit opinion on the financial statements. We are responsible for the direction, supervision, and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless these matters are forbidden by laws and regulations to be disclosed or in extremely rare circumstances, when the negative impact arising from the reasonable and expected communication about a certain matter in an auditor's report exceeds the public interest benefits arising therefrom, we determine that such matter should not be communicated in the auditor's report.

BDO CHINA Shu Lun Pan
Certified Public Accountants LLP

Certified Public Accountant of China: JIN Chunhua
(Engagement Partner)

Certified Public Accountant of China: MIAO Song

Shanghai, China

Date: March 28, 2023

This auditors' report and the accompanying notes to the financial statements are English translation of the Chinese auditors' report and statutory financial statements prepared under accounting principles and practices generally accepted in the People's Republic of China. In case of doubt as to the presentation of these documents, the Chinese version shall prevail.

Section X Financial Statements

CONSOLIDATED BALANCE SHEET

Sinopec Oilfield Service Corporation

As at December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Assets:	Note	Balance as at December 31, 2022	Balance as at December 31, 2021
Current assets:			
Cash and cash equivalents	5.1	**1,838,229**	2,508,224
Accounts receivable	5.2	**10,537,217**	8,151,019
Receivables at FVTOCI	5.3	**1,468,340**	1,295,971
Advances to suppliers	5.4	**406,578**	338,555
Other receivables	5.5	**3,196,602**	2,552,292
Inventories	5.6	**1,116,341**	1,088,304
Contract assets	5.7	**15,613,899**	13,546,895
Other current assets	5.8	**2,362,863**	2,238,006
Total current assets		**36,540,069**	31,719,266
Non-current assets:			
Long-term equity investments	5.9	**50,215**	47,048
Investment in other equity instruments	5.10	**134,492**	21,760
Fixed assets	5.11	**24,896,607**	23,461,781
Construction in progress	5.12	**467,385**	668,364
Right-of-use assets	5.13	**1,012,350**	720,938
Intangible assets	5.14	**481,490**	506,596
Long-term deferred expenses	5.15	**7,255,439**	6,595,930
Deferred income tax assets	5.16	**362,470**	310,764
Total non-current assets		**34,660,448**	32,333,181
Total assets		**71,200,517**	64,052,447

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

CONSOLIDATED BALANCE SHEET (Continued)

Sinopec Oilfield Service Corporation

As at December 31, 2022

(Amounts are expressed in RMB' thousand unless otherwise stated)

Liabilities and owners' equity	Note	As at December 31, 2022	As at December 31, 2021
Current liabilities:			
Short-term borrowings	5.17	**17,923,208**	17,520,091
Notes payable	5.18	**7,990,225**	8,334,086
Accounts payable	5.19	**25,601,228**	21,556,262
Contract liabilities	5.20	**5,115,819**	3,547,938
Employee compensation payable	5.21	**570,290**	644,026
Taxes and surcharges payable	5.22	**998,894**	737,725
Other payables	5.23	**2,728,144**	2,355,823
Non-current liabilities maturing within one year	5.24	**1,517,190**	296,045
Total current liabilities		**62,444,998**	54,991,996
Non-current liabilities:			
Long-term borrowings	5.25	**480,557**	1,554,686
Lease liabilities	5.26	**497,045**	390,866
Long-term payables	5.27	**74,657**	28,885
Estimated liabilities	5.28	**200,998**	205,771
Deferred income	5.29	**11,576**	9,288
Deferred income tax liabilities	5.16	**63,367**	9,438
Total non-current liabilities		**1,328,200**	2,198,934
Total liabilities		**63,773,198**	57,190,930
Owners' equity:			
Share capital	5.30	**18,984,340**	18,984,340
Capital reserves	5.31	**11,717,773**	11,717,773
Other comprehensive income	5.32	**5,232**	-3,823
Special reserves	5.33	**326,983**	219,182
Surplus reserves	5.34	**200,383**	200,383
Retained earnings	5.35	**-23,807,392**	-24,256,338
Total equity attributable to owners of the parent company		**7,427,319**	6,861,517
Minority interest			
Total owners' equity		**7,427,319**	6,861,517
Total liabilities and owners' equity		**71,200,517**	64,052,447

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

Section X Financial Statements

PARENT COMPANY'S BALANCE SHEET

Sinopec Oilfield Service Corporation

As at December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Assets:	Note	Balance as at December 31, 2022	Balance as at December 31, 2021
Current assets:			
Cash at bank and on hand		35,787	147
Other receivables	15.1	20,982,530	4,380,622
Other current assets		3,528	278
Total current assets		21,021,845	4,381,047
Non-current assets:			
Long-term equity investments	15.2	35,792,373	27,891,662
Fixed assets		3,549	
Construction in progress		66,276	
Right-of-use assets		26,254	
Intangible assets		35,045	
Total non-current assets		35,923,497	27,891,662
Total assets		56,945,342	32,272,709
Liabilities and owners' equity			
Current liabilities:			
Short-term borrowings		16,223,208	
Accounts payable		17,090	8,500
Employee compensation payable		1,803	
Taxes and surcharges payable		26,034	26,791
Other payables		11,080,558	14,284
Non-current liabilities maturing within one year		1,013,572	
Total current liabilities		28,362,265	49,575
Non-current liabilities:			
Lease liabilities		13,297	
Total non-current liabilities		13,297	
Total liabilities		28,375,562	49,575
Owners' equity:			
Share capital		18,984,340	18,984,340
Capital reserves		11,331,421	14,568,016
Surplus reserves		200,383	200,383
Undistributed profits		-1,946,364	-1,529,605
Total owners' equity		28,569,780	32,223,134
Total liabilities and owners' equity		56,945,342	32,272,709

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

CONSOLIDATED INCOME STATEMENT

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022

(Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Note	Current period	Prior period
I. Total operating revenue		**73,772,688**	69,533,053
Including: operating revenue	5.36	**73,772,688**	69,533,053
II. Total operating costs		**73,139,472**	69,557,989
Including: operating costs	5.36	**68,003,487**	64,520,925
Taxes and surcharges	5.37	**291,091**	238,021
Selling and distribution expenses	5.38	**75,044**	80,463
General and administrative expenses	5.39	**2,303,286**	2,184,739
Research and development expenses	5.40	**1,838,968**	1,669,706
Financial expenses	5.41	**627,596**	864,135
Including: interest expenses	5.41	**704,304**	726,760
Interest income	5.41	**15,408**	38,180
Plus: other income	5.42	**70,682**	265,296
Investment income ("-" for losses)	5.43	**26,959**	38,261
Including: income from investment in associates and joint ventures	5.43	**7,504**	7,280
Losses from credit impairment ("-" for losses)	5.44	**75,530**	-22,492
Losses from assets impairment ("-" for losses)	5.45	**-99,883**	2,826
Gains from disposal of assets ("-" for losses)	5.46	**25,888**	88,723
III. Operating profits ("-" for losses)		**732,392**	347,678
Plus: non-operating revenue	5.47	**151,067**	168,697
Less: non-operating expenses	5.48	**154,098**	25,853
IV. Total profits ("-" for total losses)		**729,361**	490,522
Less: income tax expenses	5.49	**265,547**	310,731
V. Net profit ("-" for net loss)		**463,814**	179,791
(I) Classified by operating sustainability			
1. Net profit from continued operation ("-" for net loss)		**463,814**	179,791
2. Net profit from discontinued operation ("-" for net loss)			
(II) Classified by ownership			
1. Net profit attributable to shareholders of the parent company ("-" for net loss)		**463,814**	179,791
2. Minority interest income ("-" for net loss)			
VI. Other comprehensive income, net of tax		**-5,813**	-1,799
Other comprehensive income, net of tax, attributable to owners of the parent company			
(I) Other comprehensive income that cannot be reclassified into profit or loss		**-5,813**	-1,799
1. Changes in fair value of other equity instrument investment		**-5,813**	-1,799
(II) Other comprehensive income that will be reclassified into profit or loss			
Other comprehensive income, net of tax, attributable to minority shareholders			
VII. Total comprehensive income		**458,001**	177,992
Total comprehensive income attributable to owners of the parent company		**458,001**	177,992
Total comprehensive income attributable to minority shareholders			
VIII. Earnings per share:			
(I) Basic earnings per share (RMB/Share)	17.2	**0.024**	0.009
(II) Diluted earnings per share (RMB/Share)			

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman: *Chen Xikun*

General Manager: *Yuan Jianqiang*

Accounting Principal: *Cheng Zhongyi*

Head of the Accounting Department: *Yang Yulong*

PARENT COMPANY'S INCOME STATEMENT

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Note	Current period	Prior period
I. Operating revenue			
Less: operating costs			
General and administrative expenses		31,327	13,516
Financial expenses		40,813	2
Including: interest expenses		27,230	
Interest income		-5,000	
Plus: Investment income ("-" for losses)		-344,684	
Including: income from investment in associates and joint ventures		794	
Losses from credit impairment ("-" for losses)		-4	
II. Operating profits ("-" for losses)		-416,828	-13,518
Plus: non-operating revenue		70	
Less: non-operating expenses		1	
III. Total profits ("-" for total losses)		-416,759	-13,518
Less: income tax expenses			
IV. Net profit ("-" for net loss)		-416,759	-13,518
(I) Net profit from continued operation ("-" for net loss)		-416,759	-13,518
(II) Net profit from discontinued operation ("-" for net loss)			
V. Other comprehensive income, net of tax			
(I) Other comprehensive income that cannot be reclassified into profit or loss			
(II) Other comprehensive income that will be reclassified into profit or loss			
VI. Total comprehensive income		-416,759	-13,518
VII. Earnings per share:			
(I) Basic earnings per share (RMB/Share)			
(II) Diluted earnings per share (RMB/Share)			

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

CONSOLIDATED STATEMENT OF CASH FLOWS

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Note	Current period	Prior period
I. Cash flows from operating activities			
Cash received from sales of goods and rendering of services		72,986,961	63,641,759
Refund of taxes and surcharges		310,072	194,673
Cash received from other operating activities	5.50	4,884,147	3,794,244
Sub-total of cash inflows from operating activities		78,181,180	67,630,676
Cash paid for purchase of goods and receipt of services		51,600,991	41,549,293
Cash paid to and on behalf of employees		17,956,468	15,106,616
Various taxes and surcharges paid		512,866	1,324,248
Cash paid for other operating activities	5.50	3,912,986	3,443,610
Sub-total of cash outflows from operating activities		73,983,311	61,423,767
Net cash flows from operating activities	5.51	4,197,869	6,206,909
II. Cash flows from investing activities			
Cash received from disinvestment			10
Cash received from returns on investments		4,845	3,732
Net cash received from disposal of fixed assets, intangible assets and other long-term assets		61,990	83,497
Sub-total of cash inflows from investing activities		66,835	87,239
Cash paid to acquire and construct fixed assets, intangible assets and other long-term assets		3,892,997	3,340,682
Cash paid for investments		125,000	
Sub-total of cash outflows from investing activities		4,017,997	3,340,682
Net cash flows from investing activities		-3,951,162	-3,253,443
III. Cash flows from financing activities			
Cash received from borrowings		44,571,010	60,848,383
Sub-total of cash inflows from financing activities		44,571,010	60,848,383
Cash paid for debt repayments		44,491,653	61,666,957
Cash paid for distribution of dividends and profits or payment of interest		604,287	611,439
Cash paid for other financing activities	5.50	526,319	518,194
Sub-total of cash outflows from financing activities		45,622,259	62,796,590
Net cash flows from financing activities		-1,051,249	-1,948,207
IV. Effect of fluctuation in exchange rate on cash and cash equivalents		130,386	-53,305
V. Net increase in cash and cash equivalents	5.51	-674,156	951,954
Plus: beginning balance of cash and cash equivalents		2,475,306	1,523,352
VI. Ending balance of cash and cash equivalents	5.51	1,801,150	2,475,306

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

PARENT COMPANY'S STATEMENT OF CASH FLOWS

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Note	Current period	Prior period
I. Cash flows from operating activities			
Refund of taxes and surcharges		926,860	
Cash received from other operating activities		926,860	
Sub-total of cash inflows from operating activities		14,118	
Cash paid for purchase of goods and receipt of services		2,231	
Cash paid for other operating activities		15,402	12
Sub-total of cash outflows from operating activities		31,751	12
Net cash flows from operating activities		895,109	-12
II. Cash flows from investing activities			
Cash paid to acquire and construct fixed assets, intangible assets and other long-term assets		118	
Sub-total of cash outflows from investing activities		118	
Net cash flows from investing activities		-118	
III. Cash flows from financing activities			
Cash received from borrowings		4,681,510	
Sub-total of cash inflows from financing activities		4,681,510	
Cash paid for debt repayments		5,477,603	
Cash paid for distribution of dividends and profits or payment of interest		59,305	
Cash paid for other financing activities		3,859	
Sub-total of cash outflows from financing activities		5,540,767	
Net cash flows from financing activities		-859,257	
IV. Effect of fluctuation in exchange rate on cash and cash equivalents		-94	
V. Net increase in cash and cash equivalents		35,640	-12
Plus: beginning balance of cash and cash equivalents		147	159
VI. Ending balance of cash and cash equivalents		35,787	147

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	General Manager:	Accounting Principal:	Head of the Accounting Department:
Chen Xikun	Yuan Jianqiang	Cheng Zhongyi	Yang Yulong

CONSOLIDATED STATEMENT OF CHANGES IN OWNERS' EQUITY

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022

(Amounts are expressed in RMB' thousand unless otherwise stated)

	Current period												
	Equity attributable to owners of the parent company												
		Other equity instruments											
Item	Share capital	Preferred stock	Perpetual bonds	Others	Capital reserves	Less: treasury stock	Other comprehensive income	Special reserves	Surplus reserves	General risk reserves	Undistributed profits	Sub-total	Minority equity	Total owners' equity
I. Balance at the end of the last year	18,984,340				11,717,773		-3,823	219,182	200,383		-24,256,338	6,861,517		6,861,517
Plus: changes in accounting policies													
Others													
II. Balance at the beginning of the current year	18,984,340				11,717,773		-3,823	219,182	200,383		-24,256,338	6,861,517		6,861,517
III. Increases/decreases in current year ("-" for decreases)							-5,813				463,814	458,001		458,001
(I) Total comprehensive income													
(II) Capital contributed or reduced by owners													
(III) Profit distribution													
(IV) Internal carry-forward of owners' equity							14,868				-14,868			
1. Transfer of other comprehensive income to retained earnings							14,868				-14,868			
(V) Special reserves								107,801				107,801		107,801
1. Amount withdrawn in the current period								1,321,549				1,321,549		1,321,549
2. Amount used in the current period								1,213,748				1,213,748		1,213,748
(VI) Others													
IV. Balance at the end of the current period	18,984,340				11,717,773		5,232	326,983	200,383		-23,807,392	7,427,319		7,427,319

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

CONSOLIDATED STATEMENT OF CHANGES IN OWNERS' EQUITY (Continued)

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022

(Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Prior period													
	Equity attributable to owners of the parent company													
		Other equity instruments												
	Share capital	Preferred stock	Perpetual bonds	Others	Capital reserves	Less: treasury stock	Other comprehensive income	Special reserves	Surplus reserves	General risk reserves	Undistributed profits	Sub-total	Minority equity	Total owners' equity
I. Balance at the end of the last year	18,984,340				11,717,773		-2,014	258,523	200,383		-24,436,139	6,722,866		6,722,866
Plus: changes in accounting policies														
Others														
II. Balance at the beginning of the current year	18,984,340				11,717,773		-2,014	258,523	200,383		-24,436,139	6,722,866		6,722,866
III. Increases/decreases in current year ("-" for decreases)							-1,809	-39,341			179,801	138,651		138,651
(I) Total comprehensive income							-1,799				179,791	177,992		177,992
(II) Capital contributed or reduced by owners														
1. Amounts of share-based payments recognized in owners' equity														
(III) Profit distribution														
(IV) Internal carry-forward of owners' equity							-10				10			
1. Transfer of other comprehensive income to retained earnings							-10				10			
(V) Special reserves								-39,341				-39,341		-39,341
1. Amount withdrawn in the current period								1,468,981				1,468,981		1,468,981
2. Amount used in the current period								1,508,322				1,508,322		1,508,322
(VI) Others														
IV. Balance at the end of the current period	18,984,340				11,717,773		-3,823	219,182	200,383		-24,256,338	6,861,517		6,861,517

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	General Manager:	Accounting Principal:	Head of the Accounting Department:
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

PARENT COMPANY'S STATEMENT OF CHANGES IN OWNERS' EQUITY

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Current period										
	Share capital	Other equity instruments			Capital reserves	Less: treasury stock	Other comprehensive income	Special reserves	Surplus reserves	Undistributed profits	Total owners' equity
		Preferred stock	Perpetual bonds	Others							
I. Balance at the end of the last year	18,984,340				14,568,016				200,383	-1,529,605	32,223,134
Plus: changes in accounting policies											
Others											
II. Balance at the beginning of the current year	18,984,340				14,568,016				200,383	-1,529,605	32,223,134
III. Increases/decreases in current year ("-" for decreases)					-3,236,595					-416,759	-3,653,354
(I) Total comprehensive income										-416,759	-416,759
(II) Capital contributed or reduced by owners					-3,236,595						-3,236,595
1. Others					-3,236,595						-3,236,595
(III) Profit distribution											
(IV) Internal carry-forward of owners' equity											
(V) Special reserves											
(VI) Others											
IV. Balance at the end of the current period	18,984,340				11,331,421				200,383	-1,946,364	28,569,780

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman: *Chen Xikun* | *General Manager:* *Yuan Jianqiang* | *Accounting Principal:* *Cheng Zhongyi* | *Head of the Accounting Department:* *Yang Yulong*

Section X Financial Statements

PARENT COMPANY'S STATEMENT OF CHANGES IN OWNERS' EQUITY (Continued)

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022 (Amounts are expressed in RMB' thousand unless otherwise stated)

Item	Prior period										
	Share capital	Other equity instruments			Capital reserves	Less: treasury stock	Other comprehensive income	Special reserves	Surplus reserves	Undistributed profits	Total owners' equity
		Preferred stock	Perpetual bonds	Others							
I. Balance at the end of the last year	18,984,340				14,568,016				200,383	-1,516,087	32,236,652
Plus: changes in accounting policies											
II. Balance at the beginning of the current year	18,984,340				14,568,016				200,383	-1,516,087	32,236,652
III. Increases/decreases in current year ("-" for decreases)										-13,518	-13,518
(I) Total comprehensive income										-13,518	-13,518
(II) Capital contributed or reduced by owners											
1. Amounts of share-based payments recognized in owners' equity											
(III) Profit distribution											
(IV) Internal carry-forward of owners' equity											
(V) Special reserves											
(VI) Others											
IV. Balance at the end of the current period	18,984,340				14,568,016				200,383	-1,529,605	32,223,134

The accompanying notes to the financial statements form an integral part of the financial statements.

Chairman:	*General Manager:*	*Accounting Principal:*	*Head of the Accounting Department:*
Chen Xikun	*Yuan Jianqiang*	*Cheng Zhongyi*	*Yang Yulong*

NOTES TO THE FINANCIAL STATEMENTS

Sinopec Oilfield Service Corporation

For the Year Ended December 31, 2022

(Amounts are expressed in RMB' thousand unless otherwise stated)

1 COMPANY PROFILE

1.1 Overview

Sinopec Oilfield Service Corporation (hereinafter referred to as the Company, including its subsidiaries referred to as the Group), formerly known as Sinopec Yizheng Chemical Fibre Company Limited, which was registered in the People's Republic of China ("PRC") and exclusively established by Yihua Group Corporation (hereinafter referred to as "Yihua") on December 31, 1993. The Company is headquartered at No. 22 Chaoyangmen North Street, Chaoyang District, Beijing.

The Company issued 1 billion H shares in March 1994, 200 million A shares in January 1995 and a further 400 million new H shares in April 1995. The Company's H shares, and new H shares were listed and commenced trading on the HKSE on March 29, 1994, and April 26, 1995 respectively. The Company's A shares were listed and commenced trading on the SSE on April 11, 1995.

Pursuant to the directives on the reorganization of certain companies involving the Company and Yihua as issued by the State Council and other government authorities of the PRC, China Eastern United Petrochemical (Group) Company Limited ("CEUPEC") became the largest shareholder of the Company on November 19, 1997, holding the 1,680,000,000 state-owned legal person shares (representing 42% of the Company's share capital issued) previously held by Yihua. CITIC Group Corporation ("CITIC", formerly "CITIC Group") continues to hold 720,000,000 A shares (representing 18% of the Company's share capital issued) it held prior to the reorganization, and the balance of 40% remains in public hands in the form of A shares and H shares, in total 1,600,000,000 shares.

Following the State Council's approval of the reorganization of China Petrochemical Corporation (hereinafter referred to as "Sinopec Group") on July 21, 1998, CEUPEC joined Sinopec Group. As a result of the reorganization, Yihua replaced CEUPEC as the holder of the 42% of the Company's share capital issued.

The reorganization of Sinopec Group was completed on February 25, 2000, and Sinopec Group set up a joint stock limited company, China Petroleum &Chemical Corporation (hereinafter referred to as "Sinopec Corp."), in the PRC. From that date, the 1,680,000,000 state-owned legal person shares (representing 42% of share capital issued by the Company), which were previously held by Yihua, were transferred to Sinopec Corp. and Sinopec Corp. became the largest shareholder of the Company.

On December 27, 2011, CITIC established CITIC Limited in PRC and a restructuring agreement was signed. Whereby 720,000,000 of the Company's non-public shares held by CITIC were transferred to CITIC Limited as part of its capital contributions on February 25, 2013, and CITIC Limited thus holds 18% of the Company's share capital.

Pursuant to the *Official Reply on A Share Reform Scheme of Sinopec Yizheng Chemical Fibre Company Limited* (GZCQ [2013] No. 442) issued by the State-owned Assets Supervision and Administration Commission ("SASAC") and the *Official Reply of the Ministry of Finance on A Share Reform Scheme of Sinopec Yizheng Chemical Fibre Company Limited* (CJH [2013] No. 61) issued by Ministry of Finance of the PRC, the Company implemented the A Share Reform in 2013, under which all non-circulating shareholders of the Company paid 5 shares for each 10 shares to the circulating A shares holders who were registered on August 16, 2013 (the registration date for share change, as agreed in the Share Reform Scheme). As a result, 100,000,000 shares were paid in total. After the payment, the shares held by Sinopec Corp. and CITIC Limited in the Company decreased from 42% and 18% to 40.25% and 17.25%, respectively. From August 22, 2013, the circulating right was granted to all enterprise legal person shares of the Company in the Shanghai Stock Exchange. However, in accordance with the agreed restricted conditions, 1,035,000,000 enterprise legal person shares held by CITIC Limited, the original non-circulating shareholder, were available for trading as at August 22, 2016. Pursuant to the resolutions of general meeting of shareholders of the Company, based on the total share capitals of H shares and A shares that were registered on November 13, 2013 and November 20, 2013, respectively, the Company added 5 shares per 10 shares from capital reserves, by which 700,000,000 H shares and 1,300,000,000 A shares were newly added and such transaction was completed on November 22, 2013.

Pursuant to the *Official Reply on Matters Concerning Assets Restructuring and Supporting Financing of Sinopec Yizheng Chemical Fibre Company Limited* (GZCQ [2014] No.1015) issued by the State-owned Assets Supervision and Administration Commission and the *Official Reply on the Material Asset Restructuring of Sinopec Yizheng Chemical Fibre Company Limited and the Issuance of Shares to China Petrochemical Corporation for Asset Acquisition and Supporting Fund Raising* (ZJXK [2014] No.1370) issued by China Securities Regulatory Commission, the Company implemented the material asset restructuring in 2014, under which the Company sold all of its assets and liabilities (hereinafter referred to as the "Assets Sold") to repurchase and cancel the Company's equity held by Sinopec Corp., while it issued shares to Sinopec Group in order to acquire 100% of equity of Sinopec Oilfield Service Limited held by Sinopec Group (hereinafter referred to as the "Assets Acquired" or "SOSC", hereinafter collectively referred to as the "Material Asset Restructuring"). The Company executed the *Confirmation on Delivery of Assets Sold* with Sinopec Corp. and the *Confirmation on Delivery of Assets Acquired* with Sinopec Group on December 22, 2014, by which the Company delivered the Assets Sold to Sinopec Corp. and Sinopec Group delivered the Assets Acquired to the Company. On December 30, 2014, the Company repurchased 2,415,000,000 A shares from Sinopec Corp. for cancellation and issued 9,224,327,662 A shares to Sinopec Group as consideration. On February 13, 2015, the Company issued 1,333,333,333 A Shares to seven specific investors such as Darry Asset Management (Hangzhou) Co., Ltd.

1 COMPANY PROFILE (Continued)

1.1 Overview (Continued)

As approved by the Official Reply on Approving Sinopec Oilfield Service Corporation to Make the Non-public Offering of Shares (ZJXK [2018] No. 142) issued by the China Securities Regulatory Commission, the Company made the non-public offering of 1,526,717,556 A shares to China Petrochemical Corporation and Changjiang Pension Insurance Co., Ltd. - Changjiang Shengshihuazhang Community Pension Management Product Portfolio 2 at a price of RMB2.62 per share; as approved by the Official Reply on Approving Sinopec Oilfield Service Corporation to Additionally Issue Overseas-listed Foreign Shares (ZJXK [2018] No. 130) issued by the China Securities Regulatory Commission, the Company made the non-public offering of 3,314,961,482 H shares to Sinopec Century Bright Capital Investment Limited and China Structural Reform Fund.

The business scope of the Group includes rendering of petroleum engineering technology services, such as geophysical exploration, drilling, logging and special downhole operations, for the production of onshore and offshore oil and natural gas, and contracting of domestic and overseas petroleum engineering, natural gas engineering, chemical engineering, bridge engineering, road engineering, housing construction engineering, water resources and hydropower engineering, municipal utility engineering, municipal public works, and industrial installation engineering.

The financial statements and the notes to the financial statements have been approved for issue by the 14th meeting of the 10th Board of Directors of the Company on March 28, 2023.

1.2 Scope of the consolidated financial statement

The consolidated financial statements of the Group cover the Company and its subsidiaries, refer to “Note 6 Changes in the scope of consolidation” and “Note 6 Equities in other entities” for details.

2 BASIS OF PREPARATION FOR THE FINANCIAL STATEMENTS

2.1 Basis of preparation

The Company prepares financial statements in accordance with the *Accounting Standards for Business Enterprises – Basic Standards* and all the specific accounting standards, Application Guidance to the Accounting Standards for Business Enterprises, the interpretation of the Accounting Standards for Business Enterprises and other relevant provisions (hereinafter referred to as the “Accounting Standards for Business Enterprises”), as well as the *Rules for the Compilation and Submission of Information Disclosure by Companies Offering Securities to the Public No. 15 – General Requirements for Financial Reports* issued by the China Securities Regulatory Commission.

2.2 Going Concern

The financial statements are prepared based on going concern.

As at December 31, 2022, the Group’s accumulated loss amounted to RMB23,807,392,000, the current liabilities exceeded the current assets by about RMB25,904,929,000 (In 2021, the current liabilities exceeded the current assets by about RMB23,272,730,000). Directors of the Company have made the assessment, by which the sufficient cash flows for operating activities are likely to generate in the future 12 months; as the Group’s borrowings mainly come from Sinopec Group and its subsidiaries, and the Group has maintained a long-term and good relationship with them, the Group is able to obtain adequate financial support from Sinopec Group and its subsidiaries. As of December 2022, the Company has obtained a credit line of RMB22 billion and an equivalence of USD510 million as well as a credit line of RMB10 billion for acceptance bill issuance from subsidiaries of Sinopec Group. Management and those charged with governance believe that these credit lines are sufficient to guarantee the Company’s going-concern ability. The Company will broaden the channel for financing and develop good relationships with all listed and state-owned financial institutions to obtain the more sufficient credit line. As directors of the Group believe that the above-mentioned measures are enough to meet the Group’s fund requirement for debts repayment and commitment, the Group prepared the financial statements for this reporting period on a going concern basis.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

Tips for specific accounting policies and accounting estimates:

The following disclosures have covered the specific accounting policies and accounting estimates formulated by the Company according to the characteristics of its actual production and operation. For more details, please see Note 3.14 Fixed assets, Note 3.17 Intangible assets, Note 3.19 Long-term deferred expenses and Note 3.24 Revenue.

3.1 Statement on compliance with the Accounting Standards for Business Enterprises

The financial statements meet the requirements of the Accounting Standards for Business Enterprises issued by the Ministry of Finance, and truly and completely reflect the consolidated and the parent company's financial position of the Company as at December 31, 2022, and the consolidated and the parent company's operating results and cash flows for the six months ended.

3.2 Accounting period

The accounting year is from January 1 to December 31 in calendar year.

3.3 Operating cycle

The Company's operating cycle is 12 months.

3.4 Functional currency

RMB is the functional currency of the Company and its domestic subsidiaries. The currency used by the Group is RMB when preparing the financial statements.

The Company's subsidiaries, joint ventures and associates determine their functional currencies by themselves in accordance with the main economic environment in which they operate and convert the accounts into the amount in RMB upon preparation of financial statements.

3.5 Accounting treatment methods for business combinations under common control and not under common control

Business combination under common control: for the assets and liabilities acquired from business combination by the combining party (including the goodwill formed by the acquisition by the final controller of the combinee), they are measured are measured at book value of assets and liabilities in the consolidated financial statements of the final controller on the combination date. The share premium in capital reserves is adjusted according to the difference between the book value of net assets acquired through combination and the book value of consideration paid for the combination (or total par value of shares issued). If the share premium in capital reserves is insufficient to cover the difference, the remaining amount will be charged against retained earnings.

Business combination not under common control: the combination costs are the fair value, on the acquisition date, of any assets acquired, any liabilities incurred or assumed, and any equity securities issued by the acquirer, in exchanges for the right of control over the acquiree. The Company shall recognize the difference of the combination costs in excess of the fair value of the identifiable net assets acquired from the acquiree as goodwill. The Company shall recognize the difference of the combination costs in short of the fair value of the identifiable net assets acquired from the acquiree in the current profit or loss. The identifiable assets, liabilities and contingent liabilities of the acquiree that are obtained by the acquirer from combination and conform to the recognition criteria shall be measured at the fair value on the acquisition date.

Direct relevant expenses arising from the business combination are included in the current profit or loss upon occurrence. Trading expenses on issuing equity securities or debt securities for the business combination are included in the initially recognized amount of the equity securities or the debt securities.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.6 Preparation method of consolidated financial statements

3.6.1 Scope of consolidation

The scope of consolidation for the consolidated financial statements is determined based on control. The Company and all its subsidiaries are included in the scope of consolidation thereof. Control means the power owned over the investee by the Company which enjoys the variable return through participating in activities related to the investee and has the ability to affect the return by using the power over the investee.

3.6.2 Consolidation procedures

The Company treats the enterprise group as a whole accounting entity and prepares the consolidated financial statements with uniform accounting policies, to reflect the overall financial position, operating results and cash flows of the enterprise group. Effect of internal transactions between the Company and subsidiaries and among subsidiaries will be offset. If the internal transaction indicates that the relevant assets have impairment losses, the losses shall be fully recognized. Where accounting policies and accounting periods adopted by subsidiaries are inconsistent with those of the Company, necessary adjustments should be made according to the accounting policies and accounting periods of the Company when preparing the consolidated financial statements.

Subsidiary's owners' equity, net profit or loss and the share of comprehensive income in the current period attributable to minority shareholders will be separately listed under the owners' equity in the consolidated balance sheet, net profit in the consolidated income statement and total comprehensive income. If the current losses shared by the minority shareholder of a subsidiary exceed the balances arising from the shares enjoyed by the minority shareholder in the owners' equity of the subsidiary at the beginning of the period, minority equity will be written down accordingly.

(1) Acquisition of subsidiaries or business

During the reporting period, where the Company acquired subsidiaries or business from the business combination under common control, the operating results and cash flows of the newly acquired subsidiaries or business from the beginning of the period for business combination to the end of the reporting period are included in the consolidated financial statements; the beginning amount of the consolidated financial statements and relevant items in the comparative statements are adjusted accordingly, as if the reporting entity after the business combination exists as of the time when the ultimate controller has the control.

Where control can be exercised on the investee under common control for additional investment or other reasons, for equity investments held before the control over the investee is obtained, the related gains and losses, other comprehensive income as well as other changes in net assets recognized from the later of the date when the original equity is obtained or the date when the combining party and the combined party are under the common control, to the combination date will respectively write down the retained earnings or current profit or loss in the comparative statements.

During the reporting period, the Company has acquired the subsidiaries or business from the business combination not under common control, they are included in the consolidated financial statements based on the fair values of various identifiable assets, liabilities and contingent liabilities recognized on the acquisition date.

Where the Company can control the investee not under common control for additional investments, it shall re-measure equity of the acquiree held before the acquisition date at the fair value of such equity on the acquisition date and include the difference between the fair value and book value in the current investment income. Other comprehensive income from the investee that can be reclassified into profits or losses and other changes in the owner's equity under the equity method shall be transferred to the current investment income at the purchase date.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.6 Preparation method of consolidated financial statements (Continued)

3.6.2 Consolidation procedures (Continued)

(2) Disposal of subsidiaries

① General method of disposal

For the remaining equity investments after the disposal, the Company will re-measure the fair value of the investee on the date when it loses control over the investee due to disposal of partial equity investment or other reasons. The difference of total amount of the consideration from disposal of equities plus the fair value of the remaining equities less the amount of shares calculated at the original shareholding ratio in net assets and goodwill of the original subsidiary which are continuously calculated as of the acquisition date or combination date is included in the investment income in the period when control is lost. Other comprehensive incomes that can be reclassified into profits or losses later and other changes in the owner's equity under the equity method, associated with the equity investments of the original subsidiary, are transferred into investment income of the period when control is lost.

② Disposal of subsidiaries by stages

If the control is lost due to disposal of the equity investments in subsidiaries through multiple transactions by stages, and the terms, conditions and economic impact of the transactions related to the disposal of equity investments in subsidiaries meet one or more of the following circumstances, it usually indicates that multiple transactions will be treated a package deal:

i. These transactions are concluded at the same time or under the consideration of mutual effect;

ii. A complete business result can be reached only when the transactions are conducted as a whole;

iii. The occurrence of a transaction depends on that of at least one other transactions; and/or

iv. A single transaction is uneconomical but it is economical when considered together with other transactions.

Where various transactions belong to a package deal, accounting treatment shall be made by the Company on the transactions as a transaction to dispose subsidiaries and lose the control; the difference between each disposal cost and net asset share in the subsidiaries corresponding to each disposal of investments before loss of the control should be recognized as other comprehensive income in the consolidated financial statements and should be transferred into the current profit or loss at the loss of the control.

When these transactions belong to a package of transactions, before the control loses, the partial disposal of equity investments in subsidiaries without losing control shall be subject to the accounting treatments; at the loss of the control, accounting treatment shall be made according to general treatment methods for disposal of subsidiaries.

(3) Purchase of minority interest of subsidiaries

The share premium in the capital reserves under the consolidated balance sheet will be adjusted at the difference between the long-term equity investment acquired by the Company for the purchase of minority interest and the share of net assets calculated constantly from the acquisition date (or combination date) according to the newly increased shareholding ratio. If the share premium thereof is insufficient to offset, retained earnings will be adjusted.

(4) Partial disposal of equity investments in subsidiaries without losing control

The share premium in the capital reserves under the consolidated balance sheet will be adjusted at the difference between the disposal price and the share of net assets of subsidiaries calculated from the acquisition date or the combination date corresponding to the disposal of long-term equity investments; if the share premium thereof is insufficient, the retained earnings will be adjusted.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.7 Classification of joint venture arrangements and accounting treatment methods of joint operation

Joint venture arrangements are classified into joint operation and joint venture.

Joint operation refers to joint arrangement where the joint venture may have assets thereof and undertake liabilities thereof.

The Company confirms the following items relating to the interests share in joint operation:

(1) Assets it solely holds and its share of jointly-held assets based on its percentage;

(2) Liabilities it solely assumes and its share of jointly-assumed liabilities based on its percentage;

(3) Revenue from sale of output enjoyed by it from the joint operation;

(4) Revenue from sale of output from the joint operation based on its percentage; and

(5) Separate costs and costs for the joint operation based on its percentage.

See Note 3.13 Long-term equity investments for the Company's investment in joint ventures accounted for under the equity method.

3.8 Recognition criteria of cash and cash equivalents

Cash refers to the Company's cash on hand and the unrestricted deposits. Cash equivalents refer to short-term and highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

3.9 Foreign currency transactions and translation of foreign currency statements

3.9.1 Foreign currency transactions

Foreign currency transactions shall be translated at the exchange rate similar to the spot exchange rate on the transaction date determined in accordance with the systematic and reasonable method.

The balance of foreign currency monetary items as at the balance sheet date are translated at the spot exchange rate on the balance sheet date and the exchange differences arising therefrom shall be included in the current profit or loss, except those exchange differences arising from the special borrowings of foreign currency related to the acquired and constructed assets qualified for capitalization that will be capitalized at the borrowing expenses.

3.9.2 Translation of foreign currency financial statements

Assets and liabilities in the balance sheet shall be translated at the spot exchange rates on balance sheet date; owners' equity items, except for the item of "undistributed profits", shall be translated at the spot exchange rates on the dates when the transactions occur. Revenue and expense items in the income statement shall be translated at the exchange rate similar to the spot exchange rate on the transaction date determined in accordance with the systematic and reasonable method.

Where the Company disposes of an overseas business, it shall transfer the exchange difference relating to the business disposed of from the owners' equity to the current profit or loss.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.10 Financial instruments

When the Company becomes a party to a financial instrument, it shall recognize a financial asset or financial liability.

3.10.1 Classification of financial instruments

According to the business model of financial assets and contractual cash flow characteristics of the same, which are subject to the management of the Company, financial assets are classified at the initial recognition as: financial assets measured at the amortized cost, financial assets measured at fair value through other comprehensive income and financial assets measured at fair value through the current profit or loss.

Financial assets not designated to be measured at fair value through the current profit or loss in line with the following conditions will be reclassified into the financial assets measured at amortized cost:

– Where the business model is to collect contractual cash flows; and

– Where the contractual cash flow that is only used for the payment for the principal and the interest based on the outstanding principal amount.

Financial assets that meet both the following conditions and have not been designated as financial assets measured at fair value through current profit or loss will be classified as financial assets (debt instruments) measured at fair value through other comprehensive income:

– The business model aims at gathering the contractual cash flow and selling such financial assets; and

– Where the contractual cash flow that is only used for the payment for the principal and the interest based on the outstanding principal amount.

At the initial recognition, the Company irrevocably designates the non-trading equity instrument investments as financial assets (equity instruments) measured at fair value through the other comprehensive income. The designation is made based on a single investment and the relevant investment is in line with the definition of the equity instrument from the issuer's perspective.

Except for the financial assets measured at amortized cost and the financial assets measured at fair value through other comprehensive income mentioned above, all the remaining financial assets are classified as financial assets measured at fair value through the current profit or loss. At the initial recognition, in order to eliminate or obviously reduce accounting mismatch, the Company may irrevocably designates the financial assets that shall be classified to be measured at amortized cost or measured at fair value through other comprehensive income as financial assets measured at fair value through the current profit or loss.

At the initial recognition, financial liabilities are classified as: financial liabilities measured at fair value through the current profit or loss and financial liabilities measured at the amortized cost.

At the initial recognition, financial liabilities meeting one of the following conditions can be designated as the financial liabilities measured at fair value through the current profit or loss:

1) This designation can eliminate or significantly reduce the accounting mismatch.

2) Management and performance evaluation of the financial liability portfolio or portfolio of financial assets and financial liabilities on a fair value basis in accordance with the enterprise risk management or investment strategy as set out in a formal written document, and reporting to key officers on this basis within the Company.

3) The financial liabilities contain embedded derivative needed to be separated.

The financial guarantee contract other than the financial liability designated to be measured at the fair value through the current profit or loss are measured at initial recognition but be subsequently measured at the higher of the loss reserves of estimated liabilities determined under the expected credit loss model and initially recognized amount less accumulated amortization.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.10 Financial instruments (Continued)

3.10.2 Recognition basis and measurement methods of financial instruments

(1) Financial assets measured at amortized cost

Financial assets measured at amortized cost include notes receivable and accounts receivable, other receivables, long-term receivables, and creditors' investment, etc., of which initial measurement is made at fair value, and relevant transaction costs are included in the initially recognized amount; exclude accounts receivable with significant financing component and accounts receivable with the financing component not exceeding one year and not considered by the Company, of which initial measurement is made at the contractual transaction price.

During the holding period, the interest calculated under the effective interest method is included in the current profit or loss.

At recovery or disposal, the difference between the purchase price obtained and the book value of such financial assets is included in the current profit or loss.

(2) Financial assets (debt instruments) measured at fair value through other comprehensive income

Financial assets (debt instruments) measured at fair value through other comprehensive income include receivables financing and other creditors' investment, of which initial measurement is made at fair value, and relevant transaction costs are included in the initially recognized amount. The subsequent measurement of such financial assets is made at fair value. Changes in fair value are included in other comprehensive income except for interest, impairment losses or gains and exchange gains or losses calculated under the effective interest method.

At derecognition, the accumulated gains or losses previously included in other comprehensive income will be transferred from other comprehensive income to the current profit or loss.

(3) Financial assets (equity instruments) measured at fair value through other comprehensive income

Financial assets (equity instruments) measured at fair value through other comprehensive income include other equity instrument investment, and are initially measured at fair value. Relevant transaction costs are included in the initially recognized amount. The subsequent measurement of such financial assets is made at fair value, and the changes in fair value are included in other comprehensive income. Dividends obtained are included in the current profit or loss.

At derecognition, the accumulated gains or losses previously included in other comprehensive income will be transferred from the other comprehensive income to the retained earnings.

(4) Financial assets measured at fair value through the current profit or loss

Financial assets measured at fair value through the current profit or loss include the financial assets held for trading, derivative financial assets and other non-current financial assets, etc., of which initial measurement is made at fair value, and relevant transaction costs are included in the current profit or loss. The subsequent measurement of such financial assets is made at fair value, and changes in fair value are included in the current profit or loss.

(5) Financial liabilities measured at fair value through the current profit or loss

Financial liabilities measured at fair value through the current profit or loss include the financial liabilities held for trading and derivative financial liabilities, of which initial measurement is made at fair value, and relevant transaction costs are included in the current profit or loss. The subsequent measurement of such financial liabilities is made at fair value, and changes in fair value are included in the current profit or loss.

At derecognition, the difference between the book value and the consideration paid of such financial liabilities is included in the current profit or loss.

(6) Financial liabilities measured at amortized cost

Financial liabilities measured at the amortized cost include short-term borrowings, notes payable and accounts payable, other payables, long-term borrowings, bonds payable and long-term payables, of which initial measurement is made at fair value, and related transaction costs are included in the initially recognized amount.

During the holding period, the interest calculated under the effective interest method is included in the current profit or loss.

At derecognition, the difference between the consideration paid and the book value of such financial liabilities is included in the current profit or loss.

3.10.3 Derecognition and transfer of financial assets

Where one of the following conditions is met, the Company shall derecognize financial assets:

– The contractual right of collecting cash flows of financial assets is terminated;

– The financial assets have been transferred, and nearly all of the risks and rewards related to the ownership of the financial assets have been transferred to the transferee;

– The financial assets have been transferred, and the Company does not retain the control over the financial assets through it has neither transferred nor retained nearly all risks and rewards related to the ownership of the financial assets.

In case of transfer of financial assets, the Company shall not derecognize the financial asset if nearly all the risks and rewards associated with the ownership of the financial assets are retained.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.10 Financial instruments (Continued)

3.10.3 Derecognition and transfer of financial assets (Continued)

When determining whether the transfer of a financial asset meets the above derecognition criteria of financial assets, the Company adopts the principle of substance over form.

The Company divides the transfer of financial assets into overall transfer and partial transfer. Where the entire transfer of financial assets meets the derecognition conditions, the difference of the following two amounts shall be included in the current profit or loss:

(1) The book value of the transferred financial asset;

(2) The sum of consideration received from the transfer, and the accumulated change amount of fair value originally recorded in owners' equity (the financial assets involved in the transfer are financial assets (debt instruments) measured at fair value through the other comprehensive income).

Where the partial transfer of a financial asset meets the derecognition criteria, the entire book value of the financial asset transferred shall be allocated between the derecognized part and the recognized part based on the relative fair value, and the difference between the following two amounts shall be included in the current profit or loss:

(1) The book value of the derecognized part;

(2) The sum of the consideration for the derecognized part and the amount corresponding to the derecognized part in the accumulated change amount of fair value originally and directly included in owners' equity (where the financial assets transferred are the financial assets (debt instruments) measured at fair value through other comprehensive income).

Where the transfer of financial assets does not meet the derecognition criteria, the financial assets shall continue to be recognized, and the consideration received shall be recognized as a financial liability.

3.10.4 Derecognition of financial liabilities

Where the present obligations of a financial liability are wholly or partly dissolved, such financial liability or part thereof will be derecognized. Where the Company enters into an agreement with a creditor so as to substitute the existing financial liability with any new financial liability, and the new financial liability is substantially different from the existing one in terms of contractual terms, it shall derecognize the existing financial liability, and shall at the same time recognize new financial liability.

Where substantive changes are made to the contract terms of existing financial liabilities in whole or in part, the existing financial liabilities shall be derecognized in whole or in part, and the financial liabilities of which terms have been modified shall be recognized as the new financial liabilities.

Where financial liabilities are derecognized is whole or in part, the difference between the book value of the financial liabilities derecognized and the consideration paid (including non-cash assets surrendered and the new financial liabilities assumed) shall be included in the current profit or loss.

Where the Company redeems part of its financial liabilities, it shall, on the redemption date, allocate the entire book value of whole financial liabilities according to the comparative fair value of the part that continues to be recognized and the derecognized part. The difference between the book value allocated to the derecognized part and the considerations paid (including non-cash assets surrendered and the new financial liabilities assumed) shall be included in the current profit or loss.

3.10.5 Method of determining the fair value of financial assets and financial liabilities

The fair value of a financial instrument having an active market is determined on the basis of quoted prices in the active market. Where there is no active market, the fair value of the same shall be determined by using valuation techniques. At the time of valuation, the Company shall adopt the valuation technique that is applicable to the current circumstance and is supported by sufficient available data and other information to select the input values consistent with the assets or liabilities characteristics that are taken into account by market participants in transactions of relevant assets and liabilities and shall give goals priority in use of observable input values. And the unobservable input values may be used only when the observable input values are unable or unpractical to be obtained.

3.10.6 Test method and accounting treatment of depreciation of financial assets

The Company estimates the expected credit losses of financial assets measured at amortized cost, financial assets (debt instruments) measured at fair value through other comprehensive income and financial guarantee contracts in a single or combined manner.

The Company recognizes expected credit losses by calculating the probability-weighted amount of the present value of the difference between the cash flows receivable under the contract and the cash flows expected to be received, considering reasonable and substantiated information about past events, current conditions and forecasts of future economic conditions, weighted by the risk of default.

If the credit risk of the financial instrument has increased significantly since the initial recognition, the Company measures its loss provision at the expected credit losses for the whole duration of the financial instrument; if the credit risk of the financial instrument has not significantly increased since the initial recognition, the Company measures its loss provision at the expected credit losses of the financial instrument within the next 12 months. Amount increased or reversed of provision for loss arising therefrom will be included in the current profit or loss as impairment loss or gain.

The Company determines the relative change of default risk of the financial instrument during the expected duration by comparing the risk of default of the financial instrument on the balance sheet date with the risk of default on the initial recognition date to assess whether there is a significant increase in the credit risk of the financial instrument from initial recognition. Generally, the Company believes that the credit risk of the financial instrument has significantly increased over 30 days after the due date, unless there is solid evidence that the credit risk of the financial instrument has not increased significantly since initial recognition.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.10 Financial instruments (Continued)

3.10.6 Test method and accounting treatment of depreciation of financial assets (Continued)

The Group believes that financial assets are subject to default in the following circumstances:

(1) It is unlikely that the borrower will pay in full the amount it owes to the Group and the assessment does not consider the recourse actions by the Group such as realization of collateral (if held); or

(2) Where the financial assets were overdue for more than 90 days.

If the credit risk of the financial instrument is low on the balance sheet date, the Company will immediately consider that there is no obvious increase in credit risk of such financial instrument following the initial recognition.

If there is objective evidence that any financial asset has had credit impairment, the Company will make the provision for impairment for such financial asset individually.

For accounts receivable and contract assets formed by the transaction in the *Accounting Standard for Business Enterprises No. 14 – Revenue* (2017), regardless of whether there is a significant financing component, the Company always measures their provision for loss according to the amount of expected credit losses for the entire duration.

For accounts receivable, the Company always measures their provision for loss according to the amount of expected credit losses for the entire duration.

When individual financial assets cannot assess the expected credit loss at a reasonable cost, the Group divides the notes receivable and accounts receivable into several portfolios based on the credit risk characteristics and calculates the expected credit losses on a portfolio basis. The basis for determining the portfolios is as follows:

A. Notes receivable

Notes receivable portfolio 1: bank acceptance bill

Notes receivable portfolio 2: commercial acceptance bill

B. Accounts receivable

Accounts receivable portfolio 1: receivable from related parties

Accounts receivable portfolio 2: receivable from other clients

The Group classifies the contract assets into portfolios based on the credit risk characteristics and calculates the expected credit losses on a portfolio basis. The basis for determining the portfolio is as follows:

Contract assets portfolio 1: engineering service

Contract assets portfolio 2: others

For the notes receivable and contract assets classified into a portfolio, the Group, by referring to the historical credit loss experience and in combination with the current situation and the forecast of future economic conditions, calculates the expected credit losses through risk exposure at default and the expected credit loss rate for the entire duration.

For the accounts receivable classified into a portfolio, the Group, by referring to the historical credit loss experience and in combination with the current situation and the forecast of future economic conditions, prepares a comparison table of the aging of accounts receivable and the expected credit loss rate for the entire duration to calculate expected credit losses.

The Group classifies other receivables into several portfolios based on the credit risk characteristics and calculates the expected credit losses on a portfolio basis. The basis for determining the portfolio is as follows:

Other receivables portfolio 1: reserve funds

Other receivables portfolio 2: deposits or security deposits receivable

Other receivables portfolio 3: other receivables

For other receivables classified as a portfolio, the Group calculates the expected credit loss through the default risk exposure and the expected credit loss rate over the next 12 months or the entire duration.

For creditor's right investment and other creditor's right investment, the Group calculates the expected credit loss according to the nature of the investment, various types of counterparties and risk exposures, through default risk exposure and expected credit loss rate in the next 12 months or the entire duration.

If the Company no longer reasonably expects that the contractual cash flow of the financial asset can be fully or partially recovered, the book balance of the financial asset will be directly written down.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.11 Inventories

3.11.1 Classification and cost of inventories

Inventories are classified as raw materials, goods in progress, stock commodities, revolving materials, and contract performance costs, etc.

Inventories are initially measured at cost, and the inventory cost includes the procurement cost, processing cost and other expenses arising from making the inventory at their present location and condition.

3.11.2 Measurement method of dispatched inventories

Inventories of the Group are measured at actual costs when acquired. Raw materials, stock commodities and others are measured by using the weighted average method upon outward delivery.

3.11.3 Recognition basis of net realizable value of different types of inventories

On the balance sheet date, inventories shall be measured at the cost or the net realizable value, whichever is lower. Where the inventory costs are higher than the net realizable values, the provision for inventory depreciation reserves shall be made. During routine activities, net realizable values of inventories refer to the amounts of the estimated selling prices of inventories minus the estimated costs to completion, estimated selling expenses and relevant taxes and surcharges. For inventories held to execute sales contract or service contract, their net realizable values are calculated on the basis of contract price.

In the normal production and operation process, the estimated selling price of the inventories minus the estimated selling expenses and relevant taxes and fees shall be used to determine the net realizable value of commodity inventories that are directly used for sale, such as finished products, goods in stock, and materials for sale; Material inventory that needs to be processed, in the normal production and operation process, net realizable value is the amount after the estimated selling price of the finished product produced minus the estimated cost to be incurred upon completion, estimated selling expenses and related taxes and fees; the net realizable value of inventories held for the execution of a sales contract or a labor service contract shall be calculated on the basis of the contract price. If the quantity of inventory held is larger than the quantity ordered by the sales contract, the net realizable value of the excess inventory is calculated on the basis of the general sales price.

After the provisions for the inventory depreciation are made, the factors causing any write-down of inventory value have disappeared, leading to the net realizable values of inventories higher than its book value, the amount of write-down shall be resumed and be reversed from the original provision for inventory devaluation with the reversal being included in the current profit or loss.

3.11.4 Inventory system

The perpetual inventory system is adopted.

3.11.5 Amortization method for low-cost consumables

(1) Low-cost consumables are amortized at lump-sum method.

3.12 Contract assets

3.12.1 Recognition method and criteria for contract assets

The Company presents contract assets or contract liabilities in the balance sheet based on the relationship between its performance of fulfillment obligations and customer payments. The right of the Company to the charge of consideration via goods transfer or service rendering to the customer (and the right depends on other factors except for the time lapses) shall be presented as contractual asset. Contractual assets and contractual liabilities under the same contract shall be presented at net amount. The unconditional (only depending on the time lapses) right to the charge of consideration from the customer, possessed by the Company, is presented as receivables.

3.12.2 Determination method and accounting treatment for the expected credit loss of contract assets

See “3.10.6 Test method and accounting treatment for the impairment of financial assets”, for the determination method and accounting treatment for the expected credit loss of contract assets.

3.13 Long-term equity investments

3.13.1 Judgment criteria for joint control and significant influence

Joint control refers to the control shared over an arrangement in accordance with the relevant stipulations, and the decision-making of related activities of the arrangement should not be made before the party sharing the control right agrees the same. Where the Company exercises common control over the investee together with other parties to the joint venture, and enjoys the right on the investee’s net assets, the investee shall be a joint venture of the Company.

Significant influence refers to the power to participate in making decisions on the financial and operating policies of the investee, but not the power to control, or jointly control, the formulation of such policies with other parties. Where the Company is able to exert significant influence over the investee, the investee is its associate.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.13 Long-term equity investments (Continued)

3.13.2 Determination of initial investment costs

(1) Long-term equity investments acquired through business combination

For long-term equity investments in subsidiaries acquired from business combinations under common control, the initial investment cost thereof shall be recognized at the share of book value of the owner's equity of the combinee in the consolidated financial statements of the ultimate controller on the acquisition date. The share premium in the capital reserve is adjusted according to the difference between the initial investment cost of long-term equity investment and the book value of the consideration paid; if there is no sufficient share premium in the capital reserve for write-downs, the retained earnings are adjusted. If it is available to exercise control over an investee under the common control due to additional investment, etc., the difference between the initial investment cost of the long-term equity investment recognized in accordance with the above principle and the sum of the book value of the long-term equity investment before reaching combination date plus the book value of the new consideration paid for further acquisition of shares at the date of combination shall be used to adjust the stock premium; and if the share premium is insufficient to be offset, retained earnings will be offset.

For long-term equity investments in subsidiaries acquired from business combinations not under common control, the initial investment cost thereof shall be recognized at the combination costs determined on the acquisition date. Where the Company can control the investee not under common control due to additional investments or other reasons, the initial investment cost should be the sum of the book value of equity investments originally held and newly increased investment cost.

(2) For long-term equity investments obtained by means other than business combination

For long-term equity investments acquired through making payments in cash, its initial investment cost is the actually paid purchase cost.

For long-term equity investments acquired from issuance of equity securities, its initial investment cost is the fair value of the issued equity securities.

3.13.3 Subsequent measurements and recognition of profit or loss

(1) Long-term equity investments accounted for under the cost method

Long-term equity investments of the Company in its subsidiaries are accounted for under the cost method unless those investments satisfy the conditions of holding for sale. Under the cost method, except for the actual price paid for acquisition of investment or the cash dividends or profits contained in the consideration which have been declared but not yet distributed, the Company recognizes the proportion it shall enjoy in the cash dividends or profits declared by the investee as its investment income.

(2) Long-term equity investments accounted for under equity method

Long-term equity investments of the Company in associates and joint ventures are accounted for by the equity method. If the initial investment cost is in excess of the share of fair value of the net identifiable assets in the investee when the investment is made, the difference will not be adjusted to the initial cost of long-term equity investment; if the initial investment cost is in short of the share of the fair value of the net identifiable assets in the investee when the investment is made, the difference will be included in the current profit or loss, and will be adjusted to the initial cost of long-term equity investment.

The Company shall, based on its attributable share of the net profit or loss and other comprehensive income realized by the investee, respectively recognize the investment income and other comprehensive income, and simultaneously adjust the book value of the long-term equity investment. The Company shall, in the light of the profits or cash dividends that the investee declares to distribute, reduce the book value of the long-term equity investment correspondingly. As to other changes in owners' equity of the investee other than net profit or loss, other comprehensive income and profit distribution (hereinafter referred to as "Other Changes in Owners' Equity"), the Company shall adjust the book value of the long-term equity investment and include such change in the owners' equity.

The Company shall, based on the fair value of net identifiable assets of the investee when the investment is made, recognize its attributable share of the net profits or losses, other comprehensive income and other changes in owners' equity of the investee after the adjustment made to the net profit and other comprehensive income of the investee according to the accounting policies and accounting period adopted by the Company.

The Company calculates its attributable but not realized profit or loss from internal transactions between the Company and its associates or joint ventures based on its attributable percentage and offset such profit or loss, and recognizes the investment income on that basis; however, businesses formed by assets invested or sold are excluded. Unrealized losses from internal transactions between the Company and any investee shall be recognized in full if they belong to the losses from asset impairment.

For net losses on joint ventures or associates, apart from the obligation of assuming the extra loss, the Company shall write down such losses with the book value of long-term equity investments and the long-term equity where net investments in joint ventures or associates have been formed substantially; and the maximum of such losses shall be the sum of the book value and long-term equity mentioned above. Where any joint venture or associate realize net profit in the future, the Company shall recognize the income sharing amount when the unrecognized loss sharing amount is offset with the income sharing amount.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.13 Long-term equity investments (Continued)

3.13.3 Subsequent measurements and recognition of profit or loss (Continued)

(3) Disposal of long-term equity investments

For the disposal of long-term equity investments, the difference between the book value and the actual purchase price is included in the current profit or loss.

For long-term equity investments with partial disposal accounting by the equity method, where the remaining equity is still accounted for by the equity method, other comprehensive income recognized originally upon the accounting by the equity method shall be carried forward at the corresponding proportion on the basis same with that for the direct disposal of relevant assets or liabilities by the investee, and other changes in owners' equity shall be carried forward to the current profit or loss in proportion.

Where the Company loses the common control over or significant influence on the investee on account of the disposal of equity investment and any other reason, when the accounting by the equity method is terminated, other comprehensive income recognized upon the accounting by the equity method from the original equity investment shall be subject to the accounting treatment which is made on the basis same with that for the direct disposal of relevant assets or liabilities by the investee, and other changes in owners' equity shall be transferred to the current profit or loss in full.

Where the Company loses the control over the investee on account of the disposal of partial equity and any other reason, at the preparation of any single financial statements, if the remaining equity has the common control over or significant influence on the investee, the accounting shall be made by the equity method, and an adjustment shall be made as if the remaining equity was accounted for by the equity method at acquisition; other comprehensive income recognized before the control over the investee is obtained shall be carried forward on the basis same with that for the direct disposal of relevant assets or liabilities by the investee, and other changes in owners' equity recognized on account of the accounting by the equity method shall be carried forward to the current profit or loss in proportion; if the remaining equity has no common control over or significant influence on the investee, relevant financial assets shall be recognized, the difference between the fair value on the day of losing control of such remaining equity and the book value of the same shall be included in the current profit or loss, and other comprehensive income and other changes in owners' equity which have been recognized before the control over the investee is obtained shall be carried forward in full.

Where the disposal of subsidiaries' equity investments till the loss of control by stages through multiple transactions belongs to a package deal, the accounting treatment shall be made by taking each transaction as the transaction where the subsidiaries' equity investments are disposed and the corresponding control is lost; before the loss of control, the difference between the disposal price and the book value of the long-term equity investment corresponding to the equity disposed shall be firstly recognized as other comprehensive income in the individual financial statements, and at the loss of control, all transferred to the profit or loss for the period when the control is lost. Where the aforesaid disposal does not belong to a package deal, the accounting treatment shall be made respectively for each transaction.

3.14 Fixed assets

3.14.1 Recognition and initial measurement of fixed assets

Fixed assets are tangible assets that are held for the purpose of producing goods, providing services, leasing or operating management, and having a life span of more than one fiscal year. Fixed assets are recognized when they simultaneously meet the following conditions:

(1) It is probable that the economic benefits relating to the fixed assets will flow into the Company; and

(2) The costs of the fixed assets can be measured reliably.

The initial measurement of fixed assets is made at cost (and by taking the impact of expected disposal costs).

The subsequent expenditures relating to fixed assets are included in the costs of fixed assets when relevant economic benefits are likely to flow in the Company and their costs can be measured reliably; as for the party replaced, the book value thereof is derecognized; all other subsequent expenditures are included in the current profit or loss when they occur.

3.14.2 Depreciation method

Depreciation of the fixed assets is made on a category basis using the straight-line method. The depreciation rates are determined according to the categories, estimated useful lives and estimated net residual rates of fixed assets. For fixed assets where the provision for impairment has been made, the depreciation amount in the future will be determined at the book value of the fixed assets where the provision for impairment has been deducted, based on the remaining useful life. Where the fixed assets have the components with different useful lives or bring economic benefits for the enterprise in different ways, then the Company should choose different depreciation rates or methods to separately make the provision for depreciation.

The depreciation methods, depreciation years, residual value rates and annual depreciation rates of fixed assets are presented by categories as follows:

Category	Depreciation method	Depreciation life (year)	Residual value rate (%)	Annual depreciation rate (%)
Buildings and constructions	Straight-line method	12-50	3	8.08-1.94
Machinery equipment and others	Straight-line method	4-30	3	24.25-3.23

Specifically, for fixed assets of which provision for impairment has been made, the depreciation rate shall be determined based on the fixed assets deducting the accumulated amount of provision for impairment withdrawn.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.14 Fixed assets (Continued)

3.14.3 Disposal of fixed assets

When the fixed assets are disposed, or they are expected not to bring any economic interest via use or disposal, such fixed assets will be derecognized. When the fixed asset is sold, transferred, scrapped, or damaged, the Company will include such disposal revenue, deducting the book value and related taxes and surcharges thereof, in the current profit or loss.

3.15 Construction in progress

Construction in progress is measured at the actual cost incurred. The actual costs include building costs, installation costs, borrowing costs eligible for capitalization and other necessary expenditures before making the construction in progress achieve the working condition for its intended use. Constructions in progress are transferred to fixed assets when they reach the condition for its intended use, and the provision of depreciation will be provided since the next month.

3.16 Borrowing costs

3.16.1 Recognition criteria of capitalization of borrowing costs

The borrowing costs incurred to the Company and directly attributable to the acquisition and construction or production of assets eligible for capitalization should be capitalized and recorded into relevant asset costs; other borrowing costs should be recognized as costs according to the amount incurred and be included into the current profit or loss.

Assets eligible for capitalization refer to fixed assets, investment properties, inventories and other assets which may reach their intended use or sale status only after long-time acquisition and construction or production activities.

3.16.2 Capitalization period for borrowing costs

Capitalization period refers to the period from the beginning of capitalization to the cease of capitalization, excluding the period of capitalization suspension of borrowing costs.

Capitalization shall start when the following conditions are satisfied simultaneously:

(1) Asset expenditures, which include those incurred by cash payment, the transfer of non-cash assets or the undertaking of interest-bearing debts for acquiring and constructing or producing assets eligible for capitalization, have already been incurred;

(2) Borrowing costs have already been incurred; and

(3) The acquisition and construction or production activities which are necessary to prepare the assets for their intended use or sale have been in progress.

Capitalization of borrowing costs should be ceased when the acquired and constructed or produced assets eligible for capitalization have reached their intended use or sale status.

3.16.3 Period of capitalization suspension

If the acquisition and construction or production activities of assets eligible for capitalization are abnormally interrupted and such condition lasts for more than three months, the capitalization of borrowing costs should be suspended; if the interruption is necessary procedures for the acquired, the constructed or produced assets eligible for capitalization to reach the working conditions for its intended use or sale, the borrowing costs continue to be capitalized. Borrowing costs incurred during the interruption are recognized as the current profit or loss and continue to be capitalized until the acquisition, construction or production of the asset's restarts.

3.16.4 Measurement of capitalization rate and capitalized amounts of borrowing costs

As for special borrowings borrowed for acquiring and constructing or producing assets eligible for capitalization, borrowing costs of special borrowing actually incurred in the current period less the interest income of the borrowings unused and deposited in bank or return on temporary investment should be recognized as the capitalization amount of borrowing costs.

As for general borrowings used for acquiring and constructing or producing assets eligible for capitalization, the interest of general borrowings to be capitalized should be calculated by multiplying the weighted average of asset disbursements of the part of accumulated asset disbursements exceeding special borrowings by the capitalization rate of used general borrowings. The capitalization rate is calculated by weighted average actual interest rate of general borrowings.

During the capitalization period, the exchange difference between the principal and interest of special loans in foreign currency is capitalized and included in the cost of assets that meet the capitalization conditions. Exchange differences arising from the principal and interest of foreign currency loans other than special loans in foreign currency are included in the current profit or loss.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.17 Intangible assets

3.17.1 Measurement method of intangible assets

(1) The Company initially measures intangible assets at cost on acquisition;

The costs of externally purchased intangible assets include purchase prices, relevant taxes and surcharges and other directly attributable expenditures incurred to prepare the assets for their intended uses.

(2) Subsequent measurement

The useful lives of the intangible assets are analyzed and determined on their acquisition.

Intangible assets with definite useful lives are amortized over the period during which they can bring economic benefits to an enterprise; if the period during which intangible assets can bring economic benefits to the enterprise cannot be predicted, the intangible assets will be deemed as intangible assets with indefinite useful lives and will not be amortized.

3.17.2 Estimate of useful lives for intangible assets with definite useful lives

Item	Estimated useful life	Amortization method	Note
Land use right	50 years	Straight-line method	
Software	5 years	Straight-line method	
Patent use right	10 years	Straight-line method	
Right to use technologies	10 years	Straight-line method	
Contract income right	/	Output method	

3.17.3 Specific criteria for classifying research and development stages

The Company's expenses for its internal research and development projects are classified into research expenses and development expenses.

Research phase: Research phase is the stage when creative and planned investigation and research activities are conducted to acquire and understand new scientific or technological knowledge.

Development phase: Development phase is the stage when the research achievements and other knowledge are applied to a plan or design, prior to the commercial production or use, to produce any new or substantially improved material, device, or product.

The research and development projects of the Group enter the development stage after the technical feasibility and economic feasibility studies and project establishment.

3.17.4 Specific criteria for qualifying expenditure on the development phase for capitalization

Expenditures at the research phase should be included in the current profit or loss when they are incurred. Expenditures in the development stage that meet the following conditions at the same time shall be recognized as intangible assets, and those expenditures that fail to meet the following conditions shall be included in the current profit or loss:

(1) In respect of the technology, it is feasible to finish the intangible asset for use or sale;

(2) It is intended to finish and use or sell the intangible assets;

(3) The ways how the intangible assets generate economic benefits include the way where it is able to prove that the products made by using the intangible assets exist a market or that the intangible assets themselves have the market, and the way where the serviceability of the intangible assets can be proved in case they are used internally;

(4) It can finish the development of the intangible assets and to use or sell the same with the support of sufficient technologies, financial resources and other resources; and

(5) The expenditure attributable to the intangible assets during its development phase can be measured reliably.

Where the research expenditures and the development expenditures are indistinguishable, the Company shall include research expenditures and development expenditures incurred in THE current profit or loss.

3.18 Impairment of long-term assets

Where there are indications of impairment on long-term equity investments, fixed assets, construction in progress, right-of-use assets and intangible assets with definite useful lives and other long-term assets on the balance sheet date, the impairment test should be made. If the result of the impairment test shows that the recoverable amount of the asset is lower than its book value, the provision for impairment shall be made and included in impairment loss. The recoverable amount of the asset is the higher of the net amount of its fair value less disposal expenses or the present value of its estimated future cash flows. Provision for assets impairment is made on individual asset basis. If it is difficult to estimate the recoverable amount of the individual asset, the Company shall estimate the recoverable amount of the asset group that the individual asset belongs to. Asset group is the smallest asset group that can independently generate cash inflows.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.18 Impairment of long-term assets (Continued)

Impairment tests for goodwill formed through business combination, intangible assets with uncertain useful lives and intangible assets not reaching serviceable condition shall be conducted every year, whether there are any sign of impairment or not.

The Company conducts an impairment test for the goodwill. The book value of goodwill arising from business combinations is amortized to relevant asset groups with a reasonable method since the date of acquisition; or amortized to relevant combination of asset groups if it is difficult to be amortized to relevant asset groups. Relevant asset group or portfolio of asset groups refers to the asset group or portfolio of asset groups which is able to benefit from the synergistic effect of business combination.

When making an impairment test on the relevant asset groups or combination of asset groups containing goodwill, if any indication shows that the asset groups or combinations of asset groups related to the goodwill may be impaired, the Company shall first conduct an impairment test on the asset groups or combinations of asset groups not containing goodwill, calculate the recoverable amount and compare it with the relevant book value to recognize the corresponding impairment loss. Then, the Company shall test the impairment of the asset group or portfolio of asset groups with goodwill, and compare the book value thereof with said recoverable amount; if the said recoverable amount is lower than the book value thereof, the amount of impairment losses should be firstly used to deduct book value of goodwill allocated to the asset group or the portfolio of asset group, and then deduct book value of other assets according to the proportion of the book value of other assets other than the goodwill in the asset group or the portfolio of asset group.

The above losses from asset impairment shall not be reversed in subsequent accounting periods once recognized.

3.19 Long-term deferred expenses

The Group's long-term deferred expenses mainly include oil construction specific drilling equipment, logging equipment, cables and catalyst and evenly amortized on straight-line basis over the expected beneficial period or over operation capacity. If an item of long-term deferred expense cannot bring any benefit in future accounting periods, the amortized value thereof shall all be transferred to the current profit or loss.

3.20 Contract liabilities

According to the relationship between the performance of obligations and the customer payment, the Company presents contract assets or contract liabilities in the balance sheet. The obligation of transferring goods or providing services to customers for the consideration received or receivable from customers shall be presented as contract liabilities. Contract assets and contract liabilities under the same contract shall be presented at net amount.

3.21 Employee compensation

3.21.1 Accounting treatment of short-term compensation

During the accounting period when employees serve the Company, the actual short-term compensation is recognized as liabilities and included in the current profit or loss or costs associated with assets.

The social insurance premiums and the housing provident fund paid by the Company for its employees, together with the labor union expenditures and employee education fund drew as required are used to calculate and determine the relevant employee compensation amount based on the prescribed accrual basis and accrual proportion during the accounting period in which the employees provide services to the Company.

The employee welfare expenses incurred by the Company are included in the current profit or loss or related asset costs based on the actual amount when they actually occur. Among them, non-monetary benefits are measured at fair value.

3.21.2 Accounting treatment of post-employment benefits

Post-employment benefit plans include defined contribution plans and defined benefit plans. Defined contribution plan refers to a post-employment benefit plan in which the enterprise no longer undertakes further payment obligations after paying a fixed fee to an independent fund; Defined benefit plan refers to a post-employment benefit plan other than the defined contribution plan. During the reporting period, the Group's post-employment benefits were mainly basic pension insurance.

The employees of the Group participated in the basic social pension insurance organized and implemented by the local labor and social security department. The Group pays endowment insurance premiums to the local social basic endowment insurance agency monthly based on the payment base and proportion of the local social basic endowment insurance. After employees retire, local labor and social security departments are responsible for paying basic social pensions to retired employees.

Enterprise Annuity Plan: In addition to the basic endowment insurance, the Group has established an enterprise annuity plan ("annuity plan") in accordance with the relevant policies of the national enterprise annuity system, and employees can voluntarily participate in the annuity plan. Apart from this, the Group has no other significant employee social security commitments. During the accounting period in which the employee provides services, the amount to be paid calculated according to the defined contribution plan is recognized as a liability and included in the current profit and loss or related asset costs.

3.21.3 Accounting treatment of dismissal benefits

Where the Company provides employees with dismissal benefits, the Company shall recognize the employee compensation liability incurred from dismissal welfare at the earlier of the following dates and include such liability in the current profit or loss: the date when the Company is unable to unilaterally revoke the dismissal benefits provided for the termination of labor relation or the proposal for layoffs; the date when the Company determines the cost or expense related to the restructuring involving payment of dismissal benefits.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.21 Employee compensation (Continued)

3.21.4 Accounting treatment of other long-term employee benefits

Where the Group provides employees with other long-term employee benefits which meets the conditions for defined contribution plans, the relevant provisions on the aforesaid defined contribution plans shall apply.

3.22 Estimated liabilities

When an obligation relating to a contingency meets all the following conditions at the same time, it will be recognized as an estimated liability by the Company:

(1) The obligation is a present obligation of the Company;

(2) The performance of this obligation may very probably lead to the flow of economic interests out of the Company; and

(3) The amount of the obligation can be measured reliably.

The estimated liabilities are initially measured as the best estimate of expenses required for the performance of relevant present obligations.

The Company, when determining the best estimate, has had a comprehensive consideration of risks with respect to contingencies, uncertainties and the time value of money. If the time value of money is significant, the best estimates shall be determined after discount of relevant future cash outflows.

If there is continuous range for the necessary expenses, and probabilities of occurrence of all the outcomes within this range are equal, the best estimates will be determined at the average amount of upper and lower limits within the range; under other circumstances, the best estimates shall be treated as follows in different circumstances:

- If the contingency involves a single item, it shall be determined at the most likely outcome; or
- If a contingency involves multiple items, it shall be recognized base on various possible results and the dependent probability.

When all or some of the expenses necessary for the liquidation of estimated liabilities of the Company are expected to be compensated by a third party, the compensation should be separately recognized as an asset only when it is virtually certain that the reimbursement will be obtained. The amount recognized for the reimbursement should not exceed the book value of estimated liabilities.

3.23 Share-based payment

The Company's share-based payments are transactions in which the Company grants equity instruments or undertakes equity-instrument-based liabilities in return for services from employees or other parties. The Company's share-based payments include equity-settled share-based payments and cash-settled share-based payments.

3.23.1 Equity-settled share-based payment and equity instruments

The equity-settled share-based payment in return for services from employees shall be measured at the fair value of the equity instruments granted to the employees. As to the share-based payment that can be exercised immediately after the grant, it should be included in the relevant costs or expenses at the fair value of the equity instrument on the date of grant. The capital reserves should be increased accordingly. As to an equity-settled share-based payment, after grant, if the right cannot be exercised until the services within the vesting period come to an end or until the prescribed performance conditions are met, the services obtained in the current period shall be included in the relevant costs or expenses and the capital reserves shall be increased accordingly, based on the best estimate of the equity instruments with exercisable rights on each balance sheet date within the vesting period and according to the fair value on the grant date.

If the terms of the equity-settled share-based payments were modified, the services received should be recognized at least in accordance with the unmodified terms. Moreover, the modification of fair value of equity instruments granted from any increase, or beneficial changes to the employee on the modification date should be recognized as increases in services obtained.

If the Company canceled equity instruments granted during the waiting period, it shall treat such cancellation as acceleration of the exercisable rights and shall immediately include the amount that should be recognized during the remaining waiting period in the current profit or loss. Capital reserves should be also recognized. However, if new equity instruments are granted, which are recognized as the replacement of the canceled equity instrument on the grant data, the granted equity instrument for replacement shall be handled in the same way with the disposal of revision of provisions on the original equity instrument and conditions.

3.23.2 Cash-settled share-based payment and equity instruments

The cash-settled share-based payments shall be measured at the fair value of liabilities calculated and recognized based on the shares or other equity instruments undertaken by the Company. As to the share-based payment that can be exercised immediately after the grant, it should be included in the relevant costs or expenses at the fair value of the liabilities assumed on the date of grant. The liabilities should be increased accordingly. As to an equity-settled share-based payment, after grant, if the right cannot be exercised until the services within the vesting period come to an end or until the prescribed performance conditions are met, the services obtained in the current period shall be included in the relevant costs or expenses and included in liabilities accordingly, based on the best estimate of exercisable rights on each balance sheet date within the vesting period and according to the fair value of liabilities assumed by the Company. The Company shall, on each balance sheet date and on each account date prior to the settlement of the relevant liabilities, re-measure the fair values of the liabilities and include the changes into the current profit or loss.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.24 Revenue

3.24.1 Accounting policies for revenue recognition and measurement

If the Company fulfills its performance obligations in a contract, it will recognize revenue when relevant customer obtains right of control over relevant goods or services. Obtaining the right of control over relevant goods or services means that the customer is able to make decisions on the use of the goods or the rendering of the services, and can obtain almost all of the economic benefits therefrom.

If two or more performance obligations are covered in the contract, on the contract commencement date, the transaction price will be amortized to individual performance obligation based on the relative proportion of the individual selling price of goods or services involved in the individual performance obligation. The Company measures revenue at the transaction price amortized to individual performance obligation.

The transaction price refers to the amount of consideration the Company is expected to have the right to take on account of the transfer of goods or services to the customer, excluding the payments charged by any third party and the payments expected to be refunded to the customer. The Company determines the transaction price according to the contract terms and in light of its previous regular practice, in the meantime, factors such as variable consideration, significant financing composition existing in the contract, non-cash consideration, and consideration payable to customers will be taken into account. The Company determines the transaction price involving the variable consideration at the amount that should not exceed the amount of accumulatively recognized revenue that is highly unlikely to have a major reversal when relevant uncertainty is eliminated. If the significant financing component in covered in the contract, the Company will determine the transaction price based on the amount of cash payable at once by the customer when the customer acquires the right of control over goods or services, as assumed, and amortize the difference between such transaction price and the contract price by the effective interest method during the contract period.

The obligation performance belongs to certain period in case one of the following conditions is met; otherwise, it belongs to certain time-point:

- The customer obtains and consumes the economic benefits brought by the performance of the Company while the Company is performing the obligation.
- Customers are able to control the goods under construction by the Company in the course of performing obligations.
- The Goods produced in the course of performing obligations have irreplaceable uses, and the Company has the right to receive payments for the portion of the performance that has been completed to date.

For a performance obligation to be performed within a certain period, the Company recognizes the revenue according to the performance progress during such period, except for the case that the performance progress cannot be reasonably determined. The Company may determine the performance progress by the output method or input method based on the nature of goods or service. When the performance progress cannot be reasonably determined, if the cost incurred is expected to be compensated, the revenue will be recognized by the Company at the amount of the cost incurred until the performance progress can be reasonably determined.

The revenue from obligation performance belonging to certain time-point is recognized by the Company when the customer has acquired the right of control over relevant goods or services. The Company will consider the following signs when judging whether the customer has acquired the right of control over relevant goods or services:

- The customer has the current payment obligation for such goods or service, i.e. the Company enjoys the current right to collect the payment for such goods or service.
- The Company has transferred the legal ownership of such goods to the customer, i.e. the customer possesses the legal ownership of such goods.
- The Company has transferred goods to the customer in kind, i.e. the customer has possessed such goods in kind.
- The substantial risks and rewards of the ownership of such goods have been transferred by the Company to the customer, i.e. the customer has acquired the substantial risks and rewards of the ownership of such goods.
- The customer has accepted such goods or services.

3.24.2 Specific methods

Specific methods of the Group for recognition of revenue:

Provision of drilling engineering and geophysical prospecting services: The Group recognizes revenue in the process of providing drilling engineering and geophysical prospecting services. The progress of completed performance obligations is determined by the proportion of the executed projects to the total contract value. If the contract contains two or more performance obligations, the Group will allocate the transaction price to each service based on the relative proportion of the individual selling price of each individual service on the date of contract commencement. The individual selling price of each service is determined based on the price of each service sold separately by the Group.

The revenue related to the day work drilling contract is recognized when the labor service is provided.

Borehole operations and logging, well cementation and other engineering services: relevant revenues are recognized during the accounting period when the services are provided, and the relevant accounts receivable are settled.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.24 Revenue (Continued)

3.24.2 Specific methods (Continued)

Provision of construction services: The Group recognizes revenue in the process of providing construction services. The progress of completed performance obligations of construction services is determined by the input method. The progress of completed performance obligations of construction services is based on the proportion of the incurred construction cost in the estimated total contract costs. If the contract contains two or more performance obligations, the Group will allocate the transaction price to each service based on the relative proportion of the individual selling price of each individual service on the date of contract commencement. The individual selling price of each service is determined based on the price of each service sold separately by the Group.

When the performance progress of performance obligations cannot be reasonably determined, if the cost incurred is expected to be compensated, the revenue shall be recognized at the amount of the cost incurred until the performance progress can be reasonably determined. Sales of good: When the goods are delivered to the customer, the customer has accepted the goods and the customer obtains control of the goods, the Group recognizes revenue.

For the sales of goods with sales return clauses, revenue recognition is limited to the amount of accumulated recognized revenue that is unlikely to be significantly reversed. The Group recognizes the liabilities according to the expected return amount, and at the same time, recognizes the balance after deducting the estimated cost of recovering the goods (including the impairment of the value of the returned goods) according to the estimated book value of the returned goods at the time of transfer as an asset.

3.25 Contract costs

The contract costs include contract performance costs and contract acquisition costs.

The costs incurred by the Company to perform a contract that are not regulated by the accounting standards for inventories, fixed assets or intangible assets, are recognized as an asset as contract performance costs when the following conditions are met:

- The costs are directly related to a current or expected contract obtained.
- The costs increase the resources of the Company to fulfill its performance obligations in the future.
- The costs are expected to be recovered.

If the incremental cost incurred by the Company for obtaining the contract is expected to be recovered, the contract acquisition cost is recognized as an asset.

The assets related to contract costs are amortized on the same basis as revenue recognition for goods or services related to the asset; however, if the amortization period of contract acquisition costs does not exceed one year, the Company will include them in the current profit or loss when it occurs.

If the assets related to contract costs whose carrying amount is higher than the difference between the following two items, the Company will make provision for impairment for the excess part and recognize it as loss from asset impairment:

1. The remaining consideration expected to be obtained due to the transfer of goods or services related to the asset;
2. The estimated costs that will occur for transfer of the relevant goods or services.

If there is a subsequent change in the impairment factors in previous periods, such that the aforementioned difference is higher than the carrying amount of the asset, the Company reverses the provision for impairment and recognizes it in the current profit or loss, provided that the book value of the reversed asset does not exceed the book value of the asset at the date of reversal recorded by assuming no impairment provision had been made.

3.26 Government grants

3.26.1 Type

Government grants refer to monetary or non-monetary assets obtained from the government for free and are classified into asset-related government grants and income-related government grants.

The asset-related government grants refer to government grants obtained by the Company for forming long-term assets by acquisition, construction, or other manners. The income-related government grants refer to government grants other than asset-related government grants.

3.26.2 Timing of recognition

Government grants are recognized when the Company is eligible for and can receive the government grants.

3.26.3 Accounting treatment

Asset-related government grants shall be used to offset the book value of relevant assets or recognized as deferred income. Where such grants are recognized as the deferred income, they will be included in the current profit or loss by reasonable and systematic methods within useful lives of related assets (Where such grants are related to the routine activities of the Company, they will be included in other income; where such grants are not related to the routine activities of the Company, they will be included in non-operating revenue);

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.26 Government grants (Continued)

3.26.3 Accounting treatment (Continued)

The income-related government grants used to compensate for relevant costs, expenses or losses to be incurred to the Company in subsequent periods shall be recognized as the deferred income, and, during the period when relevant costs, expenses or losses are recognized, be included in the current profit or loss (where the income-related government grants are relevant to routine activities of the Company, they shall be included in other income; where the income-related government grants are irrelevant to daily activities of the Company, they shall be included in the non-operating revenue) or used to offset relevant costs, expenses or losses. The income-related government grants used to compensate for relevant costs, expenses or losses already incurred to the Company shall be included in the current profit or loss (where the income-related government grants are relevant to routine activities of the Company, they shall be included in other income; where the income-related government grants are irrelevant to daily activities of the Company, they shall be included in the non-operating revenue) or used to offset relevant costs, expenses or losses.

3.27 Deferred income tax assets and deferred income tax liabilities

Income taxes include the current income tax and deferred income tax. The Company recognizes current income tax and deferred income tax in the current profit or loss, except for the income tax arising from business combinations and transactions or events directly recognized in owners' equity (including other comprehensive income).

Deferred income tax assets and deferred income tax liabilities are recognized based on the difference (temporary difference) between the tax basis of the assets and liabilities and their book values.

Deferred income tax assets are recognized for deductible temporary differences to the extent of the taxable income probably obtained in future period that can be used for deducting the deductible temporary differences. For deductible losses and tax credits that can be carried forward to subsequent periods, deferred income tax assets arising therefrom are recognized to the extent of the taxable income probably obtained in future period that can be used for deducting the deductible losses and tax credits.

Taxable temporary differences are recognized as deferred income tax liabilities except in special circumstances.

Special circumstances in which deferred income tax assets or deferred income tax liabilities shall not be recognized include:

- Initial recognition of goodwill;
- A transaction or event that is neither a business combination nor, when it occurs, affects accounting profit and taxable income (or deductible loss).

Deferred income tax liabilities arising from taxable temporary differences related to the investments in subsidiaries, associates and joint ventures shall be recognized, unless the Company can control the time when the temporary differences are reversed and the temporary differences will probably not be reversed in the foreseeable future. Deferred income tax assets arising from deductible temporary differences related to the investments in subsidiaries, associates and joint ventures shall be recognized when the temporary differences may be reversed in the foreseeable future and can be used to offset the taxable income of deductible temporary differences in the future.

On the balance sheet date, according to the tax law, deferred income tax assets and deferred income tax liabilities are measured at the future tax rate applicable to the period of recovery of relevant assets and repayment of relevant liabilities.

On the balance sheet date, the Company reviews the book values of its deferred income tax assets. If it is unlikely to obtain sufficient taxable income taxes to offset against the benefit of deferred tax assets, the book value of deferred tax assets shall be written down. The amount written down may be reversed when the taxable income obtained may be sufficient.

If the Company has the legal right to settle in net amounts and intends to settle in net amount or to obtain assets and discharge liabilities simultaneously, the current tax assets and current tax liabilities of the Company shall be presented based on the net amount after offset.

On the balance sheet date, the deferred income tax assets and deferred income tax liabilities are presented at net of offsetting amounts when both of the following conditions are met:

- The taxpayer has the legal right to settle current income tax assets and current income tax liabilities on a net basis;
- The deferred income tax assets and deferred income tax liabilities are related to the income tax which are imposed on the same taxpayer by the same tax collection authority or on different taxpayers, but, in each important future period in connection with the reverse of deferred income tax assets and liabilities, the involved taxpayer intends to balance income tax assets and liabilities for the current period with net settlement at the time of obtaining assets and discharging liabilities.

3.28 Leases

Lease refers to a contract in which a lessor assigns the right to use an asset to a lessee within a certain period to obtain consideration. On the contract commencement date, the Company evaluates whether the contract is a lease or includes a lease. If a party to a contract transfers the right to control the use of one or more identified assets within a certain period in exchange for consideration, the contract shall be a lease or include a lease.

If the contract contains multiple individual leases, the Company will split the contract and make accounting treatment over each individual lease. If the contract contains both leased and non-leased parts, the lessee and lessor will split the leased and non-leased parts.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.28 Leases (Continued)

For rent reductions, exemptions, deferred payments, and other rent reductions directly caused by the COVID-19 epidemic and reached on existing lease contracts, if the following conditions are met at the same time, the company adopts the simplified method for all lease options, neither assess whether a lease modification has occurred, nor reassess the lease classification:

- The lease consideration after the concession is reduced or basically unchanged from that before the concession, among which, the lease consideration can be undiscounted or discounted at the discount rate before the concession;
- The other terms and conditions of the lease have not changed significantly after considering both qualitative and quantitative factors.

3.28.1 The Company as the lessee

(1) Right-of-use assets

On the commencement date of the lease term, the Company recognizes the leases other than short-term leases and leases of low-value assets as the right-of-use assets. The right-of-use assets are initially measured at costs. Such costs include:

- the initial measurement amount of lease liabilities;
- in case of any lease incentives, relevant amount of the lease incentives enjoyed shall be deducted from the lease payment paid on or before the commencement date of the lease term;
- the initial direct costs incurred to the Company;
- the costs to be incurred to the Company for demolishing and removing leased assets, restoring the site where the leased assets are located, or restoring the leased assets to the state agreed in the lease terms, not including those incurred for production of inventories.

The Company adopts the straight-line-method to accrue depreciation of the right-of-use assets. If there is a reasonable assurance that the ownership of a leased asset can be acquired when the lease term expires, the depreciation of the right-of-use asset will be made over the remaining useful life of such lease asset; otherwise, the depreciation of such leased asset is made over the shorter of the lease term or the remaining useful life of the leased asset.

The Company determines whether a right-of-use asset is impaired and accounts for the identified impairment loss in accordance with the principles described in the Note “3.18 Impairment of long-term assets”.

(2) Lease liabilities

On the commencement date of the lease term, the Company recognizes the leases other than short-term leases and leases of low-value assets as lease liabilities. Lease liabilities are initially measured at the present value of the lease payments that have not been paid. Lease payments include:

- fixed payments (including substantial fixed payments), and if there is any lease incentive, the relevant amount of the lease incentive shall be deducted;
- variable lease payments depending on the index or ratio;
- the payments expected to be payable based on the residual value of the guarantee provided by the Company;
- exercise price of purchase option, provided that the Company reasonably determines that it will exercise the option;
- the amount to be paid to exercise the lease termination option, provided that it is reflected that the Company will exercise the lease termination option during the lease term;

The Company adopts the implicit rate of lease as the discount rate, but if the implicit rate of lease cannot be reasonably determined, the incremental borrowing rate will be adopted as the discount rate.

The Company calculates the interest expense of the lease liability in each period of the lease term according to the fixed periodic interest rate, and records it into the current profit or loss or the cost of related assets.

The variable lease payments not included in the measurement of lease liabilities shall be included in the current profit or loss or the costs of related assets when they actually occur.

After the commencement of the lease term, the Company shall re-measure the lease liability and adjust corresponding right-of-use assets based on the following situations: If the book value of the right-of-use assets has been reduced to zero and further reduction of lease liabilities is still required, the Company will include the remaining amount in the current profit or loss.

- If the Company’s assessment results of call options, lease renewal options or lease termination options have changed, or the actual exercise of the said options is inconsistent with the original assessment results, the Company remeasures its lease liabilities based on the lease payments after change and the present value calculated at revised discount rate;
- When there is a change in the substantive fixed payment amount, a change in the amount expected to be payable for the guaranteed residual value, or a change in the index or rate used to determine the lease payment amount, the Company remeasures lease liabilities based on the lease payments after change and the present value calculated at original discount rate. However, if the changes in lease payments result from changes in floating interest rates, the present value is calculated using the revised discount rate.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.28 Leases (Continued)

3.28.1 The Company as the lessee (Continued)

(3) Short-term lease and lease of low-value assets

The Company chooses not to recognize right-of-use assets and lease liabilities for short-term leases and leases of low-value assets, and the relevant lease payments are included in the current profit or loss or the cost of related assets by straight-line method over each period within the lease period. Short-term leases refer to leases that do not exceed 12 months on the commencement date of the lease period and do not include any purchase option. Low-value asset lease refers to the lease of a single lease asset with lower value when it is brand new. For the lease asset subleased by the Company subleases or expected to be subleased, the original lease is not a lease of low-value assets.

(4) Lease changes

If the lease changes and the following conditions are met at the same time, the Company will carry out accounting treatment over the lease change as a separate lease:

- where the lease change expands the scope of the lease by adding the right to use one or more leased assets; and
- where the increase of the consideration is equivalent to the adjusted individual price of the expanded part of the lease scope according to the contract.

Where the lease change is not accounted for as a separate lease, on the effective date of the lease change, the Company will re-distribute the consideration of the contract after the change, re-determine the lease period, and re-measure lease liabilities according to the present value calculated by the changed lease payments and the revised discount rate.

If a lease change results in a reduction in the scope of the lease or a shortening of the lease term, the Company reduces the book value of the right-of-use asset accordingly and recognizes gains or losses related to partial or complete termination of the lease in the current profit or loss. If the lease liabilities are remeasured due to other lease changes, the Company adjusts the book value of the right-of-use asset accordingly.

3.28.2 The Company as the lessee

Leases of the Company are classified as finance lease and operating lease on the lease commence date. Lease under which almost all the risks and rewards relevant to the ownership of leased assets are materially transferred is recognized as finance lease, regardless of whether the ownership is ultimately transferred. Operating lease refers to the leases other than finance lease. When the Company is a sub-lessor, it classifies the sub-leases based on the right-of-use assets generated by the original lease.

(1) Accounting treatment of operating lease

Rental from the operating lease in each stage during the rental period should be recognized as the rental income by the straight-line method. Initial direct costs relating to operating lease incurred by the Company are capitalized, and shall be included in the current profit or loss on the same basis as the recognition of lease income during the lease period. The variable lease payable that is not included in the lease receivable shall be included in the current profit or loss at the time of actual occurrence. If an operating lease is changed, the Company accounts for it as a new lease from the effective date of the change, and the amount of lease payments received in advance or receivable in connection with the lease before the change is considered to be the amount of payments for the new lease.

(2) Accounting treatment of finance lease

On the lease commencement date, the Company recognizes finance leases as finance lease receivables and derecognizes finance lease as assets. When the Company makes initial measurement of finance lease receivables, the net lease investment is used as the recorded value of the finance lease receivables. The net investment in leases is the sum of the unguaranteed residual value and the present value of the lease payments not yet received at the beginning of the lease term discounted at the interest rate embedded in the lease.

The Company calculates and recognizes interest income for each period of the lease term based on a fixed periodic interest rate. Derecognition and impairment of finance lease receivables are accounted for in accordance with Note "3.10 Financial instruments".

Variable lease payments not included in the net lease investment are recognized in the current profit or loss when they are actually incurred.

When a change in a finance lease occurs and both of the following conditions are met, the Company will account for the change as a separate lease:

- where the change expands the scope of the lease by adding the right to use one or more leased assets; and
- where the increase of the consideration is equivalent to the adjusted individual price of the expanded part of the lease scope according to the contract.

If the change in a finance lease cannot be accounted for as a separate lease, the Company treats the changed lease separately in the following circumstances.

- If the change becomes effective on the lease commencement date and the lease would have been classified as an operating lease, the Company accounts for it as a new lease from the effective date of the lease change and uses the net investment in the lease prior to the effective date of the lease change as the book value of the leased asset;
- If the change becomes effective on the lease commencement date and the lease is classified as a finance lease, the Company accounts for the lease in accordance with the policy on modification or renegotiation of contracts as described in Note "3.10 Financial instruments".

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.28 Leases (Continued)

3.28.3 Sale-and-leaseback transactions

The Company assesses whether the transfer of assets in sale-and-leaseback transactions is a sale in accordance with the principles described in the Note "3.24 Revenue."

(1) The Company as the lessee

If the transfer of an asset in a sale-and-leaseback transaction is a sale, the Company, as the lessee, measures the right-of-use asset resulting from the sale-and-leaseback at the portion of the original asset's book value that relates to the right of use acquired by the lease back and recognizes a gain or loss related to the right transferred to the lessor only; if the transfer of an asset in a sale-and-leaseback transaction is not a sale, the Company, as the lessee, continues to recognize the transferred asset and at the same time recognizes a financial liability equal to the transfer proceeds. For details of the accounting treatment of financial liabilities, please refer to the Note "3.10 Financial instruments."

(2) The Company as the lessor

If the transfer of assets in a sale-and-leaseback transaction is a sale, the Company accounts for the purchase of the assets as a lessor in accordance with the aforementioned policy stated in "2. The Company as the lessee; if the transfer of assets in a sale-and-leaseback transaction is not a sale, the Company, as the lessor, does not recognize the transferred asset, but recognizes a financial asset equal to the transfer proceeds. For details of the accounting treatment of financial assets, please refer to the Note "3.10 Financial instruments."

3.29 Work safety expenses

In accordance with national regulations, the Company withdraws work safety expenses for high-risk industries, and includes them both in the production costs of relevant products in the current period and in the special reserves. When withdrawn safe production costs are used within the prescribed range and belong to expenses, such costs shall be directly deducted from the special reserves. Where fixed assets form, incurred expenses are accumulated under the item "construction in progress" and are recognized as fixed assets when the safe project is completed and reaches the working conditions for its intended; meanwhile, special reserves shall be offset according to the costs of fixed assets and the accumulated depreciation of the same amount shall be recognized. Provision for depreciation of fixed assets will be no longer made in subsequent periods.

3.30 Share repurchases

The shares repurchased by the Company are managed as treasury stocks until they are canceled or transferred, and all expenses for the repurchased shares are transferred to the costs of treasury stocks. The consideration and transaction costs paid in share repurchases reduce owners' equity, and no gain or loss is recognized upon the repurchase, transfer or cancellation of the Company's shares.

The difference between the actual amount received and the book value of treasury stocks is credited to the capital surplus. If the capital surplus is not sufficient for offsetting, the surplus reserves and undistributed profits will be reduced. Upon cancellation of treasury stocks, the share capital is reduced by the par value of the shares and the number of shares canceled. The difference between the book value of the canceled treasury stocks and the par value is used to reduce capital surplus, and if the capital surplus is not sufficient for offsetting, the surplus reserves and undistributed profits will be reduced.

3.31 Segment reporting

The Company determines operating segments based on its internal organizational structure, management requirements and internal reporting system, and determines reportable segments and disclose segment information by operating segments.

The operating segments refer to the Company's components that simultaneously meet the following conditions: (1) the components can generate income and incur expenses in daily activities; (2) The Management of the Company can regularly evaluate the operating results of this component to decide the allocatable resources and assess its performance; (3) The Company can obtain relevant accounting information such as the financial positions, operating results and cash flows of this component. If two or more operating segments have similar economic characteristics and meet certain conditions, they can be merged into one operating segment.

3.32 Significant accounting estimates and judgments

The Group evaluates the significant accounting estimates and key assumptions used on an ongoing basis, based on historical experience and other factors, including reasonable expectations of future events. Significant accounting estimates and critical assumptions that have a significant risk of causing a material adjustment to the book values of assets and liabilities within the next accounting year are presented below.

3.32.1 Classification of financial assets

The significant judgments involved in determining the classification of the Group's financial assets include analysis of the business model and contractual cash flow characteristics, etc.

The Group determines the business model for managing financial assets at the level of the financial asset portfolio, taking into account factors such as the manner in which the performance of financial assets is evaluated and reported to key management personnel, the risks affecting the performance of financial assets and the manner in which they are managed, and the manner in which the relevant business management personnel are compensated.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.32 Significant accounting estimates and judgments (Continued)

3.32.1 Classification of financial assets (Continued)

In assessing whether the contract cash flow of financial assets is consistent with the basic lending arrangements, the Group has the following judgments: whether the principal's time distribution or amount may change during the lifetime for early repayment and other reasons; whether the interest only includes the time value of money, credit risk, other basic lending risks and the consideration of cost and profit. For example, does the amount of advance payment only reflect the unpaid principal and interest based on the unpaid principal, and reasonable compensation paid for the early termination of the contract.

3.32.2 Measurement of expected credit loss of receivables

The Group calculates the expected credit losses of accounts receivable by default risk exposure and expected credit losses rate of accounts receivable and determines the expected credit losses rate based on default probability and default loss rate. In determining the expected credit losses rate, the Group uses internal historical credit loss and other data and adjusts the historical data with current situation and forward-looking information. In considering forward-looking information, the indicators used by the Group include the risks of economic downturn, external market environment, technological environment, and changes in customer conditions. The Group regularly monitors, and reviews assumptions related to the calculation of expected credit losses.

3.32.3 Provision for inventory depreciation

The net realizable value of inventories is under the Group's regular review, and as a result, the provision for inventory depreciation is recognized at the excess part of inventories' book values over their net realizable value. When making estimates of net realizable value, the Company takes into consideration the use of inventories held on hand and other information available to form the underlying assumptions, including the inventories' market prices and the Company's historical operating costs. The actual selling price, cost of completion, and selling expenses and taxes of inventories may change in response to changes in market sales conditions, production technology processes or the actual use of inventories, etc. Therefore, the amount of provision for inventory depreciation may change in response to the above reasons. The adjustment to the provision for inventory depreciation will affect the profit or loss of the current period in which the estimate is changed.

3.32.4 Depreciation and amortization of fixed assets, intangible assets and long-term deferred expenses

The Group depreciates and amortizes fixed assets, intangible assets and long-term deferred expenses over their useful lives after taking into account their residual values. The Group periodically reviews the useful lives and amortization period of the related assets to determine the amount of depreciation and amortization expense to be charged to each reporting period. The useful lives of the assets are determined by the Group based on past experience with similar assets and in conjunction with expected technological changes, and the amortization period of long-term deferred expenses is determined by the Group based on the expected benefit period of each expense. Depreciation and amortization expense is adjusted in future periods if there is a significant change in previous estimates.

3.32.5 Development expenses

In determining the amount to be capitalized, management must make assumptions about the expected future cash generation from the asset, the discount rate to be used, and the expected period of benefit.

3.32.6 Pending litigations

For the legal proceedings and claims, the Group, after making reference to the opinions of its legal advisors and understanding the progress of the case and the settlement solution, judges the expected losses to be borne based on the best estimate of the expenses required to fulfill the relevant present obligations. The estimated losses will change during the development of the legal proceedings and claims.

3.32.7 Revenue recognition

Revenue related to the Group's provision of petroleum engineering services is recognized over a period of time. The recognition of revenue and profit from the related labor services depends on the Group's estimate of the contractual outcome and the progress of performance. The Group estimates the expected total contract revenue using the expected value method or the most likely-to-occur amount based on the contract, and assesses the expected total contract cost based on historical experience and the construction program. Given that the contract cycle for engineering services may span multiple accounting periods, the Group periodically reviews and revises the estimated contract revenue and contract cost in the budget as the contract completion progresses. If the actual amount of total revenue and total costs incurred is higher or lower than the management's estimates, it will affect the amount of revenue and profit recognized by the Group in future periods.

3.32.8 Deferred income tax assets

To the extent that it is very likely that there will be enough taxable profits to offset the losses, the Group should recognize deferred income tax assets for all unused tax losses. This requires the management to use significant judgment in estimating the timing and amount of future taxable profit, combined with tax planning strategies, to determine the amount of deferred tax assets to be recognized. If the taxable revenue to be earned in future accounting periods is lower than expected or the effective income tax rate is higher than expected, the deferred tax assets recognized will be reversed and included in the income statement in the period of reversal.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.32 Significant accounting estimates and judgments (Continued)

3.32.9 Taxation

There is uncertainty about the interpretation of complex tax legislation, including provisions relating to tax benefits, and the amount and timing of future taxable revenue. Given the complexity of extensive international business relationships and existing contractual agreements, differences between actual results of operations and assumptions made, or future changes in such assumptions, may require future adjustments to the recognized tax income and expense. The Group accrues tax expense based on reasonable estimates of the probable outcome of audits by the tax authorities where the Group operates. The amount of tax expenses accrued is based on various factors, such as prior tax audit experience, and different tax regulation interpretations from taxable entities and relevant tax authorities. Since the Group operates in different tax regions, different interpretation may be resulted from various events.

3.33 Changes in significant accounting policies and accounting estimates

3.33.1 Changes in significant accounting policies

(1) Implementation of the Interpretation No. 15 to the Accounting Standards for Business Enterprises

On December 30, 2021, the Ministry of Finance issued the Interpretation No. 15 to the Accounting Standards for Business Enterprises (CS [2021] No. 35, hereinafter referred to as the "Interpretation No. 15").

① Accounting Treatment of Trial Operation Sales

Interpretation No. 15 specifies the accounting treatment and presentation of selling the products or by-products produced before the fixed assets reach the intended usable state or during the research and development process by the Company. It stipulates that the net amount after offsetting the cost from the sales related to the trial operation shall not be written off against the cost of fixed assets or R&D expenditure. This regulation comes into force on January 1, 2022, and retrospective adjustments should be made for the trial sales that occurred between the beginning of the earliest period of financial statement presentation and January 1, 2022. The adoption of Interpretation No. 15 had no material impact on the Company's financial position and operating results.

② Judgment on onerous contracts

Interpretation No. 15 clarifies that the "cost of performing the contract" considered by an enterprise when judging whether a contract constitutes an onerous contract should include both the incremental cost of performing the contract and the apportioned amount of other costs directly related to performing the contract. This regulation comes into force on January 1, 2022. Company should implement this regulation for contracts that have not yet fulfilled all obligations on January 1, 2022, and the cumulative effect will be adjusted on the implementation date of the retained earnings at the beginning of the year and other related financial statement items, without adjusting the comparative financial statement data for the previous period. The adoption of Interpretation No. 15 had no material impact on the Company's financial position and operating results.

***(2) Implementation of the* Circular on adjusting the Application Scope of the Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19**

On May 19, 2022, the Ministry of Finance issued the *Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19* (CK (2022) No.13). The scope of Covid-19-related rental concessions that allow for the simplified approach has been adjusted again, removing the previous restriction that the simplified approach would only apply to concessions on lease payments due before June 30, 2022. Lessees and lessors may continue to elect to use the simplified approach specified in the Regulations on Accounting for COVID-19 Related Rent Concessions for concessions on lease payments payable after 30 June 2022 that are directly attributable to the COVID-19 pandemic. processing, other applicable conditions remain unchanged.

The current period of the Company does not involve the relevant accounting treatment of the above-mentioned " *Provisions on Accounting Treatment of Rent Concessions Related to Epidemic in Covid-19*".

(3) Implementation of the Interpretation No. 16 to the Accounting Standards for Business Enterprises

On November 30, 2022, the Ministry of Finance issued the Interpretation No. 16 to the Accounting Standards for Business Enterprises (CS [2022] No. 31, hereinafter referred to as the "Interpretation No. 16").

① Accounting treatment for the income tax impact of dividends related to financial instruments classified as equity instruments by the issuer

Interpretation No. 16 For financial instruments classified as equity instruments by enterprises, if the relevant dividend payments are deducted before corporate income tax in accordance with the relevant provisions of the tax policy, the income tax impact related to the dividends should be confirmed when the dividends payable are confirmed, and the income tax impact related to the dividends should be confirmed in accordance with the previous regulations, and in line with the accounting treatment adopted for transactions or events that generate distributable profits, include the income tax effect of dividends is included in the current profit and loss or owner's equity (including other comprehensive income items).

This provision will come into effect on the date of announcement. If the relevant dividend payable occurs between January 1, 2022 and the effective date, it will be adjusted in accordance with this provision; if it occurs before January 1, 2022 and the relevant financial instruments has not been terminated on January 1, 2022, a retrospective adjustment shall be made. The implementation of this regulation did not have a significant impact on the Company's financial status and operating results.

3 SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES (Continued)

3.33 Changes in significant accounting policies and accounting estimates (Continued)

3.33.1 Changes in significant accounting policies (Continued)

(3) Implementation of the Interpretation No. 16 to the Accounting Standards for Business Enterprises (Continued)

② Regarding the accounting treatment of enterprises' modification of cash-settled share-based payment to equity-settled share-based payment

Interpretation No. 16 clarifies that if an enterprise modifies the terms and conditions of a cash-settled share-based payment agreement to make it an equity-settled share-based payment, on the date of modification (whether it occurs during the waiting period or after the end), fair value of the modification date of the equity instrument of the equity-settled share-based payment shall be measured, the services obtained shall be included in the capital reserve, and at the same time the liabilities recognized on the modification date of cash-settled share-based payment are derecognized, the difference between the two Included in current profit and loss.

This regulation will come into effect on the date of promulgation, and relevant transactions newly added from January 1, 2022 to the effective date shall be adjusted in accordance with this regulation; Retrospective adjustments will be made to adjust the accumulated impact on retained earnings and other related items on January 1, 2022, without adjusting the comparative financial statement data in the previous period. The implementation of this regulation did not have a significant impact on the company's financial status and operating results.

3.33.2 Changes in significant accounting estimates

The Company has no significant changes in accounting estimates in this year.

3.33.3 Correction of significant accounting errors of prior periods

The Company has no correction of significant accounting errors of prior periods in this year.

3.34 Others

The Company had no other adjustments this year.

4 TAXATION

4.1 Major tax types and tax rates

Tax type	Tax basis	Legal tax rate (%)
Value-added tax	The output tax is calculated based on the sales of goods and taxable labor income calculated according to the tax law. After deducting the input tax that can be deducted in the current period, the difference is the value-added tax payable.	3, 6, 9, 10 or 13
Consumption tax	Levied based on taxable sales income	1, 5 or 7
Urban maintenance and construction tax	Levied based on the actual VAT and consumption tax paid	5
Enterprise income tax	Levied based on the taxable income	25

Disclosure of information about taxpayers applying different enterprise income tax rates

Taxpayer name	Income tax rate
Sinopec Shengli Petroleum Engineering Corporation	15
Shandong Shenggong Testing Technology Co., Ltd	15
Sinopec Zhongyuan Petroleum Engineering Corporation	15
Sinopec Jianghan Petroleum Engineering Corporation	15
Sinopec Zhongyuan Oil Engineering Design Company Limited	15
Sinopec Oil Engineering Design Company Limited	15
Sinopec Geophysical Corporation	15
Sinopec Jianghan Oil Engineering Design Company Limited	15
Sinopec Henan Oil Engineering Design Company Limited	15
Sinopec Huabei Petroleum Engineering Corporation	15
Sinopec Pipeline Technical Service Co., Ltd.	15
SinoFTS Petroleum Services Ltd.	15
Sinopec Jianghan Oil Construction Engineering Co., Ltd.	15

4.2 Tax preference

4.2.1 Consumption tax refund of self-used refined oil

According to the Circular on the Refund of Consumption Tax on the Self-use Refined Oil Produced by Oil (Gas) Field Enterprises (CS [2011] No. 7), since January 1, 2009, the full amount of consumption tax contained in the internally purchased refined oil consumed by oil (gas) field enterprises during the extraction of crude oil will be temporarily refunded according to the actual amount of consumption tax paid.

4.2.2 Enterprise income tax

Sinopec Shengli Petroleum Engineering Corporation, Shandong Shenggong Testing Technology Co., Ltd, Sinopec Zhongyuan Petroleum Engineering Corporation, Sinopec Jianghan Petroleum Engineering Corporation, Sinopec Zhongyuan Oil Engineering Design Company Limited, Sinopec Oil Engineering Design Company Limited, Sinopec Geophysical Corporation, Sinopec Jianghan Oil Engineering Design Company Limited, Sinopec Henan Oil Engineering Design Company Limited, Sinopec Huabei Petroleum Engineering Corporation, Sinopec Pipeline Technical Service Co., Ltd., SinoFTS Petroleum Services Ltd, Sinopec Jianghan Oil Construction Engineering Co., Ltd. have obtained the certification of high-tech enterprise and are subject to a reduced enterprise income tax rate of 15% in accordance with the *Enterprise Income Tax Law of the People's Republic of China and the Circular of the State Administration of Taxation on Issues Related to the Implementation of High and New Technology Enterprise Income Tax Preference* (GSX [2009] No. 203), the enterprise income tax will be paid at a reduced rate of 15%.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS

5.1 Monetary funds

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Cash on hand	2,992	5,230
Cash at banks	985,082	908,850
Cash in finance companies	849,631	1,593,669
Other monetary funds	524	475
Total	1,838,229	2,508,224
Including: Amount deposited abroad:	1,376,948	1,290,784

As at December 31, 2022, the Group's monetary funds restricted for use due to mortgage, pledge or freezing, or placed overseas with restrictions on fund repatriation are as follows:

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Guarantee deposit	6,555	7,352
L/C deposit	95	87
Frozen and pledged deposits	27,429	22,478
Time deposit	3,000	3,000
Total	37,079	32,917

As at December 31, 2022, the Group had not pledged deposit with any bank for the issuance of bank acceptance bill.

5.2 Accounts receivable

5.2.1 Disclosure of accounts receivable by aging

Aging	Balance as at December 31, 2022	Balance as at December 31, 2021
Within 1 year	9,943,144	7,475,672
Including: Not overdue	8,369,711	4,678,622
Overdue – Within 1 year	1,573,433	2,797,050
1 – 2 years	440,120	577,083
2 – 3 years	237,662	314,236
3 – 4 years	283,750	452,920
4 – 5 years	332,445	186,582
Over 5 years	1,697,891	1,560,021
Sub-total	12,935,012	10,566,514
Less: provision for bad debts	2,397,795	2,415,495
Total	10,537,217	8,151,019

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.2 Accounts receivable (Continued)

5.2.2 Disclosure of accounts receivable by category based on the method for provision for bad debts

Category	Balance as at December 31, 2022					Balance as at December 31, 2021				
	Book balance		Provision for bad debts			Book balance		Provision for bad debts		
	Amount	Proportion (%)	Amount	Expected credit loss ratio (%)	Book value	Amount	Proportion (%)	Amount	Expected credit loss ratio (%)	Book value
Provision made on an individual basis	1,017,877	7.87	1,017,877	100.00		955,589	9.04	955,589	100.00	
Provision for bad debts made by portfolio	11,917,135	92.13	1,379,918	11.58	10,537,217	9,610,925	90.96	1,459,906	15.19	8,151,019
Including:										
Related-party portfolio	5,523,774	42.70	64,570	1.17	5,459,204	3,293,119	31.17	48,184	1.46	3,244,935
Non-related-party portfolio	6,393,361	49.43	1,315,348	20.57	5,078,013	6,317,806	59.79	1,411,722	22.35	4,906,084
Total	12,935,012	100.00	2,397,795		10,537,217	10,566,514	100.00	2,415,495		8,151,019

Provision made on an individual basis:

Item	Balance as at December 31, 2022			
	Book balance	Provision for bad debts	Proportion of provision (%)	Reason for provision
Entity A	936,653	936,653	100.00	The debtor is short of funds and the funds have not been recovered for a long time.
Entity B	46,392	46,392	100.00	The debtor is short of funds and the funds have not been recovered for a long time.
Entity C	25,220	25,220	100.00	The debtor is short of funds and the funds have not been recovered for a long time.
Total of other sporadic units	9,612	9,612	100.00	The debtor is short of funds and the funds have not been recovered for a long time.
Total	1,017,877	1,017,877		

Provision for bad debts made by portfolio:

Provision by portfolio:

Item	Balance as at December 31, 2022		
	Accounts receivable	Provision for bad debts	Proportion of provision (%)
Accounts receivable from related-party clients	5,523,774	64,570	1.17
Accounts receivables from non-related-party clients	6,393,361	1,315,348	20.57
Total	11,917,135	1,379,918	

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.2 Accounts receivable (Continued)

5.2.2 Disclosure of accounts receivable by category based on the method for provision for bad debts (Continued)

Provision by portfolio: Accounts receivable from related-party clients

	Balance as at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for bad debts		Book balance	Provision for bad debts	
Category	Amount	Amount	Expected credit loss ratio (%)	Amount	Amount	Expected credit loss ratio (%)
Within 1 year	5,242,663	18,605	0.35	3,025,701	11,896	0.39
Including:						
Not overdue	4,459,024	13,377	0.30	2,333,468	7,000	0.30
Overdue – Within 1 year	783,639	5,228	0.67	692,233	4,896	0.71
1 – 2 years	143,289	6,333	4.42	128,378	5,810	4.53
2 – 3 years	46,949	3,814	8.12	79,747	5,666	7.10
3 – 4 years	53,878	9,696	18.00	30,219	4,602	15.23
4 – 5 years	12,384	6,278	50.69	11,768	6,185	52.56
Over 5 years	24,611	19,844	80.63	17,306	14,025	81.04
Total	5,523,774	64,570	1.17	3,293,119	48,184	1.46

Provision by portfolio: Accounts receivable from non-related-party clients

	Balance as at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for bad debts		Book balance	Provision for bad debts	
Category	Amount	Amount	Expected credit loss ratio (%)	Amount	Amount	Expected credit loss ratio (%)
Within 1 year	4,700,481	38,266	0.81	4,449,971	107,739	2.42
Including:						
Not overdue	3,910,687	11,732	0.30	2,345,154	7,035	0.30
Overdue – Within 1 year	789,794	26,534	3.36	2,104,817	100,704	4.78
1 – 2 years	296,831	72,712	24.50	448,706	115,929	25.84
2 – 3 years	190,713	95,150	49.89	234,489	123,406	52.63
3 – 4 years	229,872	173,108	75.31	340,961	258,484	75.81
4 – 5 years	238,837	199,485	83.52	174,814	137,299	78.54
Over 5 years	736,627	736,627	100.00	668,865	668,865	100.00
Total	6,393,361	1,315,348	20.57	6,317,806	1,411,722	22.35

5.2.3 Provision, reversal, or recovery of provision for bad debts in the current period

		Changes in the current period				
Category	Balance as at December 31, 2021	Provision	Recovery or reversal	Write-off or charge-off	Other decreases	Balance as at December 31, 2022
Provision for bad debts	2,415,495	46,630	129,145	74,692	-139,507	2,397,795
Total	2,415,495	46,630	129,145	74,692	-139,507	2,397,795

5.2.4 Accounts receivable actually charged off in the current period

Accounts receivable of RMB74,692,000 has been charged off in the year.

Including, the write-off of significant accounts receivable:

Entity	Nature of receivable	Amount write-off	Reason of write-off	Write-off procedures performed	Whether the payment is due to related transactions
Entity A	Project receivable	17,329	Contract dispute, ruled by the court, no enforceable assets	Assessed and approved by the Group's internal write-off policies	No
Entity B	Project receivable	14,078	Contract dispute, ruled by the court, no enforceable assets	Assessed and approved by the Group's internal write-off policies	No
Total		31,407			

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.2 Accounts receivable (Continued)

5.2.5 Top 5 of accounts receivable as at December 31, 2022, presented by debtor

Company name	Balance as at December 31, 2022		
	Accounts receivable	Proportion in total accounts receivable (%)	Provision for bad debts
Entity 1	3,783,746	29.25	39,571
Entity 2	1,138,317	8.80	10,492
Entity 3	1,082,679	8.37	9,219
Entity 4	936,653	7.24	936,653
Entity 5	574,768	4.44	27,303
Total	7,516,163	58.10	1,023,238

5.3 Receivables financing

5.3.1 Breakdowns of receivables financing

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Notes receivable	**1,468,340**	1,295,971
Total	**1,468,340**	1,295,971

Some subsidiaries of the Group discounted and transferred via endorsement a part of bank acceptance bills and commercial acceptance bills based on its routine funds management demand and derecognized the discounted and endorsed notes receivable based on the situation that almost all risks and remuneration have been transferred to relevant counterparties. As at December 31, 2022, the notes receivable endorsed or discounted but not matured amounted to RMB4,659,287,000 (As at December 31, 2021, RMB4,714,670,000). As relevant subsidiaries manage notes receivable with the purpose of collecting contractual cash flows and selling such financial assets, the Company classifies these subsidiaries' bank acceptance bills and commercial acceptance bills as the financial assets measured at fair value through other comprehensive income.

The Group had no bank acceptance bill or commercial acceptance bill individually impaired. As at December 31, 2022, the Group believed that the bank acceptance bills and commercial acceptance bills it held had not significant credit risk as they were accepted by the banks or finance companies with higher credit levels, and it would not be subjected to the significant loss caused by the default of these banks and finance companies. The Group had not made the provision for losses from credit impairment of receivables financing.

5.4 Advances to suppliers

5.4.1 Presentation of advances to suppliers by aging

Aging	Balance as at December 31, 2022		Balance as at December 31, 2021	
	Amount	Proportion (%)	Amount	Proportion (%)
Within 1 year	**331,945**	**81.64**	242,449	71.61
1 – 2 years	**10,921**	**2.69**	66,669	19.69
2 – 3 years	**61,219**	**15.06**	28,127	8.31
Over 3 years	**2,493**	**0.61**	1,310	0.39
Total	**406,578**	**100.00**	338,555	100.00

5.4.2 Top 5 of advances to suppliers as at December 31, 2022, collected by supplier

The sum amount of top 5 of accounts receivable as at December 31, 2022, presented by debtor was RMB207,885,000, accounting for 51.13% of the total ending balance of advances to suppliers.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.5 Other receivables

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Dividends receivable	540	548
Other receivables	3,196,062	2,551,744
Total	3,196,602	2,552,292

5.5.1 Dividends receivable

(1) Details of dividends receivable

Project (or investee)	Balance as at December 31, 2022	Balance as at December 31, 2021
Qianjiang Hengyun Motor Vehicle Comprehensive Performance Inspection & Testing Co., Ltd.	540	548
Sub-total	540	548
Less: provision for bad debts		
Total	540	548

5.5.2 Other receivables

(1) Disclosure of other receivables by aging

Aging	Balance as at December 31, 2022	Balance as at December 31, 2021
Within 1 year	2,421,288	1,892,581
1 – 2 years	284,474	175,623
2 – 3 years	87,480	582,805
3 – 4 years	573,531	72,611
4 – 5 years	54,738	97,489
Over 5 years	632,241	535,874
Sub-total	4,053,752	3,356,983
Less: provision for bad debts	857,690	805,239
Total	3,196,062	2,551,744

(2) Disclosure of other receivables by category based on the method for provision for bad debts

	Balance at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for bad debts	Book value	Book balance	Provision for bad debts	Book value
Category	Amount	Amount	Amount	Amount	Amount	Amount
Imprest	5,188	205	4,983	3,304	124	3,180
Security deposit	1,349,502	133,650	1,215,852	1,247,723	121,125	1,126,598
Advance money for the Company	1,254,411	182,084	1,072,327	870,202	165,960	704,242
Suspense payment	1,003,269	497,676	505,593	697,197	473,246	223,951
Escrow payment	5,920	1,153	4,767	6,430	1,727	4,703
Deposit	94,537	11,162	83,375	127,035	8,611	118,424
Export rebates receivable	21,161	515	20,646	21,405	70	21,335
Others	319,764	31,245	288,519	383,687	34,376	349,311
Total	4,053,752	857,690	3,196,062	3,356,983	805,239	2,551,744

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.5 Other receivables (Continued)

5.5.2 Other receivables (Continued)

(3) Details of provision for bad debts

Provision for bad debts at stage I as at December 31, 2022

Category	Book balance	Expected credit loss ratio in future 12 months (%)	Provision for bad debts	Book value
Provision for bad debts made by portfolio	3,253,029	4.38	142,574	3,110,455
– Imprest	5,188	3.95	205	4,983
– Margin and deposit	1,322,385	4.01	53,028	1,269,357
– Other receivables	1,925,456	4.64	89,341	1,836,115
Total	3,253,029		142,574	3,110,455

As at December 31, 2022, the Company had no interest receivable, dividends receivable and other receivables at stage II.

Provision for bad debts at stage III as at December 31, 2022:

Category	Book balance	Expected credit loss ratio in future 12 months (%)	Provision for bad debts	Book value
Provision for bad debts made by portfolio	800,723	89.31	715,116	85,607
– Imprest				
– Margin and deposit	121,654	75.45	91,784	29,870
– Other receivables	679,069	91.79	623,332	55,737
Total	800,723		715,116	85,607

(4) Provision, reversal or recovery of provision for bad debts in the current period

Provision for bad debts	Stage I Expected credit loss in future 12 months	Stage II Expected credit loss in the whole duration (without credit impairment)	Stage III Expected credit loss in the whole duration (with credit impairment)	Total
Balance as at December 31, 2021	131,563		673,676	805,239
Balance as at December 31, 2021 in the current period				
– Transferred in Stage II				
– Transferred in Stage III				
– Reversal from Stage II				
– Reversal from Stage I				
Provision in the current period	20,306		106,882	127,188
Reversal in the current period	9,295		110,908	120,203
Write-off in the current period				
Other changes			45,466	45,466
Balance as at December 31, 2022	142,574		715,116	857,690

(5) Other receivables actually charged off in the current period

No other receivables were charged off in the current period.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.5 Other receivables (Continued)

5.5.2 Other receivables (Continued)

(6) Top 5 of other receivables as at December 31, 2022, presented by debtor

Company name	Nature	Balance as at December 31, 2022	Aging	Proportion in the total balance of other receivables as at December 31, 2022 (%)	Balance of provision for bad debts as at December 31, 2022
Entity 1	Advance money for the Company	612,642	Within 1 year and 3 – 4 years	15.11	28,427
Entity 2	Suspense payment	439,819	1 – 5 years and over 5 years	10.85	9,167
Entity 3	Security deposits Advance payment	325,773	2 – 5 years and over 5 years	8.04	325,031
Entity 4	Suspense payment	317,171	Within 1 year and 1 – 2 years	7.82	13,718
Entity 5	Security deposits Advance payment	166,339	Over 5 years	4.10	166,339
Total		1,861,744		45.92	542,682

5.6 Inventories

5.6.1 Classification of inventories

Item	Balance as at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for inventory depreciation/ Provision for impairment of contract performance cost	Book value	Book balance	Provision for inventory depreciation/ Provision for impairment of contract performance cost	Book value
Raw materials	923,489	24,494	898,995	919,795	24,610	895,185
Revolving materials	14,258		14,258	13,604		13,604
Goods in process	6,257	1,671	4,586	5,567	1,671	3,896
Stock commodities	97,835	2,429	95,406	96,481		96,481
Contract performance cost	103,096		103,096	79,138		79,138
Total	1,144,935	28,594	1,116,341	1,114,585	26,281	1,088,304

5.6.2 Provision for inventory depreciation and provision for impairment of contract performance cost

Item	Balance as at December 31, 2021	Increase in the current period		Decrease in the current period		Balance as at December 31, 2022
		Provision	Others	Reversal or write-off	Others	
Raw materials	24,610				116	24,494
Goods in process	1,671					1,671
Stock commodities		2,429				2,429
Total	26,281	2,429			116	28,594

5.6.3 Notes to the capitalized amounts of borrowing costs included in the ending balance of inventories

As at December 31, 2022 and December 31, 2021, the Group had no capitalized borrowing costs included in the year end balance of inventories. The inventories were not used for collateral or guarantee.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.7 Contract assets

5.7.1 Breakdowns of contract assets

Item	Balance as at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for impairment	Book value	Book balance	Provision for impairment	Book value
Contract assets	15,815,303	201,404	15,613,899	13,647,488	100,593	13,546,895
Total	15,815,303	201,404	15,613,899	13,647,488	100,593	13,546,895

The petroleum engineering technology services provided by the Group are usually settled in stages according to the completion schedule agreed in the contract, and the project payment will be collected 30 – 180 days after the settlement via making out an invoice. Engineering construction business will reserve quality guarantee as 5% of progress billings, and have an unconditional right to receive the guarantee after guarantee period.

5.7.2 Amounts with and reasons for significant changes in book values during the reporting period

During the current period, there was no significant change in contract assets caused by the accumulated and additional adjustment to revenues.

5.7.3 Disclosure by category of contract assets based on the provision method for impairment

Category	Balance as at December 31, 2022					Balance as at December 31, 2021				
	Book balance		Provision for impairment			Book balance		Provision for impairment		
	Amount	Proportion (%)	Amount	Proportion of provision (%)	Book value	Amount	Proportion (%)	Amount	Proportion of provision (%)	Book value
Provision made on an individual basis	141,901	0.90	141,901	100.00						
Provision for impairment made by portfolios	15,673,402	99.10	59,503	0.38	15,613,899	13,647,488	100.00	100,593	0.74	13,546,895
Including:										
Petroleum Engineering	9,134,876	57.76	39,691	0.43	9,095,185	7,627,792	55.89	82,495	1.08	7,545,297
Construction and Engineering	6,538,526	41.34	19,812	0.30	6,518,714	6,019,696	44.11	18,098	0.30	6,001,598
Total	15,815,303	100.00	201,404		15,613,899	13,647,488	100.00	100,593		13,546,895

5.8 Other current assets

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Value-added tax retained	1,123,184	1,281,654
Input VAT to be certified	61,174	22,671
Value-added tax prepaid	1,153,395	931,596
Enterprise income tax prepaid	25,110	2,085
Total	2,362,863	2,238,006

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.9 Long-term equity investments

Investee	Balance as at December 31, 2021	Increase/decrease in the current period								Balance as at December 31, 2022	Ending balance of provision for impairment
		Additional investment	Negative investment	Profit or loss on investments recognized by the equity method	Adjustment to other comprehensive income	Other changes in equity	Cash dividends or profits declared to be distributed	Provision for impairment made	Others		
1. Joint ventures											
Zhong Wei Energy Services Co., Ltd. (A Sinopec – Weatherford Joint Venture)	8,374			417						8,791	
Sinopec Gulf Petroleum Engineering Services, LLC	13,039			-36						13,003	
EBAPAN,S.A.DEC.V	1,037			509						1,546	
Sub-total	22,450			890						23,340	
2. Associates											
Hua Bei Ruida Oil Service Company Limited ("Ordos North")	8,251			2,705			-1,400			9,556	
Xinjiang North China Tianxiang Oil Service Company Limited ("Xinjiang North")	4,263			893			-1,620			3,536	
Qianjiang HengYun Comprehensive Vehicle Performance Inspecting Company Limited	1,672			600			-540			1,732	
Zhenjiang Huajiang Oil and Gas Engineering Technology Service Co., Ltd	2,353			538			-288			2,603	
Henan Zhongyuan Oil & Gas Technology Service Co., Ltd	2,557			57			-28			2,586	
Henan Zhongyou Oil & Gas Technology Service Co., Ltd	5,502			1,821			-461			6,862	
Sub-total	24,598			6,614			-4,337			26,875	
Total	47,048			7,504			-4,337			50,215	

Other descriptions:

There is no restriction on sale of the long-term equity investments held by the Group. For the information on the Group's joint ventures and associates, see Note 7.2 Equity in joint ventures or associates.

5.10 Investment in other equity instruments

5.10.1 Details of investment in other equity instruments

Item	**Balance as at December 31, 2022**	Balance as at December 31, 2021
Sinopec Carbon Industry Technology Co., Ltd.	**125,011**	
Sinopec & Tharwa Drilling Company		13,352
Dongying Kewei Intelligent Technology Co., Ltd.	**116**	116
Shengli Oilfield Niuzhuang Petroleum Development Co., Ltd.	**9,365**	8,292
Total	**134,492**	21,760

As the investments in other equity instruments involving Sinopec Carbon Industry Technology Co., Ltd. are investments held as planned for a strategic purpose in a long term, the Group designated these investments as the financial assets measured at fair value through other comprehensive income.

5.10.2 Details of investment in non-trading equity instruments

Item	Dividend revenue recognized in the current period	Accumulated gains	Accumulated losses	Amount of other comprehensive income transferred to retained earnings	Reason for transferring the other comprehensive income to retained earnings
Sinopec & Tharwa Drilling Company			14,868	14,868	Disposed during the year
Dongying Kewei Intelligent Technology Co., Ltd.			300		
Shengli Oilfield Niuzhuang Petroleum Development Co., Ltd.	500	7,365			
Sinopec Carbon Industry Technology Co., Ltd.			11		

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.11 Fixed assets

5.11.1 Fixed assets and disposal of fixed assets

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Fixed assets	24,849,097	23,428,943
Disposal of fixed assets	47,510	32,838
Total	24,896,607	23,461,781

5.11.2 Breakdowns of fixed assets

Item	Buildings and constructions	Equipment and others	Total
1. Original book value			
(1) Balance as at December 31, 2021	1,644,119	63,932,401	65,576,520
(2) Increase in the current period	7,240	4,635,993	4,643,233
– Purchase		100,000	100,000
– Transferred from construction in progress	7,240	4,535,993	4,543,233
(3) Decrease in the current period	8,551	2,865,257	2,873,808
– Disposal or retirement	8,551	2,865,257	2,873,808
(4) Balance as at December 31, 2022	1,642,808	65,703,137	67,345,945
2. Accumulated depreciation			
(1) Balance as at December 31, 2021	640,591	40,259,263	40,899,854
(2) Increase in the current period	55,442	2,942,636	2,998,078
– Provision	55,442	2,942,636	2,998,078
(3) Decrease in the current period	7,341	2,593,667	2,601,008
– Disposal or retirement	7,341	2,593,667	2,601,008
(4) Balance as at December 31, 2022	688,692	40,608,232	41,296,924
3. Provision for impairment			
(1) Balance as at December 31, 2021	654	1,247,069	1,247,723
(2) Increase in the current period			
– Provision			
(3) Decrease in the current period		47,799	47,799
– Disposal or retirement		47,799	47,799
(4) Balance as at December 31, 2022	654	1,199,270	1,199,924
4. Book value			
(1) Book value as at December 31, 2022	953,462	23,895,635	24,849,097
(2) Book value as at December 31, 2021	1,002,874	22,426,069	23,428,943

As at December 31, 2022, the Group had no fixed assets under pledge.

5.11.3 Fixed assets with pending certificates of title

There had been a total amount of 25 premises without qualified ownership certificates up to December 31, 2022, totaling amount in cost of RMB167,225,000, in accumulated depreciation of RMB73,721,000 and net book value of RMB93,504,000.

5.11.4 Disposal of fixed assets

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Equipment	47,510	32,838
Total	47,510	32,838

Remark: As at December 31, 2022, there was no disposal of fixed assets lasting for over one year.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.12 Construction in progress

5.12.1 Construction in progress and project materials

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Construction in progress	**467,204**	668,364
Engineer material	**181**	
Total	**467,385**	668,364

5.12.2 Details of construction in progress

Item	Balance as at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for impairment	Book value	Book balance	Provision for impairment	Book value
Infrastructure improvement expenditure	**3,890**	**3,502**	**388**	8,731	3,502	5,229
Major Materials and equipment procurement projects	**459,402**		**459,402**	655,232		655,232
Other construction projects	**7,414**		**7,414**	7,903		7,903
Total	**470,706**	**3,502**	**467,204**	671,866	3,502	668,364

5.12.3 Changes in important construction in progress in the current period

Project name	Budget amount	Balance as at December 31, 2021	Increase in the current period	Amount transferred to fixed assets in the current period	Other decreases in the current period	Balance as at December 31, 2022	Proportion of accumulated project investments in budget amount (%)	Project progress	Accumulated capitalized amount of interest	Source of funds
SICP system construction	165,150		52,569			52,569	31.83	31.83	165,150	Self-financing in full
Year 2022, 70 modern drilling rig renewal project in the southwest work area	107,850		107,456	56,451		51,005	99.63	99.63	107,850	Self-financing in full
Year 2022, Mexico HUELITLI project non-installation equipment purchase project	277,610		172,063	126,266		45,797	61.98	61.98	277,610	Self-financing in full
Year 2022, 50DB Modern Rig Renewal Project	47,800		36,544			36,544	76.45	76.45	47,800	Self-financing in full
Shale Gas Technology Center Experimental Facilities Supporting Improvement Project	36,520	10,000	26,520			36,520	100.00	100.00	36,520	Self-financing in full
Year 2022, Rotary Steerable Instrument Purchase	140,000		138,755	104,006		34,749	99.11	99.11	140,000	Self-financing in full
Renewal and purchase of logging engineering vehicles	43,830		43,769	20,886		22,883	99.86	99.86	43,830	Self-financing in full
Year 2022, Straight pipe laying operation equipment purchase project	22,820		22,816			22,816	99.98	99.98	22,820	Self-financing in full
Year 2022, the fast-moving and fast-loading test oil and gas workover rig will be updated	28,750		28,688	10,639		18,049	99.78	99.78	28,750	Self-financing in full
Year 2022, the 70-type drilling rig renovation project in the Southwest Work Area	12,630		12,621			12,621	99.93	99.93	12,630	Self-financing in full
Total		10,000	641,801	318,248		333,553				

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.13 Right-of-use assets

Item	Land	Buildings	Equipment and others	Total
1. Original book value				
(1) Balance as at December 31, 2021	164,030	711,999	1,026,161	1,902,190
(2) Increase in the current period	65,334	747,750	117,129	930,213
– Newly-added leases	63,930	743,086	114,150	921,166
– Adjustment of lease liabilities	1,404	4,664	2,979	9,047
(3) Decrease in the current period	77,249	392,739	204,867	674,855
– Adjustment of lease liabilities	81	1,502	705	2,288
– Write-off or early termination	77,168	391,237	204,162	672,567
(4) Balance as at December 31, 2022	152,115	1,067,010	938,423	2,157,548
2. Accumulated depreciation				
(1) Balance as at December 31, 2021	112,286	487,856	581,110	1,181,252
(2) Increase in the current period	49,108	340,137	243,251	632,496
– Depreciation	49,108	340,137	243,251	632,496
(3) Decrease in the current period	74,910	390,715	202,925	668,550
– Write-off or early termination	74,910	390,715	202,925	668,550
(4) Balance as at December 31, 2022	86,484	437,278	621,436	1,145,198
3. Provision for impairment				
4. Book value				
(1) Book value as at December 31, 2022	65,631	629,732	316,987	1,012,350
(2) Book value as at December 31, 2021	51,744	224,143	445,051	720,938

Other description: As at December 31, 2022, the lease expenses recognized by the Group and relevant to the short-term lease and low-value assets lease amounted to RMB1,504,664,000.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.14 Intangible assets

5.14.1 Breakdowns of intangible assets

Item	Land use right	Software use right	Contract income right	Others	Total
1. Original book value					
(1) Balance as at December 31, 2021	137,876	206,662	706,143	77,364	1,128,045
(2) Increase in the current period		55,401	80,694	19	136,114
– Purchase		32			32
– Complete of construction		55,369	80,694	19	136,082
(3) Decrease in the current period		10,980			10,980
– Dispose		10,980			10,980
(4) Balance as at December 31, 2022	137,876	251,083	786,837	77,383	1,253,179
2. Accumulated amortization					
(1) Balance as at December 31, 2021	31,410	153,455	396,518	40,066	621,449
(2) Increase in the current period	3,216	20,214	129,065	8,725	161,220
– Provision	3,216	20,214	129,065	8,725	161,220
(3) Decrease in the current period		10,980			10,980
– Dispose		10,980			10,980
(4) Balance as at December 31, 2022	34,626	162,689	525,583	48,791	771,689
3. Provision for impairment					
4. Book value					
(1) Book value as at December 31, 2022	103,250	88,394	261,254	28,592	481,490
(2) Book value as at December 31, 2021	106,466	53,207	309,625	37,298	506,596

① As at December 31, 2022, there were no intangible assets generating from the internal research and development.

② As at December 31, 2022, there were no intangible assets under pledge or guarantee.

5.14.2 Land use right with pending certificate of title

As at December 31, 2022, there were 2 land-use-right with pending certificates of title and the original book value thereof amounted to RMB7,766,000. The provision for accumulated amortization made amounted to RMB2,425,000, and the net book value was RMB5,342,000.

5.15 Long-term deferred expenses

Item	Balance as at December 31, 2021	Increase in the current period	Amortization in the current period	Other decreases	Balance as at December 31, 2022
Special tools for petroleum engineering	5,392,326	2,092,649	1,789,936	11,127	5,683,912
Other tools for petroleum engineering	523,770	508,510	263,201	15,502	753,577
Camping house	659,885	351,025	233,017	15	777,878
Other long-term deferred expenses	19,949	26,550	6,427		40,072
Total	6,595,930	2,978,734	2,292,581	26,644	7,255,439

Other description: The Group's long-term deferred expenses mainly represent special drilling and logging tools of petroleum engineering, geophysical special tools, camping house etc.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.16 Deferred income tax assets and deferred income tax liabilities

5.16.1 Deferred income tax assets without offset

Item	Balance as at December 31, 2022		Balance as at December 31, 2021	
	Deductible temporary differences	Deferred income tax assets	Deductible temporary differences	Deferred income tax assets
Provision for asset impairment and impact of depreciation	953,538	155,815	1,009,924	166,865
Provision for bad debts	731,120	133,660	788,394	142,073
Deferred income	4,877	731	2,478	372
Deductible loss	481,761	72,264		
Others			9,697	1,454
Total	2,171,296	362,470	1,810,493	310,764

5.16.2 Deferred income tax liabilities before offset

Item	Balance as at December 31, 2022		Balance as at December 31, 2021	
	Taxable temporary differences	Deferred income tax liabilities	Taxable temporary differences	Deferred income tax liabilities
Revaluation of assets	7,110	1,777	14,220	3,555
Depreciation of fixed assets	378,327	59,745	26,656	4,310
Changes in fair value through other comprehensive income	7,376	1,845	6,292	1,573
Total	392,813	63,367	47,168	9,438

5.16.3 Details of unrecognized deferred income tax assets

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Deductible temporary differences	2,941,933	2,760,502
Deductible losses	12,609,694	14,146,311
Total	15,551,627	16,906,813

5.16.4 Deductible losses from unrecognized deferred income tax assets will be expired in the following years

Year	Balance as at December 31, 2022	Balance as at December 31, 2021	Remark
Year 2022		1,460,055	
Year 2023	246,170	246,170	
Year 2024	136,050	136,050	
Year 2025	453,670	555,618	
Year 2026	9,176,676	9,569,754	
Year 2027 and later	2,597,128	2,178,664	
Total	12,609,694	14,146,311	

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.17 Short-term borrowings

5.17.1 Classification of short-term borrowings

Item	Currency	Balance as at December 31, 2022	Balance as at December 31, 2021
Credit loans from related parties	RMB	**16,095,000**	15,550,000
	USD	**1,828,208**	1,970,091
Total		**17,923,208**	17,520,091

Description: As at December 31, 2022, no assets of the Group were pledged.

As at December 31, 2022, the Group has no overdue short-term borrowings.

As at December 31, 2022, the interest rate interval for short-term borrowings was from 1.42% to 4.82% (As at December 31, 2021: 1.42%-3.92%).

5.18 Notes payable

Category	Balance as at December 31, 2022	Balance as at December 31, 2021
Bank acceptance bill	**7,987,375**	8,334,086
Commercial acceptance bill	**2,850**	
Total	**7,990,225**	8,334,086

At the end of the current period, there were neither notes payable due but not paid, nor notes payable with bank deposits pledged.

5.19 Accounts payable

5.19.1 Presentation of accounts payable

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Payables for materials	**5,953,406**	5,012,775
Payables for construction	**6,680,943**	5,625,361
Payable for labour cost	**8,150,479**	6,862,711
Payables for equipment	**3,988,288**	3,358,143
Others	**828,112**	697,272
Total	**25,601,228**	21,556,262

5.19.2 Significant accounts payable with aging over one year

Item	Balance as at December 31, 2022	Reason for no payment or carry-forward
Entity 1	**35,588**	Unsettled payment
Entity 2	**29,156**	Quality guarantee deposit, unsettled payment
Entity 3	**20,688**	Quality guarantee deposit, unsettled payment
Entity 4	**13,620**	Unsettled payment
Entity 5	**12,654**	Quality guarantee deposit, unsettled payment
Total	**111,706**	

5.20 Contract liabilities

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Petroleum Engineering	**1,858,141**	1,179,692
Construction Engineering	**3,257,678**	2,368,246
Total	**5,115,819**	3,547,938

In the current period, revenue recognized based on the contract liabilities at the beginning of the current period amounted to RMB2,721,763,000.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.21 Employee compensation payable

5.21.1 Presentation of employee compensation payable

Item	Balance as at December 31, 2021	Increase in the current period	Decrease in the current period	Balance as at December 31, 2022
Short term employee benefits	643,446	15,815,697	15,889,649	569,494
Post-employment benefits	580	2,127,478	2,127,262	796
Termination benefits		25,668	25,668	
Total	644,026	17,968,843	18,042,579	570,290

5.21.2 Presentation of short-term compensation

Item	Balance as at December 31, 2021	Increase in the current period	Decrease in the current period	Balance as at December 31, 2022
(1) Wages or salaries, bonuses, allowances and subsidies	474,028	10,851,334	10,950,926	374,436
(2) Staff welfare		1,170,939	1,170,939	
(3) Social security contributions	810	1,088,315	1,087,215	1,910
Including: 1. Basic medical insurance	229	948,872	947,607	1,494
2. Work-related injury insurance	10	70,860	70,863	7
3. Birth insurance	20	28,543	28,533	30
4. Other insurance	551	40,040	40,212	379
(4) Housing funds	1,734	1,042,728	1,042,688	1,774
(5) Labor union and employee education funds	160,544	313,054	288,262	185,336
(6) Others	6,330	1,349,327	1,349,619	6,038
Total	643,446	15,815,697	15,889,649	569,494

5.21.3 Presentation of defined contribution plans

Item	Balance as at December 31, 2021	Increase in the current period	Decrease in the current period	Balance as at December 31, 2022
Basic pension insurance	400	1,374,355	1,374,295	460
Unemployment insurance	13	57,921	57,919	15
Annuity	167	695,202	695,048	321
Total	580	2,127,478	2,127,262	796

The in-service employees of the Group are subject to basic pension and medical insurance, which are extracted and paid according to regulated rates and set up and governed by local government. In addition, the Company provides a supplementary defined contribution retirement plan for its employees at rates not exceeding 8% of their salaries. Employees who have served the Group for more than one year may participate in this plan. The assets of this plan are held separately from those of the Group in an independent fund administered by a committee consisting of representatives from the employees and the Group. A member of the above plans is entitled to a pension amount equal to a fixed proportion of the salary prevailing at his or her retirement date. The Group has no other material obligation for the payment of pension benefit associated with the basic and supplementary pension plans beyond the annual contributions described above.

During this report, the Group paid RMB25,668,000 compensation to the resigning employee for terminating labor relation.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.22 Taxes and surcharges payable

Taxes and surcharges	Balance as at December 31, 2022	Balance as at December 31, 2021
VAT	396,565	209,114
Corporate income tax	252,726	211,513
Urban maintenance and construction tax	34,974	35,705
House property tax	1,223	1,637
Land use tax	12,733	12,209
Individual income tax	174,702	159,739
Education surtax	21,422	21,021
Other taxes	104,549	86,787
Total	998,894	737,725

5.23 Other payables

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Interest payable	21,885	19,476
Other payables	2,706,259	2,336,347
Total	2,728,144	2,355,823

5.23.1 Interest payable

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Interest payable of long-term loan which interest paid by installment and principal paid at maturity date	5,069	112
Interest payable of short-term loan	16,816	19,364
Total	21,885	19,476

At the end of the current period, the Group had no interest overdue but unpaid.

5.23.2 Other payables

(1) Presentation of other payables by nature

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Guarantee	819,893	617,945
Deposit	145,438	138,024
Amount paid on behalf	645,731	671,505
Temporary receipts	238,069	224,384
Escrow payments	44,611	38,852
Withheld payments	56,067	56,341
Others	756,450	589,296
Total	2,706,259	2,336,347

As at December 31, 2022, other payables with aging over one year amounted to RMB481,057,000 (As at December 31, 2021: RMB439,815,000), mainly including the project quality guarantee deposit, deposit and security fund which are payable. As the project guarantee period has not been matured, or the settlement period has not been due, such payables have not been settled.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.24 Non-current liabilities maturing within one year

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Long-term borrowings within one year	1,000,000	
Long-term payables within one year		5,700
Lease liabilities within one year	517,190	290,345
Total	1,517,190	296,045

5.25 Long-term borrowings

Classification of long-term borrowings:

Item	Balance as at December 31, 2022	Interest rate period	Balance as at December 31, 2021	Interest rate period
Loans on credit	1,480,557	2.37%-2.92%	1,554,686	2.37%-2.92%
Sub-total	1,480,557		1,554,686	
Less: Long-term loans within one year	1,000,000			
Total	480,557		1,554,686	

The Group has no long-term borrowings due but not repaid.

5.26 Lease liabilities

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Land and housing	687,361	251,416
Equipment and others	326,874	429,795
Sub-total	1,014,235	681,211
Less: Lease liabilities within one year	517,190	290,345
Total	497,045	390,866

The interest expenses of lease liabilities accrued for year ended December 31, 2022 were RMB59,843,000, which were included in the “financial expenses – interest expenses.”

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.27 Long-term payables

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Long-term payables	74,657	28,885
Total	74,657	28,885

5.27.1 Long-term payables

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Loans payable		5,600
Others	74,657	28,985
Sub-total	74,657	34,585
Less: Long-term payables within one year		5,700
Total	74,657	28,885

5.28 Estimated liabilities

Item	Balance as at December 31, 2022	Balance as at December 31, 2021	Forming reason
Outstanding litigation	4,000	4,000	
Expected loss of judicial restructuring	159,323	158,233	Estimated payment costs of judicial restructuring
Executory onerous contracts	17,429	25,004	Expected loss of construction contract
Estimated foreign tax expenses	20,246	18,534	Estimated tax expense
Total	200,998	205,771	

For details of expected loss of judicial restructuring, please see Note 11 Significant contingencies existing on balance sheet date.

5.29 Deferred income

Item	Balance as at December 31, 2021	Increase in current period	Decrease in current period	Balance as at December 31, 2022	Forming reason
Government grants	9,288	106,678	104,390	11,576	Government grants received
Total	9,288	106,678	104,390	11,576	

5.30 Share capital

Current Period

Item	Balance as at December 31, 2021	Changes in current period ("+" for increase and "-" for decrease)					Balance as at December 31, 2022
		New shares issued	Share donation	Conversion of reserves into shares	Others	Sub-total	
Legal person share held by domestic capital	11,786,046						11,786,046
RMB social public shares (A-share)	1,783,333						1,783,333
Foreign shares listed overseas (H-share)	5,414,961						5,414,961
Total	18,984,340						18,984,340

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.30 Share capital (Continued)

Prior Period

Item	Balance as at December 31, 2020	Changes in current period ("+" for increase and "-" for decrease)					Balance as at December 31, 2021
		New shares issued	Share donation	Conversion of reserves into shares	Others	Sub-total	
Legal person share held by domestic capital	11,786,046						11,786,046
RMB social public shares (A-share)	1,783,333						1,783,333
Foreign shares listed overseas (H-share)	5,414,961						5,414,961
Total	18,984,340						18,984,340

5.31 Capital reserves

Current Period

Item	Balance as at December 31, 2021	Increase in current period	Decrease in current period	Balance as at December 31, 2022
Share premium	11,649,804			11,649,804
Other capital reserves	67,969			67,969
Total	11,717,773			11,717,773

Prior Period

Item	Balance as at December 31, 2020	Increase in current period	Decrease in current period	Balance as at December 31, 2021
Share premium	11,629,142	20,662		11,649,804
Other capital reserves	88,631		20,662	67,969
Total	11,717,773	20,662	20,662	11,717,773

5.32 Other comprehensive income

Item	Balance as at December 31, 2021	Current period						Balance as at December 31, 2022
		Pre-tax amount incurred in current period	Less: the amount included in other comprehensive income in prior period and transferred to current profits or losses	Less: amount previously included in the other comprehensive income and currently transferred to the retained earnings	Less: income tax expenses	Amount after tax attributable to the parent company	Amount after tax attributable to minority shareholders	
1. Other comprehensive income that cannot be reclassified into profit or loss	-3,823	-4,087		-14,868	1,726	9,055		5,232
Including: changes in the fair value of other equity instruments investment	-3,823	-4,087		-14,868	1,726	9,055		5,232
Total of other comprehensive income	-3,823	-4,087		-14,868	1,726	9,055		5,232

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.33 Special reserves

Item	Balance as at December 31, 2021	Increase in current period	Decrease in current period	Balance as at December 31, 2022
Safety costs	219,182	1,321,549	1,213,748	326,983
Total	219,182	1,321,549	1,213,748	326,983

Note: In accordance with PRC regulations, the Group appropriated production safety fund of RMB1,321,549,000 to specific reserve for year ended December 31, 2022, which was recognised in the cost of related products and the Specific reserve. for year ended December 31, 2022, the Group utilised production safety fund amounting to RMB1,213,748,000 which was of expenditure nature.

5.34 Surplus reserves

Item	Balance as at December 31, 2021	Increase in current period	Decrease in current period	Balance as at December 31, 2022
Statutory surplus reserves	200,383			200,383
Total	200,383			200,383

5.35 Retained earnings

Item	Current period	Prior period	Withdrawal or distribution proportion
Retained earnings as at the beginning of the period	-24,256,338	-24,436,139	
Plus: net profit attributable to owners of the parent company in the period	463,814	179,791	
Other comprehensive income carried forward to retained earnings	-14,868	10	
Retained earnings as at the end of the period	-23,807,392	-24,256,338	
Including: the amount of the surplus reserve withdrawn by subsidiaries in the year attributable to the parent company	24,239	25,961	

5.36 Revenue and cost of sales

5.36.1 Revenue and cost of sales

Item	Current year		Prior year	
	Revenue	Cost	Revenue	Cost
Major business	**72,483,444**	**67,208,238**	68,215,016	63,685,095
Other business	**1,289,244**	**795,249**	1,318,037	835,830
Total	**73,772,688**	**68,003,487**	69,533,053	64,520,925

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.36 Revenue and cost of sales (Continued)

5.36.2 Revenue from contracts

The Group has six reportable segments, they are geophysics, drilling engineering, logging, and mud logging, special down-hole operations, engineering construction and others. The Group expects that classify and disclose revenue according to customer type, major business area and revenue recognition time can reflect the impact of relevant economic factors on the nature, amount, time distribution and uncertainty of enterprise income and cash flow.

The current revenue breakdown information is as follows:

Contract classification	Geophysics	Drilling engineering	Logging and mud logging	Special down-hole operations	Engineering construction	Others	Total
Main business premise							
Mainland China	3,824,307	27,394,924	3,212,301	8,312,909	15,883,365	842,134	59,469,940
Other countries or regions	932,683	9,419,616	45,307	1,053,583	1,552,873	9,442	13,013,504
Total	4,756,990	36,814,540	3,257,608	9,366,492	17,436,238	851,576	72,483,444
Client type							
Related parties	3,528,689	23,970,433	2,871,414	7,496,369	12,712,204	241,257	50,820,366
Third party	1,228,301	12,844,107	386,194	1,870,123	4,724,034	610,319	21,663,078
Total	4,756,990	36,814,540	3,257,608	9,366,492	17,436,238	851,576	72,483,444
Recognition time of revenue							
Goods (recognised at a certain time)		3,999		1,833	13,015	113,177	132,024
Service (recognised over time)	4,756,990	36,810,541	3,257,608	9,364,659	17,423,223	738,399	72,351,420
Total	4,756,990	36,814,540	3,257,608	9,366,492	17,436,238	851,576	72,483,444

5.36.3 Notes to performance obligations

The Group's accounting policies for revenue is set out in Note 3.24. The Group signs petroleum engineering technical service contracts or construction engineering contracting contracts with customers to provide geophysical, drilling engineering, logging, and mud logging, special down-hole operations and engineering construction, and usually completes labor services or delivers construction within the agreed period. The customer settles the completed workload in installments during the contract performance period and pays the progress payment within 30-180 days after settlement. The final settlement and payment are made after the completion of the project and the completion acceptance.

According to the contractual stipulations and legal provisions, the Group's engineering construction business provides quality assurance for the construction. This type of quality assurance is a guaranteed quality assurance to the customer that the construction meet the established standards and does not constitute an individual performance obligation. The Group accounts in accordance with the accounting policies described in Note 3.24.

The Group determines whether the Group's identity is the major principal or agent when engaging in a transaction based on whether it has control over the goods or services before transferring the goods or services to the customers. If the Group can control the goods or services before transferring goods or services to customers, the Group is the major principal and recognizes revenue according to the total amount received or receivable; otherwise, the Group is an agent and recognizes revenue in accordance with the amount of commission or poundage expected to be recognized. The amount is determined by the net amount of deducting to the payable of other related parties from the total amount received or receivable, or according to the established commission amount or proportion.

5.36.4 Transaction price allocated to the remaining performance obligations

The Group signs engineering service contracts with several customers to provide petroleum engineering technical services and construction engineering contracting services and will perform them in a certain period. These contracts usually constitute an individual performance obligation. As at December 31, 2022, some of the Group's petroleum engineering technical services and construction projects are still in the course of performance, and the total transaction price allocated to the unfulfilled obligations is approximately RMB31,630,000,000. The amount is related to performance of each contract and will be recognized as revenue based on the progress of the performance in the future performance period of each contract.

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.37 Taxes and surcharges

Item	Current period	Prior period
Urban maintenance and construction tax	44,060	49,450
Educational surcharges	34,861	38,010
Overseas taxes and surcharges	84,439	22,927
Property taxes	9,945	9,553
Land use taxes	55,708	55,507
Vehicle and vessel usage tax	7,853	7,839
Stamp duty	51,217	49,435
Others	3,008	5,300
Total	291,091	238,021

5.38 Selling and distribution expenses

Item	Current period	Prior period
Staff costs	59,053	58,894
Depreciation cost	611	367
Expenses for business trips	3,133	4,774
Publicity expenses	39	84
Rental expenses	1,718	2,923
Office expenses	2,541	2,570
Others	7,949	10,851
Total	75,044	80,463

5.39 General and administrative expenses

Item	Current period	Prior period
Repair and maintenance	33,468	43,965
Staff costs	1,531,355	1,458,349
Miscellaneous service charges	23	454
The information system runs maintenance fees	56,032	50,493
Business entertainment	22,894	25,667
Travel expenses	32,134	46,350
Rental expenses	22,944	35,058
Depreciation and amortization	131,226	106,160
Consultation	25,700	14,888
Property insurance	2,654	2,622
Others	444,856	400,733
Total	2,303,286	2,184,739

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.40 Research and development expenses

Item	Current period	Prior period
Staff costs	726,794	682,076
Materials costs	713,551	642,424
Technical collaboration fee	189,175	166,194
Experimental expenses	57,536	49,247
Depreciation	48,979	44,688
Others	102,933	85,077
Total	1,838,968	1,669,706

5.41 Financial expenses

Item	Current period	Prior period
Interest expenses on borrowings	644,461	670,798
Interest expenses on lease liabilities	59,843	55,962
Interest income	-15,408	-38,180
Exchange losses/(gains)	-98,667	127,419
Bank charges and others	37,367	48,136
Total	627,596	864,135

5.42 Other income

Grant items (sources of other income)	Current period	Prior period	Asset-related/ revenue-related
National research grants	8,835	6,405	Related to income
Subsidies of enterprise development	7,078	27,585	Related to income
Subsidies of stable post	14,191	19,701	Related to income
Government incentives	500	4,151	Related to income
National research grants	1,164	1,228	Related to assets
Additional input VAT credit	35,918	27,358	Related to income
Return of individual income tax fee	2,996	3,650	Related to income
Asset Replacement Subsidy Income		1,176	Related to income
Self-use refined oil consumption tax refund		172,939	Related to income
Other		1,103	Related to assets
Total	70,682	265,296	

5.43 Investment income

Item	Current period	Prior period
Investment income from Long-term equity calculated by equity method	7,504	7,280
Investment income from disposal of trading financial assets	798	
Dividend income obtained during the holding period of other equity instrument investments	500	1,577
Investment income from debt restructuring	18,157	29,404
Total	26,959	38,261

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.44 Impairment of credit losses

Item	Current period	Prior period
Losses form impairment of accounts receivable	**-82,515**	1,342
Losses form impairment of other receivables	**6,985**	21,150
Total	**-75,530**	22,492

5.45 Impairment of assets

Item	Current period	Prior period
Losses from impairment of contract assets	**97,454**	-2,826
Losses from impairment of inventories	**2,429**	
Total	**99,883**	-2,826

5.46 Gains from disposal of assets

Item	Current period	Prior period
Gain on disposal of fixed assets ("-" for losses)	**13,525**	84,972
Others	**12,363**	3,751
Total	**25,888**	88,723

5.47 Non-operating income

Item	Current period	Prior period	Amount included in the current non-recurring profit or loss
Income from waived payables	**14,711**	31,145	14,711
Compensation received	**8,201**	7,790	8,201
Penalty income	**4,290**	2,313	4,290
Gains from assets counts	**2,202**	140	2,202
Insurance compensation	**1,455**	6,959	1,455
Gain from asset scrap	**39,445**	38,300	39,445
Government subsidy income	**36,704**	35,178	36,704
Relocation compensation	**26,877**	37,900	26,877
Other	**17,182**	8,972	17,182
Total	**151,067**	168,697	151,067

5.48 Non-operating expenses

Item	Current period	Prior period	Amount included in the current non-recurring profit or loss
Donation	**1,764**	830	1,764
Expected losses on pending claims		-79	
Compensation	**9,016**	5,683	9,016
Penalty	**2,265**	6,376	2,265
Non-current assets written off	**71,538**	24,762	71,538
Estimated judicial restructuring loss		-69,049	
Others	**69,515**	57,330	69,515
Total	**154,098**	25,853	154,098

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.49 Income tax expenses

5.49.1 Table of income tax expenses

Item	Current period	Prior period
Current tax in accordance with tax laws and related regulations	265,050	229,351
Deferred income tax	497	81,380
Total	265,547	310,731

5.49.2 Adjustment process of accounting profits and income tax expenses

Item	Current period
Total profits	729,361
Income tax expenses calculated at statutory tax rate	182,340
Effect of different tax rates used by subsidiaries	48,104
Adjustments of current tax in previous years	-4,102
Profit and loss of joint ventures and associates accounted for using the equity method	-1,268
Effect of non-deductible costs, expenses, and losses	71,032
Effect of unrecognized deferred income tax assets in prior periods	-72,744
Effect of deductible temporary differences or losses from deferred income tax assets unrecognized in current period	193,632
Tax effect of additional deduction of research and development expenses	-151,447
Income tax expenses	265,547

5.50 Items of statement of cash flows

5.50.1 Cash received from other operating activities

Item	Current period	Prior period
Amount paid on behalf	1,408,619	1,008,365
Government grants	109,674	263,585
Temporary receipt and payment	1,416,960	855,134
Guarantee	1,321,081	1,084,786
Compensation	63,640	119,868
Deposits	34,082	77,920
Others	530,091	384,586
Total	4,884,147	3,794,244

5.50.2 Cash paid for other operating activities

Item	Current period	Prior period
Temporary receipt and payment	206,390	181,633
Guarantee	1,349,502	1,350,783
Integrated service	92,402	54,034
Repair and maintenance expenses	612,605	409,998
Other operating expenses	1,505,492	1,381,062
Others	146,595	66,100
Total	3,912,986	3,443,610

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.50 Items of statement of cash flows (Continued)

5.50.3 Cash paid for other financing activities

Item	Current period	Prior period
Lease payments	503,490	496,440
Notes acceptance fee	1,293	1,593
Payment of guarantee and commitment fees	21,536	20,161
Total	526,319	518,194

5.51 Supplementary information to the statement of cash flows

5.51.1 Supplementary information to the statement of cash flows

Supplementary information	Current period	Prior period
1. Net profits adjusted to cash flows from operating activities		
Net profit	463,814	179,791
Plus: Impairment of credit losses	-75,530	22,492
Impairment losses on assets	99,883	-2,826
Depreciation of fixed assets	2,998,078	2,937,642
Depreciation of right-of-use assets	632,496	535,838
Amortization of intangible assets	161,220	115,269
Amortization of long-term deferred expenses	2,292,581	2,151,839
Losses on disposal of fixed assets, intangible assets, and other long-term assets ("-" for gains)	-25,888	-88,723
Losses from scrapping of fixed assets ("-" for gains)	32,093	-10,181
Financial expenses ("-" for gains)	568,686	837,280
Investment loss ("-" for gains)	-26,959	-38,261
Decreases in deferred income tax assets ("-" for increases)	-51,706	85,070
Increases in deferred income tax liabilities ("-" for decreases)	52,203	-4,033
Decreases in inventories ("-" for increases)	-30,350	-40,410
Decreases in operating receivables ("-" for increases)	-5,522,350	-147,664
Increases in operating payables ("-" for decreases)	2,521,797	-286,873
Work safety expenses	107,801	-39,341
Net cash flows from operating activities	4,197,869	6,206,909
2. Significant investing and financing activities not involving cash receipts and payments		
3. Net change in cash and cash equivalents		
Ending balance of cash and cash equivalents	1,801,150	2,475,306
Less: beginning balance of cash and cash equivalents	2,475,306	1,523,352
Net increase in cash and cash equivalents	-674,156	951,954

5.51.2 Breakdowns of cash and cash equivalents

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
I. Cash	1,801,150	2,475,306
Including: cash on hand	2,992	5,230
Unrestricted bank deposits	1,797,634	2,469,601
Other unrestricted monetary funds	524	475
II. Cash equivalents		
III. Ending balance of cash and cash equivalents	1,801,150	2,475,306
Including: Restricted cash and cash equivalents by the parent company or its subsidiary subsidiaries		

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.52 Assets with restrictions on the ownership or use right

Item	Book value as at December 31, 2022	Reason for restriction
Cash at bank and on hand	37,079	Guarantee and funds that are blocked frozen
Total	**37,079**	

5.53 Foreign currency monetary items

5.53.1 Foreign currency monetary items

Item	Balance in foreign currency as at December 31, 2022	Exchange rate for conversion	RMB amount translated as at December 31, 2022
Monetary funds			1,307,770
Including: USD	107,678	6.9646	749,934
KWD	9,392	22.7520	213,681
SAR	22,695	1.8528	42,050
DZD	234,952	0.0507	11,917
Others			290,188
Accounts receivable			4,536,252
Including: USD	501,151	6.9646	3,490,300
KWD	14,523	22.7520	330,424
SAR	185,555	1.8528	343,805
Others			371,723
Other receivables			1,849,264
Including: USD	151,112	6.9646	1,052,438
KWD	9,898	22.7520	225,192
SAR	227,877	1.8528	422,221
DZD	20,674	0.0507	1,049
Others			148,364
Accounts payable			1,121,982
Including: USD	86,639	6.9647	603,410
KWD	3,213	22.7520	73,092
SAR	175,518	1.8528	325,209
DZD	238,483	0.0507	12,097
Others			108,174
Other payables			258,399
Including: USD	17,910	6.9646	124,737
KWD	2,654	22.7520	60,380
SAR	9,667	1.8528	17,911
DZD	596,637	0.0507	30,263
Others			25,108
Interest payable			91
Including: USD	13	6.9646	91
Short-term borrowings			1,828,208
Including: USD	262,500	6.9646	1,828,208
Long-term borrowings			480,557
Including: USD	69,000	6.9646	480,557

5 NOTES TO THE ITEMS OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5.54 Government grants

Grant item	Category	Balance as at December 31, 2021	New grants in current period	Amount carried forward and included in profit or loss in current period	Balance as at December 31, 2022	Presented items carried forward and included in profit or loss in current period	Assets-related/ Income-related
Relocation compensation	Financial appropriation		36,704	36,704		Other income	Income-related
Return of individual income tax fee	Financial appropriation		2,996	2,996		Other gains	Income-related
Special funds for national scientific research	Financial appropriation	7,055	9,366	8,835	7,586	Other gains	Income-related
Grants for enterprise development	Financial appropriation		9,578	7,078	2,500	Other gains	Income-related
Subsidy for job stabilization	Financial appropriation	102	14,089	14,191		Other gains	Income-related
Government incentive fund	Financial appropriation		500	500		Other gains	Income-related
Additional VAT deduction	Financial appropriation		36,441	35,918	523	Other gains	Income-related
Grants for enterprise development – Asset-related	Financial appropriation	2,131		1,164	967	Other gains	Asset-related
Total		9,288	109,674	107,386	11,576		

5.55 Lease

5.55.1 As the lessee

Item	Current period
Interest expenses on lease liabilities	**59,843**
Expense on short-term lease under simplified treatment and included in relevant asset costs or the current profit or loss	**1,504,664**
Total cash outflows relevant to lease	**2,200,698**

The Company's future potential cash outflows not included in the lease liabilities for measurement mainly come from leases where the leasee has committed but not started yet. The estimated annual cash outflows in the future of leases where the lease has committed but not started are as below:

Remaining lease term	Lease payment undiscounted
Within 1 year	116,518
Total	116,518

5.55.2 As the lessor

(1) Operating lease

	Current period
Revenue from operating lease	**75,466**
Including: Revenue relevant to variable lease payment not included in lease receipts	

Undiscounted lease receipts that will be collected after December 31, 2022:

Remaining lease term	Current period
Within 1 year	79,230
1-2 years	24,250
2-3 years	7,211
3-4 years	5,579
4-5 years	5,504
Over 5 years	5,507
Total	127,281

5.55.3 Effect on implementation of the *Accounting Treatment of Rent Concessions Related to the COVID-19 Epidemic*

For rent concessions such as rent reductions and deferred payment for rent concessions that meet the conditions and are directly triggered by the COVID-19 *epidemic*, the Company chose to adopt the simplified method of accounting in accordance with the *Accounting Treatment of Rent Concessions Related to the COVID-19 Epidemic*.

There is no rental concessions meet relevant conditions in the year.

6 CHANGE OF CONSOLIDATION SCOPE

The Company's newly set up fourth-level subsidiary, Sinopec Jingwei Geological Measurement and Control Technology Co., Ltd., was included in the scope of consolidation.

7 EQUITY IN OTHER ENTITIES

7.1 Equity in the subsidiaries

7.1.1 Structure of enterprise group

Name of subsidiary	Principal place of business	Registration place	Business nature	Shareholding ratio (%)		Way of acquisition
				Direct	Indirect	
Sinopec Oilfield Service Corporation	China	Beijing	Oilfield technical service	100		Business combination under the common control
Sinopec Shengli Petroleum Engineering Corporation	China	Dongying, Shandong	Oilfield technical service	100		Business combination under the common control
Sinopec Zhongyuan Petroleum Engineering Corporation	China	Puyang, Henan	Oilfield technical service	100		Business combination under the common control
Sinopec Jianghan Petroleum Engineering Corporation	China	Qianjiang, Hubei	Oilfield technical service	100		Business combination under the common control
Sinopec East China Petroleum Engineering Corporation	China	Nanjing, Jiangsu	Oilfield technical service	100		Business combination under the common control
Sinopec North China Petroleum Engineering Corporation	China	Zhengzhou, Henan	Oilfield technical service	100		Business combination under the common control
Sinopec South West Petroleum Engineering Corporation	China	Chengdu, Sichuan	Oilfield technical service	100		Business combination under the common control
Sinopec Geophysical Corporation	China	Beijing	Geophysical exploration	100		Business combination under the common control
Sinopec Petroleum Engineering and Construction Corporation	China	Beijing	Engineering construction	100		Business combination under the common control
Sinopec Offshore Petroleum Engineering Corporation	China	Shanghai	Offshore oilfield technical service	100		Business combination under the common control
Sinopec International Petroleum Service Corporation	China	Beijing	Oilfield technical service	100		Business combination under the common control
Sinopec Jingwei Co., Ltd.	China	Qingdao, Shandong	Specialized mining and ancillary activities	100		Established

7.2 Equity in joint venture arrangements or associates

7.2.1 Major joint ventures or associates

Name of joint ventures or associates	Principal place of business	Registered place	Business nature	Shareholding ratio (%)		Accounting treatment method for investments in joint ventures or associates
				Direct	Indirect	
Zhong Wei Energy Service Co. Ltd.	China	Beijing	Oilfield technical services	50.00		Equity method

7 EQUITY IN OTHER ENTITIES (Continued)

7.2 Equity in joint venture arrangements or associates (Continued)

7.2.2 Principal financial information of major joint ventures

	Zhong Wei Energy Services Co., Ltd.	
	Balance as at December 31, 2022/ Current period	Balance as at December 31, 2021/ Prior period
Current assets	**50,498**	31,934
Including: cash and cash equivalents	**7,367**	5,949
Non-current assets	**3,183**	3,817
Total assets	**53,681**	35,751
Current liabilities	**36,098**	19,002
Non-current liabilities		
Total liabilities	**36,098**	19,002
Net assets	**17,583**	16,749
Equity attributable to shareholders of the Company	**8,791**	8,374
Adjusted matters		
Carrying amount of equity investment in joint ventures	**8,791**	8,374
Revenue	**57,848**	26,207
Financial expenses	**-51**	-70
Income tax expenses		
Net profit	**835**	118
Other comprehensive income		
Total comprehensive income	**835**	118
Dividends received from joint ventures		

7.2.3 Summary of financial information on insignificant joint ventures or associates

	Balance as at December 31, 2022/ Current period	Balance as at December 31, 2021/ Prior period
Joint ventures:		
Total book value of investments	**14,549**	14,076
Total amount calculated based on the following shareholding proportions		
– Net profit	**473**	801
– Other comprehensive income		
– Total comprehensive income	**473**	801
Associates:		
Total book value of investments	**26,875**	24,598
Total amount calculated based on the following shareholding proportions		
– Net profit	**6,614**	6,420
– Other comprehensive income		
– Total comprehensive income	**6,614**	6,420

8 RISKS RELATED TO FINANCIAL INSTRUMENTS

The major financial instruments of the Group include cash at bank and on hand, accounts receivable, receivables at FVTOCI, other current assets, other equity instrument investments, bills payable, accounts payable, other payables, short-term loans, non-current liabilities due within one year, long-term loans, lease liabilities and long-term payables. The details of these financial instruments are disclosed in the respective notes. The financial risk of these financial instruments and financial management policies used by the Group to minimize the risk are disclosed as below. The management manages and monitors the exposure of these risks to ensure the above risks are controlled in the limited range.

Risk management objectives and policies

The Group's objective in risk management is to obtain an appropriate equilibrium between risk and return. It also focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance. Based on the objectives of financial risk management, certain policies are made to recognize and analyze risk and internal control is designed according to proper acceptable in order to monitor the risk position of the Group. Both the policies and internal control will be reviewed and revised regularly to adapt the changes of the market and business activities of the Group. The performance of internal control will be reviewed regularly or randomly in accordance with the financial management policies.

The Group's financial instrument risks mainly include credit risk, liquidity risk and market risk.(Including currency risk and interest rate risk.)

The board of directors is responsible for planning and establishing the risk management structure of the Group, formulating the Group's risk management policies and related guidelines, supervising the implementation of risk management measures. The Group has established risk management policies to identify and analyze the risks faced by the Group. These risk management policies clearly define specific risks, covering market risk, credit risk and liquidity risk. The Group regularly assesses changes in the market environment and the Group's operating activities to determine whether update risk management policies and systems. The risk management of the Group is carried out by the Risk Management Committee in accordance with the policies approved by the Board of Directors. The Risk Management Committee identifies, evaluates and circumvents related risks through close cooperation with other departments of the Group. The internal audit department of the Group reviews regularly on risk management controls and procedures, then reports the audit results to the audit committee of the Group.

The Group diversifies the risk of financial instruments through appropriate diversified investments and business combinations, and reduces the risk of concentration in a single industry, a specific region or a specific counterparty by developing appropriate risk management policies.

8.1 Credit risk

Credit risk refers to the risk that the counterparty to a financial instrument would fail to discharge its obligation under the terms of the financial instrument and cause a financial loss to the Group.

Credit is managed on the grouping basis. Credit risk is mainly arises from cash at bank, bills receivable, accounts receivable, other receivables, contract assets, long-term receivables etc.

The Group expects that there is no significant credit risk associated with cash at bank since it is deposited or will be accepted by the sate-owned banks and other medium or large size listed banks.

In addition, the Group has policies to limit the credit risk exposure on bills receivable and accounts receivable, other receivables, contract assets and long-term receivables. The Group assesses the credit quality of and sets credit limits on its customers by taking into account their financial position, the availability of guarantee from third parties, the availability of guarantee from third parties, their credit history and other factors such as current market conditions. The credit history of the customers is regularly monitored by the Group. In respect of customers with a poor credit history, the Group will use written payment reminders, or shorten or cancel credit periods, to ensure the overall credit risk of the Group is limited to a controllable extent.

The highest credit risk exposed to the Group is limited to the carrying amount of each financial instrument illustrated in the balance sheet. The Group would not provide any guarantee that might cause credit risk to the Group.

Among the bills receivable and accounts receivable of the Group, the bills receivable and accounts receivable of the top five customers accounted for 58.11% (in 2021: 49.54%); among the other receivable of the Group, the other receivable of the top five customers accounted for 45.93% (2021: 43.83%).

8.2 Liquidity risk

Liquidity risk refers to the risks that the Group will not be able to meet its obligations associated with its financial liabilities that are settled by delivering cash or other financial assets.

Cash flow forecasting is performed by Group's finance department. The Group's finance management monitors cash and cash equivalents to meet operational needs and reduce the effect of floating cash flow. The department monitors the usage of bank loan so that the Group does not breach borrowing limits or covenants while maintaining sufficient headroom on its undrawn committed borrowing facilities from Sinopec Finance Co., LTD and major financial institute to meet the short-term and long-term liquidity requirements. In addition, the Group will also consider negotiating with suppliers to reduce the amount of debt to reduce the company's cash flow pressure.

The Group raises working capital from its operations, bank and other borrowings. As at December 31, 2022, the amount of bank loans not yet used by the Group is RMB13,189,601,000. (as at December 31, 2021: RMB15,937,997,000).

8 RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

Risk management objectives and policies (Continued)

8.2 Liquidity risk (Continued)

As at the end of the period, the financial assets, financial liabilities and off-balance sheet guarantee items held by the Company are analyzed based on the maturity of remaining undiscounted contractual cash flows as follows (unit: RMB '000):

Item	Balance as at December 31, 2022				
	Within 1 year	1 – 2 years	2 – 5 years	Over 5 years	Total
Financial assets:					
Cash and cash equivalents	1,838,229				1,838,229
Accounts receivable	10,537,217				10,537,217
Accounts receivable financing	1,468,340				1,468,340
Other receivables	3,196,602				3,196,602
Other current assets	2,362,863				2,362,863
Total financial assets	19,403,251				19,403,251
Financial liabilities:					
Short-term loans	18,523,287				18,523,287
Bills payable	7,990,226				7,990,226
Accounts payable	25,601,228				25,601,228
Other payables	2,728,144				2,728,144
Non-current liabilities due within 1 year	1,567,679				1,567,679
Long-term borrowings	10,668	480,557			491,225
Lease liabilities		377,161	94,685	50,939	522,785
Long-term payables		74,657			74,657
Total financial liabilities and contingent liabilities	56,421,232	932,375	94,685	50,939	57,499,231

Item	Balance as at December 31, 2021				
	Within 1 year	1 – 2 years	2 – 5 years	Over 5 years	Total
Financial assets:					
Cash and cash equivalents	2,508,224				2,508,224
Accounts receivable	8,151,019				8,151,019
Accounts receivable financing	1,295,971				1,295,971
Other receivables	2,552,292				2,552,292
Other current assets	2,238,006				2,238,006
Total financial assets	16,745,512				16,745,512
Financial liabilities:					
Short-term loans	17,878,057				17,878,057
Bills payable	8,334,086				8,334,086
Accounts payable	21,556,262				21,556,262
Other payables	2,355,823				2,355,823
Non-current liabilities due within 1 year	337,691				337,691
Long-term borrowings		1,639,014			1,639,014
Lease liabilities		224,724	195,470	10,835	431,029
Long-term payables					
Total financial liabilities and contingent liabilities	50,461,919	1,863,738	195,470	10,835	52,531,962

8 RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

Risk management objectives and policies (Continued)

8.3 Market risk

Market risk, includes interest rate risk and foreign currency risk, refers to the risk that the fair value or future cash flow of a financial instrument will fluctuate because of the changes in market price.

8.3.1 Interest rate risk

Interest rate risk refers to the risk that the fair value or future cash flow of a financial instrument will fluctuate because of the floating rate. Interest rate risk arises from recognized interest-bearing financial instrument and unrecognized financial instrument (e.g. loan commitments).

The Group's interest rate risk arises from long-term bank loans and other interest-bearing liabilities. Financial liabilities issued at floating rate expose the Group to cash flows interest rate risk. Financial liabilities issued at fixed rate expose the Group to fair value interest rate risk. The Group determines the relative proportions of its fixed rate and floating rate contracts depending on the prevailing market conditions. At the same time, the Group monitors and maintains the combined financial instruments of fixed rate and floating rate.

The Group closely monitors the impact of changes in interest rates on the Group's interest rate risk. The Group currently does not adopt an interest rate hedging policy. However, management is responsible for monitoring interest rate risk and will consider hedging significant interest rate risk when it will be needed. Increase in interest rates will increase the cost of new borrowing and the interest expenses with respect to the Group's outstanding floating rate borrowings, and therefore could have a material adverse effect on the Group's financial position. The Group's management will make decisions with reference to the latest market conditions. The Group may enter into interest swap agreement to mitigate its exposure to the interest rate risk. For the period ended December 31, 2022 and year ended December 31, 2021, the Company did not enter into any interest rate swap arrangements. The fair value interest rate risk of the deposit with bank was not principal because the fixed term deposits are short-term deposits etc.

The interest-bearing financial instruments held by the Group are as follows:

As at December 31, 2022, if the borrowing interest rate calculated at the floating interest rate rises or falls by 50 basis points, while other factors remain unchanged, the Group's net profit and shareholders' equity will decrease or increase by approximately RMB12,408,000 (as at December 31, 2021: RMB13,218,000).

The financial instruments held by the Group at the date of balance sheet expose the Group to fair value interest rate risk. Under the hypothesis of a floating interest rate at the date of balance sheet, the effect to the net profit and shareholder's equity illustrated in the sensitivity analysis as above is arised from the recalculation of these financial instrument issued at new interest rates. The non-derivative tools issued at floating interest rate held by the Group at the date of balance sheet expose the Group to cash flow interest rate risk. The effect to the net profit and shareholder's equity illustrated in the sensitivity analysis as above is arised from the effect to the annual estimate amount of interest expenses or revenues at the floating interest rate. The analysis of the previous period is based on the same hypothesis and method.

Item	**Balance as at December 31, 2022**	Balance as at December 31, 2021
Fixed interest rate financial instruments		
Financial assets:	**6,821**	3,000
Monetary funds	**6,821**	3,000
Financial liabilities:	**17,109,236**	16,236,811
Short-term borrowings	**16,095,000**	15,550,000
Lease liabilities	**1,014,236**	681,211
Long-term payables		5,600
Floating interest rate financial instruments		
Financial assets:	**1,831,408**	2,505,224
Monetary funds	**1,831,408**	2,505,224
Financial liabilities:	**3,308,765**	3,524,777
Short-term borrowings	**1,828,208**	1,970,091
Long-term borrowings	**1,480,557**	1,554,686

8 RISKS RELATED TO FINANCIAL INSTRUMENTS (Continued)

Risk management objectives and policies (Continued)

8.3 Market risk (Continued)

8.3.2 Exchange rate risk

Foreign currency risk refers to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign currency rates. Foreign currency risk arises from the functional currency denominated financial instrument measured at individual entity.

The Group's major operational activities are carried out in Mainland China and most of the transactions are denominated in RMB. However, the Group's recognized foreign currency assets and liabilities and future foreign currency transactions (foreign currency assets and liabilities and foreign currency transactions are mainly denominated in US dollar, Saudi Riyal and Kuwaiti Dinar) still have foreign exchange risks.

As at December 31, 2022, the foreign currency financial assets and liabilities held by the Group were converted to RMB. The amounts are listed as follows:

	Foreign currency liabilities		Foreign currency assets	
Item	Amount as at December 31, 2022	Amount as at December 31, 2021	Amount as at December 31, 2022	Amount as at December 31, 2021
USD	3,037,003	3,100,442	5,292,672	4,401,430
SAR	343,120	236,671	808,076	630,487
KWD	133,472	124,601	769,297	931,583
Other foreign currencies	175,642	166,726	823,241	703,471
Total	3,689,237	3,628,440	7,693,286	6,666,971

The Group closely monitors the impact of changes in interest rates on the Group's interest rate risk. The Group's management is responsible for monitoring the amount of assets and liabilities, and transactions denominated in foreign currencies. The Group may consider entering into forward exchange agreements or currency swap agreements to mitigate the foreign currency risk.

Under the circumstance that other variables remain unchanged, the after-tax effects of possible reasonable changes in the exchange rate of foreign currencies against RMB this year on the Group's current profit or loss are as follows:

Increase (decrease) in after-tax profit	Current year		Prior year	
USD exchange rate rises	5%	84,588	5%	48,787
USD exchange rate declines	-5%	-84,588	-5%	-48,787
SAR exchange rate rises	5%	17,436	5%	14,768
SAR exchange rate declines	-5%	-17,436	-5%	-14,768
KWD exchange rate rises	5%	23,843	5%	30,262
KWD exchange rate declines	-5%	-23,843	-5%	-30,262

9 DISCLOSURE OF FAIR VALUE

The input value used for measuring fair value is divided into three levels:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company can access on the measurement date.

Level 2 inputs are directly or indirectly observable inputs of relevant assets or liabilities other than first-level inputs;

Level 3 inputs refer to unobservable inputs of relevant assets or liabilities.

The fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

9.1 Fair value of assets and liabilities measured at fair value as at December 31, 2022

Item	Fair value as at December 31, 2022			
	Measurement of fair value at level 1	Measurement of fair value at level 2	Measurement of fair value at level 3	Total
9.1.1 Continuous measurement at fair value				
◆Receivables at FVTOCI			1,468,340	1,468,340
◆Other equity instrument investments			134,492	134,492
Total assets with continuous measurement at fair value			1,602,832	1,602,832

9.2 Nature and quantitative information of valuation techniques and key parameters adopted for items measured at the fair value of Level 3 on a going and non-going concern

Item	Fair value as at December 31, 2022	Valuation techniques	Unobservable input values	Range (weighted average value)
Receivables at FVTOCI	**1,468,340**	Asset-based valuation or Discounted Cash Flow Model	N/A	N/A
Other equity instrument investments	**134,492**	Net value of assets	N/A	N/A

9.3 Analysis on the measurement items measured at fair value of level 3 on a going concern, adjustment information between the book value as at the end of the last year and the book value as at the end of last period and sensitivity of unobservable parameters

9.3.1 Adjustment information on the continuous measurement project of fair value at level 3

Item	Balance as at December 31, 2021	Transferred to Level III	Transferred from Level III	Total gains or losses in the current period		Purchase, Issue, Sale and Settlement				Balance as at December 31, 2022	For the assets held at the end of the reporting period, the current unrealized gains or changes included in profit or loss
				Included in the profit or loss	Included in the other comprehensive income	Purchase	Issue	Sale	Settlement		
Other equity instrument investments	21,760				-4,087	125,000		8,181		134,492	
Total	21,760				-4,087	125,000		8,181		134,492	

9.4 Fair value of financial assets and financial liabilities not measured at fair value

The Group's financial assets and financial liabilities measured at amortized cost mainly include: monetary funds, notes receivable, accounts receivable, other receivables, short-term borrowings, notes payable, accounts payable, other payables, long-term payables and long-term borrowings.

Except for the above-mentioned financial assets and financial liabilities, the book value and fair value of other financial assets and financial liabilities not measured at fair value have a very small difference.

10 RELATED PARTIES AND RELATED-PARTY TRANSACTIONS

10.1 Parent company of the Company

Name of parent company	Registration place	Business nature	Registered capital (RMB100 million)	Shareholding ratio of the parent company in the Company (%)	Voting ratio of the parent company in the Company (%)
China Petrochemical Corporation	22 Chaoyangmen North Street, Chaoyang District Beijing	Petroleum and natural gas exploration, exploitation and sales; petroleum refining; production, sales, storage and transportation of petrochemical, chemical fiber and other chemical products; pipeline transportation of oil and natural gas; research, development, and application of technology and information.	3,265.47	56.51	70.18

The ultimate controller of the Company is China Petrochemical Corporation.

China Petrochemical Corporation directly holds 56.51% of the Company's equity and holds 13.67% of the Company's equity its wholly owned subsidiary Sinopec Century Bright Capital Investment Limited, with a total voting ratio of 70.18%.

10.2 Information on subsidiaries of the Company

See "Note 7 Equity in other entities" for details of subsidiaries of the Company.

10.3 Joint ventures and associates of the Company

See "Note 7 Equity in other entities" for the details of significant joint ventures or associates of the Company

Other joint ventures and associates that conduct related-party transactions with the Company in the current period or have a balance arising from the related transactions with the Company occurred in the prior period are follows:

Name of joint venture or associate	Relationship with the Company
Sinopec Bayshore Petroleum Service Co., LTD	Joint venture
Qianjiang Hengyun Motor Vehicle Performance Testing Corporation	Associate
Huabei Ruida Oil Service Company Limited	Associate
Xinjiang North China Tianxiang Oil Service Company Limited	Associate
Zhenjiang Huajiang Oil & Gas Engineering Technology Service Co., Ltd	Associate
Henan Zhongyuan Oil & Gas Engineering Technology Service Co., Ltd	Associate
Oil & Gas Engineering Technology Service Co., Ltd	Associate

10 RELATED PARTIES AND RELATED-PARTY TRANSACTIONS (Continued)

10.4 Other related parties

Name of other related parties	Relationship between other related parties and the Company
China Petroleum &Chemical Corporation	Under the common control of Sinopec Group
Sinopec Shengli Petroleum Administrative Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Zhongyuan Petroleum Exploration Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Jianghan Petroleum Administrative Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Henan Petroleum Exploration Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Jiangsu Petroleum Prospecting Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Star Co., Ltd.	Under the common control of Sinopec Group
Sinopec East China Petroleum Bureau	Under the common control of Sinopec Group
Sinopec North China Petroleum Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Southwest Petroleum Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Northeast Petroleum Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Pipeline Storage and Transportation Company	Under the common control of Sinopec Group
Sinopec Offshore Petroleum Bureau Co., Ltd.	Under the common control of Sinopec Group
Sinopec Finance Co., Ltd.	Under the common control of Sinopec Group
Sinopec Century Bright Capital Investment Limited	Under the common control of Sinopec Group
Sinopec Assets Operation and Management Co., Ltd.	Under the common control of Sinopec Group
China CITIC Limited	As of December 31, 2022, holding 3.25% equity of the Company
CITIC Bank	Subsidiaries of China CITIC Limited
Taiping & Sinopec Financial Leasing Co., Ltd.	Joint venture of Sinopec
Sinopec International Petroleum Exploration and Production Corporation	Associate of Sinopec
China Oil & Gas Pipeline Network Group	Associate of Sinopec
Directors, managers, chief accountant and secretary of the Board of Directors	Key management personnel

10.5 Related-party transactions

10.5.1 Related-party transaction on purchase and sales of goods, and rendering and receipt of services

10.5.1.1 Purchase of goods

Related party	Content of related transaction	Pricing and decision-making process of related transactions	**Current period**	Prior period
Sinopec Group and its subsidiaries	Purchase of materials and equipment	According to normal commercial terms or related agreements	**11,803,515**	11,446,329
Joint ventures and associates of the Group	Purchase of materials and equipment	According to normal commercial terms or related agreements	**377,805**	232,535

10.5.1.2 Sales of goods

Related party	Content of related transaction	Pricing and decision-making process of related transactions	**Current period**	Prior period
Sinopec Group and its subsidiaries	Sales of products	According to normal commercial terms or related agreements	**68,940**	13,546
Joint ventures and associates of the Group	Sales of products	According to normal commercial terms or related agreements		13

10 RELATED PARTIES AND RELATED-PARTY TRANSACTIONS (Continued)

10.5 Related-party transactions (Continued)

10.5.1 Related-party transaction on purchase and sales of goods, and rendering and receipt of services (Continued)

10.5.1.3 Rendering of services

Related party	Content of related transaction	Pricing and decision-making process of related transactions	Current period	Prior period
Sinopec Group and its subsidiaries	Petroleum engineering technology service	According to normal commercial terms or related agreements	46,647,299	46,780,540
Joint ventures and associates of the Group	Petroleum engineering technology service	According to normal commercial terms or related agreements	3,896,918	3,498,968
Joint ventures and associates of the Group	Petroleum engineering technology service	According to normal commercial terms or related agreements	256,187	180,725

10.5.1.4 Receipt of labor services

Related party	Content of related transaction	Pricing and decision-making process of related transactions	Current period	Prior period
Joint ventures and associates of the Group	Receipt of labor services	According to normal commercial terms or related agreements	2,039,600	1,944,794

10.5.1.5 Rendering of comprehensive services services

Related party	Content of related transaction	Pricing and decision-making process of related transactions	Current period	Prior period
Sinopec Group and its subsidiaries	Rendering of comprehensive services services	According to normal commercial terms or related agreements	106,648	29,578
Joint ventures and associates of the Group	Rendering of comprehensive services services	According to normal commercial terms or related agreements	2,645	

10.5.1.6 Receipt of comprehensive services services

Related party	Content of related transaction	Pricing and decision-making process of related transactions	Current period	Prior period
Sinopec Group and its subsidiaries	Receipt of community comprehensive services	According to normal commercial terms or related agreements	41,602	54,034
Sinopec Group and its subsidiaries	Receipt of others comprehensive services	According to normal commercial terms or related agreements	750,963	514,949
Joint ventures and associates of the Group	Receipt of others comprehensive services	According to normal commercial terms or related agreements	1,923	542

10.5.1.7 Rendering sci-tech R&D services

Related party	Content of related transaction	Pricing and decision-making process of related transactions	Current period	Prior period
Sinopec Group and its subsidiaries	Rendering sci-tech R&D services	According to normal commercial terms or related agreements	278,469	95,956
Joint ventures and associates of the Group	Rendering sci-tech R&D services	According to normal commercial terms or related agreements	15,204	

10.5.2 Related-party lease

The Company as the lessor:

Name of lessee	Type of leased assets	Pricing and decision-making process of related transactions	Lease revenue recognized in the current period	Lease revenue recognized in the previous period
Sinopec Group and its subsidiaries	Equipment	According to normal commercial terms or related agreements	3,163	808
Sinopec Group and its subsidiaries	Housing	According to normal commercial terms or related agreements	649	1,920
Joint ventures and associates of the Group	Equipment	According to normal commercial terms or related agreements	1,181	

10 RELATED PARTIES AND RELATED-PARTY TRANSACTIONS (Continued)

10.5 Related-party transactions (Continued)

10.5.2 Related-party lease (Continued)

The Company as the lessee:

Name of the lessor	Type of leased assets	Pricing and decision-making process of related transactions	Current period Rental fees paid in the current period	Prior period Rental fees paid in the prior period
Sinopec Group and its subsidiaries	Land and real estate	According to normal commercial terms or related agreements	**607,928**	114,253
	Including: short-term lease	According to normal commercial terms or related agreements	**75,234**	58,576
	Right-of-use assets	According to normal commercial terms or related agreements	**532,694**	55,678
Sinopec Group and its subsidiaries	Equipment	According to normal commercial terms or related agreements	**146,921**	33,715
	Including: short-term lease	According to normal commercial terms or related agreements	**145,377**	29,911
	Right-of-use assets	According to normal commercial terms or related agreements	**1,543**	3,805
Joint ventures and associates of the Group	Equipment	According to normal commercial terms or related agreements	**275,725**	353,253
	Including: short-term lease	According to normal commercial terms or related agreements	**39,292**	25,071
	Right-of-use assets	According to normal commercial terms or related agreements	**236,433**	328,182

10.5.3 Related-party guarantees

The Company acted as guarantor:

The guaranteed	Guarantee type	Guarantee amount	Guarantee commencement date	Guarantee expiry date	Guarantee performance completed or not
Sinopec Group	Anti-guarantee	RMB 300,000 thousand	September 2021	September 2024	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 61,830 thousand	September 2015	December 2024	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 588,000 thousand	December 2015	December 2022	No
Sinopec International Petroleum Service Corporation	Performance guarantee	THB 3,142,900 thousand; USD103,929 thousand	April 2017	May, 2023	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 67,000 thousand	April 2019	January 2023	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 611,000 thousand	June 2021	June 2030	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 91,664 thousand	February 2022	October 2029	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 274,950 thousand	June 2022	December 2048	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 118,000 thousand	July 2022	September 2025	No
Sinopec International Petroleum Service Corporation	Performance guarantee	USD 15,000 thousand	December 2022	May 2045	No

10 RELATED PARTIES AND RELATED-PARTY TRANSACTIONS (Continued)

10.5 Related-party transactions (Continued)

10.5.4 Loans to and from related parties

Related party	Content of related-party transaction	Pricing and decision-making process of related-party transactions	Current period	Prior period
Sinopec Group and its subsidiaries	Revenue from deposit interest	Based on normal commercial terms	**1,145**	1,008
	Loan interest expense	Based on normal commercial terms	**594,984**	597,814
	Obtaining the borrowing	Based on normal commercial terms	**44,571,010**	60,848,383
	Payment of the loan	Based on normal commercial terms	**44,368,880**	61,654,200
Joint ventures and associates of the Group	Interest expenses of financial leases	Based on normal commercial terms	**216**	509

10.5.5 Assets transfer and debt restructuring of related parties

Related party	Content of related-party transaction	Pricing and decision-making process of related-party transactions	Current period	Prior period
Sinopec Group	Security fund expenditure	Based on normal commercial terms or relevant agreements	**80,200**	75,600
	Return on security fund	Based on normal commercial terms or relevant agreements	**112,657**	132,145

10.5.6 Remuneration of key management personnel

There are 18 key management personnel who received remuneration from the Company in the current period, and 15 key management personnel in the previous period.

Item	Current period	Prior period
Remuneration	**10,125**	9,799
Retirement scheme contribution	**625**	585
Total	**10,750**	10,384

10.6 Receivables from and payables to related parties

10.6.1 Receivables

Item	Related party	Balance as at December 31, 2022	Balance as at December 31, 2021
		Book balance	Book balance
Bank deposits	Sinopec Finance Co., Ltd.	47,531	902,678
	Sinopec Century Bright Capital Investment Limited	802,100	690,991
	CITIC Bank	915	
Accounts receivable	Sinopec Group and its subsidiaries	4,362,460	2,361,677
	Joint ventures of the Group	11,341	31,673
	Joint ventures and associates of Sinopec Group	1,149,973	899,769
Contract assets	Sinopec Group and its subsidiaries	6,719,322	5,604,733
	Joint ventures and associates of Sinopec Group	1,727,820	1,769,973
Prepayments	Sinopec Group and its subsidiaries	83,073	88,584
	Joint ventures and associates of Sinopec Group	7,048	143
Other receivables	Sinopec Group and its subsidiaries	349,639	200,891
	Joint ventures and associates of the Group	8,199	246
	Joint ventures and associates of Sinopec Group	490,374	384,649

10 RELATED PARTIES AND RELATED-PARTY TRANSACTIONS (Continued)

10.6 Receivables from and payables to related parties (Continued)

10.6.2 Payables

Item	Related party	Balance as at December 31, 2022	Balance as at December 31, 2021
Short-term borrowings	Sinopec Finance Co., Ltd.	**16,095,000**	4,550,000
	Sinopec Century Bright Capital Investment Limited	**1,828,208**	1,970,091
	Sinopec Group and its subsidiaries		11,000,000
Accounts payable	Sinopec Group and its subsidiaries	**2,406,778**	1,242,578
	Joint ventures and associates of the Group	**107,009**	52,175
	Joint ventures and associates of Sinopec Group	**16,074**	12,054
Other payables	Sinopec Group and its subsidiaries	**69,875**	47,788
	Joint ventures and associates of the Group	**243**	468
	Joint ventures and associates of Sinopec Group	**132,540**	23,410
Contract liabilities	Sinopec Group and its subsidiaries	**3,175,493**	2,127,395
	Joint ventures and associates of Sinopec Group	**744,098**	433,982
Interest payable	Sinopec Group and its subsidiaries	**21,796**	19,364
Non-current liabilities maturing within one year	Joint ventures and associates of Sinopec Group		5,600
Long-term borrowings maturing within one year	Sinopec Group and its subsidiaries	**1,000,000**	
Lease liabilities	Sinopec Group and its subsidiaries	**423,475**	40,504
	Joint ventures and associates of Sinopec Group	**118,839**	16,453
Long-term borrowings	Sinopec Finance Co., Ltd.		1,000,000
Non-current liabilities	Sinopec Group and its subsidiaries	**12**	

10.7 Centralized management of funds

10.7.1 The main contents of the centralized management of funds that the company participates in and implements are as follows:

In order to regulate the capital operation of its subsidiaries, accelerate capital turnover, improve capital operation efficiency, improve internal control mechanism, and ensure the maximization of the group's overall benefits, China Petrochemical Corporation (hereinafter referred to as "Sinopec Group") implemented centralized and unified management of the funds of the Sinopec Group and its member units through Sinopec Finance Co., Ltd. ("Sinopec Finance") and Sinopec Century Bright Capital Investment Limited. ("Century Bright") according to relevant laws and regulations.

10.7.2 Funds collected by the Company to the Group

Funds deposited by the Group is directly deposited into the Sinopec Finance and Century Bright without being collected into the account of the parent company of the Group:

As of December 31, 2022, the total amount deposited by the Group in Sinopec Finance and Century Bright was RMB849,631,000 (December 31, 2021: RMB1,593,669,000), which was listed as " Cash at bank and on hand", and there was no withdrawal restriction or impairment.

10.7.3 Funds borrowed by the Company from the parent company or member units of the group

As of December 31, 2022, the balance of funds borrowed by the Group from Sinopec Finance and Century Bright was RMB17,923,207,000 (December 31, 2021: RMB6,520,091,000), and the balance of funds borrowed by the Group from the parent company Sinopec Group was RMB1,000,000,000 (December 31, 2021: 12,000,000,000).

11 COMMITMENTS AND CONTINGENCIES

11.1 Significant commitments

11.1.1 Significant commitments existed on the balance sheet date

Capital commitments contracted for but not yet necessary to be recognized on the balance sheet	As at December 31, 2022	As at December 31, 2021
Construction of long-term assets commitments	15,905	74,473
Investment commitments	129,625	129,625

11.1.2 Performance of prior commitments

The Group has fulfilled the capital and operating lease commitments as at December 31, 2022.

11.2 Contingencies

11.2.1 Significant contingencies existed on the balance sheet date

(1) Pending litigation and arbitration matters

The Group might involve in disputes, litigations and claims for compensation with customers, sub-contractors, and suppliers in the ordinary course of business. The Management has assessed the possibility of adverse results of these contingencies, litigations or other proceedings and believes that any resulting liabilities will not have material adverse effect on the financial position, operating results, or cash flow of the Group, and thus accrues no provision.

1. China National Chemical Engineering No.11 Construction Co., Ltd. ("No.11 Chemical Construction") as a subcontractor of the Group undertook the construction of the "Package C project" of "Saudi Yanbu-Medina Phase III Pipeline Project" in August 2012. On May 29, 2018, No.11 Chemical Construction submitted an arbitration application to the China International Economic and Trade Arbitration Commission for contract dispute, requesting the Group to pay RMB456,810 thousand for the project fee and the accrued interest, RMB145,968 thousand for the loss due to stoppage of work and the accrued interest, RMB38,018 thousand for the advance payment under the letter of guarantee and the accrued interest, and RMB500 thousand for attorney fee and the arbitration fees for the case. The China International Economic and Trade Arbitration Commission accepted the case on June 15, 2018. The hearing was held on January 24, 2019. Both parties made statements on the focus of the dispute and the main factual issues and answered the questions of the arbitral tribunal. In November 2019, the arbitral tribunal determined the project cost appraisal agency in accordance with the procedures and started the appraisal work. The hearing was held again on July 3, 2022. Both parties questioned the appraisal agency on issues such as cost appraisal, and made statements and debates on other major issues involved in the arbitration. At present, the appraisal agency is conducting the final appraisal review and improvement work, and the arbitral tribunal has extended the arbitration deadline to April 24, 2023. Since the case is still under trial, it is impossible to make a reasonable estimate of the possible outcome of the case. As of December 31, 2022, RMB4 million of legal fees has been provided for the litigation costs expected to be incurred in the arbitration process according to the agency agreement of the SWCC arbitration case. Other than that, no estimated liabilities have been accrued. For this arbitration case, the company will actively respond to safeguard the legal rights and interests of the company.

2. On October 8, 2014, Sinopec Group International Petroleum Engineering Banyaduli Company, a subsidiary of the Company, signed a service contract with Petroecuador (hereinafter referred to as "PAM") to provide obligatory workload operations such as capacity optimization, recovery enhancement and exploration operations for the three oil fields of I-L-Y to enhance oil field production. Due to different interpretations of the supplemental clauses by both parties during project operation, two parties had disputes over the identification of oilfield production and payment amount from 2016 to 2017, and repeated negotiations were unsuccessful. In October 2018, the Company initiated an international legal arbitration plan. In April 2019, in accordance with the relevant regulations of the I-L-Y oilfield project contract, the company submitted a "Notice of Application for Legal Arbitration" to PAM for contract disputes to initiate legal arbitration procedures. In May 2020, the Company filed a statement of claim for arbitration for approximately USD79.22 million, including the amount of claims and interest. In February 2022, Banyaduli Company received a ruling, and the result of the ruling was generally favorable to the Company. However, according to the relevant arbitration laws of Chile, the place of arbitration, the parties to the arbitration have the right to apply for annulment of the arbitral award. In July 2022, PAM submitted an application for revocation of the arbitration. In August 2022, we submitted our defense. The Chilean court has included the hearing of the case in the schedule, but as of the date of this report, the date of the hearing has not yet been confirmed. The Company judges that the possibility of the other party's actual payment is low, and accrues impairment of accounts receivable and contract assets according to the principle of prudence.

(2) Judicial reorganization of the Brazil subsidiary and its financial impact

On August 16, 2018, Sinopec (Brazil) Co., Ltd., an indirectly wholly-owned overseas subsidiary of the Company (the "Brazil Subsidiary") applied for judicial reorganization to the Third State Court of Commercial Enterprises in Rio de Janeiro, Brazil (the "Court of Rio") according to the relevant local laws in Brazil. On August 31, 2018, the Brazil subsidiary received ruling from Court of Rio, approved Brazil Subsidiary's entering judicial reorganization and the law firm Nascimento & Rezende Advogados was appointed as the judicial reorganization manager by Court of Rio.

According to the relevant laws of Brazil, the Brazil Subsidiary is required to prepare a reorganization plan upon the Court of Rio has approved that the Brazil Subsidiary enters the legal reorganization procedure. Such legal reorganization is conditional upon the approval of the reorganization plan from the creditors' meeting and the Court of Rio.

To obtain approval from creditors' meeting and the Court of Rio in Brazil, the Brazil Subsidiary's reorganization plan shall include full settlement of the amount due to employees in respect of the Project, repaying a proportion of debt due to Three Suppliers, and paying legal fees, fees on judicial authorities and other services fees in relation to the implementation of legal reorganization procedure. Such payments amount is estimated to be approximately RMB475,276 thousand.

11 COMMITMENTS AND CONTINGENCIES (Continued)

11.2 Contingencies (Continued)

11.2.1 Significant contingencies existed on the balance sheet date (Continued)

(2) Judicial reorganization of the Brazil subsidiary and its financial impact (Continued)

During the implementation of the judicial restructuring plan, the Brazilian subsidiary actively fulfilled its judicial restructuring obligations, and the restructuring work was progressing smoothly. Because of the fact that the Brazilian third fertilizer plant project lawsuit has obtained favorable expert appraisal opinions for the Brazilian subsidiary, the devaluation of the Brazilian currency due to the epidemic and the effective reduction of the cost of reorganization and operation, the Company expects that the total expenses actually paid by the Brazilian subsidiary due to the reorganization plan will be USD58.42 million (equivalent to approximately RMB389 million). As of December 31, 2022, the remaining balance of estimated liabilities was RMB159,323,000.

(3) Contingent liabilities arising from overseas tax penalties and their financial impacts

On August 3, 2021, the Ghana subsidiary of Sinopec Group International Petroleum Engineering Co., Ltd. (referred to as the "Ghana subsidiary" of the "International Company") received a tax audit notification letter from the Large Enterprise Taxation Department of the Ghana Taxation Bureau, requesting for an income tax audit of the Ghana subsidiary's holding company, International Company, execution of the Ghana Gas Engineering EPCC project for the period 2012-2020. After receiving the income tax audit letter, the Ghana subsidiary and International Company sorted out the relevant business according to the audit requirements of the Ghana Tax Bureau and analyzed the future risks of the audit matters, conducted a business self-inspection on the provisions of Ghana's 2015 Income Tax Act concerning resident institutions. Due to the long implementation cycle of the project and frequent personnel exchanges during the implementation of the project, there may be relevant personnel working in Ghana exceeding the 90-day requirement. This results in a permanent establishment mechanism being touched, and therefore a tax risk. The Ghana subsidiary has made provision for estimated liabilities based on the best estimate of relevant income tax and penalty interest. As of December 31, 2022, the balance of estimated liabilities was RMB20,246,000.

(4) Contingent liabilities arising from guarantees provided for debt of other entities and their financial effects

As at December 31, 2022, Sinopec Oilfield Service Limited, the subsidiary of the Company, has provided guarantee amount of USD1,068,423,000 and THB 3,142,900,000 to its subsidiaries.

The Group provides guarantees for the performance obligations under the Production Sharing Contract for the EBANO project in Mexico signed by DS Servicios Petroleros, S.A.de C.V. ("DS Mexico") and the beneficiary, the Mexican National Oil and Gas Commission, to ensure that the Group will perform the contract on its behalf when DS Mexico loses its ability to perform. As of December 31, 2022, the maximum amount of joint and several guaranteed liabilities assumed by the Group during this guarantee period shall not exceed an amount equivalent to USD274,950,000.

(5) Other contingent liabilities

With respect to uncertainties about enterprise income tax differences arising from 2006 and before as originated from a tax circular (GSH [200]No. 644) issued by the State Administrative of Taxation in June 2007, the Company has been informed the relevant tax authority to settle the enterprise income tax for 2007 at a rate of 33%. To date, the Company has not been requested to pay additional enterprise income tax in respect of any years prior to 2007. There is no further development of this matter as at December 31, 2022, no provision has been made in the financial statements for this uncertainty for tax year prior to 2007, because the management believes it cannot reliably estimate the amount of the obligation, if any, that might exist.

12 POST BALANCE SHEET EVENTS

As at March 28, 2023, there are no post balance sheet events to be disclosed by the Group.

13 CAPITAL MANAGEMENT

The objective of the Group's capital management policy is to safeguard the Group's ability to continue as a going concern, thereby providing returns to shareholders and benefits to other stakeholders, while maintaining an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the method of financing, adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares and other equity instruments or sell assets to reduce debt.

The Group monitors its capital using the debt-to-capital ratio, which is calculated as net debt divided by total capital. The net debt is total borrowings (including short-term borrowings, long-term borrowings maturing within one-year, long-term borrowings, and long-term payables) less the cash balance shown in the statement of cash flows. Total capital is the sum of shareholders' equity and net debt as presented in the consolidated balance sheet. Total shareholders' equity includes the shareholders' equity attributable to the parent company and the minority interests.

13 CAPITAL MANAGEMENT (Continued)

As at the balance sheet date, the Group's debt-to-capital ratio is as follows:

Item	Balance as at December 31, 2022	As at December 31, 2021
Short-term borrowings	**17,923,208**	17,520,091
Lease liabilities maturing within one year	**517,190**	290,345
Long-term payables maturing within one year		5,600
Long-term borrowings maturing within one year	**1,000,000**	
Long-term borrowings	**480,557**	1,554,686
Lease liabilities	**497,045**	390,866
Less: cash balances as shown in the statement of cash flows	**1,801,150**	2,475,306
Net debt	**18,616,850**	17,286,282
Shareholders' equity	**7,427,319**	6,861,517
Total capital	**26,044,169**	24,147,799
Debt-to-capital ratio	**71.48%**	71.59%

14 OTHER SIGNIFICANT EVENTS

14.1 Correction of prior accounting errors

There were no corrections of accounting errors in prior periods during the reporting period.

14.2 Debt restructuring

The Group restructured its debts with the creditors in the current period by modifying the debt principal. The total amount of profits recognized in the current period due to debt restructuring was RMB18,176,000. The amount of losses which cash back below the book value of the claims is RMB19,000. There is no individually significant debt restructuring during the current period.

During the year, the Group has negotiated with a debtor to replace its project receivables with national treasure bonds held by the debtor of the country where the debtor is located, to replace its receivables of US$10 million (equivalent to approximately RMB69.35 million) with local national treasure bonds equivalent to its face value. The trade receivable has been fully impaired in previous years. The acquired treasury bonds were measured as financial instruments and has been disposed of during the year.

14.3 Assets replacement

There was no asset replacement during the reporting period.

14.4 Annuity plan

For details about the main components of the annuity plans, please refer to the Note 3.21.3 Accounting treatment of dismissal benefits."

14.5 Discontinued operation

There is no discontinued operation during the reporting period.

14.6 Segment information

14.6.1 Determination criteria and accounting policies for reportable segments

The Group has identified five reportable segments based on its internal structure, management requirements and internal reporting policy. The reportable segments are: geophysics, drilling engineering, logging and mud logging, special down-hole operations, and engineering construction. The segment information is prepared based on the financial information of the Company's daily management requirements. The Group's management reviews reportable segments' financial information periodically for the purposes of allocating resources and assessing the performance.

The Group's reportable segments include:

(1) Geophysics, which provides geophysical exploration, development and technical services;

(2) Drilling engineering, which provides customers with drilling construction, technical services and drilling instrumentation;

(3) Logging and mud logging, which provides logging and mud logging technology services;

(4) Special down-hole operations, which provides oil engineering technical and construction, including oil (gas) testing, well repair, lateral drilling, fracturing, acidising and oil assignments;

(5) Engineering construction, which provides a package of services, including feasibility studies, design, procurement, construction for projects of onshore and offshore oil and gas fields, long-distance pipeline projects.

14 OTHER SIGNIFICANT EVENTS (Continued)

14.6 Segment information (Continued)

14.6.1 Determination criteria and accounting policies for reportable segments (Continued)

The segment information is disclosed in accordance with the accounting policies and measurement standards reported to management by each segment. These accounting policies and measurement standards are consistent with the accounting policies and measurement standards of preparation of the financial statements.

Inter-segment transfers are measured by reference to market price. The assets are allocated based on the operations of the segment and the physical location of the asset.

The resources related to long-term equity investment and investment (loss)/income on joint venture, income tax expenses as well as shared assets of all segments are centrally managed and accounted for by the Company, and thus are not allocated among segments.

14.6.2 Financial information of reportable segments

Current period or As at December 31, 2022	Geophysics	Drilling engineering	Logging and mud logging	Special down-hole operations	Engineering construction	Others	Offset	Total
Operating revenue	4,868,755	39,556,120	6,068,003	9,964,863	17,539,960	9,186,412	-13,411,425	73,772,688
Including: income from external transactions	4,756,990	36,814,540	3,257,608	9,366,492	17,436,238	2,140,820		73,772,688
Income from inter-segment transactions	111,765	2,741,580	2,810,395	598,371	103,722	7,045,592	-13,411,425	
Including: income from primary business	4,868,755	39,556,120	6,068,003	9,964,863	17,539,960	7,260,145	-12,774,402	72,483,444
Operating costs	4,572,357	37,426,913	5,498,805	9,325,702	16,020,967	8,570,168	-13,411,425	68,003,487
Including: costs of primary business	4,572,357	37,426,913	5,498,805	9,325,702	16,020,967	7,293,336	-12,929,842	67,208,238
Operating expenses	263,412	1,683,651	263,610	312,510	1,204,721	1,432,434		5,160,338
Operating profit (loss)	51,952	466,427	316,137	331,193	343,652	-776,969		732,392
Total assets	5,709,085	30,373,430	4,636,423	7,743,455	22,352,376	37,584,884	-37,199,136	71,200,517
Total liabilities	4,680,689	24,488,460	3,359,394	4,850,991	21,672,974	41,919,826	-37,199,136	63,773,198
Supplementary information:								
1. Capital expenditure	588,602	2,339,696	195,919	715,235	726,733	662,632		5,228,817
2. Depreciation and amortization expenses	464,603	3,742,306	341,500	743,074	310,363	482,529		6,084,375
3. Losses from impairment of assets	-25,853	26,697	4,499	-24,642	-80,659	124,311		24,353

Prior period or As at December 31, 2021	Geophysics	Drilling engineering	Logging and mud logging	Special down-hole operations	Engineering construction	Others	Offset	Total
Operating revenue	4,706,123	36,839,486	5,536,994	9,917,443	16,741,825	9,295,975	-13,504,793	69,533,053
Including: income from external transactions	4,663,346	33,081,850	3,207,549	9,384,197	16,714,720	2,481,391		69,533,053
Income from inter-segment transactions	42,777	3,757,636	2,329,444	533,246	27,104	6,814,586	-13,504,793	
Including: income from primary business	4,706,123	36,839,486	5,536,994	9,917,443	16,741,825	7,638,730	-13,165,585	68,215,016
Operating costs	4,468,662	35,275,582	4,918,847	9,211,862	15,345,615	8,805,150	-13,504,793	64,520,925
Including: costs of primary business	4,468,662	35,275,582	4,918,847	9,211,862	15,345,615	7,824,972	-13,360,445	63,685,095
Operating expenses	270,720	1,663,193	276,268	340,496	1,049,110	1,456,943		5,056,730
Operating profit (loss)	20,376	40,344	351,417	399,695	379,803	-843,957		347,678
Total assets	4,524,519	38,958,384	3,541,026	6,425,152	20,252,666	29,111,052	-38,760,352	64,052,447
Total liabilities	3,427,097	28,862,019	2,978,969	3,475,883	19,867,388	37,339,926	-38,760,352	57,190,930
Supplementary information:								
1. Capital expenditure	263,143	2,692,812	151,087	358,794	455,405	416,778		4,338,019
2. Depreciation and amortization expenses	474,909	3,572,429	381,248	758,853	291,091	262,058		5,740,588
3. Losses from impairment of assets	3,509	9,003	8,399	-47,890	23,800	22,845		19,666

14 OTHER SIGNIFICANT EVENTS (Continued)

14.6 Segment information (Continued)

14.6.3 Other segment information

14.6.3.1 Revenue from external transactions of products and services

Item	Current period	Prior period
Geophysics	4,756,990	4,663,346
Drilling engineering	36,814,540	33,081,850
Logging and mud logging	3,257,608	3,207,549
Special down-hole operations	9,366,492	9,384,197
Engineering construction	17,436,238	16,714,720
Others	2,140,820	2,481,391
Total	73,772,688	69,533,053

14.6.3.2 Area information

Current period or As at December 31, 2022	China	Other countries	Offset	Total
Operating revenue	60,654,155	13,118,533		73,772,688
Non-current assets	28,874,064	5,786,384		34,660,448

Prior period or As at December 31, 2021	China	Other countries	Offset	Total
Operating revenue	59,869,980	9,663,073		69,533,053
Non-current assets	27,292,641	5,040,540		32,333,181

14.6.3.3 Dependence to principal customers:

The Group obtained over 50% of the total geophysics, drilling engineering, logging, and mud logging, special down-hole operations and engineering construction revenue from a single customer.

15 NOTES TO MAIN ITEMS OF FINANCIAL STATEMENTS OF THE PARENT COMPANY

15.1 Other receivables

Item	Balance as at December 31, 2022	Balance as at December 31, 2021
Other receivables	20,982,530	4,380,622
Total	20,982,530	4,380,622

15.1.1 Other receivables

(1) Disclosure of other receivables by aging

Aging	Balance as at December 31, 2022	Balance as at December 31, 2021
Within 1 year	16,017,264	4,380,622
1 – 2 years	585,106	
3 years and above	4,380,164	
Sub-total	20,982,534	4,380,622
Less: provision for bad debts	4	
Total	20,982,530	4,380,622

15 NOTES TO MAIN ITEMS OF FINANCIAL STATEMENTS OF THE PARENT COMPANY (Continued)

15.1 Other receivables (Continued)

15.1.1 Other receivables (Continued)

(2) Details of provision for bad debts

Category	Balance as at December 31, 2022					Balance as at December 31, 2021				
	Book balance		Provision for bad debts			Book balance		Provision for bad debts		
	Amount	Proportion (%)	Amount	Expected credit loss rate in the next 12 months (%)	Book value	Amount	Proportion (%)	Amount	Expected credit loss rate in the next 12 months (%)	Book value
Provision for bad debts accrued on a combination basis	20,982,534	100.00	4		20,982,530	4,380,622	100.00			4,380,622
Including:										
Related-party portfolio	20,982,408	100.00			20,982,408	4,380,622	100.00			4,380,622
Non-related-party portfolio	126		4		122					
Total	20,982,534	100.00	4		20,982,530	4,380,622	100.00			4,380,622

Provision for bad debts accrued on a combination basis:

Portfolio provision items:

Category	Balance as at December 31, 2022		
	Book balance	Provision for bad debts	Proportion (%)
Other receivables from related parties	20,982,408		
Non-related-party portfolio	126	4	3.17
Total	20,982,534	4	

(3) Classification by nature

Category	Balance as at December 31, 2022	Balance as at December 31, 2021
Other receivables from wholly-owned subsidiaries	20,982,408	4,380,622
Others	126	
Total	20,982,534	4,380,622

(4) Top 5 of other receivables as at December 31, 2022, presented by debtor

Company	Nature	Balance as at December 31, 2022	Aging	Proportion in the total ending balance of other receivables (%)	Ending balance of provision for bad debts
Sinopec Petroleum Engineering and Construction Corporation	Amount from wholly-owned subsidiaries	7,598,201	Within 1 year	36.21	
Sinopec Zhongyuan Petroleum Engineering Corporation	Amount from wholly-owned subsidiaries	5,022,124	Within 1 year	23.93	
Sinopec Geophysical Corporation	Amount from wholly-owned subsidiaries	2,762,587	Within 1 year	13.17	
Sinopec Shengli Petroleum Engineering Corporation	Amount from wholly-owned subsidiaries	2,443,761	Within 1 year and 1 -2 years	11.65	
Sinopec East China Petroleum Engineering Corporation	Amount from wholly-owned subsidiaries	1,500,000	Within 1 year	7.15	
Total		19,326,673		92.11	

15 NOTES TO MAIN ITEMS OF FINANCIAL STATEMENTS OF THE PARENT COMPANY (Continued)

15.2 Long-term equity investments

Item	Balance as at December 31, 2022			Balance as at December 31, 2021		
	Book balance	Provision for impairment	Book value	Book balance	Provision for impairment	Book value
Investments in subsidiaries	35,783,581		35,783,581	27,891,662		27,891,662
Investments in associates and joint ventures	8,792		8,792			
Total	35,792,373		35,792,373	27,891,662		27,891,662

In order to optimize its own resource allocation and management structure, reduce the level of structure complexities, and further promote and enhance the company's business development, on July 28, 2022, the 11th meeting of the 10th session of the board of directors of the company reviewed and approved the <About Gratuitous Transfer and Dissolution of the two-step method to cancel the wholly-owned subsidiary Sinopec Petroleum Engineering Technology Service Co., Ltd. Proposal>, agreeing that the Company will cancel the second-level wholly-owned subsidiary Sinopec Oilfield Service Limited, and transfer the third-level wholly-owned subsidiaries, joint ventures' equity and related assets held by Sinopec Oilfield Service Limited to the Company, setting December 31, 2021 as the baseline date. The cost of investments of such entities is using the book value recorded by Sinopec Oilfield Service Limited. The cost of acquiring such entities by the Company is nil. As of the publication date of this report, the gratuitous transfer has been nearly completed, and Sinopec Oilfield Service Limited is in the process of liquidation and cancellation.

15.2.1 Investments in subsidiaries

Investee	Balance as at December 31, 2021	Increase in the current period	Decrease in the current period	Balance as at December 31, 2022	Provision for impairment made in the current period	Balance of provision for impairment as at December 31, 2022
Sinopec Oilfield Service Limited	27,891,662		27,891,662			
Sinopec Jingwei Co., Ltd.		892,995		892,995		
Sinopec Shengli Petroleum Engineering Corporation		5,205,033		5,205,033		
Sinopec Jianghan Petroleum Engineering Corporation		1,493,284		1,493,284		
Sinopec Geophysical Corporation		1,757,237		1,757,237		
Sinopec Zhongyuan Petroleum Engineering Corporation		4,741,156		4,741,156		
Sinopec South West Petroleum Engineering Corporation		3,153,948		3,153,948		
Sinopec North China Petroleum Engineering Corporation		2,445,771		2,445,771		
Sinopec East China Petroleum Engineering Corporation		2,912,441		2,912,441		
Sinopec Petroleum Engineering and Construction Corporation		8,810,288		8,810,288		
Sinopec International Petroleum Service Corporation		871,691		871,691		
Sinopec Offshore Petroleum Engineering Corporation		3,499,737		3,499,737		
Total	27,891,662	35,783,581	27,891,662	35,783,581		

15 NOTES TO MAIN ITEMS OF FINANCIAL STATEMENTS OF THE PARENT COMPANY (Continued)

15.2 Long-term equity investments (Continued)

15.2.2 Investment in associates and joint ventures

Investee	Balance at the end of last year	Increase/decrease in the current period									Ending balance	Ending balance of provision for impairment
		Intra group transfer	Additional investment	Reduce investment	Investment profit and loss recognized under equity method	Other comprehensive income adjustment	Other equity changes	Declared cash dividends or profits	Provision for impairment	other		
1. Joint venture												
Zhongwei United International Energy Services Co., Ltd	7,998				794						8,792	
Subtotal	7,998				794						8,792	
2. Associated enterprises												
Total	7,998				794						8,792	

15.2.3 Investment income

Item	Current period	Prior period
Investment income from long-term equity investments under equity method	**794**	
Gains from derecognition of long-term equity investments	**-345,478**	
Total	**-344,684**	

16 SUPPLEMENTARY INFORMATION

16.1 Breakdown of non-recurring profit or loss in the current period

Item	Amount	Remark
Profit or loss from disposal of non-current assets	-6,205	
Government grants included in the current profit or loss (except for government grants closely related to the enterprise business, obtained by quota or quantity at unified state standards)	104,391	
Profit or loss from debt restructuring	18,157	
Gains and losses from changes in fair value arising from holding transactional financial assets, derivative financial assets, transactional financial liabilities, and derivative financial liabilities, as well as disposal of transactional financial assets and derivative financial assets Investment income from assets, trading financial liabilities, derivative financial liabilities and other debt investments, except for the effective hedgings related to the Company's normal business operations	798	
Other items of profit or loss subject to the definition of non-recurring profit or loss	-7,642	
Sub-total	109,499	
Affected amount of income tax	23,048	
Total	86,451	

16.2 ROE and earnings per share

Profit during the reporting period	Weighted average ROE (%)	Earnings per share (RMB)	
		Basic earnings per share	Diluted earnings per share
Net profit attributable to ordinary shareholders of the Company	6.54	0.024	
Net profit attributable to ordinary shareholders of the Company after deducting the non-recurring profit or loss	5.32	0.020	

16 SUPPLEMENTARY INFORMATION (Continued)

16.3 Accounting data difference between the domestic and overseas accounting standards

16.3.1 Reconciliation of differences between CASBE and IFRS financial statements

	Net profit		Net assets	
	Current period	Prior period	**Balance as at December 31, 2022**	Balance as at December 31, 2021
Based on CASBE	**463,814**	179,791	**7,427,319**	6,861,517
Adjusted items and amounts in accordance with IFRS:				
Special reserves	**107,801**	-39,341		
Based on IFRS	**571,615**	140,450	**7,427,319**	6,861,517

16.3.2 Related notes

In accordance to CASBE, provision of safety fund according to the PRC regulation is recognised to the profit or loss in the current period and at the same time included in the “special reserve” account. When safety costs and maintenance funds provided are used according to the specified scope, payment of expenses is directly offset against the special reserve; payment in formation of fixed assets is first imputed through “construction in progress” account, then recognised as fixed assets when the project is completed to its intended use state; meanwhile, offset the special reserve according to the cost in formation of the fixed assets and recognize the same amount of accumulated depreciation. The fixed assets will no longer depreciate in the subsequent accounting periods. According to IFRSs, expenditure in cost nature is recognised in the profit or loss and expenditure in capital nature is recognised as fixed assets when incurred and depreciate in the corresponding depreciation method.

PREPARED IN ACCORDANCE WITH INTERNATIONAL FINANCIAL REPORTING STANDARDS

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INDEPENDENT AUDITOR'S REPORT

To the Shareholders of Sinopec Oilfield Service Corporation

(Established in the People's Republic of China with limited liability)

OPINION

We have audited the consolidated financial statements of Sinopec Oilfield Service Corporation (the "Company") and its subsidiaries (together, the "Group") set out on pages 166 to 237, which comprise the consolidated statement of financial position as at 31 December 2022, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements" section of our report. We are independent of the Group in accordance with the the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (the "IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and informing our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters identified in our audit are summarised as follow:

Revenue recognition

Refer to note 2.22 (Revenue recognition), note 4(6) (Critical accounting judgement and estimates), note 5 (revenue and segment information) and notes 23(a) & (b) (contract assets and cost to fulfil contracts/contract liabilities) to the consolidated financial statements for related disclosures and accounting polices respectively.

Revenue related to rendering of services and construction contracts is derived from provision of petroleum engineering and technical services to the People's Republic of China (the "PRC") and overseas petroleum exploration and development companies, including geophysics, drilling engineering, logging and mud logging, special downhole operations and engineering construction services. The contract revenue would be recognised over time, and the recognition of related revenue depends on management's estimation of the total budgeted costs and the progress towards satisfaction of a performance obligation. The management of the Group adopts either the expected value or most likely amount method to estimate the total amount of consideration to which the Group will be entitled, and evaluates the total budgeted costs according to historical information and construction plan, which are continuously evaluated and revised during the execution of the contract. These rely on management's critical accounting estimation.

When the progress towards satisfaction of a performance obligation can be reasonably measured, the Group should recognised revenue in accordance with the progress of performance obligation being satisfied at the end of reporting period. The recognition of revenue mainly depends on the management's critical estimation and judgement, including total amount of consideration to which the Group will be entitled, total budgeted costs, remaining contract costs and estimated progress completed-to-date. If there is any change on the final contract billing amount or actual execution progress, actual results may differ from the management's estimates. Hence, we have identified the revenue recognition related to rendering of services and construction contracts as a key audit matter.

Our response:

Our key procedures in relation to the revenue recognition related to provision of petroleum engineering and technical services included:

- evaluating the appropriateness of the application of accounting policies for recognising revenue associated with the rendering of services and construction contracts in light of business nature, contract terms and IFRS15 "Revenue from contracts with customers";
- understanding, assessing and testing the design and implementation of internal controls about management's determination on the total budgeted contract revenue, the total budgeted contract costs, the actual contract costs incurred, remaining contract costs and progress of performance obligation being satisfied for contract to evaluate the operating effectiveness of such internal controls;
- reviewing contracts and interviewing with the management to understand and assess the reasonableness of the basis and assumptions of the total budgeted revenue and total budgeted contract costs, and checking the consistency of the preparation and assumptions of various types of projects;
- performing variance analysis by comparing the accumulated costs incurred as at 31 December 2022 with the budgeted contract costs, checking the significant costs incurred subsequent to the end of the reporting period and assessing the reasonableness of the management's estimation on workload forecast and remaining contract costs;
- testing, on a sample basis, the application of progress of performance obligation being satisfied by cross-checking the principal terms set out in the relevant contracts to supporting documents such as progress billing reports or acceptance certificates and progress reports being issued by customers;
- evaluating the reasonableness about budgeted revenue, budgeted costs and budgeted gross profit of sub-divisional contracts by analysis and calculation; and
- testing, on a sample basis, the amount and period of the aforesaid revenue recognised having regard to respective progress of performance obligation being satisfied at the end of the reporting period, and comparing, on a sample basis, the accumulated costs incurred up to the end of the reporting period with the budgeted costs to verify the existence of cost overrun.

We found that the management's judgment in determining the progress of performance obligation being satisfied and, the revenue recognition are supported by available evidence.

Expected credit losses ("ECL") on trade receivables and contract assets

Refer to note 2.9 (Financial instruments), note 4(2) (Critical accounting judgement and estimates), note 21 (Trade receivables) and note 23(a) (Contract assets and cost to fulfil contracts) to the consolidated financial statements for related disclosures and accounting polices respectively.

During the year ended 31 December 2022, the Group's gross amount of trade receivables and contract assets are RMB12.935 billion and RMB15.815 billion respectively, representing 40% of total assets. As at 31 December 2022, the accumulated ECL allowance for trade receivables and contract assets amounted to RMB2.599 billion.

We have identified ECL measurement of trade receivables and contract assets as a key audit matter because the ECL measurement of trade receivables and contract assets is inherent uncertain as it requires the management's subjective judgment and the aforesaid balance has a significant impact on the Group's consolidated financial statements.

Our response:

Our key procedures in relation to the ECL on trade receivables and contract assets included:

– assessing and testing the related internal controls of the measurement of ECL established by the management, and testing the effectiveness of key control executions;

– evaluating the management's relevant considerations and objective evidences for ECL measurement of trade receivables and contract assets (including historical records and circumstances of bad debts of trade receivables and contract assets with similar characteristics, customer credit and market environment, etc.), and assessing the appropriateness of the methods being applied in grouping of the trade receivables and contract assets and calculation for the ECL;

– gathering public information about the customers whose balances of trade receivables and contract assets is material or exceeds the credit period, or their industry development status to identify any situations affecting the Group's ECL assessment results of trade receivables and contract assets;

– assessing the accuracy and classification on trade receivables by obtaining ageing analysis of the trade receivables as at 31 December 2022 and reviewing, on a sample basis, key information such as aging, overdue days, and relationship by checking supporting documents such as accounting vouchers and invoices;

– arranging audit confirmations to those customers with significant balance of trade receivables, and comparing the results to the returned confirmations with the Group's record;

– recalculating the ECL on trade receivables and contract assets and comparing the results with the amounts recorded by the Group; and

– evaluating the reasonableness of management's ECL assessment by considering the customer's settlement subsequent to the reporting period.

We found that that the management's judgment in determination and estimation in the measurement of ECL on trade receivables and contract assets is supported by available evidence.

Other information

The directors are responsible for the other information. The other information comprises all the information included in the Company's annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Director's responsibilities for the consolidated financial statements

The directors are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with IFRSs and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The directors are also responsible for overseeing the Group's financial reporting process. The Audit Committee assists the directors in discharging their responsibility in this regard.

Auditor's responsibilities for the audit of the consolidates financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. This report is made solely to you, as a body, in accordance with the terms of our engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

BDO Limited

Certified Public Accountants

Chan Tsz Hung

Practising Certificate no. P06693

Hong Kong, 28 March 2023

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended as at 31 December 2022

	Notes	2022 RMB'000	2021 RMB'000
Revenue	5	**73,772,688**	69,533,053
Cost of sales and taxes and surcharges		**(68,186,777)**	(64,798,287)
Gross profit		**5,585,911**	4,734,766
Selling expenses		**(75,044)**	(80,463)
General and administrative expenses		**(2,303,286)**	(2,184,739)
Research expenses		**(1,838,968)**	(1,669,706)
Finance expenses, net	6	**(627,596)**	(864,135)
Expected credit loss		**(21,924)**	(19,666)
Write down of inventories to net realisable value		**(2,429)**	–
Expected credit loss and write-down of inventories to net realisable value	7	**(24,353)**	(19,666)
Investment income	8	**500**	1,577
Share of profit from joint ventures	19(a)	**890**	1,467
Share of profit from associates	19(b)	**6,614**	5,813
Other income	9	**266,592**	552,120
Other expenses, net	10	**(154,098)**	(25,853)
Profit before income tax	11	**837,162**	451,181
Income tax expense	12	**(265,547)**	(310,731)
Profit for the year		**571,615**	140,450
Other comprehensive income for the year, net of tax			
Items that will not be reclassified subsequently to profit or loss:			
Net movement in fair value of financial assets at fair value through other comprehensive income (non-recycling) ("FVTOCI")		**(5,813)**	(1,799)
Total comprehensive income for the year		**565,802**	138,651
Earnings per share for profit attributable to owners of the Company (presented in RMB per share)	13	**RMB**	RMB
Basic and diluted		**0.030**	0.007

Section X Financial Reports

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2022

	Notes	2022 RMB'000	2021 RMB'000
Assets			
Non-current assets			
Property, plant and equipment	17(a)	**26,432,082**	24,924,711
Other non-current assets	17(b)	**7,255,439**	6,595,302
Intangible assets	18	**378,240**	400,130
Interests in joint ventures	19(a)	**23,340**	24,122
Interests in associates	19(b)	**26,875**	22,926
Financial assets at FVTOCI	20	**134,492**	21,760
Deferred tax assets	35	**362,470**	310,764
Total non-current assets		**34,612,938**	32,299,715
Current assets			
Inventories	24	**1,013,245**	1,009,166
Financial assets at FVTOCI	20	**1,468,340**	1,295,971
Trade receivables	21	**10,537,217**	8,151,019
Prepayments and other receivables	22	**6,013,554**	5,162,319
Contract assets and cost to fulfil contracts	23(a)	**15,716,994**	13,626,033
Restricted cash	25	**37,079**	32,917
Cash and cash equivalents	26	**1,801,150**	2,475,307
Total current assets		**36,587,579**	31,752,732
Total assets		**71,200,517**	64,052,447

CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)

As at 31 December 2022

	Notes	2022 RMB'000	2021 RMB'000
Equity			
Share capital	27	**18,984,340**	18,984,340
Reserves		**(11,557,021)**	(12,122,823)
Total equity		**7,427,319**	6,861,517
Liabilities			
Non-current liabilities			
Long-term borrowings	34	**977,602**	1,945,552
Deferred income	31	**11,576**	9,288
Deferred tax liabilities	35	**63,367**	9,438
Provisions	38	**200,998**	205,771
Total non-current liabilities		**1,253,543**	2,170,049
Current liabilities			
Notes and trade payables	32	**33,591,453**	29,890,348
Other payables	33	**4,119,259**	3,555,046
Contract liabilities	23(b)	**5,115,819**	3,547,938
Short-term borrowings	34	**19,440,398**	17,816,036
Current income tax payable		**252,726**	211,513
Total current liabilities		**62,519,655**	55,020,881
Total liabilities		**63,773,198**	57,190,930
Total equity and liabilities		**71,200,517**	64,052,447
Net current liabilities		**(25,932,076)**	(23,268,149)
Total assets less current liabilities		**8,680,862**	9,031,566

On behalf of the board of directors

Chairman of the Board:
CHEN Xikun

Executive director, General Manager:
YUAN Jianqiang

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2022

	Share capital	Share premium	Other capital reserve	Surplus reserve	Specific reserve	Other comprehensive income reserve (non-recycling)	Accumulated losses	Total equity
	RMB'000 (Note 27)	RMB'000 (Note 29(i))	RMB'000 (Note 29(i))	RMB'000 (Note 29(ii))	RMB'000 (Note 29(iii))	RMB'000 (Note 29(iv))	RMB'000	RMB'000
At 1 January 2021	18,984,340	11,622,283	95,490	200,383	258,523	(2,014)	(24,436,139)	6,722,866
Profit for the year	–	–	–	–	–	–	140,450	140,450
Other comprehensive income for the year:								
Net movement in fair value of financial assets at FVTOCI	–	–	–	–	–	(1,799)	–	(1,799)
Total comprehensive income	–	–	–	–	–	(1,799)	140,450	(138,651)
Transactions with owners:								
Appropriation of specific reserve	–	–	–	–	1,468,981	–	(1,468,981)	–
Utilisation of specific reserve	–	–	–	–	(1,508,322)	–	1,508,322	–
Transfer of other comprehensive income reserve	–	–	–	–	–	(10)	10	–
Total transactions with owners	–	–	–	–	(39,341)	(10)	39,351	–
At 31 December 2021 and 1 January 2022	18,984,340	11,622,283	95,490	200,383	219,182	(3,823)	(24,256,338)	6,861,517
Profit for the year	–	–	–	–	–	–	571,615	571,615
Other comprehensive income for the year:								
Net movement in fair value of financial assets at FVTOCI	–	–	–	–	–	(5,813)	–	(5,813)
Total comprehensive income	–	–	–	–	–	(5,813)	571,615	565,802
Transactions with owners:								
Appropriation of specific reserve	–	–	–	–	1,435,693	–	(1,435,693)	–
Utilisation of specific reserve	–	–	–	–	(1,328,170)	–	1,328,170	–
Transfer of other comprehensive income reserve	–	–	–	–	–	14,868	(14,868)	–
At 31 December 2022	18,984,340	11,622,283	95,490	200,383	326,705	5,232	(23,807,114)	7,427,319

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2022

	Notes	2022 RMB'000	2021 RMB'000
Cash flows from operating activities			
Cash flows generated from operations	37(a)	**4,492,533**	6,453,196
Interests received		**15,408**	38,180
Income tax paid		**(310,072)**	(284,466)
Net cash generated from operating activities		**4,197,869**	6,206,910
Cash flows from investing activities			
Purchases of property, plant and equipment		**(3,756,883)**	(3,224,999)
Proceeds from disposal of property, plant and equipment		**61,990**	83,497
Purchases of intangible assets		**(136,114)**	(115,683)
Increase in investments in financial assets at FVTOCI		**(112,732)**	(1,077)
Dividends received from joint ventures		**1,048**	503
Dividends received from associates		**3,797**	2,729
Investment income received from financial assets at FVTOCI		**(12,268)**	1,587
Net cash used in investing activities		**(3,951,162)**	(3,253,443)
Cash flows from financing activities			
Proceeds from borrowings		**44,571,010**	60,848,383
Repayments of borrowings		**(44,491,653)**	(61,666,957)
Payment of lease liabilities		**(525,026)**	(516,092)
Interests paid		**(605,580)**	(613,541)
Net cash used in financing activities		**(1,051,249)**	(1,948,207)
Net (decrease)/increase in cash and cash equivalents		**(804,542)**	1,005,260
Effect of foreign exchange rate changes on cash and cash equivalents		**130,385**	(53,305)
Cash and cash equivalents at beginning of year		**2,475,307**	1,523,352
Cash and cash equivalents at end of year	26	**1,801,150**	2,475,307

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 31 December 2022

1. GENERAL INFORMATION

Sinopec Oilfield Service Corporation (the "Company") is a joint stock company with limited liability established in the People's Republic of China (the "PRC"). The registered office is No. 22, Chaoyangmen North Street, Chaoyang District, Beijing, the PRC and the headquarter address is No. 9, Jishikou Road, Chaoyang District, Beijing, the PRC.

The immediate and ultimate holding company of the Company is China Petrochemical Corporation (hereinafter referred to as the "Sinopec Group") which is a state wholly-owned enterprise established in the PRC. The principal activities of the Group are the provision of onshore and offshore oil, natural gas and other mineral prospecting, exploration, drilling and exploitation and provision of general contracting, design and construction services for the oil and gas and other types of construction projects.

These consolidation financial statements are presented in Renminbi ("RMB"), unless otherwise stated. These consolidation financial statements have been approved and authorised for issue by the Board of Directors on 28 March 2023.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of the consolidation financial statements are set out below.

2.1 Basis of preparation

(1) Statement of compliance

The consolidation financial statements set out in this report have been prepared in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board (the "IASB"). These consolidated financial statements also comply with the applicable disclosure requirements of the Hong Kong Companies Ordinance and the applicable disclosure provisions of the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange (the "Listing Rules").

(2) Basis of preparation of the consolidated financial statements and going concern assumption

The consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of financial assets at fair value through other comprehensive income, which are carried at fair value.

The preparation of consolidated financial statements in conformity with IFRSs requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the accounting policies of the Group. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are set out in Note 4.

As at 31 December 2022, the Group had net current liabilities of approximately RMB25,932,076,000 and capital commitments of approximately RMB15,905,000 (Note 36(a)). These conditions may cast significant doubt about the Group's ability to continue as a going concern. The directors of the Company have performed an assessment covering a period of 12 months from the year ended 31 December 2022, taking account of the following events and measures:

(i) In December 2022, the Group obtained a line of credit of RMB22 billion and USD0.51 billion (Total: approximately RMB25.5 billion), and a line of credit promissory note of RMB11.8 billion from the Sinopec Group's subsidiaries;

(ii) As disclosed in Note 34, the Group's borrowings amounted to approximately RMB18.9 billion are sourced from Sinopec Group and its subsidiaries, where the Group maintains ongoing good relationship with these companies, which enables the Group to secure sufficient financial support from these companies;

(iii) To obtain additional credits facilities, the Group will diversify its source of finance by exploring and developing good relationship with listed and state-owned financial institutions; and

(iv) The Group is expected to generate operating cash inflows in the next twelve months.

The directors of the Company are in the opinion that the above measures are sufficient to meet with the expected liquidity, daily operation and capital requirements and considered that going concern basis is appropriate for the preparation of these consolidated financial statements.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.2 Accounting for business combinations under common control and not under common control

(1) Business combination involving entities under common control

For the business combinations involving entities under common control, the assets and liabilities that are obtained in a business combination shall be measured at their original carrying amounts at the date of combination as recorded by the party being combined, except for the adjustments of different accounting policies. The difference between the carrying amount of the net assets obtained and the carrying amount of the consideration paid for the combination shall be adjusted to other capital reserve/share premium, if other capital reserve/share premium is not sufficient to absorb the difference, any excess shall be adjusted against accumulated losses.

(2) Business combination involving entities not under common control

For business combinations involving entities not under common control, the consideration for each combination is measured at the aggregate of the fair values, at the acquisition date, of assets given, liabilities incurred or assumed, and equity securities issued by the acquirer in exchange for control of the acquiree. At the acquisition date, the acquired assets, liabilities and contingent liabilities of the acquiree are generally measured at their fair values.

Where the consideration exceeds the acquirer's interest in the fair value of the acquiree's identifiable net assets, the difference is recognised as goodwill, and is subsequently measured at costs less any accumulative impairment losses. Where the consideration is less than the acquirer's interest in the fair value of the acquiree's identifiable net assets, the difference is recognised in profit or loss for the current period after reassessment.

Business combinations involving entities not under common control through step acquisition

In the consolidated financial statements, the carrying amount of equity interest of the acquiree held prior to acquisition date shall be re-measured at the fair value at acquisition date, the difference between the fair value and the carrying amount shall be recognised as investment income or loss for the current period. Amounts previously recognised in other comprehensive income in relation to that acquiree are accounted for on the same basis as would be required if the relevant assets or liabilities were disposed of.

(3) Transaction fees attributed during the business combination

The intermediary and other relevant administrative expenses such as audit, legal and valuation advisory for business combinations are recognised in profit or loss when incurred. Transaction costs of equity or debt securities issued as the considerations of business combination are included in the initial recognition amounts of the related equity or debt securities.

2.3 Basis of preparation of the consolidated financial statements

(1) Scope of consolidation

The scope of consolidation is on the basis of control. Control refers to the power over investee of the Group, exposure or rights to variable returns in participating in the investee's related activities and the ability to use the power to affect those variable returns. A subsidiary is the entity controlled by the Group (including severable part of the investee and the enterprise, structured body controlled by the enterprise, etc.)

Subsidiaries

Subsidiaries are entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that the Group ceases control.

Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method and are initially recognised at cost. The Group's investment in associates includes goodwill identified on acquisition, net of any accumulated impairment loss. The Group's shares of its associates' post-acquisition profits or losses is recognised in the consolidated statement of comprehensive income and its share of post acquisition movements in other comprehensive income is recognised in other comprehensive income. The cumulative post-acquisition movements are adjusted against the carrying amounts of the investments. When the Group's share of losses in an associate equals or exceeds its interest in the associates (which includes any other unsecured receivables that, in substance, form part of the Group's net investment in the associate), the Group does not recognise further losses, unless the Group has incurred obligations or made payments on behalf of the associates.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.3 Basis of preparation of the consolidated financial statements (Continued)

(1) Scope of consolidation (Continued)

Joint Arrangements

A joint arrangement is an arrangement of which two or more parties have joint control. Joint arrangement is divided into joint operation and joint venture.

(1) Joint operations

A joint operation is a joint arrangement whereby the Group that has joint control of the arrangement has rights to the assets, and obligations for the liabilities.

A joint operator shall recognise in relation to its interest in a joint operation, which is followed by relevant accounting policies:

A. its assets, including its share of any assets held jointly;

B. its liabilities, including its share of any liabilities incurred jointly;

C. its revenue from the sale of its share of the output arising from the joint operation;

D. its share of the revenue from the sale of the output by the joint operation;

E. its expenses, including its share of any expenses incurred jointly.

(2) Joint ventures

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

The accounting treatment is in accordance with the provisions of long-term investment under equity method.

(2) Method of preparation of consolidated financial statements

The consolidated financial statements are based on the financial statements of the Company and its subsidiaries, and are prepared by the Company in accordance with other relevant information. In preparing the consolidated financial statements, the Company and its subsidiaries are required to apply consistent accounting policy and accounting period, intra-group transactions and balances shall be offset.

A subsidiary acquired through a business combination involving entities under common control in the reporting period shall be included in the scope of the consolidation from the beginning of the date on which the businesses are under common control, the subsidiary's income, expenses and profits are included in the consolidated results of operations, and cash flows are included in the consolidated statement of cash flow from earliest date presented or since the businesses first came under common control, whichever is later.

Where a subsidiary has been acquired through a business combination involving entities not under common control, the subsidiary's income, expenses and profits are included in the consolidated results of operations, and cash flows are included in the consolidated statement of cash flow from the acquisition date to the end of the reporting date.

(3) Treatment of loss of control of subsidiaries

When there is a loss of control over investee because of disposing part of equity investment or other reasons, the remaining part of the equity investment should be re-measured at fair value at the date when losing control over the investee; the cash received in disposal of the equity investment and the fair value of remaining part of the equity investment, deducting net assets proportion calculated by original share percentage since the acquisition date shall be recorded in profit or loss for current period of disposal.

Amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for on the same basis as would be required if the relevant assets or liabilities were disposed of.

2.4 Segment reporting

The Group has identified several operating segments based on the internal structure, management requirements and internal reporting policy. The segment information is prepared based on the financial information of the Company's daily management requirements, which are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The Company's executive management reviews operating segments' financial information regularly for the purposes of resources allocation and performance assessment.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.5 Foreign currency transactions and translation of foreign currency statements

(1) Foreign currency transactions

When foreign currency transactions occur, they are translated into the reporting currency at spot exchange rate at the dates of the transactions.

At the reporting date, foreign currency monetary items are translated using the spot exchange rate at the reporting date. Exchange differences arising from the differences between the spot exchange rate prevailing at the reporting date and those spot rates used on initial recognition or at the previous reporting date are recognised in profit or loss in current period; foreign currency non-monetary items carried at historical cost continue to be measured at the amounts using the spot exchange rates at the dates of the transactions; foreign currency non-monetary items carried at fair value are translated using the spot exchange rates at the date when the fair value was determined. Differences arising from retranslation are included in profit or loss in current period except for differences arising on retranslation of non-monetary items in respect of which gains and losses are recognised in other comprehensive income, in which case, the exchange differences are also recognised in other comprehensive income.

(2) Translation of foreign currency statements

At the reporting date, when translating the foreign currency financial statements of overseas subsidiaries, the assets and liabilities of the statement of financial position are translated using the spot exchange rate at the reporting date.

The revenue and expenses in the consolidated statement of comprehensive income are translated using at spot rates with reasonable approximation of the exchange rates prevailing on the transaction dates.

All items in the statement of cash flows are translated using at spot rates with reasonable approximation of the exchange rates prevailing on the transaction dates. The impact of exchange rate changes on cash amount is reflected separately in the cash flow as "Effect of foreign exchange rate changes on cash and cash equivalents".

Differences arising from the translation of foreign currency financial statements are separately reflected in "other comprehensive income".

When there is a loss of control in overseas operations, the exchange reserve related to overseas operations presented in the shareholders' equity in the consolidated statement of financial position shall be transferred to profit or loss in current period.

2.6 Property, plant and equipment (including other non-current assets)

(1) Recognition and initial measurement

The Group's property, plant and equipment and other non-current asset are tangible assets that are held for use in production, rendering of services, for rentals, or for administrative purposes and have useful lives of more than one accounting year.

Property, plant and equipment and other non-current asset shall be recognised only when it is probable that economic benefit associated with the asset will flow into the entity and the cost of the asset can be measured reliably.

Property, plant and equipment and other non-current asset of the Group are stated at cost less accumulated depreciation and accumulated impairment loss.

(2) Depreciation methods, estimated useful lives and residual value

The Group uses the straight-line method for depreciation. Depreciation of the property, plant and equipment and other non-current asset (other than right-of-use assets as described in Note 2.23) begins when they achieved the condition for their intended use, and stop being depreciated when derecognised or classified as non-current assets held for sale. For those property, plant and equipment without considering impairment provision, the Group's annual depreciation rates are shown as follows according to the category, expected useful lives and estimated net residual values rates.

Buildings	12 – 50 years
Oil engineering equipment and others	4 – 30 years

Among these, property, plant and equipment which have been impaired should deduct the cumulative amount of impairment provision to determine the depreciation rate. Other non-current assets, such as specific drilling and logging equipment, were depreciated over their estimated useful life or units of production. Other non-current assets that cannot generate future benefits are recognised in the profit or loss in the period of relevant cost being incurred.

The method of impairment test and impairment provision of property, plant and equipment are set out in Note 2.8.

The Group reviews the useful life and estimated residual value of a property, plant and equipment and other non-current assets and the depreciation method applied annually at each of the period end.

The estimated useful lives and residual values of property, plant and equipment and other non-current assets are adjusted if they are different from the original estimates.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.6 Property, plant and equipment (including other non-current assets) (Continued)

(3) Overhaul costs

The overhaul costs occurred in regular inspection of property, plant and equipment and other non-current assets are recognised in the cost of property, plant and equipment and other non-current assets if there is undoubted evidence to confirm that they meet the recognition criteria, otherwise, the overhaul costs are recognised in profit or loss for the current period. Property, plant and equipment and other non-current assets are depreciated during the intervals of the regular overhaul.

(4) Construction in progress

The cost of construction in progress is determined according to the actual expenditure incurred for the construction, including all necessary construction expenditures incurred during the construction period, borrowing costs that shall be capitalised before the construction reaches the condition for intended use and other relevant expenses.

Construction in progress is transferred to other classes of property, plant and equipment when the assets are ready for their intended use.

For provision for impairment of construction in progress, refer to Note 2.8.

2.7 Intangible assets

Intangible assets include software, etc.

The Group initially measures the intangible asset at cost, and analyses and judges its useful life when it is acquired. An intangible asset with a finite useful life is amortised using the method which can reflect the expected realisation of economic benefits related to the asset over its expected useful life since the asset is available for use; an intangible asset which expected realisation cannot be reliably measured is amortised using straight-line method; an intangible asset with an indefinite useful life is not amortised.

Amortisation of an intangible asset with finite useful life is as follows:

Software	5 years
Others	10 years/unit of production method

For an intangible asset with a finite useful life, the Group reviews the useful life and amortisation method at the end of each financial year, if it is different from the previous estimate, adjustment is made at previous estimates and accounted for according to changes in accounting estimates.

The carrying amount of an intangible asset should be transferred to profit or loss in current period when it is estimated that no further economic benefits can be brought to the Group as at the reporting date.

For the impairment method of intangible assets, refer to Note 2.8.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.8 Impairment of non-financial assets

Assets that have an indefinite useful life (e.g. goodwill) are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

The impairment of non-financial assets such as subsidiaries, associates, joint ventures, property, plant and equipment (including right-of-use assets and other non-current assets) and intangible assets are determined as follows:

At the reporting date, the Group determines whether there may be evidence of impairment, the Group will estimate the recoverable amount for impairment and then perform impairment test if there is any such evidence. For goodwill arising from business combination, intangible assets with identified useful life and the intangible assets that have not yet ready for use are tested for impairment annually regardless of whether such evidence exists.

The recoverable amount of an asset is determined by the higher amount of fair value deducting disposal costs and net present value of future cash flows expected from the assets. The Group estimates the recoverable amount based on individual asset; for the recoverable amount of individual asset which is difficult to estimate, the recoverable amount of the asset group is determined based on the asset group which involved in the asset. The identification of the asset group is based on whether the cash flow generated from the asset group is independent of the major cash inflows from other assets or asset groups. When the asset or asset group's recoverable amount is lower than its carrying amount, the Group reduces its carrying amount to its recoverable amount. The reduced amount is included in profit or loss, while the provision for impairment of assets is recognised.

2.9 Financial instruments

Financial assets and financial liabilities are recognised in the consolidated statement of financial position when the Group becomes a party to the contractual provision of the financial instrument. Financial assets and financial liabilities are initially measured at fair value.

A financial asset or financial liability (unless it is a trade receivable without a significant financing component) is initially measured at fair value plus, for an item not at fair value through profit or loss ("FVTPL"), transaction costs that are directly attributable to its acquisition or issue. Transaction costs of financial assets carried at FVTPL are expensed in the consolidated statement of comprehensive income. A trade receivable without a significant financing component is initially measured at the transaction price.

(1) Classification and measurement of financial assets

On initial recognition, a financial asset is classified as measured at: amortised cost; fair value through other comprehensive income ("FVTOCI") – debt investment; FVTOCI – equity investment; or FVTPL.

Financial assets are not reclassified subsequent to their initial recognition, except if and in the period the Group changes its business model for managing financial assets.

A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated as at FVTPL:

(i) the asset is held within a business model whose objective is to hold assets to collect contractual cash flows; and

(ii) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortised cost or FVTOCI as described above are measured at FVTPL. On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortised cost or at FVTOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.9 Financial instruments (Continued)

(1) Classification and measurement of financial assets (Continued)

Financial assets: Business model assessment

The Group makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with the Group's continuing recognition of the assets.

Financial assets that are held for trading or are managed and whose performance is evaluated on a fair value basis are measured at FVTPL.

Financial assets: Assessment whether contractual cash flows are solely payments of principal and interest

For the purposes of this assessment, "principal" is defined as the fair value of the financial asset on initial recognition. "Interest" is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument.

This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

(i) contingent events that would change the amount or timing of cash flows;

(ii) terms that may adjust the contractual coupon rate, including variable rate features;

(iii) prepayment and extension features; and

(iv) terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a significant discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

Financial assets: Subsequent measurement and gains and losses

Financial assets at amortised cost

Trade receivables, other receivables, restricted cash and cash and cash equivalents are subsequently measured at amortised cost using the effective interest method. The amortised cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognised in the profit or loss. Any gain or loss on derecognition is recognised in the profit or loss.

Financial assets at FVTOCI – equity investments

They are measured at fair value with gains and losses arising from changes in fair value recognised in other comprehensive income and accumulated in the other comprehensive income reserve (non-recycling); and are not subject to impairment assessment. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, and will continue to be held in the other comprehensive income reserve (non-recycling).

Dividends on these investments in equity instruments are recognised in profit or loss when the Group's right to receive the dividends is established in accordance with IFRS 9, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the "other income" line item in profit or loss.

Financial assets at FVTOCI – debt investments

Notes receivables held by the Group are classified as at FVTOCI. Notes receivables are initially measured at fair value plus transaction costs. Subsequently, changes in their carrying amount as a result of foreign exchange gains and losses, impairment gains or losses, and interest income calculated using the effective interest method are recognised in profit or loss. The amounts that are recognised in profit or loss are the same as the amounts that would have been recognised in profit or loss if these notes receivables had been measured at amortised cost. All other changes in their carrying amount are recognised in other comprehensive income and accumulated under the heading of other comprehensive income (recycling). When these notes receivables are derecognised, the cumulative gains or losses previously recognised in other comprehensive income are reclassified to profit or loss.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.9 Financial instruments (Continued)

(2) Derecognition of financial assets

The Group derecognises a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Group neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

When the Group enters into transactions whereby it transfers assets recognised on its consolidated statement of financial position, but retains either all or substantially all of the risks and rewards of the transferred assets, in such cases, the transferred assets are not derecognised.

(3) Impairment of financial assets

The Group recognises loss allowances for expected credit losses ("ECL") on financial assets measured at amortised cost and debt instruments that are measured at FVTOCI. The Group has the following types of assets that are subject to IFRS 9's ECL model:

- notes and trade receivables
- contract assets
- cash and cash equivalents
- restricted cash
- other receivables

The Group generally measures loss allowances at an amount equal to lifetime ECL, except that the credit risk of a financial assets has not been increased significantly since initial recognition, in which case, measured at 12-month ECL. ECL are a probability-weighted estimation of credit losses (i.e. the present value of all cash shortfalls) over the expected life of the financial assets. Lifetime ECL are the ECL that result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL are the portion of ECL that results from default events on a financial instrument that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months). In all cases, the maximum period considered when estimating ECL is the maximum contractual period over which the Group is exposed to credit risk.

For notes and trade receivables, and contract assets, the Group applies the simplified approach to provide for ECL as prescribed by IFRS 9 and has calculated ECL based on lifetime ECL, using provision matrix.The provision matrix is determined based on historical observed default rates over the expected life of the notes and trade receivables with similar credit risk characteristics and is adjusted for forward-looking estimates. At every reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information, 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 indication 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.9 Financial instruments (Continued)

(3) Impairment of financial assets (Continued)

Credit-impaired financial assets

At each reporting date, the Group assesses on a forward-looking basis whether financial assets carried at amortised cost are credit-impaired. A financial asset is "credit-impaired" when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

(i) significant financial difficulty of the borrower or issuer;

(ii) a breach of contract such as a default or past due event;

(iii) the restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;

(iv) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(v) the disappearance of an active market for a security because of financial difficulties.

The Group recognises an impairment loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade receivables, other receivables, contract assets, restricted cash and cash and cash equivalents etc., where the corresponding adjustment is recognised through a loss allowance account. For investments in debt instruments that are measured at FVTOCI, the loss allowance is recognised in OCI and accumulated in the other comprehensive income reserve (recycling) without reducing the carrying amounts of these debt instruments.

Write-off

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

(4) Classification and measurement of financial liabilities

The Group's financial liabilities include notes and trade payables, other payables, long-term borrowings and short-term borrowings. Financial liabilities (other than lease liabilities) are classified as measured at amortised cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognised in the profit or loss. Accounting policies for lease liability are set out in Note 2.23.

(5) Derecognition of financial liabilities

The Group derecognises a financial liability when its contractual obligations are discharged or cancelled, or expire.

The Group also derecognises a financial liability when its terms are modified and the cash flows of the modified liability are substantially different. In this case, a new financial liability based on the modified terms is recognised at fair value. The difference between the carrying amount of the financial liability extinguished and the new financial liability with modified terms is recognised in the profit or loss.

(6) Offsetting

Financial assets and financial liabilities are offset and the net amount is presented in the consolidated statement of financial position when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

Income and expenses are presented on a net basis only when permitted under IFRS, or for gains and losses arising from a group of similar transactions.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.10 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability or in the absence of a principal market, in the most advantageous market for the asset or liability. The Group shall measure the fair value of an asset or a liability using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

If an active market exists for the financial assets or financial liabilities, the Group uses the quotation on the active market at its fair value. For those in the absence of active market, the Group uses valuation technique to recognise its fair value.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

An entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, in priority to use relevant observable inputs and only use unobservable inputs when observable inputs cannot be obtained.

The fair value measurement of the assets and liabilities measured at fair value is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability.

At each reporting date, the Group reassesses the assets and liabilities measured at fair value to ensure any transfer between the levels of the fair value hierarchy.

2.11 Inventories

(1) Classification

Inventories include raw materials, work in progress, consumables and finished goods.

(2) Determination of cost

Inventories are recognised at its actual cost when acquired. Inventories are calculated by weighted average method when issued.

(3) Write down to net realisable value

Net realisable value is based on the estimated selling price deducting the estimated costs to be, the estimated selling expenses and related taxes amount incurred when it is completed. Recognition of the net realisable value is based on the verified evidences and considers the purpose of holding inventories and the effect of post balance sheet events to the extent that such events confirm conditions existing at the end of the reporting period.

At the reporting date, if the cost of inventory of the Group exceeds its net realisable value, the inventories is write down to their net realisable value, if the factors caused the inventory previously written-down have disappeared, the amount of write down is reversed to the extent that the new carrying amount is the lower of the cost and the net realisable value.

(4) Inventory system

The Group adopts perpetual inventory system.

(5) Amortisation methods of consumables

Consumables include low-value consumables that are amortised in full when used.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.12 Contract assets and contract liabilities

The contract asset is the Group's right to consideration in the exchange for services that the Group has transferred to customer. The contract assets are transferred to trade receivables when receipt of the consideration is conditional only on the passage of time.

The Group expects that contract assets have the same risk characteristics as notes and trade receivables.

The contract liabilities are due to the non-refundable advance payment made by customers. Such liabilities fluctuated as a result of the terms of different projects. A contract liability is the Group's obligation to render services to a customer for which the Group has received consideration. A contract liability is recognised by the Group when the customer pays consideration but before the Group recognised the related revenue.

For a single contract with the customer, either a net contract asset or a net contract liability is presented. For multiple contracts, contract assets and contract liabilities of unrelated contracts are not presented on a net basis.

2.13 Cash and cash equivalents

Cash comprises cash on hand and deposits that can be readily drawn on demand. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

2.14 Share capital

Ordinary share are classified as equity. Share capital is recognised at the amount of consideration of shares issued, after deducting any transaction costs associated with the issuing of shares (net of any related income tax benefit) to the extent that they are incremental costs directly attributable to the equity transaction.

2.15 Borrowing costs

(1) Recognition principle of capitalisation of borrowing costs

For borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset, they shall be capitalised and included in the cost of related assets; other borrowing costs are recognised as expenses and included in profit or loss when incurred. Capitalisation of such borrowing costs can commence only when all of the following conditions are satisfied:

(1) Capital expenditures for the asset are being incurred, which includes the expenditure in the form of cash payment, transfer of non-cash assets or the interest bearing liabilities for the purpose of acquiring or constructing assets eligible for capitalisation;

(2) Borrowing costs are being incurred; and

(3) Activities relating to the acquisition, construction or production of the asset that are necessary to prepare the asset for its intended use or sale have commenced.

(2) Capitalisation period of borrowing costs

Capitalisation of such borrowing costs ceases when the qualifying assets being acquired, constructed or produced become ready for their intended use or sale. The borrowing cost incurred after that is recognised as an expense in the period in which they are incurred and included in profit or loss for the period incurred.

Capitalisation of borrowing costs is suspended during the periods in which the acquisition, construction or production of a qualifying asset is interrupted abnormally and when the interruption is for a continuous period of more than 3 months; the borrowing costs in the normally interrupted period are continued to be capitalised.

(3) Calculation of rate and amount of borrowing costs to be capitalised

Interest expenses for specific borrowings incurred in the period, less interest income of unused specific borrowings deposited with bank or investment income arising from temporary investment are capitalised. The capitalisation rate of the general borrowing is determined by reference to the weighted average effective interest rate of general borrowings. The amount of capitalisation of general borrowings is determined by reference to the weighted average of the amount of cumulative expenditures of the asset over the amount of specific borrowings and the capitalisation rate of general borrowings.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.16 Deferred tax assets and deferred tax liabilities

Tax expense comprises current tax expense and deferred tax expense. Current tax and deferred tax are included in profit or loss for the current period as tax expense, except for deferred tax related to transactions or events that are recognised in other comprehensive income or directly recognised in shareholders' equity, which are recognised in other comprehensive income or directly in shareholders' equity, and deferred tax arising from a business combination, which is adjusted against the carrying amount of goodwill.

Temporary differences arising from the difference between the carrying amount of an asset or liability and its tax base are recognised as deferred tax using the balance sheet liability method.

All the taxable temporary differences are recognised as deferred tax liabilities except for those incurred in the following transactions:

(1) The initial recognition of goodwill, and the initial recognition of an asset or liability in a transaction which is neither a business combination nor affects accounting profit or taxable profit (or deductible loss) when the transaction occurs;

(2) The taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, and the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

The Group recognised deductible temporary differences, deductible tax losses as deferred tax assets to the extent that they are available for set-off future taxable income unless such timing difference was arised from the following transactions:

(1) The transaction is neither a business combination nor affects accounting profit or taxable profit (or deductible loss) when the transaction occurs;

(2) The deductible temporary differences associated with investments in subsidiaries, associates and joint ventures, the corresponding deferred tax asset is recognised when both of the following conditions are satisfied: it is probable that the temporary difference will reverse in the foreseeable future, it is probable that taxable profits will be available in the future, against which the temporary difference can be utilised.

At the reporting date, deferred tax assets and deferred tax 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, and their tax effect is reflected.

At the reporting date, the Group reviews the carrying amount of a deferred tax asset. If it is probable that sufficient taxable profits will not be available in future periods to allow the benefit of the deferred tax asset to be utilised, the carrying amount of the deferred tax asset is reduced. Any such reduction in amount is reversed when it becomes probable that sufficient taxable profits will be available.

2.17 Employee Benefits

(1) Scope of employee benefits

Employee benefits are all forms of consideration and compensation given by the Group in exchange for service rendered by employees or the termination of employment. Employee benefits include short-term employee benefits, post-employment benefits, termination benefits and other long-term employee benefits. Employee benefits include benefits provided to employees' spouses, children, and other dependants, survivors of the deceased employees or to other beneficiaries.

(2) Short-term employee benefits

Wages, bonuses, contribution to the social welfare (including medical insurance, injury insurance, birth insurance, etc.) and house funding are recognised as liability and to the profit of loss or cost of related assets in the period of relevant costs being incurred. If related liabilities in which the employees render their services are not expected to be wholly payable within twelve months after the financial period of relevant expenses being incurred and the financial impact is significant, relevant liabilities will be measured at discounted values.

(3) Post employment benefits

Post-employment comprised of defined contribution plan. The Group's obligations under the defined contribution plan are limited to the fixed amount of contribution to the independent trustee.

Defined contribution plans

Defined contribution plans include the basic pension insurance, unemployment insurance and annuity scheme.

In addition to the basic social pension insurance, the Group sets up annuity scheme according to the relevant policies of annuity system, employees may voluntarily participate in the annuity scheme. The Group has no other significant commitments of social security of employees.

The Group recognised the contribution payable under the defined contribution plan as liabilities with corresponding amount recognised in the profit or loss of the financial period of services rendered by employees.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.17 Employee Benefits (Continued)

(4) Termination benefits

The Group recognises termination benefits liabilities and profit or loss in the period in the earlier date of the followings: (i) The Group cannot unilaterally withdraws the termination plan or reduce the termination benefits under the proposal, or (ii) The Group recognises the payment of the termination benefits costs and expenses.

For the implementation of internal retirement plan for employees, the economic compensation before the official retirement date is termination benefit.

From the date when the employee stops providing the service to the normal retirement date, the amount for wages and social insurance expenses to be paid for the internal retired employee would be recognised in profit or loss when incurred.

(5) Other long-term employee benefits

Other long-term employee benefits provided by the Group to its employees who meet with the conditions of defined contribution plan were treated in accordance with the relevant provisions of defined contribution plans as set out above.

2.18 Share-based payment

(1) Category of share-based payment

The term “share-based payment” refers to equity-settled share-based payment and cash-settled share-based payment. The Group’s share option incentive plans are equity-settled share-based payments.

(2) Fair value of equity instrument

For the existence of an active market for options and other equity instruments granted by the Group, the fair value is determined at the active market quotations. For options and other equity instruments with no active market, option pricing model shall be used to estimate the fair value of the equity instruments. Factors as follows shall be taken into account using option pricing models: (a) the exercise price of the option (b) the validity period of the option (c) the current market price of the share (d) the expected volatility of the share price (e) predicted dividend of the share and (f) risk-free rate of the option within the validity period.

(3) Recognition of vesting of equity instrument based on the best estimate

During the vesting period at each reporting period, the Group shall make the best available estimate of the number of equity instruments expected to vest and shall revise that estimate, if necessary, if subsequent information indicates that the number of equity instruments expected to vest differs from previous estimates. On vesting date, the entity shall revise the estimate to equal the number of equity instruments that ultimately vested.

(4) Accounting treatment of implementation, modification and termination of share-based payment

Equity-settled share-based payment is measured at the fair value of the equity instruments granted to employees. For those equity instruments that vested immediately after the grant, the fair value of equity instrument at the grant date is recognised in the relevant costs or expenses with corresponding increase in other capital reserve accordingly. Within the vesting period, the Group will recognise the received service-related costs or expense and other capital reserves for each reporting date based on the best estimate of the number of vested equity instruments and the grant date’s equity instruments value. After the vesting period, no adjustment will be made on the relevant costs or expenses recognised and total shareholders’ equity.

When there is modification in Group’s share-based payment plans, and if the modification increases the fair value of the equity instruments granted, the increase in the fair value of the equity instruments is recognised over the remaining vesting period; if the modification increases the number of equity instruments granted, the increase in fair value of the equity instruments is recognised as a corresponding increase in service received. Increase in the fair value of equity instruments refer to the difference between the fair values of the modified equity instruments and the original equity instruments, measured at the modified date. If the modification reduces the total fair value of equity instruments or not otherwise beneficial to the employee, the Group will continue to account for the services received, as if the modification had not occurred, unless the Group cancelled some or all of the equity instruments granted.

During the vesting period, if the equity instruments is cancelled (except for failure to meet the conditions of the non-market vesting conditions, such as length of service performance conditions or market conditions are cancelled), the cancellation of the equity instruments granted shall be accounted for as accelerated vesting of the remaining period and recognised immediately in profit or loss, with corresponding increase in the other capital reserve. When the Group or employees can choose whether to meet non-vesting conditions, the Group shall treat the failure to meet that non-vesting condition during the vesting period as a cancellation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.19 Provision

An obligation for additional losses of investees related to a contingency is recognised as a provision when all of the following conditions are satisfied:

1. The obligation is a present obligation of the Group;
2. It is probable that an outflow of economic benefits will be required to settle the obligation;
3. The amount of the obligation can be measured reliably.

Provisions are initially measured at the best estimate of the payment to settle the associated obligations and consider the relevant risk, uncertainty and time value of money. If the impact of time value of money is significant, the best estimate is determined as its present value of future cash outflow. The Group reviews the carrying amount of provisions at the reporting date and adjusts the carrying amount to reflect the best estimate.

If the expenses for clearing of predictive liability is fully or partially compensated by a third party, and the compensated amount can be definitely received, it is recognised separately as an asset. The compensated amount shall not be greater than the carrying amount of the predictive liability.

2.20 Research and development expenditure

Expenditure on an internal research and development project is classified into expenditure on the research phase and expenditure on the development phase.

Expenditure on the research phase is related to theories of oil-gas exploration and development, oil-gas exploration and development experiments, pilot tests for oil-gas exploration, researches of softwares, etc.; Expenditure on the development phase is related to applications of oil-gas exploration and development technology, pilot tests of oil-gas development, adaptability of technologies in a development process, software developments, etc.

Expenditure on the research phase is recognised in profit or loss when incurred.

Expenditure on the development phase is capitalised only when the Group can satisfy all of the following conditions: the technical feasibility of completing the intangible asset so that it will be available for use or sale; its intention to complete the intangible asset is to use or sell it; how the intangible asset will generate economic benefits. Among other things, the Group can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset; the availability of adequate technical, financial and other resources to complete the development and the ability to use or sell the intangible asset; its ability to measure reliably the expenditure attributable to the intangible asset during its development phase. Otherwise, it is charged to profit or loss.

The research and development projects of the Group will enter into the development stage after meeting the above conditions and passing through the technical feasibility and economic feasibility studies and the formation of the project.

Capitalised expenditure on the development phase is presented as “development costs” in the statement of financial position and shall be transferred to intangible assets when the project is completed to its intended use state.

2.21 Government grants

Grants from the government are recognised only when there is a reasonable assurance that the grant will be received and the Group can comply with the attached conditions.

If a government grant is in the form of a transfer of a monetary asset, the item is measured at the amount received or receivable. Where there is undoubted evidence that the grants can meet the relevant conditions of financial support policy and is expected that the financial support fund is receivable, they can be measured in accordance with the receivable amount, and otherwise, they shall be measured according to the amount actually received. If a government grant is in the form of a transfer of a non-monetary asset, the item is measured at fair value. When fair value is not reliably determinable, the item is measured at nominal amount.

Government grant related to assets represents the government grant received for acquisition, construction of long-term assets. Except for these, all government grant are related to income.

Regarding to the government grant not clearly defined in the official documents and can be used for long-term assets, the part of government grant which can be referred to the value of the assets is classified as government grant related to assets and the remaining part is government grant related to income. For the government grant that is difficult to distinguish, the entire government grant is classified as government grant related to income.

A government grant related to an asset is recognised as deferred income, and evenly amortised to profit or loss over the useful life of the related asset. For a government grant related to income, if the grant is a compensation for related expenses or losses already incurred, the grant is recognised immediately in profit or loss for the current period; if the grant is a compensation for related expenses or losses to be incurred in subsequent periods, the grant is recognised as deferred income, and then recognised in profit or loss over the periods in which the costs are recognised.

When recognised government grants need to be returned, the repayment is offset against book balance of deferred income and the excess is recognised in profit or loss for the current period; if there is no related deferred income, it is directly recognised in profit or loss for the current period.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.22 Revenue recognition

Revenue from contracts with customers is recognised when control of goods or services is transferred to the customers at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services, excluding those amounts collected on behalf of third parties. Revenue excludes value added taxes or other sales taxes and is after deduction of any trade discounts.

To determine whether to recognise revenue, the Group follows a 5-step process:

1. Identifying the contract with a customer
2. Identifying the performance obligations
3. Determining the transaction price
4. Allocating the transaction price to the performance obligations
5. Recognising revenue when/as performance obligation(s) are satisfied

In all cases, the total transaction price for a contract is allocated amongst the various performance obligations based on their relative stand-alone selling prices.

Revenue is recognised either at a point in time or over time, when (or as) the Group satisfies performance obligations by transferring the promised goods or services to its customers.

Where the contract contains a financing component which provides a significant financing benefit to the customer for more than 12 months, revenue is measured at the present value of the amount receivable, discounted using the discount rate that would be reflected in a separate financing transaction with the customer, and interest income is accrued separately under the effective interest method. Where the contract contains a financing component which provides a significant financing benefit to the Group, revenue recognised under that contract includes the interest expense accreted on the contract liability under the effective interest method.

Cost to fulfil contracts

If the costs incurred in fulfilling a contract with a customer are not within the scope of an accounting standard other than IFRS 15, the Group shall recognise an asset from the costs incurred to fulfil a contract only if those costs meet all of the following criteria:

(a) the costs relate directly to a contract or to an anticipated contract that the Group can specifically identify;

(b) the costs generate or enhance resources of the entity that will be used in satisfying (or in continuing to satisfy) performance obligations in the future; and

(c) the costs are expected to be recovered.

A recognised asset shall be subsequently amortised on a systematic basis that is consistent with the transfer to the customer of the goods or services to which the asset relates. The assets shall be subjected to impairment review.

Capitalised cost to fulfil contracts is stated at cost less accumulated amortisation and impairment losses. Impairment losses are recognised to the extent that the carrying amount of the contract cost asset exceeds the net of (i) remaining amount of consideration that the Group expects to receive in exchange for the goods or services to which the asset relates, less (ii) any costs that relate directly to providing those goods or services that have not yet been recognised as expenses.

Further details of the Group's revenue and other income recognition policies are as follows:

(1) Sales of products

Revenue from sales of products is recognised when control of the products has been transferred, being when the products are delivered to the customers and there is no unfulfilled obligation that could affect the customer's acceptance of the products.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.22 Revenue recognition (Continued)

(2) Revenue from construction contracts and service contracts

Drilling engineering and geophysics

Revenues from drilling engineering and geophysics service contracts are recognised progressively over time using the output method, based on total value of contract work performed as a percentage of total contract sum, as customer simultaneously receives and consumes benefits provided by the Group's performance as the Group performs.

For contracts included two or more performance obligations, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis, an entity shall determine the stand-alone selling price at contract inception of the distinct service underlying each performance obligation in the contract.

Engineering construction

Revenue from engineering construction contracts is recognised progressively over time using the input method, based on the contract costs incurred to date as a percentage of total forecast costs, as the Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced.

For contracts included two or more performance obligations, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis, an entity shall determine the stand-alone selling price at contract inception of the distinct service underlying each performance obligation in the contract.

When the outcome of the contract cannot be reasonably measured, revenue is recognised only to the extent of contract costs incurred that are expected to be recovered.

Special downhole operations and Logging and mud logging

Revenue from special downhole operation and logging and mud logging service contract is recognised when services are rendered as customer simultaneously receives and consumes benefits provided by the Group's performance as the Group performs.

(3) Dividend income

Dividend income is recognised when the right to receive payment is established.

(4) Interest income

Interest income is recognised on a time-proportion basis using the effective interest method. When a loan and receivable is impaired, the Group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loan and receivables is recognised using the original effective interest rate.

2.23 Leases

(1) Definition of a lease and the Group as a lessee

For entering any new contracts, the Group considers whether a contract is, or contains a lease. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an identified asset (the underlying asset) for a period of time in exchange for consideration'. To apply this definition, the Group assesses whether the contract meets three key evaluations which are whether:

(i) the contracts contains an identified asset, which is either explicitly identified in the contract or implicitly specified by being identified at the time the asset is made available to the Group;

(ii) the Group has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use, considering its rights within the defined scope of the contract; and

(iii) the Group has the right to direct the use of the identified asset throughout the period of use. The Group assess whether it has the right to direct 'how and for what purpose' the asset is used throughout the period of use.

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 selling price of the lease component and the aggregate stand-alone selling price of the non-lease components.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.23 Leases (Continued)

(1) Definition of a lease and the Group as a lessee (Continued)

Measurement and recognition of leases as a lessee

At lease commencement date, the Group recognises a right-of-use asset and a lease liability on the consolidated statement of financial position. The right-of-use asset is measured at cost, which is made up of the initial measurement of the lease liability, any initial direct costs incurred by the Group, an estimate of any costs to dismantle and remove the underlying asset at the end of the lease, and any lease payments made in advance of the lease commencement date (net of any lease incentives received).

The Group depreciates the right-of-use assets on a straight-line basis from the lease commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The Group also assesses the right-of-use asset for impairment when such indicator exists.

At the commencement date, the Group measures the lease liability at the present value of the lease payments unpaid at that date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate.

Lease payments included in the measurement of the lease liability are made up of fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable payments based on an index or rate, and amounts expected to be payable under a residual value guarantee. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payment of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate.

Subsequent to initial measurement, the liability will be reduced for lease payments made and increased for interest cost on the lease liability. It is remeasured to reflect any reassessment or lease modification, or if there are changes in in-substance fixed payments. The variable lease payments that do not depend on an index or a rate are recognised as expense in the period on which the event or condition that triggers the payment occurs.

The Group remeasures lease liabilities whenever:

– there are changes in lease term or 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.

– there are changes in lease payments due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used).

– a lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured 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.

When the lease is remeasured, the corresponding adjustment is reflected in the right-of-use asset, or profit and loss if the right-of-use asset is already reduced to zero.

The Group has elected to account for short-term leases using the practical expedients. Instead of recognising a right-of-use asset and lease liability, the payments in relation to these leases are recognised as an expense in profit or loss on a straight-line basis over the lease term. Short-term leases are leases with a lease term of 12 month or less.

The Group presents right-of-use assets in “property, plant and equipment”, the same line item as that within which the corresponding underlying assets would be presented if they were owned.

(2) The Group as a lessor

As a lessor, the Group classifies its leases as either operating or finance leases.

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of the underlying asset, and classified as an operating lease if it does not.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

2.24 Shares repurchase

Prior to the cancellation or transfer of repurchased shares from the Group's share option incentive plan, the repurchased shares were classified as treasury shares. Costs of treasury shares comprised of cost incurred for the repurchase of shares. Costs incurred for repurchase of shares were deducted from equity and no profit or loss will be recognise upon repurchase or cancellation of shares.

Upon transfer of treasury shares, the differences between the considerations received and the nominal value of treasury shares were deducted from other capital reserve and share premium, any differences will be deducted from surplus reserves and accumulated losses. Upon cancellation of treasury shares, share capital will be deducted by reference to number of shares and its nominal value, any difference between the nominal value of treasury shares will be deducted from the other capital reserve and share premium, any differences will be deducted from surplus reserves and accumulated losses.

2.25 Related parties

For the purposes of these consolidated financial statements, 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 if that person:

- (i) has control or joint control over 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.

(b) the party is an entity and if 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 an associate or joint venture of a member of a group of which the other entity is a member);
- (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 (if the Group is itself such a plan) and the sponsoring employers are also 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); or
- (viii) the entity, or any member of a group of which it is a part, provide key management personnel services to the Group or to the parent of the Group.

Close members of the family or a person are those family members who may be expected to influence, or be influenced by, that person in their dealings with the entity.

3. NEW AND AMENDED IFRSs

3.1 Application of new and amendments to IFRSs

The IASB has issued a number of amended IFRSs. The Group has adopted all these amended IFRSs, which are relevant to the Group's operations and effective for the Group's consolidated financial statements for the accounting period beginning on or after 1 January 2022:

Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	Interest Rate Benchmark Reform – Phase 2
Amendments to IFRS 16	COVID-19-Related Rent Concessions beyond 30 June 2021 (early adopted)
Amendments to IAS 16	Property, Plant and Equipment – Proceeds before Intended Use
Amendments to IAS 37	Onerous Contracts – Cost of Fulfilling a Contract
Amendments to IFRS 3	Reference to the Conceptual Framework
Amendments to IFRSs	Annual Improvements to IFRS Standards 2018-2020

Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16, Interest Rate Benchmark Reform – Phase 2

The amendments provide temporary reliefs which address the financial reporting effects when an interbank offered rate is replaced with an alternative nearly risk-free interest rate. The amendments include the following practical expedients:

- A practical expedient to require contractual changes, or changes to cash flows that are directly required by the reform, to be treated as changes to a floating interest rate, equivalent to a movement in a market rate of interest
- Permit changes required by IBOR reform to be made to hedge designations and hedge documentation without the hedging relationship being discontinued
- Provide temporary relief to entities from having to meet the separately identifiable requirement when an RFR instrument is designated as a hedge of a risk component

These amendments had no impact on the consolidated financial statements of the Group. The Group intends to use the practical expedients in future periods if they become applicable.

Amendment to IFRS 16, COVID-19-Related Rent Concessions beyond 30 June 2021

On 28 May 2020, the IASB issued COVID-19-Related Rent Concessions – amendment to IFRS 16 Leases. The amendments provide relief to lessees from applying IFRS 16 guidance on lease modification accounting for rent concessions arising as a direct consequence of the COVID-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a COVID-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the COVID-19 related rent concession the same way it would account for the change under IFRS 16, if the change were not a lease modification.

The amendment was intended to apply until 30 June 2021, but as the impact of the COVID-19 pandemic is continuing, on 31 March 2021, the IASB extended the period of application of the practical expedient to 30 June 2022.The amendment applies to annual reporting periods beginning on or after 1 April 2021. However, the Group has not received COVID-19-related rent concessions, but plans to apply the practical expedient if it becomes applicable within allowed period of application.

Amendments to IAS 16, Property, Plant and Equipment – Proceeds before Intended Use

The amendments prohibit a company from deducting from the cost of property, plant and equipment amounts received from selling items produced while the company is preparing the asset for its intended use. Instead, a company will recognise such sales proceeds and related cost in profit or loss.

Amendments to IAS 37, Onerous Contracts – Cost of Fulfilling a Contract

The amendments state that the cost of fulfilling a contract comprises the costs that relate directly to the contract. Those costs include both incremental costs and an allocation of other costs so long as they relate directly to fulfilling contracts. Examples of incremental costs are direct labor and direct materials.

Amendments to IFRS 3, Reference to the Conceptual Framework

The amendment prohibits entities from deducting from the cost of an item of property, plant and equipment (PPE), any proceeds of the sale of items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling such items, and the costs of producing those items, in profit or loss.

3. NEW AND AMENDED IFRSS (CONTINUED)

3.2 New or amended IFRSs that have been issued but are not yet effective and not early adopted

The new and amended accounting standards issued but not yet effective for the accounting period ended 31 December 2022 which are relevant to the Group but the Group has not early adopted are set out below:

IFRS 17 and amendments to IFRS 17	Insurance Contracts and related amendments[1]
Amendments to IAS 1	Classification of Liabilities as Current or Non-current[1]
Amendments to IAS 8	Definition of Accounting Estimates[1]
Amendments to IAS 1 and IFRS Practice Statement 2	Disclosure of Accounting Policies[1]
Amendments to IAS 12	Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction[1]
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[3]
Amendments to IFRS 16	Lease Liability in a Sale and Leaseback[2]
Amendments to IAS 1	Non-current Liabilities with Covenants[2]

1 Effective for annual periods beginning on or after 1 January 2023
2 Effective for annual periods beginning on or after 1 January 2024
3 The amendments shall be applied prospectively to the sale or contribution of assets occurring in annual periods beginning on or after a date to be determined

The directors of the Company anticipate that the application of these new and amended IFRSs will have no material impact on the results and the financial position of the Group.

4. CRITICAL ACCOUNTING JUDGEMENT AND ESTIMATES

The Group continually evaluates the critical accounting estimates and key assumptions based on its historical experience and other factors, including expectation of future events that are believed to be reasonable under the circumstances.

The critical accounting estimates and key assumptions that are likely to have significant risks of causing material adjustments to the carrying amounts of assets and liabilities in the next financial year are set out as below:

(1) Classification of financial assets

The Group's critical judgements on determining the classification of financial assets, including the business model and analysis of contractual cash flow characteristics.

The Group's assessment of the business model is performed on a financial assets portfolio basis, taking into consideration of the way for how the performance of the financial assets are evaluated and reported to the Group's key management personnel, the way for how the risks for being affected by the performance of the financial assets are evaluated and managed, and the way for how managers are compensated and etc.

The Group's critical judgements on whether the cash flows are consistent with the loan arrangement include whether principal amount may change (including future cash flow and amount) over the life of the financial asset (for example, if there are early repayments of principal) and whether interest only consists of consideration for the time value of money, for the credit risk, and for other basic lending risks and costs, as well as a profit margin. For examples, whether the amount for early repayment solely reflects the outstanding principal and related interest and the reasonable compensation for the early termination of agreement.

(2) Provision for ECL of trade receivables and contract assets

The Group makes allowances on trade receivables (Note 21) and contract assets (Note 23) based on assumptions about risk of default and expected loss rates. The Group applies judgment in making these assumptions and selecting the inputs to the ECL calculation, based on the Group's past collection history, existing market conditions as well as forward looking estimates at the end of each reporting period. During the year ended 31 December 2022, reversal of ECL allowance on trade receivables of RMB82,515,000 (2021: ECL allowance of RMB1,342,000) and ECL allowance on contract assets of RMB97,454,000 (2021: reversal of ECL allowance of RMB2,826,000) respectively are recognised in profit or loss.

(3) Write down of inventories

The Group regularly reviews the net realisable value of inventories and inventories write-down is recognised at the excess of the carrying amounts of inventories over their net realisable value. When making estimation of the net realisable value of inventories, the Group considers the purpose of the inventories held on hand and other information available to form the underlying assumptions, including the market prices of inventories and the Group's historical operating costs. The actual selling price, costs of completion, selling expenses and taxes may vary according to the changes in market conditions, manufacturing technology or the actual use of the inventories. The profit or loss for the period will be affected by the adjustment in carrying amount of inventories. The carrying amount of inventories is set out in Note 24.

4. CRITICAL ACCOUNTING JUDGEMENT AND ESTIMATES (CONTINUED)

(4) Research and development costs

Research costs are expensed as incurred. Costs incurred on development projects relating to the design and testing of new or improved products are recognised as an intangible asset where the technical feasibility and intention of completing the product under development has been demonstrated and the resources are available to do so, costs are identifiable and there is an ability to sell or use the asset that will generate probable future economic benefit. Significant judgement is required in determining the capitalisation of development costs. Development costs that are recognised as assets are amortised on the straight-line basis to reflect the pattern in which the related economic benefits are recognised. Development costs that do not meet the above criteria are expensed as incurred.

(5) Depreciation and amortisation of property, plant and equipment, intangible assets and other non-current assets

The Group takes into account of residual value before calculating the depreciation and amortisation of property, plant and equipment, intangible assets and other non-current assets. The Group regularly review the estimated useful lives of the assets to determine the depreciation and amortisation charged in each reporting period. The useful lives of the assets are determined based on historical experiences of similar assets and the estimated technical changes, the amortisation periods for other non-current assets are determined by the Group in accordance with the expected benefit period of each assets. Depreciation and amortisation charges is revised if there is material effect on the previous estimation.

Carrying amount of property, plant and equipment and other non-current asset as well as intangible assets is set out in Notes 17 and 18.

(6) Revenue recognition

The contract revenue of petroleum engineering and technical services provided by the Group is recognised over time. The recognition of related revenue depends on the total budgeted costs and the estimation of progress towards satisfaction of a performance obligation by the Group. The management of the Group adopts either the expected value or most likely amount method to estimate the total amount of consideration to which the Group will be entitled, and evaluates the total budgeted costs according to historical information and construction plan. In view of the fact that the construction service contract cycle may span multiple accounting periods, the Group will continuously and periodically review and revise the estimated amount of consideration to which the Group will be entitled, estimated contract costs and the progress towards satisfaction of a performance obligation. If the total amount of consideration to which the Group will be entitled, and total contract costs are actually higher or lower than the management's estimated value, the amount of revenue recognised will be affected in the future.

(7) Provision for litigation claims

For the legal proceedings and claims, the Group derives the best estimate of the expenditure required to settle the related current obligations based on the legal advices consulted and according to the process and solutions of the legal proceedings and claims. The estimated losses will change according to the progress of the legal proceedings. The related information is set out in Note 39.

(8) Deferred tax assets

Deferred tax assets are recognised for all unused tax losses when the Group is likely to have sufficient taxable profits to offset those losses. The management estimates the timing and amount in relation to the future taxable profits, including the availability of tax planning strategy to recognise the appropriate amount of deferred tax assets. If the taxable profits in future accounting period is lower than the expected amount or the actual tax rate is lower than the expected tax rate, the deferred tax assets recognised will be reversed and included in the consolidated statement of comprehensive income. The related information is set out in Note 35.

(9) Taxation

There are various uncertainties on interpretation of the complicated tax regulations (including related tax incentive regulations) and timing and extent of the future taxable profits. Regarding to various international business and complexity of current contract, there may be adjustment to the recognised taxable income and expenses in the future. The Group has reasonably estimated the provision of taxation in the countries where the Group operates. Such provision of taxation is based on different factors, such as previous tax audit experience and interpretation by related tax authorities. Since the Group operates in different tax regions, different interpretations may be resulted from various events. Relevant information is set out in Notes 12 and 39(c).

(10) Going concern basis

These consolidated financial statements have been prepared on a going concern basis, the validity of which depends upon the financing plan assessed as detailed in note 2.1 to these consolidated financial statements. However, because not all future events or conditions can be predicted, this assumption is not a guarantee as to the Group's and Company's ability to continue as a going concern.

5. REVENUE AND SEGMENT INFORMATION

The Group's revenue is as follows:

	2022 RMB'000	2021 RMB'000
Geophysics	**4,756,990**	4,663,346
Drilling engineering	**36,814,540**	33,081,850
Logging and mud logging	**3,257,608**	3,207,549
Special downhole operations	**9,366,492**	9,384,197
Engineering construction	**17,436,238**	16,714,720
Others	**2,140,820**	2,481,391
	73,772,688	69,533,053

Segment information

The Group identifies its operating segments based on the internal organisation structure, senior executive management requirements and internal reporting system. The Group has identified five operating segments including geophysics, drilling engineering, logging and mud logging, special downhole operations and engineering construction. These operating segments are identified based on the regular internal financial information reported to the senior executive management. Senior executive management of the Company regularly reviews the segment information for their decision about the resources allocation and performance assessment.

Five reportable operating segments are as follows:

– Geophysics, which provides terrestrial and marine geophysical exploration, development and technical services;

– Drilling engineering, which provides customers with land and ocean drilling design, construction, technical services and drilling instrumentation;

– Logging and mud logging, which provides land and ocean project contracting and technical services for collection, monitoring, transmission, processing and interpretation and evaluation of wellbore oil and gas, geology and engineering information;

– Special downhole operations, which provides oil engineering technical and construction, including oil (gas) testing, well repair, lateral drilling, fracturing, acidising and oil assignments; and

– Engineering construction, which provides a package of services, including feasibility studies, design, procurement, construction for projects of onshore and offshore oil and gas fields, long-distance pipeline projects, oil and gas transporting process projects, storage and transportation projects, petrochemical supporting projects, building construction, water resources and hydropower, ports and waterways, electricity transmission and distribution projects, manufacturing of pressure vessels, LNG projects, coal chemical engineering, geothermal utilisation, energy saving and municipal roads and bridges.

Inter-segment transfers are measured by reference to market price. The assets are allocated based on the operations of the segment and the physical location of the asset.

All assets are allocated to reportable segments other than certain property, plant and equipment, certain intangible assets, certain other non-current assets, certain inventories, certain contract assets and cost to fulfil contracts, certain notes and trade receivables, certain prepayment and other receivables, certain cash and cash equivalents, and certain deferred tax assets.

All liabilities are allocated to reportable segments other than certain borrowings, certain deferred income, certain deferred tax liabilities, certain notes and trade payables, certain other payables, certain contract liabilities, and certain current income tax payable.

The resources related to interest income, interest expenses, interests in joint ventures, interests in associates, gain on investment, income tax expense as well as shared assets of all segments are centrally managed and accounted for by the Company, and thus are not allocated among segments.

Segment information of each reportable segment were reported and disclosed to the senior executive management in accordance with the accounting policies and the respective measurement bases. These accounting policies and measurement bases were the same as those used in for the preparation of the consolidated financial statements.

Information regarding each reportable segment provided to the senior executive management was as follows:

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

Segment information (Continued)

(a) Segment results, assets and liabilities

For the year ended 31 December 2022 and as at that date, the segment results, assets and liabilities were as follows:

	Geophysics	Drilling engineering	Logging and mud logging	Special downhole operations	Engineering construction	Unallocated	Eliminated	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
During the year ended 31 December 2022								
Segment revenue and results								
Revenue from external customers	4,756,990	36,814,540	3,257,608	9,366,492	17,436,238	2,140,820	–	73,772,688
Inter-segment revenue	111,765	2,741,580	2,810,395	598,371	103,722	7,045,592	(13,411,425)	–
Segment revenue	4,868,755	39,556,120	6,068,003	9,964,863	17,539,960	9,186,412	(13,411,425)	73,772,688
Reportable segment profit/(loss)	33,329	608,255	321,038	332,297	316,388	(886,639)	–	724,668
Other income	19,936	81,225	11,337	6,554	99,721	47,819	–	266,592
Other expenses	(44,865)	(49,730)	(4,785)	(4,280)	(39,830)	(10,608)	–	(154,098)
Profit/(loss) before income tax	8,400	639,750	327,590	334,571	376,279	(849,428)	–	837,162
Income tax expense								(265,547)
Profit for the year								571,615
Supplementary information								
Depreciation and amortisation								
– Property, plant and equipment	345,261	1,960,365	197,647	529,509	287,390	313,618	–	3,633,790
– Other non-current assets	119,152	1,780,771	142,358	203,453	9,842	14,722	–	2,270,298
– Intangible assets	190	1,171	1,495	10,112	13,130	131,906	–	158,004
Capital expenditure								
– Property, plant and equipment	585,413	2,259,002	195,919	714,069	596,172	617,128	–	4,967,703
– Intangible assets	3,189	80,694	–	1,166	5,561	45,504	–	136,114
– Equity investment	–	–	–	–	125,000	–	–	125,000
(Reversal of provision for)/Provision for ECL on trade receivables, net	(26,011)	16,921	2,898	(25,273)	(81,936)	30,886	–	(82,515)
(Reversal of provision for)/Provision for ECL on other receivables, net	(1,639)	11,091	951	695	(2,857)	(1,256)	–	6,985
Provision for ECL on contract assets	1,797	(1,315)	650	(64)	1,705	94,681	–	97,454
Written down of inventories to net realisable value	–	–	–	–	2,429	–	–	2,429
As at 31 December 2022								
Assets								
Segment assets	5,709,085	30,373,430	4,636,423	7,743,455	22,352,376	37,584,884	(37,199,136)	71,200,517
Liabilities								
Segment liabilities	4,680,689	24,488,460	3,359,394	4,850,991	21,672,974	41,919,826	(37,199,136)	63,773,198

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

Segment information (Continued)

(a) Segment results, assets and liabilities (Continued)

For the year ended 31 December 2021 and as at that date, the segment results, assets and liabilities were as follows:

	Geophysics	Drilling engineering	Logging and mud logging	Special downhole operations	Engineering construction	Unallocated	Eliminated	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
During the year ended 31 December 2021								
Segment revenue and results								
Revenue from external customers	4,663,346	33,081,850	3,207,549	9,384,197	16,714,720	2,481,391	–	69,533,053
Inter-segment revenue	42,777	3,757,636	2,329,444	533,246	27,104	6,814,586	(13,504,793)	–
Segment revenue	4,706,123	36,839,486	5,536,993	9,917,443	16,741,824	9,295,977	(13,504,793)	69,533,053
Reportable segment (loss)/profit	(28,969)	(222,536)	357,206	443,739	344,629	(969,155)	–	(75,086)
Other income	58,795	210,017	12,832	35,222	106,933	128,321	–	552,120
Other expenses	(12,685)	(36,792)	(5,706)	(9,316)	42,969	(4,323)	–	(25,853)
Profit/(Loss) before income tax	17,141	(49,311)	364,332	469,645	494,531	(845,157)		451,181
Income tax expense								(310,731)
Profit for the year								140,450
Supplementary information								
Depreciation and amortisation								
– Property, plant and equipment	361,919	1,871,291	232,520	497,354	269,981	243,520	–	3,476,585
– Other non-current assets	112,955	1,614,113	143,835	253,542	11,737	14,310	–	2,150,492
– Intangible assets	37	89,129	1,440	7,957	9,373	4,228	–	112,164
Capital expenditure								
– Property, plant and equipment	262,098	2,602,257	151,087	357,807	433,975	415,114	–	4,222,338
– Intangible assets	1,045	90,555	–	987	21,432	1,664	–	115,683
Provision for/(Reversal of provision for) ECL on trade receivables, net	1,636	21,093	7,976	(31,501)	(1,183)	3,321	–	1,342
Provision for/(Reversal of provision for) ECL on other receivables, net	389	2,766	(85)	(167)	22,322	(4,075)	–	21,150
Provision for ECL on contract assets	1,556	4,758	911	541	1,252	(11,844)	–	(2,826)
As at 31 December 2021								
Assets								
Segment assets	4,524,519	38,958,384	3,541,026	6,425,152	20,252,666	29,111,052	(38,760,352)	64,052,447
Liabilities								
Segment liabilities	3,427,097	28,862,019	2,978,969	3,475,883	19,867,388	37,339,926	(38,760,352)	57,190,930

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

Segment information (Continued)

(b) Geographical information

The following table presents the geographical information. Revenue is based on the location at which revenue were derived. Specified non-current assets include property, plant and equipment, other non-current assets, intangible assets, interests in joint ventures and interests in associates, which are based on the physical location of the assets.

	Revenue from external customers	
	2022	2021
	RMB'000	RMB'000
The PRC	**60,654,155**	59,869,980
Middle East	**9,399,935**	6,804,288
Other countries	**3,718,598**	2,858,785
	73,772,688	69,533,053

	Specified non-current assets	
	2022	2021
	RMB'000	RMB'000
The PRC	**28,874,064**	26,965,860
Other countries	**5,786,384**	5,001,331
	34,660,448	31,967,191

(c) Major customer

For the years ended 31 December 2022 and 2021, revenue from customers which individually contributed over 10% of the Group's revenue is as follows:

	2022	2021
	RMB'000	RMB'000
Customer A	**47,105,168**	46,922,348

Revenue from this customer was derived from the operating segments of geophysics, drilling engineering, logging and mud logging, special downhole operations and engineering construction accounted for more than 50% of the Group's revenue.

5. REVENUE AND SEGMENT INFORMATION (CONTINUED)

Segment information (Continued)

(d) Analysis on revenue from contracts

For the years ended 31 December 2022 and 2021, the Group derives revenue from the transfer of goods and service at a point in time and over time in the following customers' segment for geophysics, drilling engineering, logging and mud logging, special downhole operations and engineering construction service:

	Geophysics	Drilling engineering	Logging and mud logging	Special downhole operations	Engineering construction	Unallocated	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
During the year ended 31 December 2022							
Timing of revenue recognition:							
– At a point in time	–	3,999	–	1,833	13,015	970,380	989,227
– Over time	4,756,990	36,810,541	3,257,608	9,364,659	17,423,223	1,170,440	72,783,461
Total	4,756,990	36,814,540	3,257,608	9,366,492	17,436,238	2,140,820	73,772,688
During the year ended 31 December 2021							
Timing of revenue recognition:							
– At a point in time	–	2,481	13,271	466	13,969	759,138	789,325
– Over time	4,663,346	33,079,369	3,194,278	9,383,731	16,700,751	1,722,253	68,743,728
Total	4,663,346	33,081,850	3,207,549	9,384,197	16,714,720	2,481,391	69,533,053

(e) Performance obligation of contracts with customers

The Group enters into petroleum engineering technical service contracts or construction contracts with customers to provide geophysical exploration, drilling, logging and mud logging, special downhole operations and surface engineering construction services of which rendering of services and construction contracts is completed according to the agreed schedule. When value of the completed work is confirmed and is certified, customers pay progress payments within 30-180 days after billing. Final billing and payment is made upon the completion and acceptance of the work.

In accordance with contracts and relevant legal requirement, the Group's engineering construction business provides quality assurance for the constructed assets. This type of quality assurance is an assurance-type warranty that ensures that the constructed assets fulfil the established quality standards, which does not constitute a single performance obligation.

6. FINANCE EXPENSES – NET

	2022	2021
	RMB'000	RMB'000
Finance income		
Interest income		
– Sinopec Group's subsidiaries	1,145	1,008
– Third-parties and other financial institutions	14,263	37,172
	15,408	38,180
Finance expenses		
Interest expenses on loans wholly repayable within 5 years		
– Sinopec Group and its subsidiaries	(594,984)	(597,814)
– Third-party and other financial institutions	(49,261)	(72,475)
Interest expenses on lease liabilities		
– Sinopec Group and its subsidiaries	(26,516)	(21,752)
– Associates and joint ventures of Sinopec Group	(13,698)	(20,410)
– Third-parties	(19,845)	(14,309)
Exchange gain/(losses), net	98,667	(127,419)
Bank and other charges	(37,367)	(48,136)
	(643,004)	(902,315)
	(627,596)	(864,135)

7. EXPECTED CREDIT LOSS ("ECL") AND WRITE-DOWN OF INVENTORIES TO NET REALISABLE VALUE

	2022 RMB'000	2021 RMB'000
(Reversal of ECL)/ECL on trade and other receivables, net	(75,530)	22,492
ECL/(reversal of ECL) on contract assets, net	97,454	(2,826)
Write-down of inventories to net realisable value	2,429	–
	24,353	19,666

8. INVESTMENT INCOME

	2022 RMB'000	2021 RMB'000
Investment income from financial assets at FVTOCI	500	1,577

9. OTHER INCOME

	2022 RMB'000	2021 RMB'000
Gain on disposal of property, plant and equipment, net	13,525	84,972
Gain on disposal of other non-current assets, net	12,363	3,751
Gain on debt restructuring	18,157	29,404
Government grants (Note)	107,386	300,474
Waived payables	14,711	31,145
Penalty income	4,290	2,313
Compensation received	8,201	7,790
Insurance claims	1,455	6,959
Asset surplus	41,648	38,440
Others	44,856	46,872
	266,592	552,120

Note:

For the years ended 31 December 2022 and 2021, government grants primarily represent financial appropriation income and non-income tax refunds received from respective government agencies without conditions or other contingencies attached to the receipts of the grants.

10. OTHER EXPENSES, NET

	2022 RMB'000	2021 RMB'000
Loss on scarps of assets	71,538	24,762
Penalty	2,265	6,376
Donation	1,764	830
Compensation	9,016	5,683
Reversal of provision for expected loss on pending litigations	–	(79)
Reversal of expected loss on judicial reorganization (Note 38)	–	(69,049)
Others	69,515	57,330
	154,098	25,853

11. PROFIT BEFORE INCOME TAX

Profit before income tax is stated after charging/(crediting) the followings:

	2022	2021
	RMB'000	RMB'000
Staff costs, including directors and supervisors emoluments (Note 16)	**17,968,202**	16,999,677
Retirement benefit plan contribution (including in the above mentioned staff costs)		
– Municipal retirement scheme costs	**1,374,355**	1,329,452
– Supplementary retirement scheme costs	**695,202**	675,163
Changes in inventories of finished goods and work in progress	**2,044**	(32,567)
Raw materials and consumables used	**30,508,153**	29,033,824
Depreciation and amortisation		
– Property, plant and equipment	**3,633,790**	3,476,585
– Other non-current assets	**2,270,298**	2,150,492
– Intangible assets	**158,004**	112,164
Short-term leases and leases with lease term of 12 months or less	**1,504,664**	1,055,154
ECL, net		
– Trade and other receivables	**(75,530)**	22,492
– Contract assets	**97,454**	(2,826)
Impairment of assets		
– Write down of inventories to net realisable value	**2,429**	–
Rental income from property, plant and equipment after relevant expenses	**(13,794)**	(13,915)
Gain on disposal of property, plant and equipment, net	**(13,525)**	(84,972)
Gain on disposal of other non-current assets, net	**(12,363)**	(3,751)
Auditors' remuneration	**7,200**	7,200
Exchange (gain)/loss, net	**(98,667)**	127,419
COVID-19 related rent concessions	**–**	460

12. INCOME TAX EXPENSE

	2022	2021
	RMB'000	RMB'000
Current tax		
PRC enterprise income tax	**193,683**	98,907
Overseas enterprise income tax	**71,367**	130,444
	265,050	229,351
Deferred tax		
Origination and reversal of temporary difference (Note 35)	**497**	81,380
Income tax expense	**265,547**	310,731

According to the Corporate Income Tax Law of the PRC, the applicable income tax of the years ended 31 December 2022 and 2021 is 25%.

According to the normal statutory PRC corporate income tax and relevant rules, apart from a certain subsidiaries of the Company subjected to the relevant development zone policy or participation in technology development and the PRC's western development project can enjoy 15% preferential tax rate during the years ended 31 December 2022 and 2021, the majority of the companies of the Group are subject to 25% income tax rate.

Taxes in other countries are calculated according to the tax laws where the related companies of the Group operate.

12. INCOME TAX EXPENSE (CONTINUED)

Reconciliation between income tax expenses and profit before income tax calculated at the statutory tax rate is as follows:

	2022 RMB'000	2021 RMB'000
Profit before income tax	**837,162**	451,181
Taxation calculated at the statutory tax rate	**209,291**	112,795
Income tax effects of:		
Difference in overseas profits tax rates	**48,104**	90,528
Non-deductible expenses	**44,081**	82,639
Effect of utilization of unrecognized tax losses and deductible temporary differences	**(72,744)**	(23,741)
Effect of unrecognized tax losses and deductible temporary differences	**193,632**	178,256
Adjustment of current tax in previous years	**(4,102)**	(747)
Equity method accounting for the joint ventures and associates' profit or loss	**(1,268)**	(1,278)
Tax effect on research and development expenses	**(151,447)**	(127,721)
Income tax expense	**265,547**	310,731

13. EARNINGS PER SHARE

(a) Basic

For the years ended 31 December 2022 and 2021, the basic earnings per share is calculated by dividing the profit attributable to owners of the Company.

	2022	2021
Profit for the year attributable to owners of the Company (RMB'000)	**571,615**	140,450
Weighted average number of ordinary shares in issue (Shares)	**18,984,340,033**	18,984,340,033
Basic earnings per share (RMB)	**0.030**	0.007

(b) Diluted

For the years ended 31 December 2022 and 2021, the diluted earnings per share was the same as the basic earnings per share as the exercise price of those share options is higher than the average market price for shares in the both years.

14. DIVIDENDS

The Board of Directors of the Company did not recommend the payment of any dividends for the years ended 31 December 2022 and 2021.

15. DIRECTORS', SUPERVISORS', AND FIVE HIGHEST INDIVIDUALS' EMOLUMENTS

Directors', supervisors' and highest individuals' emoluments, disclosed pursuant to the Listing Rules and the Hong Kong Companies Ordinance is as follows:

(a) Directors' and supervisors' emoluments

Details of directors and supervisors of the Company are as follows:

(I) For the year ended 31 December 2022

	Fee	Salary, allowance and bonus	Contributions to pension plans	Share-based payment	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive directors:					
CHEN Xikun	–	945	58	–	1,003
YUAN Jiangqiang	–	945	58	–	1,003
	–	1,890	116	–	2,006
Non-executive directors:					
LU Baoping	–	35	–	–	35
FAN Zhonghai	–	–	–	–	–
WEI Ran	–	–	–	–	–
ZHOU Meiyun	–	–	–	–	–
	–	35	–	–	35
Independent non-executive directors:					
CHEN Weidong	200	–	–	–	200
DONG Xiucheng	200	–	–	–	200
ZHENG Weijin	200	–	–	–	200
	600	–	–	–	600
Supervisors:					
MA Xiang (i)	–	216	14	–	230
DU Jiangbo	–	–	–	–	–
ZHANG Jianbo	–	–	–	–	–
ZHANG Qin	–	–	–	–	–
SUN Yongzhuang	–	873	38	–	911
ZHANG Bailing	–	800	39	–	839
DU Guangyi	–	975	58	–	1,033
WANG Jun (ii)	–	459	35	–	494
	–	3,323	184	–	3,507
	600	5,248	300	–	6,148

Notes:

(i) Resigned on 29 March 2022.
(ii) Appointed on 26 May 2022.

For the year ended 31 December 2022, Mr. YUAN Jianqiang is also the general manager of the Company and his emoluments disclosed above included his remuneration of serving as the general manager.

15. DIRECTORS', SUPERVISORS', AND FIVE HIGHEST INDIVIDUALS' EMOLUMENTS (CONTINUED)

(a) Directors' and supervisors' emoluments (Continued)

Details of directors and supervisors of the Company are as follows: (Continued)

(II) For the year ended 31 December 2021

	Fee	Salary, allowance and bonus	Contributions to pension plans	Share-based payment	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Executive directors:					
CHEN Xikun	–	923	52	–	975
YUAN Jiangqiang	–	923	52	–	975
	–	1,846	104	–	1,950
Non-executive directors:					
LU Baoping	–	–	–	–	–
FAN Zhonghai	–	–	–	–	–
WEI Ran	–	–	–	–	–
ZHOU Meiyun (i)	–	–	–	–	–
	–	–	–	–	–
Independent non-executive directors:					
JIANG Bo (ii)	17	–	–	–	17
CHEN Weidong	200	–	–	–	200
DONG Xiucheng	200	–	–	–	200
ZHENG Weijin (i)	183	–	–	–	183
	600	–	–	–	600
Supervisors:					
ZHANG Qin	–	–	–	–	–
DU Jiangbo	–	–	–	–	–
ZHANG Hongshan (ii)	–	60	3	–	63
ZHANG Jianbo	–	–	–	–	–
ZHAI Yalin (ii)	–	–	–	–	–
SUN Yongzhuang (i)	–	755	33	–	788
ZHANG Bailing (i)	–	724	33	–	757
DU Guangyi (i)	–	765	48	–	813
MA Xiang	–	842	52	–	894
	–	3,146	169	–	3,315
	600	4,992	273	–	5,865

Notes:

(i) Appointed on 2 February 2021.
(ii) Resigned on 2 February 2021.

For the year ended 31 December 2021, Mr. YUAN Jianqiang is also the general manager of the Company and his emoluments disclosed above included his remuneration of serving as the general manager.

15. DIRECTORS', SUPERVISORS', AND FIVE HIGHEST INDIVIDUALS' EMOLUMENTS (CONTINUED)

(b) Five highest paid individuals

The number of director or supervisor and non-director or supervisor included in the five highest paid individuals for the years ended 31 December 2022 and 2021 are as follows:

	2022	2021
Director or supervisor	3	2
Non-director or supervisor	2	3
	5	5

The aggregate of the emoluments in respect of the highest paid non-director or supervisor are as follows:

	2022	2021
Salaries, allowances and bonus	1,881	2,618
Contributions to pensions plans	115	156
Share-based payments	–	–
	1,996	2,774

The emoluments of the two (2021: three) highest paid individuals who are non-director or supervisor are within the following bands:

	2022	2021
Nil to HK$1,000,000	1	–
HK$1,000,001 to HK$1,500,000	1	3

16. EMPLOYMENT BENEFITS

	2022	2021
	RMB'000	RMB'000
Salaries, wages and other benefits	15,898,645	14,995,062
Contribution to pension plans (Note)		
— Municipal retirement scheme costs	1,374,355	1,329,452
— Supplementary retirement scheme costs	695,202	675,163
	17,968,202	16,999,677

Note:

Retirement benefits

As stipulated by the regulations of the PRC, the Group participates in basic defined contribution retirement schemes organised by respective municipal government under which it is governed. As at 31 December 2022, the Group and the employees pay 16% and 8% (31 December 2021: 16% and 8%) of salary respectively to basic defined contribution plan.

In addition, the Group provides a supplementary defined contribution retirement plan for its staff at rates not exceeding 8% (31 December 2021: 8%) of the salaries. Employees who have served the Group for one year or more are entitled to participating in this plan. The funds of this plan are held separately from the Group in an independent fund administered by a committee consisting of representatives from the employees and the Group.

Those employees who involved supplementary retirement scheme are entitled to receive the pension in accordance with a certain percentage of the pre-retirement salary after retirement. The Group has no other material obligation for the payment of retirement benefits associated with these plans beyond Municipal retirement scheme and Supplementary retirement scheme.

17. PROPERTY, PLANT AND EQUIPMENT AND OTHER NON-CURRENT ASSETS

(a) Property, Plant and Equipment

For the year ended 31 December 2022

	Buildings	Oil engineering equipment and others	Land	Prepaid land leases	Construction in progress	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Cost						
At 1 January 2022	2,356,118	64,958,563	164,030	137,876	671,866	68,288,453
Additions	743,086	214,150	63,930	–	4,342,253	5,363,419
Remeasurement of leases	3,162	2,274	1,324	–	–	6,760
Expiration of or early termination of contract	(391,237)	(204,162)	(77,168)	–	–	(672,567)
Disposals/Write-off	(8,551)	(2,865,257)	–	–	–	(2,873,808)
Transferred from construction in progress	7,240	4,535,993	–	–	(4,543,233)	–
At 31 December 2022	2,709,818	66,641,561	152,116	137,876	470,886	70,112,257
Accumulated depreciation						
At 1 January 2022	1,128,447	40,840,374	112,286	31,410	–	42,112,517
Depreciation	395,580	3,185,886	49,108	3,216	–	3,633,790
Expiration of or early termination of contract	(390,715)	(202,925)	(74,910)	–	–	(668,550)
Disposals/Write-off	(7,341)	(2,593,667)	–	–	–	(2,601,008)
At 31 December 2022	1,125,971	41,229,668	86,484	34,626	–	42,476,749
Accumulated impairment loss						
At 1 January 2022	654	1,247,069	–	–	3,502	1,251,225
Disposals/Write-off	–	(47,799)	–	–	–	(47,799)
At 31 December 2022	654	1,199,270	–	–	3,502	1,203,426
Carrying amounts						
At 31 December 2022	1,583,193	24,212,623	65,632	103,250	467,384	26,432,082

17. PROPERTY, PLANT AND EQUIPMENT AND OTHER NON-CURRENT ASSETS (CONTINUED)

(a) Property, Plant and Equipment (Continued)

For the year ended 31 December 2021

	Buildings	Oil engineering equipment and others	Land	Prepaid land leases	Construction in progress	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Cost						
At 1 January 2021	2,574,128	63,146,900	229,773	136,660	356,026	66,443,487
Additions	149,791	226,656	72,824	1,216	3,763,263	4,213,750
Remeasurement of leases	6,956	401	1,231	–	–	8,588
Expiration of or early termination of contract	(385,532)	(33,048)	(139,798)	–	–	(558,378)
Disposals/Write-off	(27,483)	(1,791,511)	–	–	–	(1,818,994)
Transferred from construction in progress	38,258	3,409,165	–	–	(3,447,423)	–
At 31 December 2021	2,356,118	64,958,563	164,030	137,876	671,866	68,288,453
Accumulated depreciation						
At 1 January 2021	978,471	39,361,809	99,134	28,305	–	40,467,719
Depreciation	307,456	3,110,333	55,691	3,105	–	3,476,585
Expiration of or early termination of contract	(145,397)	(32,213)	(42,539)	–	–	(220,149)
Disposals/Write-off	(12,083)	(1,599,555)	–	–	–	(1,611,638)
At 31 December 2021	1,128,447	40,840,374	112,286	31,410	–	42,112,517
Accumulated impairment loss						
At 1 January 2021	8,436	1,319,930	–	–	71,734	1,400,100
Disposals/Write-off	(7,782)	(72,861)	–	–	(68,232)	(148,875)
At 31 December 2021	654	1,247,069	–	–	3,502	1,251,225
Carrying amounts						
At 31 December 2021	1,227,017	22,871,120	51,744	106,466	668,364	24,924,711

Notes:

(i) Recognised depreciation is analysed as follows:

	2022	2021
	RMB'000	RMB'000
Cost of sales	**3,466,269**	3,349,140
Selling expenses	**608**	364
General and administrative expenses	**118,377**	91,040
Research expenses	**48,536**	36,041
	3,633,790	3,476,585

(ii) As at 31 December 2022, right-of-use assets with carrying amounts of RMB1,115,600,000 are included in property, plant and equipment (2021: right-of-use assets with carrying amounts of RMB827,404,000).

	Carrying amounts		**Depreciation**
	As at 31 December 2022	**As at 1 January 2022**	**During the year 31 December 2022**
	RMB'000	**RMB'000**	**RMB'000**
Buildings	**629,737**	**224,143**	**342,573**
Oil engineering equipment and others	**316,980**	**445,051**	**243,257**
Land	**65,633**	**51,744**	**49,108**
Prepaid land leases	**103,250**	**106,466**	**3,216**
	1,115,600	**827,404**	**638,154**

(iii) For the year ended 31 December 2022, the total increase in the right-of-use assets included in property, plant and equipment was RMB921,166,000.

17. PROPERTY, PLANT AND EQUIPMENT AND OTHER NON-CURRENT ASSETS (CONTINUED)

(b) Other non-current assets

For the year ended 31 December 2022

	Special tools of petroleum engineering	Other tools of petroleum engineering	Camping house	Other long-trem deferred expenses	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Cost					
At 1 January 2022	14,196,612	1,942,128	2,142,874	51,214	18,332,828
Additions	2,092,649	513,404	351,025	–	2,957,078
At 31 December 2022	16,289,261	2,455,532	2,493,899	51,214	21,289,906
Accumulated depreciation					
At 1 January 2022	8,804,286	1,418,358	1,482,990	31,892	11,737,526
Amortisation	1,789,936	236,023	233,017	11,322	2,270,298
Other decrease	11,127	15,502	14	–	26,643
At 31 December 2022	10,605,349	1,669,883	1,716,021	43,214	14,034,467
Carrying amounts					
At 31 December 2022	5,683,912	785,649	777,878	8,000	7,255,439

For the year ended 31 December 2021

	Special tools of petroleum engineering	Other tools of petroleum engineering	Camping house	Other long-trem deferred expenses	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Cost					
At 1 January 2021	11,938,311	1,609,042	1,823,188	44,576	15,415,117
Additions	2,258,301	333,086	319,686	6,638	2,917,711
At 31 December 2021	14,196,612	1,942,128	2,142,874	51,214	18,332,828
Accumulated depreciation					
At 1 January 2021	7,163,913	1,099,821	1,272,641	23,828	9,560,203
Amortisation	1,635,493	317,938	188,997	8,064	2,150,492
Other decrease	4,880	599	21,352	–	26,831
At 31 December 2021	8,804,286	1,418,358	1,482,990	31,892	11,737,526
Carrying amounts					
At 31 December 2021	5,392,326	523,770	659,884	19,322	6,595,302

18. INTANGIBLE ASSETS

For the year ended 31 December 2022

	Computer softwares	Others	Total
	RMB'000	RMB'000	RMB'000
Cost			
At 1 January 2022	**206,662**	**783,509**	**990,171**
Additions	**55,401**	**80,713**	**136,114**
Disposals/Write-off	**(10,980)**	**–**	**(10,980)**
At 31 December 2022	**251,083**	**864,222**	**1,115,305**
Accumulated amortisation			
At 1 January 2022	**153,455**	**436,586**	**590,041**
Amortisation	**20,214**	**137,790**	**158,004**
Disposals/Write-off	**(10,980)**	**–**	**(10,980)**
At 31 December 2022	**162,689**	**574,376**	**737,065**
Carrying amounts			
At 31 December 2022	**88,394**	**289,846**	**378,240**

For the year ended 31 December 2021

	Computer softwares	Others	Total
	RMB'000	RMB'000	RMB'000
Cost			
At 1 January 2021	178,160	696,328	874,488
Additions	28,502	87,181	115,683
At 31 December 2021	206,662	783,509	990,171
Accumulated amortisation			
At 1 January 2021	138,599	339,278	477,877
Amortisation	14,856	97,308	112,164
At 31 December 2021	153,455	436,586	590,041
Carrying amounts			
At 31 December 2021	53,207	346,923	400,130

Recognised amortisation is analysed as follows:

	2022	2021
	RMB'000	RMB'000
Cost of sales	**144,256**	99,286
Selling expenses	**3**	3
General and administrative expenses	**12,848**	11,536
Research expenses	**897**	1,339
	158,004	112,164

19. INTERESTS IN JOINT VENTURES AND ASSOCIATES

(a) Interests in joint ventures

	2022 RMB'000	2021 RMB'000
At 1 January	**24,122**	23,204
Reclassification	**(1,672)**	–
Share of total comprehensive income	**890**	1,467
Dividend	**–**	(549)
At 31 December	**23,340**	24,122

The interests in each joint venture are as follows:

	2022 RMB'000	2021 RMB'000
Qiangjiang HengYun Comprehensive Vehicle Performance Inspecting Company Limited ("Qiangjiang HengYun")	**–**	1,671
Sinopec Gulf Petroleum Engineering Services, LLC ("Gulf Petroleum Engineering")	**13,003**	13,039
Zhong Wei Energy Service Co. Limited ("Zhong Wei")	**8,791**	8,374
EBAPAN, S.A. DE C.V ("EBAPAN")	**1,546**	1,038
	23,340	24,122

The details of joint ventures, unlisted and established as limited companies, of the Group are as follows:

Name	Place of incorporation/ registration	Registered capital RMB'000	Registered capital MXN'000	Actual interest held indirectly	Principal activities and place of operation
Qianjiang HengYun	The PRC	Nil (2021: 2,100)	–	Nil (2021: 49.10%)	Transportation services/The PRC
Gulf Petroleum Engineering	Kuwait	27,312 (2021: 27,312)	–	49.00% (2021: 49.00%)	Oilfield service/Kuwait
Zhong Wei	The PRC	305,000 (2021: 305,000)	–	50.00% (2021: 50.00%)	Oilfield technical service/The PRC
EBAPAN	Mexico	–	50 (2021: 50)	50.00% (2021: 50.00%)	Oil and gas extraction professional and auxiliary activities/Mexico

The above joint ventures are accounted for using equity method.

Notes:

(i) The decision of financial and operating strategies requires unanimous consent from the Group and other ventures as stated in the contracts signed by the both parties. The equities of joint ventures are measured by the joint ventures.

(ii) Commitments and contingent liabilities of the joint ventures

As at 31 December 2022 and 2021, there is no material contingent liability and commitment between the Group and its joint ventures or the joint ventures itself.

The summarised financial information of other non-major joint ventures of the Group is as follows:

	2022 RMB'000	2021 RMB'000
Profit for the year and total comprehensive income for the year	**3,001**	2,954

19. INTERESTS IN JOINT VENTURES AND ASSOCIATES (CONTINUED)

(b) Interest in associates

	2022	2021
	RMB'000	RMB'000
At 1 January	**22,926**	19,842
Reclassification	**1,672**	–
Share of total comprehensive income	**6,614**	5,813
Dividend paid	**(4,337)**	(2,729)
At 31 December	**26,875**	22,926

The details of associates, unlisted and established as limited companies, of the Group are as follows:

Name	Place of incorporation/ registration	Registered capital		Actual interest held indirectly	Principal activities and place of operation
		RMB'000	USD'000		
Ordos North China Ruida Oil Service Company Limited ("Ordos North")	The PRC	10,000 (2021: 10,000)	–	35.00% (2021: 35.00%)	Oil and natural gas exploration/The PRC
Xinjiang North China Tianxiang Oil Service Company Limited ("Xinjiang North")	The PRC	10,000 (2021: 10,000)	–	20.00% (2021: 20.00%)	Oil and natural gas exploration/The PRC
Zhenjiang Huajiang Oil Service Company Limited ("Huajiang Oil")	The PRC	5,000 (2021: 5,000)	–	37.00% (2021: 37.00%)	Oil and natural gas exploration/The PRC
Henan Zhongyuan Petroleum Technology Service Company Limited ("Henan Zhongyuan")	The PRC	10,000 (2021: 10,000)	–	20.00% (2021: 20.00%)	Oil and natural gas exploration/The PRC
Henan Zhongyou Petroleum Technology Service Company Limited ("Henan Zhongyou")	The PRC	10,000 (2021: 10,000)	–	20.00% (2021: 20.00%)	Oil and natural gas exploration/The PRC
Qianjiang HengYun	The PRC	2,100 (2021: nil)	–	49.10% (2021: nil)	Transportation services/The PRC

The above associates are accounted for using equity method.

Note:

Commitments and contingent liabilities of the associates

As at 31 December 2022 and 2021, there is no material contingent liability and commitment between the Group and its associates or associates themselves.

20. FINANCIAL ASSETS AT FVTOCI

	2022	2021
	RMB'000	RMB'000
Non-current asset:		
Financial assets at FVTOCI (non-recycling)		
Unlisted securities: Equity securities – the PRC	**134,492**	21,760
Current assets:		
Financial assets at FVTOCI		
Notes receivable	**1,468,340**	1,295,971

Notes:

(i) Unlisted investments represent the Groups' equity interests in the unlisted entities in the PRC. They are mainly engaged in drilling and technical services operations.

The Group designated its investment in unlisted investment as financial assets at FVTOCI (non-recycling), as the investment is held for strategic purpose.

(ii) As at 31 December 2022 and 2021, notes receivable were classified as financial assets at FVTOCI, as the Group's business model is achieved both by collecting contractual cash flows and by selling of these assets.

(iii) Financial assets at FVTOCI are measured at fair value. Refer to Note 41.4 for details. All financial assets at FVTOCI are denominated in RMB.

21. TRADE RECEIVABLES

	2022 RMB'000	2021 RMB'000
Trade receivables		
– Sinopec Group and its subsidiaries	**4,362,460**	2,361,677
– Joint ventures of the Group	**11,341**	31,673
– Joint ventures and associates of Sinopec Group	**20,031**	31,943
– Third parties	**8,541,180**	8,141,221
	12,935,012	10,566,514
Less: ECL allowance	**(2,397,795)**	(2,415,495)
Trade receivables – net	**10,537,217**	8,151,019

As at 31 December 2022 and 2021, the Group's trade receivables were approximately their fair values.

The Group usually provides customers with a credit term between 90 to 180 days. For the settlement of trade receivables from provision of services, the Group usually reaches an agreement on the term of each payment with the customer by taking into account factors such as, among other things, the credit history of the customer, its liquidity position and the Group's working capital needs, which varies on a case-by-case basis that requires the judgment and experience of the management. The Group do not hold any collateral as security.

Ageing analysis of trade receivables net of ECL allowance based on invoice date is as follows:

	2022 RMB'000	2021 RMB'000
Within 1 year	**9,942,031**	7,356,037
1 to 2 years	**380,380**	455,345
2 to 3 years	**93,954**	185,164
Over 3 years	**120,852**	154,473
	10,537,217	8,151,019

The movements of ECL allowance on trade receivables are as follows:

	2022 RMB'000	2021 RMB'000
Balance at beginning of the year	**2,415,495**	2,474,538
ECL allowance	**46,630**	93,248
Reversal	**(129,145)**	(91,906)
Others	**139,507**	(31,649)
Receivables written-off as uncollectible	**(74,692)**	(28,736)
At 31 December	**2,397,795**	2,415,495

22. PREPAYMENTS AND OTHER RECEIVABLES

	2022 RMB'000	2021 RMB'000
Prepayments (Note (i))	**410,442**	342,419
Other receivables (Note (ii))		
Petty cash funds	**5,188**	3,304
Guarantee deposits	**1,349,502**	1,247,723
Disbursement of funds	**1,254,411**	870,202
Temporary payment	**1,003,269**	697,197
Escrow payments	**5,920**	6,430
Deposits	**94,537**	127,035
Export tax refund receivables	**21,161**	21,405
Excess value-added tax paid	**1,123,184**	1,281,654
Value added tax to be certified	**61,174**	22,671
Prepaid value-added tax	**1,153,395**	931,596
Prepaid income tax	**25,110**	2,085
Dividend receivable	**540**	548
Others	**367,275**	417,153
	6,875,108	5,971,422
Less: ECL allowance	**(861,554)**	(809,103)
Prepayments and other receivables – net	**6,013,554**	5,162,319

Notes:

(i) As at 31 December 2022, the prepayments included related party balances: Sinopec Group and its subsidiaries amounting at RMB83,073,000 (2021: RMB88,584,000) and associates and the joint ventures of Sinopec Group amounting at RMB6,836,000 (2021: RMB143,000).

(ii) As at 31 December 2022, the other receivables included related party balances: Sinopec Group and its subsidiaries amounting at RMB349,639,000 (2021: RMB200,891,000), the joint ventures of the Group amounting at RMB8,199,000 (2021: RMB246,000) and associates and the joint ventures of Sinopec Group amounting at RMB23,587,000 2021: RMB29,806,000).

(iii) The amounts due from related parties are unsecured, interest free and repayable on demand.

(iv) The carrying amounts of the Group's prepayments and other receivables as at 31 December 2022 and 2021 approximate their fair values.

The movements of ECL allowance on other receivables are as follows:

	2022 RMB'000	2021 RMB'000
Balance at the beginning of the year	**809,103**	761,013
ECL allowance	**127,187**	122,076
Reversal	**(120,204)**	(100,926)
Receivables write-off as uncollectible	**–**	(4,151)
Others	**45,468**	31,091
At 31 December	**861,554**	809,103

23. CONTRACT ASSETS AND COST TO FULFIL CONTRACTS/CONTRACT LIABILITIES

(a) Contract assets and cost to fulfil contracts

	2022 RMB'000	2021 RMB'000
Contract assets arising from construction and service contracts (Note (a))	**15,815,303**	13,647,488
Cost to fulfil contracts (Note(b))	**103,095**	79,138
Less: ECL allowance	**(201,404)**	(100,593)
	15,716,994	13,626,033

Notes:

(a) Typical payment terms which impact on the amount of contract assets recognised are as follows:

The Group's construction and service contracts include payment schedules which require progress payments over the construction period once certain specified milestones are reached. Approximate 5% of progress billings of engineering construction service would be retained as quality guarantee. This amount is included in contract assets and the Group's entitlement to this final payment until the end of guarantee period.

The amount of contract assets that is expected to be recovered after more than one year is RMB1,987,467,000 (31 December 2021: RMB350,834,000).

(b) Cost to fulfil contracts represented costs directly related to existing contracts or to specifically identifiable anticipated contracts, including direct labor, direct materials, cost allocation, costs clearly payable by the customer, and costs to enter contracts. Managements consider the cost to fulfil contracts is recoverable and the cost is deferred and amortised in the profit or loss when relevant contract revenue is recognised.

The movements of ECL allowance on contract assets are as follows:

	2022 RMB'000	2021 RMB'000
Balance at the beginning of the year	**100,593**	104,447
Provision for/(reversal of) ECL allowance	**97,454**	(2,826)
Others	**3,357**	(1,028)
At 31 December	**201,404**	100,593

(b) Contract liabilities

	2022 RMB'000	2021 RMB'000
Contract liabilities arising from construction and service contracts	**5,115,819**	3,547,938

Note:

When the Group received the deposits in advance to the commencement of construction period/provision of services, the amount will be recognised as contract liabilities at contract inception until the amount of recognised revenue is greater than the deposits.

The balance of contract liabilities as at 1 January 2022 is RMB3,547,938,000 (2021: RMB3,024,461,000), in which RMB2,721,763,000 (2021:RMB2,765,332,000) was recognised as revenue during the period.

Unsatisfied performance obligation:

The group has signed engineering service contracts with several customers to provide petroleum engineering and technical service and construction engineering contracts, which will be completed within the agreed period and regarded as a single performance obligation as a whole. As at 31 December 2022, part of the Group's petroleum engineering and technical service and construction engineering contracts were still in the process, and the total transaction price apportioned to the unsatisfied performance obligation was RMB31.63 billion (2021: RMB27.46 billion), the amount of which was related to the progress of the performance of each contract, and will be recognised as revenue in accordance with the percentage of work performed in the future, which is expected to be completed in the coming 60 months.

24. INVENTORIES

	2022 RMB'000	2021 RMB'000
Raw materials	**923,489**	919,795
Finished goods	**97,835**	96,481
Work in progress	**6,257**	5,567
Turnover materials	**14,258**	13,604
	1,041,839	1,035,447
Less: Inventories write-down	**(28,594)**	(26,281)
	1,013,245	1,009,166

For the years ended 31 December 2022 and 2021, cost of inventories recognised as expenses and included in "cost of sales" amounting to RMB30,507,768,000 and RMB29,001,257,000 respectively. During the year ended 31 December 2022, there was additional provision for inventories of RMB2,429,000 was made to write down inventories to their net realisable values (2021: nil) and inventories of RMB116,000 previously written down were written off (2021: RMB14,216,000).

25. RESTRICTED CASH

	2022 RMB'000	2021 RMB'000
Letter of credit guarantee deposits	**95**	87
Guarantee deposits	**36,984**	32,830
	37,079	32,917

As at 31 December 2022 and 2021, restricted cash represents the deposits in banks with initial maturity due for six months.

As at 31 December 2022 and 2021, the annual interest rates on restricted cash are determined in accordance with the annual interest rates of bank current account.

At the end of the respective reporting periods, the maximum exposure to credit risk approximates to carrying amounts of the Group's restricted cash.

26. CASH AND CASH EQUIVALENTS

	2022	2021
	RMB'000	RMB'000
Cash on hand	2,992	5,230
An initial term of less than three months:		
– Sinopec Finance Company Limited	47,531	902,678
– Sinopec Century Bright Capital Investment Company Limited	802,100	690,991
– Third party banks and other financial institutions	948,527	876,408
	1,801,150	2,475,307

As at 31 December 2022 and 2021, the annual interest rates on cash at bank are determined in accordance with the annual interest rates of bank current account.

At the end of the respective reporting periods, the maximum exposure to credit risk approximates the carrying amounts of the Group's cash and cash equivalents.

27. SHARE CAPITAL

	2022		2021	
	Number of shares	Share capital	Number of shares	Share capital
	Share	RMB'000	Share	RMB'000
Registered, issued and paid:				
– Domestic non-public legal person shares of RMB1.00 each	11,786,045,218	11,786,046	11,786,045,218	11,786,046
– Social public A shares of RMB1.00 each	1,783,333,333	1,783,333	1,783,333,333	1,783,333
– H shares of RMB1.00 each	5,414,961,482	5,414,961	5,414,961,482	5,414,961
	18,984,340,033	18,984,340	18,984,340,033	18,984,340

28. THE STATEMENT OF FINANCIAL POSITION AND THE STATEMENT OF CHANGES IN EQUITY OF THE COMPANY

(i) The statement of financial position of the Company

	2022 RMB'000	2021 RMB'000
Assets		
Non-current assets		
Property, plant and equipment	**96,080**	–
Intangible assets	**35,045**	–
Interests in subsidiaries	**35,792,373**	27,891,662
Total non-current assets	**35,923,498**	27,891,662
Current assets		
Other receivables	**20,982,530**	4,380,622
Other current assets	**3,527**	278
Cash and cash equivalents	**35,787**	147
Total current assets	**21,021,844**	4,381,047
Total assets	**56,945,342**	32,272,709
Equity		
Share capital	**18,984,340**	18,984,340
Reserves	**9,585,440**	13,238,794
Total equity	**28,569,780**	32,223,134
Liabilities		
Non-current liabilities		
Long-term borrowing	**13,298**	–
Current liabilities		
Trade payables	**17,091**	8,500
Other payables	**11,082,360**	14,284
Short-term borrowing	**17,236,779**	–
Other taxes payables	**26,034**	26,791
Total current liabilities	**28,362,264**	49,575
Total liabilities	**28,375,562**	49,575
Total equity and liabilities	**56,945,342**	32,272,709
Net current (liabilities)/assets	**(7,340,420)**	4,331,472
Total assets less current liabilities	**28,583,078**	32,223,134

Approved and authorised for issue by the board of directors on 28 March 2023.

Chairman of the Board:
CHEN Xikun

Executive director, General Manager:
YUAN Jianqiang

28. THE STATEMENT OF FINANCIAL POSITION AND THE STATEMENT OF CHANGES IN EQUITY OF THE COMPANY (CONTINUED)

(ii) The statement of changes in equity of the Company

	Share capital	Share premium	Other capital reserve	Surplus reserve	Accumulated losses	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
		(Note 29(i))	(Note 29(i)	(Note 29(ii))		
At 1 January 2021	18,984,340	13,919,394	49,001	200,383	(916,466)	32,236,652
Total comprehensive expense	–	–			(13,518)	(13,518)
At 31 December 2021 and 1 January 2022	**18,984,340**	**13,919,394**	**49,001**	**200,383**	**(929,984)**	**32,223,134**
Total comprehensive expense	**–**	**–**	**(3,236,595)**	**–**	**(416,759)**	**(3,653,354)**
At 31 December 2022	**18,984,340**	**13,919,394**	**(3,187,594)**	**200,383**	**(1,346,743)**	**28,569,780**

The distributable profits of the Company are as follows:

	2022	2021
	RMB'000	RMB'000
Distributable profits	**–**	–

29. RESERVES

(i) Share premium and other capital reserve

In accordance with the relevant laws and regulations of the PRC, on this restructuring, the surplus of related asset revaluation, transaction with Sinopec Group, issue of share capital and share repurchases are reflected in this reserves. Other capital reserve includes the fair value of recognised share options (refer to Note 2.18 to the consolidated financial statements for the accounting policies).

(ii) Surplus reserve

In accordance with the relevant laws and regulations of the PRC and the articles of association of the Company, it is required to appropriate 10% of its net profit to the statutory surplus reserve. When the balance of such a reserve reaches 50% of the respective companies registered capital, any further appropriation is optional. The statutory surplus reserve can be used to offset losses, if any, and may be converted into share capital by issuing new shares.

(iii) Specific reserve

Pursuant to certain regulations issued by the State Administration of Work Safety of the PRC, the Group is required to set aside an amount to a safety fund for its oil construction business. The fund can be used for improvements of safety at the worksite, and is not available for distribution to shareholders. Upon incurring qualifying safety expenditures, an equivalent amount is transferred from safety fund to retained earnings.

(iv) Other comprehensive income reserve (non-recycling)

Other comprehensive income reserve (non-recycling) includes net accumulated movement in fair value of equity investment at FVTOCI (refer to Note 2.9 to the consolidated financial statements for the accounting policies).

30. SHARE-BASED PAYMENTS

Pursuant to the resolution of the fourteen meeting of the eighth session of the Board of Directors of the Company on 1 November 2016, the proposal regarding "the Adjustment of the List of Participants and the Number of the Share Options under the Proposed Grant of the Share Option Incentive Scheme" and the proposal regarding "the Proposed Grant under Share Option Incentive Scheme" was approved.

According to the Company's share option incentive scheme, the grant date of share options was 1 November 2016, and there were a total of 49,050,000 share options granted to 477 participants (0.3469% of the total ordinary share capital issued). Each share option has a right to purchase an ordinary A share listed in PRC on vesting date at an exercise price of RMB5.63 under vesting conditions. The options are exercisable starting two years from the grant date, subject to the following vesting conditions:

(i) achieving compound annual growth rate of no less than 6% in profit before income tax for 2017, 2018 and 2019, respectively based on the profit before income tax of 2015;

(ii) ratio of earnings before interest, tax, depreciation and amortisation to net asset of the Group should be no less than 32% for 2017, 2018 and 2019 in respect to the three vesting periods;

(iii) the above (i) and (ii) conditions should be no lower than the 75% level of peer companies; and

(iv) the performance of the indicator for economic value added has reached the target set by the Sinopec Group for 2017, 2018 and 2019, and the changes of economic value added should be large than zero.

The total fair value of share options at the grant date was RMB54,229,200 for 49,050,000 share options, which has been valued by an external valuation expert using Black-Scholes valuation model. The Third Exercise Period under the Frist Grant of the A Share Option Incentive Scheme of the Company is from 1 November 2020 to 30 October 2021. On 28 October 2021, the outstanding Share Options granted to the Participants were cancelled in view of the relatively substantial difference between the Company's A Share price and the execrcise price. As at 31 December 2021 and 2022, there is no outstanding share options.

No share-based payment expenses has been recognised in the consolidated statement of comprehensive income for the year ended 31 December 2021 and 31 December 2022.

31. DEFERRED INCOME

	2022 RMB'000	2021 RMB'000
At 1 January	**9,288**	14,186
Government grants received during the year	**106,679**	295,576
Recognised in the statement of comprehensive income for the year	**(104,391)**	(300,474)
At 31 December	**11,576**	9,288

Deferred income mainly related to income from the national special research government grants.

32. NOTES AND TRADE PAYABLES

	2022 RMB'000	2021 RMB'000
Trade payables		
– Sinopec Group and its subsidiaries	**2,406,778**	1,242,579
– Joint ventures	**107,009**	52,175
– Sinopec Group's joint ventures and associates	**16,074**	12,054
– Third parties	**23,071,367**	20,249,454
	25,601,228	21,556,262
Notes payables	**7,990,225**	8,334,086
	33,591,453	29,890,348

As at 31 December 2022 and 2021, the carrying amounts of Group's notes and trade payables were approximately their fair values.

Ageing analysis of notes and trade payables based on invoice date is as follows:

	2022 RMB'000	2021 RMB'000
Within 1 year	**32,987,429**	29,450,316
1 and 2 years	**370,450**	161,590
2 and 3 years	**63,688**	87,803
Over 3 years	**169,886**	190,639
	33,591,453	29,890,348

33. OTHER PAYABLES

	2022 RMB'000	2021 RMB'000
Salaries payables	**570,290**	644,026
Other tax payables	**746,168**	526,212
Interest payables (Note (i))	**21,885**	19,476
Other payables (Note (ii))		
Guarantee deposits	**819,893**	617,945
Deposits	**145,438**	138,024
Disbursement of funds	**645,731**	671,505
Temporary receipts	**238,069**	224,384
Escrow payments	**44,611**	38,852
Withheld payments	**56,067**	56,341
Others	**831,107**	618,281
	4,119,259	3,555,046

Notes:

(i) As at 31 December 2022, the interest payables include related party balances: Sinopec Group and its subsidiaries amounting at RMB16,816,000 (2021: RMB19,364,000).

(ii) As at 31 December 2022, the other payables include related party balances: Sinopec Group and its subsidiaries amounting to RMB69,875,000 (2021: RMB47,788,000), joint ventures of the Group amounting to RMB242,000 (2021: RMB468,000) and joint ventures and associates of Sinopec Group amounting to RMB nil (2021: RMB23,410,000).

(iii) Amounts due to related parties are unsecured, interest free and repayable on demand.

34. BORROWINGS

	2022 RMB'000	2021 RMB'000
Current liabilities		
Loans from Sinopec Finance Company Limited (Note (a))	**16,095,000**	4,550,000
Loans from Sinopec Century Bright Capital Investment Limited (Note (a))	**1,828,208**	1,970,091
Loans from Sinopec Group (Note (a))	**1,000,000**	11,000,000
Lease liabilities (Note (b))	**517,190**	295,945
	19,440,398	17,816,036
Non-current liabilities		
Loans from Sinopec Group (Note (a))	**–**	1,000,000
Bank borrowings (Note (a))	**480,557**	554,686
Lease liabilities (Note (b))	**497,045**	390,866
	977,602	1,945,552
	20,418,000	19,761,588

Notes:

(i) The loans of the Group are repayable as follows:

	2022 RMB'000	2021 RMB'000
Within 1 year	**18,923,208**	17,520,091
1 to 2 years	**480,557**	1,554,686
	19,403,765	19,074,777

As at 31 December 2022, annual interest rates of credit loans from related parties and bank ranged from 1.42% to 4.82% (2021: 1.42% to 3.92%).

(ii) Lease liabilities

	2022 RMB'000	2021 RMB'000
Total minimum lease payments		
– Within 1 year	**539,279**	308,806
– 1 to 2 years	**377,161**	224,724
– 2 to 5 years	**94,684**	195,470
– Over 5 years	**50,938**	10,834
	1,062,062	739,834
Future finance charges on lease liabilities	**(47,827)**	(53,023)
Present value of lease liabilities	**1,014,235**	686,811

	2022 RMB'000	2021 RMB'000
Present value of minimum lease payments:		
– Within 1 year	**517,190**	295,945
– 1 to 2 years	**363,905**	202,509
– 2 to 5 years	**88,571**	178,013
– Over 5 years	**44,569**	10,344
	1,014,235	686,811
Less: Portion due within one year included under current liabilities	**(517,190)**	(295,945)
Portion due after one year included under non-current liabilities	**497,045**	390,866

Notes:

(a) For the year ended 31 December 2022, the Group leases various residential properties, office and equipment under non-cancellable operating lease agreements. The leases run for an initial period of 1 to 30 years (2021: 1 to 30 years), with an option to renew the leases and renegotiate the terms at the expiry date or at dates mutually agreed between the Group and respective landlords/lessors.

(b) As at 31 December 2022, lease liabilities included related party balances: Sinopec Group and its subsidiaries amounting to RMB423,475,000 (2021: RMB40,504,000), the associated and joint ventures of Sinopec Group amounting to RMB118,839,000 (2021: RMB22,053,000).

35. DEFERRED TAX

Deferred tax assets and liabilities recognised:

The analysis of deferred tax assets and liabilities is as follows:

	2022	2021
	RMB'000	RMB'000
Deferred tax assets	362,470	310,764
Deferred tax liabilities	(63,367)	(9,438)
Deferred tax assets, net	299,103	301,326

The movement of the deferred tax account is as follows:

	2022	2021
	RMB'000	RMB'000
At 1 January	301,326	382,363
Debited to profit or loss (Note 12)	(497)	(81,380)
(Credited)/debited to other comprehensive income	(1,726)	343
At 31 December	299,103	301,326

The movement of deferred tax assets/(liabilities) during the years ended 31 December 2022 and 2021, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

Deferred tax assets

	Deferred income	Provision for impairment on assets	Net movement in fair value of financial assets at FVTOCI	Tax losses	Total
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	493	394,178	1,163	–	395,834
(Debited)/credited to:					
Profit or loss	(121)	(85,242)	–	–	(85,363)
Other comprehensive income	–	–	293	–	293
At 31 December 2021 and 1 January 2022	372	308,936	1,456	–	310,764
(Debited)/credited to:					
Profit or loss	360	(19,463)	–	72,264	53,161
Other comprehensive income	–	–	(1,455)	–	(1,455)
At 31 December 2022	732	289,473	1	72,264	362,470

Deferred tax liabilities

	Accelerated depreciation allowance	Revaluation on assets	Net movement in fair value of financial assets at FVTOCI	Total
	RMB'000	RMB'000	RMB'000	RMB'000
At 1 January 2021	329	11,519	1,623	13,471
Credited to:				
Profit or loss	(193)	(3,790)	–	(3,983)
Other comprehensive income	–	–	(50)	(50)
At 31 December 2021 and 1 January 2022	136	7,729	1,573	9,438
(Credited)/debited to:				
Profit or loss	53,658	–	–	53,658
Other comprehensive income	–	–	271	271
At 31 December 2022	53,794	7,729	1,844	63,367

35. DEFERRED TAX (CONTINUED)

Deferred tax liabilities (Continued)

Deferred tax assets represent the recognised tax losses carried forward to the extent that the realisation of the related income tax benefits through the future taxable profits is probable. In accordance with the PRC tax law applicable to those companies in their respective jurisdictions, tax losses may be carried forward against future taxable income. Tax losses and deductible temporary differences not recognised as deferred in tax assets in the Group is as follow:

	2022	2021
	RMB'000	RMB'000
Tax losses not recognised as deferred tax assets	14,350,643	14,146,311
Temporary differences not recognized as deferred tax assets	2,907,252	2,760,502

The Group did not recognise the above deferred tax assets as the management believes that it is less likely such deductible temporary differences and tax losses would be realised. The said tax losses not recognised as deferred tax assets would be expired within five years.

36. COMMITMENTS

(a) Capital commitments

Capital commitments for the purchase of property, plant and equipment outstanding as at 31 December 2022 and 2021 not provided for in the financial statements are as follows:

	2022	2021
	RMB'000	RMB'000
Contracted but not provided for	15,905	74,473

(b) Lease commitments

The Group as a lessee

The lease commitments for short-term leases as at 31 December 2022 and 2021 are as follows:

	2022	2021
	RMB'000	RMB'000
Within 1 year	45,938	89,085

As at 31 December 2022 and 2021, the Group leases various residential properties, office and equipments under non-cancellable operating leases, with a lease period of 6 to 12 months, which are qualified to be accounted for under short-term lease exemption under IFRS 16.

The Group as as a lessor

The Group has entered into operating leases on its property, plant and equipment. Rental income recognised by the Group during the year was RMB75,466,000 (2021: RMB71,821,000)

Future minimum rentals receivable under non-cancellable operating leases as at 31 December are as follows:

	2022	2021
	RMB'000	RMB'000
Within 1 year	79,230	53,130
After 1 year but not more than 5 years	42,544	79,426
Over 5 years	5,507	11,191
	127,281	143,747

(c) Investment commitments

As at 31 December 2022, the Group has outstanding commitments of RMB129,625,000 (2021: RMB129,625,000) in respect of its investment in in joint ventures.

(d) Fulfillment of commitments for the previous period

The Group has fulfilled the capital and operating lease commitments as at 31 December 2022.

37(a) CASH GENERATED FROM OPERATIONS

	2022	2021
	RMB'000	RMB'000
Profit before income tax	837,162	451,181
Adjustments for:		
– Depreciation of property, plant and equipment	3,633,790	3,476,585
– Gains on disposal of property, plant and equipment	(13,525)	(84,972)
– Amortisation of other non-current assets	2,270,298	2,150,492
– Gains on disposal of other non-current assets	(12,363)	(3,751)
– Amortisation of intangible assets	158,004	112,164
– Interest income	(15,408)	(38,180)
– Interest expense	704,304	726,760
– Share of profit from joint ventures	(890)	(1,467)
– Share of profit from associates	(6,614)	(5,813)
– (Reversal of provision for)/provision for ECL on trade receivables, net	(82,515)	1,342
– Provision for ECL on other receivables, net	6,985	21,150
– Provision for/(reversal of provision for)/ECL allowance on contract assets	97,454	(2,826)
– Write down of inventories to net realizable value	2,429	–
– Investment income from financial assets at FVTOCI	(500)	(1,577)
Cash flows generated from operating activities before changes in working capital	7,578,611	6,801,088
Changes in working capital:		
– Other non-current assets	(3,394,020)	(2,985,086)
– Inventories	4,079	16,799
– Notes and trade receivables	(2,476,053)	1,233,478
– Prepayments and other receivables	(858,218)	(767,757)
– Restricted cash	(4,162)	(4,811)
– Provisions	(4,773)	(176,875)
– Contract assets and cost to fulfil contracts	(2,188,416)	(2,004,606)
– Contract liabilities	1,567,881	523,477
– Deferred income	2,288	(4,898)
– Notes and trade payables	3,701,105	3,087,611
– Other payables	564,211	734,776
Cash generated from operations	4,492,533	6,453,196

37(b) RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

As at 31 December 2022, the details changes in the Group's liabilities arising from financing activities are as below:

	Borrowings	Lease liabilities	Total
	RMB'000	RMB'000	RMB'000
At 1 January 2022	19,074,777	686,811	19,761,588
Changes from financing cash flows:			
Proceeds from borrowings	44,571,010	–	44,571,010
Interest paid	(545,521)	–	(545,521)
Repayments of borrowings	(44,491,653)	–	(44,491,653)
Capital element of lease rentals paid	–	(525,026)	(525,026)
Interest element of lease rentals paid	–	(60,059)	(60,059)
Total changes from financing cash flows	(466,164)	(585,085)	(1,051,249)
Other changes:			
Addition of lease liabilities	–	921,166	921,166
Remeasurement of leases	–	6,760	6,760
Expiry write-off or early termination of lease liabilities	–	(4,017)	(4,017)
Interest expenses on borrowings	644,245	–	644,245
Interest expenses on lease liabilities	–	60,059	60,059
Exchange difference	150,907	(71,459)	79,448
Total other changes	795,152	912,509	1,707,661
At 31 December 2022	19,403,765	1,014,235	20,418,000

As at 31 December 2021, the details changes in the Group's liabilities arising from financing activities are as below:

	Borrowings	Lease liabilities	Total
	RMB'000	RMB'000	RMB'000
At 1 January 2021	19,951,236	1,260,716	21,211,952
Changes from financing cash flows:			
Proceeds from borrowings	60,848,383	–	60,848,383
Repayments of borrowings	(61,666,957)	–	(61,666,957)
Interest paid	(557,579)	–	(557,579)
Capital element of lease rentals paid	–	(516,092)	(516,092)
Interest element of lease rentals paid	–	(55,962)	(55,962)
Total changes from financing cash flows	(1,376,153)	(572,054)	(1,948,207)
Other changes:			
Addition of lease liabilities	–	322,050	322,050
Remeasurement of leases	–	8,588	8,588
Expiry write-off or early termination of lease liabilities	–	(338,229)	(338,229)
Interest expenses on borrowings	670,289	–	670,289
Interest expenses on lease liabilities	–	56,471	56,471
Exchange difference	(170,595)	(50,731)	(221,326)
Total other changes	499,694	(1,851)	497,843
At 31 December 2021	19,074,777	686,811	19,761,588

38. PROVISIONS

	Provision for the pending litigations RMB'000 (Note(a))	Provision for onerous contracts RMB'000 (Note(b))	Provision for loss on judicial reorganization RMB'000 (Note(c))	Others RMB'000	Total RMB'000
At January 2021	889	51,081	330,676	–	382,646
Provision during the year	4,000	–	–	18,534	22,534
Reversal during the year	–	–	(69,049)	–	(69,049)
Realisation during the year	(889)	(26,077)	(103,394)	–	(130,360)
At 31 December 2021 and 1 January 2022	**4,000**	**25,004**	**158,233**	**18,534**	**205,771**
Provision during the year	**–**	**5,754**	**1,090**	**1,712**	**8,556**
Reversal during the year	**–**	**–**	**–**	**–**	**–**
Realisation during the year	**–**	**(13,329)**	**–**	**–**	**(13,329)**
At 31 December 2022	**4,000**	**17,429**	**159,323**	**20,246**	**200,998**

Notes:

(a) The Group recognised provision amounting to RMB4,000,000 (2021: RMB4,000,000) based on the estimated claim amount.

(b) As at 31 December 2022, the Group had a provision of approximately RMB17,429,000 (2021: RMB25,004,000) for onerous contracts, of which the expected unavoidable costs of meeting the performance obligation as stated in construction contracts have exceeded the economic benefits expected to be received. The provision was recognised for the contract based on the estimated minimum net cost of completing the contract.

(c) On 16 August 2018, Sinopec (Brazil) Co., Ltd., an indirectly wholly-owned subsidiary of the Company (the "Brazil Subsidiary") applied for judicial reorganisation to the Third State Court of Commercial Enterprises in Rio de Janeiro, Brazil (the "Court of Rio") according to the relevant local laws in Brazil. On 31 August 2018, the Brazil Subsidiary received ruling from Court of Rio, which approved Brazil subsidiary's entered into judicial reorganisation and Nascimento & Rezende Advogados, the law firm, was appointed as the judicial reorganisation manager by Court of Rio.

According to relevant laws of Brazil, the Brazil Subsidiary is required to prepare a reorganisation plan upon the court of Rio has approved that the Brazil Subsidiary is allowed to implement the legal reorganisation procedure. Such legal reorganization is conditional upon the approval of the reorganisation plan from the creditors' meeting and the court of Rio.

For the purpose of obtaining approval from creditors' meeting and the court of Rio in Brazil, the Brazil Subsidiary's reorganisation plan shall include fully settlement of the amount due to employees in respect of the project, repayment of a proportion of debts due to suppliers, service providers and subcontractors, and payment of legal fees, fees on judicial authorities and other service fees in relation to the implementation of the legal reorganisation procedure. The management assessed that provision for loss on judicial reorganisation amounting to approximately RMB389,000,000 was made. At 31 December 2022, the balance for the provision was approximately RMB159,323,000.

39. CONTINGENCIES AND GUARANTEES

(a) Contingent liabilities and financial impacts due to pending litigation

(1) The Group is the defendant of certain lawsuits and also the third party or the designated party of other proceedings arising in the ordinary course of business. Management has assessed the possibility of adverse results of these contingencies, lawsuits or other proceedings and believes that any resulting liabilities will not have significant negative impact on the financial position, operating results or cash flow of the Group. Therefore, the management does not make provision for the foresaid matters.

China National Chemical Engineering No. 11 Construction Co., Ltd. (the "Applicant") and Sinopec International Petroleum Services Corporation ("International services Corporation" or the "Respondent"), a wholly-owned subsidiary of the Group, has entered into the "Works Contract for the Package C Construction of the Saudi Yanbu-Medina Phase III Pipeline Project" (the "Construction Works Contract") with International Services Corporation on 16 August 2012. Pursuant to the Construction Works Contract, International Services Corporation subcontracted to the Applicant the construction of the "Package C Project" of the "Saudi Yanbu-Medina Phase III Pipeline Project". On 29 May 2018, the Applicant submitted to the China International Economic and Trade Arbitration Commission in Beijing the "Application for Arbitration" in respect of the contract dispute between the Applicant and the Respondent during the performance of the Construction Works Contract, requesting the Respondent to pay approximately RMB456,810,000 for the project fee and the accrued interest, approximately RMB145,968,000 for the loss due to stoppage of work and the accrued interest, approximately RMB38,018,000 for the advance payment under the letter of guarantee and the accrued interest, and approximately RMB500,000 for attorney fee and the arbitration fee for the case (the "Arbitration"). The China International Economic and Trade Arbitration Commission accepted the case on 15 June 2018. At the report date, the arbitration tribunal has selected a professional to conduct cost confirmation on the disputed costs in this case.

As the case is still under trial, the Group does not make provision for the pending litigation since the management considered that the outcome of the litigation cannot be reasonably estimated and an outflow of resources embodying economic benefits required to settle the obligation is not probable.

39. CONTINGENCIES AND GUARANTEES (CONTINUED)

(a) Contingent liabilities and financial impacts due to pending litigation (Continued)

(2) On 8 October 2014, the Ecuador Banya Duri Company 厄瓜多爾斑尼亞杜麗公司("EBDC"), an indirectly wholly-owned subsidiary of the Company (the "Banya Duri Company") entered into the Contract for I-L-Y Oilfield Comprehensive Service Projects in Ecuador (the "I-L-Y Oilfield Projects Contract") with Corporacion Estatal Petrolera Ecuatoriana (the "PAM"). During the implementation of the I-L-Y oilfield comprehensive service project, the two parties had disputes over the oilfield production and payment amount from 2016 to 2017 and negotiations were unsuccessful. In October 2018, the EBDC has initiated an international legal arbitration plan. In April 2019, in accordance with the relevant provisions of the I-L-Y oilfield project contract, EBDC submitted a "Notice of Application for Legal Arbitration" to PAM for contract disputes to initiate legal arbitration procedures. In May 2020, the Company submitted an arbitration application for the compensation and the accrued interest, approximately amounting to USD79.22 million. In February 2022, Banya Duli Company received the international arbitration award issued by the arbitral tribunal on the dispute over the payment of oil production increase in the I-L-Y oilfield comprehensive service project. The overall result of the award is favourable for Banya Duli Company. However, since the place of arbitration is Chile, the parties to the arbitration have the right to apply for annulment of the arbitral award according to the relevant laws of Chile, and there is still uncertainty as whether the other party will perform the arbitral award. In August 2022, EBDC received a formal notification from the Santiago Court of Chile that PAM had hired a local Chilean law firm to submit an application for revocation of the arbitration award to the court in late July 2022. EBDC has to file the statement of defense within 10 working days of receipt of the notice. After receiving the notice, EBDC has hired a local law firm in Chile to provide litigation support in accordance with Chilean law, and submitted a statement of defense in August 2022. EBDC received an email from a supporting lawyer from Chile in October 2022, and the Chilean court has included the hearing of the case on the schedule. In November 2022, Chilean law firm received a notice from the local court to request confirmation of the hearing on 29 November 2022. PAM has then filed an application for postponement of the hearing, and PAM is waiting for the court to notify the latest hearing date.

As at 31 December 2022, the arbitration procedure had not been completed. The Company will make active response and safeguard the legitimate rights and interests of the Company. The Group considered the recoverability of the amount receivables under arbitration is low and full provision has been provided for the related trade receivables and contract assets.

(b) Contingent liabilities and financial impacts from guarantee provided for other entities

As at 31 December 2022, there is no material contingency from guarantee provided for other entities except for disclosed in note 39(d) below (2021: none).

(c) Other contingent liabilities

With respect to uncertainties about enterprise income tax differences arising from 2006 and before as originated from a tax circular (Circular [2007] No.664) issued by the State Administrative of Taxation in June 2007, the Group has been informed by the relevant tax authority to settle the enterprise income tax ("EIT") for 2007 at a rate of 33%. Up to date, the Group has not been requested to pay additional EIT in respect of any years prior to 2007. There is no further development of this matter as at 31 December 2022. No provision has been made in the financial statements for this uncertainty for tax years prior to 2007 because management believes it cannot reliably estimate the amount of the obligation, if any, which might exist.

(d) Performance guarantee

As at 31 December 2022, the Group agreed to provide performance guarantee for DS Servicios Petroleros, S.A.de C.V. ("Mexico DS Company") for the performance obligations under the production sharing contract for the EBANO project entered into between Mexican National Hydrocarbons Commission, being the beneficiary, and the Mexico DS Company. During the guarantee period, when Mexico DS Company loses contract performance capabilities, the Group shall undertake to perform the contracts on its behalf to an amount not exceed USD274,950,000.

40. SIGNIFICANT RELATED PARTY TRANSACTIONS

Related parties are those parties that have the ability to control the other party or exercise significant influence in making financial and operation decisions. Parties are also considered to be related if they are subject to common control. The Group is subject to the control of the PRC government which also controls a significant portion of the productive assets and entities in the PRC (collectively known as the "state-owned enterprises").

In accordance with IAS 24 "Related party disclosures", other state-owned enterprises and their subsidiaries, directly or indirectly controlled by the PRC government are regarded as related parties of the Group ("other state-owned enterprises"). For the purpose of related party disclosures, the Group has in place procedures to identify the immediate ownership structure of its customers and suppliers to determine whether they are state-owned enterprises. Many state-owned enterprises have multi-layered corporate structure and the ownership structures change over time as a result of transfers and privatisation programs. Nevertheless, management believes that meaningful information relating to related party transaction has been adequately disclosed.

In addition to the related party transactions and balances shown elsewhere in this interim financial information, 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, including other state-owned enterprises, during the year ended 31 December 2022 and 2021.

The transactions with related parties are carried out on normal commercial terms or relevant agreements with counter parties in the ordinary course of business.

The majority of these significant related party transactions with Sinopec Group and its fellow subsidiaries also constitute continuing connected transactions as defined under Chapter 14A of the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange.

40. SIGNIFICANT RELATED PARTY TRANSACTIONS (CONTINUED)

(a) Significant related party transactions arising with Sinopec Group and its subsidiaries and fellow subsidiaries:

	2022	2021
	RMB'000	RMB'000
Purchases of materials		
– Sinopec Group and its subsidiaries	**11,803,515**	11,446,329
Sales of products		
– Sinopec Group and its subsidiaries	**68,940**	13,546
Rendering of engineering services		
– Sinopec Group and its subsidiaries	**46,647,299**	46,780,540
Receiving of community services		
– Sinopec Group and its subsidiaries	**41,602**	54,034
Rendering of integrated services		
– Sinopec Group and its subsidiaries	**106,648**	29,578
Receiving of integrated services		
– Sinopec Group and its subsidiaries	**750,963**	514,949
Rendering of technology development services		
– Sinopec Group and its subsidiaries	**278,469**	95,956
Rental income – Buildings		
– Sinopec Group and its subsidiaries	**649**	1,920
Rental income – Equipment		
– Sinopec Group and its subsidiaries	**3,163**	808
Lease payment – Lands and buildings – short-term leases		
– Sinopec Group and its subsidiaries	**75,234**	58,576
Lease payment – Lands and buildings – right-of-use assets		
– Sinopec Group and its subsidiaries	**532,694**	55,678
Lease payment – equipment and vehicles – short-term leases		
– Sinopec Group and its subsidiaries	**145,377**	29,911
Lease payment – equipment and vehicles – right-of-use assets		
– Sinopec Group and its subsidiaries	**1,543**	3,805

40. SIGNIFICANT RELATED PARTY TRANSACTIONS (CONTINUED)

(a) Significant related party transactions arising with Sinopec Group and its subsidiaries and fellow subsidiaries: (Continued)

	2022 RMB'000	2021 RMB'000
Deposits interest income		
– Sinopec Group's subsidiaries	1,145	1,008
Loans interest expenses		
– Sinopec Group and its subsidiaries	594,984	597,814
Interest expenses on lease liabilities		
– Sinopec Group and its subsidiaries	26,517	21,752
Borrowings obtained		
– Sinopec Group and its subsidiaries	44,571,010	60,848,383
Borrowings repaid		
– Sinopec Group and its subsidiaries	44,368,880	61,654,200
Safety and insurance fund expenses		
– Sinopec Group	80,200	75,600
Safety and insurance fund refund		
– Sinopec Group	112,657	132,145

(b) Significant related party transactions arising with the associates and joint ventures of the Group:

	2022 RMB'000	2021 RMB'000
Rendering of engineering services		
– Associates and joint ventures of the Group	256,187	180,725
Receiving of engineering services		
– Associates and joint ventures of the Group	2,039,600	1,944,794

(c) Significant related party transactions arising with Sinopec Group's associates and joint ventures:

	2022 RMB'000	2021 RMB'000
Purchases of materials		
– Sinopec Group's associates and joint ventures	377,805	232,535
Sale of products		
– Sinopec Group's associates and joint ventures	–	13
Rendering of engineering services		
– Sinopec Group's associates and joint ventures	3,896,918	3,495,833
Receiving of integrated services		
– Sinopec Group's associates and joint ventures	599	542
Lease payment – equipment and vehicles –short-term leases		
– Sinopec Group's associates and joint ventures	39,292	25,071
Lease payment – equipment and vehicles – right-of-use assets		
– Sinopec Group's associates and joint ventures	236,433	328,182
Interest expenses on lease liabilities		
– Sinopec Group's associates and joint ventures	13,698	20,410

40. SIGNIFICANT RELATED PARTY TRANSACTIONS (CONTINUED)

(d) Remuneration of key management personnel

Key management includes directors, supervisors, president, vice presidents, chief financial officer and secretary to the Board of Directors. The compensation paid or payable to key management form employee services is shown below:

	2022 RMB'000	2021 RMB'000
Fee	600	600
Salaries, allowances and bonus	10,125	9,799
Contributions to pension plans	625	585
Share-based payments	–	–
	11,350	10,984

Senior management, excluding directors and supervisors, whose remuneration fell within the following bands is as follows:

	2022 Number of Individuals	2021 Number of Individuals
RMB0 to RMB500,000	2	4
RMB500,001 to RMB1,000,000	4	4
RMB1,000,001to RMB2,000,000	1	–
	7	8

(e) Provision for counter guarantee

As at 31 December 2022, the Group has provided the counter guarantee to Sinopec Group, amounting to RMB300,000,000 (2021: RMB300,000,000). The counter guarantee will be ended in September 2024 (2021: September 2024).

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT

The Group established certain risk management policies to recognise and analyse the potential risk of the Group. The Group designed an internal control procedure according to proper acceptable risk level in order to monitor the risk position of the Group. Both risk management policies and related internal control system will be reviewed regularly to adapt the market condition or changes in operating activities of the Group. The implementation of internal control system will be reviewed regularly or randomly by the internal audit department in accordance to the risk management policies.

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.1 Category of financial assets and liabilities

	2022 RMB'000	2021 RMB'000
Financial assets		
Financial assets at FVTOCI (non-recycling)		
– Unlisted equity investment	**134,492**	21,760
Financial assets at FVTOCI		
– Notes receivables	**1,468,340**	1,295,971
	1,602,832	1,317,731
Financial assets measured at amortised cost		
– Restricted cash and cash and cash equivalents	**1,838,229**	2,508,224
– Trade receivables	**10,537,217**	8,151,019
– Other receivables	**4,101,802**	3,390,997
	16,477,248	14,050,240
	18,080,080	15,367,971
Financial liabilities		
Financial liabilities measured at amortised cost		
– Notes and trade payables	**33,591,453**	29,890,348
– Other payables	**4,119,259**	3,555,046
– Borrowings	**20,418,000**	19,761,588
	58,128,712	53,206,982

41.2 Financial risk factors

The Group's financial instrument risks mainly include interest rate risk, currency risk, credit risk and liquidity risk. The Group's objective in risk management is to obtain an appropriate equilibrium between risk and return. It also focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

(a) Market risk

Market risk includes interest rate risk and currency risk, refers to the risk that the fair value or future cash flow of a financial instrument will be fluctuated due to the changes in market price.

(i) Interest rate risk

Interest rate risk refers to the risk that the fair value or future cash flow of a financial instrument will be fluctuated due to the floating rate. Interest rate risk arises from recognised interest-bearing financial instrument and unrecognised financial instrument (e.g. loan commitments).

The Group's interest rate risk arises from cash and cash equivalents, borrowings and interest-bearing liabilities. Financial liabilities issued at floating rate expose the Group to cash flow interest rate risk. Financial liabilities issued at fixed rate expose the Group to fair value interest rate risk. The Group determines the relative proportions of its fixed rate and floating rate contracts depending on the prevailing market conditions and to maintain an appropriate combination of financial instruments at fixed rate and floating rate through regular reviews and monitors.

The Group's finance department continuously monitors the interest rate position of the Group. Increase in interest rates will increase the cost of new borrowing and the interest expenses with respect to the Group's outstanding floating rate interest-bearing borrowings, and therefore could have a material adverse effect on the Group's financial result. The management will make adjustments with reference to the latest market conditions. These adjustments may include enter into interest swap agreement to mitigate its exposure to the interest rate risk. For the year ended 31 December 2022 and 2021, the Group did not enter into any interest rate swap arrangements. The fair value interest rate risk of the deposit with bank was not significant because the fixed term deposits are short-term deposits.

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(a) Market risk (Continued)

(i) Interest rate risk (Continued)

Interest-bearing financial instruments held by the Group are as below:

	2022		2021	
	%	RMB'000	%	RMB'000
Fixed rate financial instruments				
Restricted cash and cash and cash equivalents (Notes 25 and 26)	**2.75%**	**3,000**	2.75%	3,000
Borrowings (Note 34)	**1.42%-4.82%**	**18,109,236**	1.42%-3.92%	16,236,811
Floating rate financial instruments				
Restricted cash and cash and cash equivalents (Notes 25 and 26)	**0.01%-0.35%**	**1,838,230**	0.3%-0.35%	2,505,224
Borrowings (Note 34)	**2.37%-2.92%**	**2,308,765**	2.37%-2.92%%	3,524,777

As at 31 December 2022, it is estimated that a general increase of 50 basis points in the borrowings with variable interest rates, with all other variables held constant, would increase the Group's net loss and decrease the shareholder's equity for the year by approximately RMB12,408,000 (2021: increase the net loss and decrease the shareholder's equity for the year by approximately RMB13,218,000).

As at 31 December 2022, a general decrease of 50 basis points in variable interest rates would have had the same magnitude but of opposite effect the above borrowings, on the basis that all other variables remain constant.

The financial instruments held by the Group at the reporting date expose the Group to fair value interest rate risk. This sensitivity analysis as above been determined assuming that the change in interest rates had occurred at the reporting date and arised from the recalculation of the above financial instrument issued at new interest rates. The non-derivative tools issued at floating interest rate held by the Group at the reporting date expose the Group to cash flow interest rate risk. The effect to the net profit and shareholder's equity illustrated in the sensitivity analysis as above is arised from the effect the annual estimate amount of interest expenses or revenue at the floating interest rate. The analysis is performed on the same basis for last year.

(ii) Currency risk

Currency risk refers to the risk that the fair value or future cash flows of a financial instrument will be fluctuated due to the changes in foreign currency rates. Foreign currency risk arises on financial instruments that are denominated in a currency other than the functional currency in which they are measured.

The Group's major operational activities are carried out in the PRC and a majority of the transactions are denominated in RMB. The Group is exposed to foreign currency risk arising from the recognised assets and liabilities, and future transactions denominated in foreign currencies, primarily denominated in US Dollars, Saudi Riyals and Kuwait Dinars.

The foreign currency assets and liabilities include restricted cash, cash and cash equivalents, trade and other receivables, trade and other payables and borrowings which are denominated in foreign currencies.

The following table details the financial assets and liabilities held by the Group which denominated in foreign currencies and amounted to RMB are as follows:

As at 31 December 2022	**USD**	**SAR**	**KWD**	**Others**
	RMB'000	**RMB'000**	**RMB'000**	**RMB'000**
Restricted cash and cash and cash equivalents	**749,934**	**42,050**	**213,681**	**302,105**
Trade and other receivables	**4,542,738**	**766,026**	**555,616**	**521,135**
Trade and other payables	**(728,236)**	**(343,120)**	**(133,472)**	**(175,642)**
Borrowings	**(2,308,765)**	**–**	**–**	**–**
Net exposure in RMB	**2,255,671**	**464,956**	**635,825**	**647,598**

As at 31 December 2021	USD	SAR	KWD	Others
	RMB'000	RMB'000	RMB'000	RMB'000
Restricted cash and cash and cash equivalents	689,107	46,836	32,613	285,192
Trade and other receivables	3,712,323	583,651	704,421	418,279
Trade and other payables	(575,550)	(236,671)	(124,601)	(166,726)
Borrowings	(2,524,777)	–	–	–
Net exposure in RMB	1,301,103	393,816	612,433	536,745

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(a) Market risk (Continued)

(ii) Currency risk (Continued)

The Group's finance department is responsible for monitoring the amount of assets and liabilities, and transactions denominated in foreign currencies in order to minimise foreign exchange risk. The Group may sign a forward exchange contracts or currency swap contracts to mitigate the foreign exchange risk. In 2022 and 2021, the Group did not enter into any forward exchange contracts or currency swap contracts to mitigate the foreign currency risk.

The following table illustrates the effect on the Group's net profit/loss in regard to a 5% appreciation in RMB against the following currencies, with other variables were held constant as at 31 December 2022 and 2021:

	2022	2021
	RMB' 000	RMB' 000
	Decrease in net profit	Decrease in net profit
– USD	**(84,588)**	(48,787)
– SAR	**(17,436)**	(14,768)
– KWD	**(23,843)**	(30,262)

As at 31 December 2022 and 2021, the same 5% depreciation in RMB against the respective foreign currencies would have the same magnitude but of opposite effect, on the basis that all other variables remain constant.

(b) Credit risk

Credit risk refers to the risk that the counterparty to a financial instrument would fail to discharge its obligation under the terms of the financial instrument and cause a financial loss to the Group. The Group's exposure to credit risk mainly arises from restricted cash, cash and cash equivalent, notes and trade receivables, contract assets and other receivables.

In order to minimise credit risk, the Group has developed and maintains the Group's credit risk gradings to categorise exposures according to their degree of risk of default. The credit rating information is based on the Group's own trading records to rate its major customers and other debtors. The Group's exposure and the credit ratings of its counterparties are continuously monitored and the aggregate value of transactions concluded is spread amongst approved counterparties.

For receivables, the Group has policies to limit the credit risk exposure. The Group assesses the credit quality of and sets credit limits on its customers by taking into account their financial position, the availability of guarantee from third parties, their credit history and other factors such as current market conditions. The credit history of the customers is regularly monitored by the Group. In respect of customers with a poor credit history, the Group will use written payment reminders, shorten or cancel credit periods, to ensure the overall credit risk is limited to a controllable extent.

The Group has certain concentration of credit risk in respect of trade receivables as 61.62% (2021: 48.71%) of the total trade receivables was due from the Group's five largest customers. The Group has certain concentration of credit risk in respect of other receivables as 36.77% (2021: 30.60%) of the total other receivables was due from the Group's five largest customers.

For financial assets at amortised cost and contract assets, the exposures to credit risk are monitored such that any outstanding debtors are reviewed and followed up on an ongoing basis. The Group does not hold any collateral from its debtors.

Impairment assessment under ECL model

The Group's current credit risk grading framework comprises the following categories:

Category	Description	Basis for recognizing ECL
Performing	The counterparty has a low risk of default and does not have any past-due amounts	12-month ECL
Doubtful	There has been a significant increase in credit risk since initial recognition	Lifetime ECL – not credit-impaired
In default	There is evidence indicating the asset is credit-impaired	Lifetime ECL – credit impaired
Write-off	There is evidence indicating that the debtor is in severe financial difficulty and the Group has no realistic prospect of recovery	Amount is written off

Trade receivables and contract assets

As set out in Note 2.9, the Group assesses ECL under IFRS 9 on trade receivables and contract assets based on provision matrix, the expected loss rates are based on the payment profile for sales in the past years as well as the corresponding historical credit losses during that period. The historical rates are adjusted to reflect current and forwarding looking macroeconomic factors affecting the customer's ability to settle the amount outstanding. At each reporting date, the historical default rates are updated and changes in the forward-looking estimates are analysed.

As at 31 December 2022, the gross carrying amount of trade receivables of RMB1,017,877,000 (2021: RMB955,589,000) has been individually assessed and impaired in full. For remaining trade receivables and contract assets, based on the historical credit loss experience of the existing debtors and all available forward-looking information, the Group assessed the losses for trade receivables and contract assets based on debtors with aging for classes with different credit risk characteristics and exposures.

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(b) Credit risk (Continued)

Impairment assessment under ECL model (Continued)

Trade receivables and contract assets (Continued)

The following table provides information about the Group's exposure to credit risk and ECLs for trade receivables as at 31 December 2022 and 2021:

Type	As at 31 December 2022				
	Cost		Provision		Net carrying amount RMB'000
	Amount RMB'000	Proportion (%)	Amount RMB'000	ECL (%)	
Provision made on individual basis	1,017,877	7.87	1,017,877	100.00	–
Provision made on collective basis	11,917,135	92.13	1,379,918	11.58	10,537,217
Including:					
Related party grouping	4,393,832	33.97	64,570	1.47	4,329,262
Third party grouping	7,523,303	58.16	1,315,348	17.48	6,207,955
Total	12,935,012	100.00	2,397,795		10,537,217

Type	As at 31 December 2021				
	Cost		Provision		Net carrying amount RMB'000
	Amount RMB'000	Proportion (%)	Amount RMB'000	ECL (%)	
Provision made on individual basis	955,589	9.04	955,589	100.00	–
Provision made on collective basis	9,610,925	90.96	1,459,906	23.81	8,151,019
Including:					
Related party grouping	2,425,293	22.95	47,425	1.96	2,377,868
Third party grouping	7,185,632	68.01	1,412,481	19.66	5,773,151
Total	10,566,514	100.00	2,415,495		8,151,019

Provision made on an individual basis:

Name	As at 31 December 2022			
	Cost RMB'000	Provision RMB'000	ECL (%)	Reason of provision
Entity A	936,653	936,653	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Entity B	46,392	46,392	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Entity C	25,220	25,220	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Others	9,612	9,612	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Total	1,017,877	1,017,877		

Name	As at 31 December 2021			
	Cost RMB'000	Provision RMB'000	ECL (%)	Reason of provision
Entity A	873,848	873,848	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Entity B	42,469	42,469	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Entity C	24,530	24,530	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Others	14,742	14,742	100.00	The debtor is short of funds and the amount is outstanding for a long time.
Total	955,589	955,589		

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(b) Credit risk (Continued)

Impairment assessment under ECL model (Continued)

Trade receivables and contract assets (Continued)

Provision made on collective basis: Related party grouping

Category	As at 31 December 2022			As at 31 December 2021		
	Cost	Provision		Cost	Provision	
	Amount RMB'000	ECL RMB'000	ECL (%)	Amount RMB'000	ECL RMB'000	ECL (%)
Within 1 year	4,211,263	18,605	0.44	2,246,543	11,896	0.53
Including:						
Not overdue	3,653,294	13,377	0.37	1,796,686	7,000	0.39
Overdue within 1 year	557,969	5,228	0.94	449,857	4,896	1.09
1 to 2 years	71,768	6,333	8.82	62,961	5,810	9.23
2 to 3 years	28,861	3,814	13.22	69,529	5,666	8.15
Over 3 years	81,940	35,818	43.71	46,260	24,053	52.00
Total	4,393,832	64,570	1.47	2,425,293	47,425	1.96

Provision made on collective basis: Third party grouping

Category	As at 31 December 2022			As at 31 December 2021		
	Cost	Provision		Cost	Provision	
	Amount RMB'000	ECL RMB'000	ECL (%)	Amount RMB'000	ECL RMB'000	ECL (%)
Within 1 year	5,731,881	38,266	0.67	5,229,129	107,739	2.06
Including:						
Not overdue	4,716,416	11,732	0.25	2,881,936	7,035	0.24
Overdue within 1 year	1,015,465	26,534	2.61	2,347,193	100,704	4.29
1 to 2 years	368,352	72,712	19.74	514,123	115,929	22.55
2 to 3 years	208,800	95,150	45.57	244,707	123,407	50.43
Over 3 years	1,214,270	1,109,220	91.35	1,197,673	1,065,406	88.96
Total	7,523,303	1,315,348	17.48	7,185,632	1,412,481	19.66

The following table provides information about the Group's exposure to credit risk and ECLs for contract assets as at 31 December 2022 and 2021:

Type	As at 31 December 2022				
	Cost		Provision		Net carrying amount RMB'000
	Amount RMB'000	Proportion (%)	Amount RMB'000	ECL (%)	
Provision made on individual basis	141,901	0.90	141,901	100	–
Provision made on collective basis	15,673,402	99.10	59,503	0.38	15,613,899
Including:					
Petroleum engineering	9,276,777	58.66	181,592	1.96	9,095,185
Construction and Engineering	6,538,526	41.34	19,812	0.30	6,518,714
Total	15,815,303	100.00	201,404		15,613,899

Type	As at 31 December 2021				
	Cost		Provision		Net carrying amount RMB'000
	Amount RMB'000	Proportion (%)	Amount RMB'000	ECL (%)	
Provision made on collective basis	13,647,488	100.00	100,593	0.74	13,546,895
Including:					
Petroleum engineering	7,627,792	55.89	82,495	1.08	7,545,297
Construction and Engineering	6,019,696	44.11	18,098	0.30	6,001,598
Total	13,647,488	100.00	100,593		13,546,895

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(b) Credit risk (Continued)

Other receivables

As at 31 December 2022, lifetime ECL is applied for credit impaired other receivables with gross carrying amount RMB800,723,000 (2021: RMB705,973,000).

Other than abovesaid other receivables, the Group measures the loss allowance equal to 12-month ECL of remaining other receivables. There is no significant increase in credit risk since initial recognition, the Group apply 12-month ECL based on aging for classes with different credit risk characteristics and exposures.

The following table provides information about the Group's exposure to credit risk and ECLs for other receivables as at 31 December 2022 and 2021:

As at 31 December 2022

	Gross carrying amount	ECLs allowance		As at 31 December 2022
	RMB'000	%	RMB'000	RMB'000
Petty cash funds	5,188	4.0	205	4,983
Guarantee deposits	1,349,502	9.9	133,650	1,215,852
Disbursement of funds	1,254,411	14.5	182,084	1,072,327
Temporary payment	1,003,269	49.6	497,676	505,593
Escrow payments	5,920	19.5	1,153	4,767
Deposits	94,537	11.8	11,162	83,375
Export tax refund receivable	21,161	2.4	515	20,646
Dividend receivable	540	–	–	540
Others	367,275	8.5	31,245	336,030
Total	4,101,803		857,690	3,244,113

ECL provision in the first stage:

Category	Cost RMB'000	Expected ECL in the next 12 months (%)	ECL RMB' 000	Net carrying amount RMB'000
Provision made on collective basis:				
– Petty cash funds	5,188	3.96	205	4,983
– Guarantee and other deposits	1,322,386	4.01	53,028	1,269,358
– Others	1,973,507	4.53	89,341	1,884,166
Total	3,301,081	4.38	142,574	3,158,507

ECL provision in the third stage:

Category	Cost RMB'000	Expected ECL in the next 12 months (%)	ECL RMB' 000	Net carrying amount RMB'000
Provision made on collective basis:				
– Guarantee and other deposits	121,653	75.45	91,784	29,869
– Others	679,069	91.79	623,332	55,737
Total	800,722	89.31	715,116	85,606

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(b) Credit risk (Continued)

Other receivables (Continued)

As at 31 December 2021

	Gross carrying amount	ECLs allowance		As at 31 December 2021
	RMB'000	%	RMB'000	RMB'000
Petty cash funds	3,304	3.8	124	3,180
Guarantee deposits	1,247,723	9.7	121,125	1,126,598
Disbursement of funds	870,202	19.1	165,960	704,242
Temporary payment	697,197	67.9	473,246	223,951
Escrow payments	6,430	26.9	1,727	4,703
Deposits	127,035	6.8	8,611	118,424
Export tax refund receivable	21,405	0.3	70	21,335
Dividend receivable	548	–	–	548
Others	417,153	8.2	34,376	382,777
Total	3,390,997		805,239	2,585,758

ECL provision in the first stage:

Category	Cost RMB'000	Expected ECL in the next 12 months (%)	ECL RMB' 000	Net carrying amount RMB'000
Provision made on collective basis:				
– Petty cash funds	3,304	3.75	124	3,180
– Guarantee and other deposits	1,272,362	4.03	51,276	1,221,086
– Others	1,409,358	5.68	80,163	1,329,195
Total	2,685,024	4.89	131,563	2,553,461

ECL provision in the third stage:

Category	Cost RMB'000	Expected ECL in the next 12 months (%)	ECL RMB' 000	Net carrying amount RMB'000
Provision made on collective basis:				
– Guarantee and other deposits	102,396	76.62	78,460	23,936
– Others	603,577	98.61	595,216	8,361
Total	705,973	95.43	673,676	32,297

Restricted cash and cash and cash equivalents

The Group's bank deposits are mainly deposited in state-owned banks and other large and medium-sized listed banks, and the Group considers the credit risk to be insignificant that the losses due to the breach of contract is minimal.

Notes receivables measured at FVTOCI

The Group's notes receivables measured at FVTOCI issued by banks and other financial institutions with high credit ratings, and the Group considers the credit risk to be insignificant that the losses due to the breach of contract is minimal.

The Group's maximum exposure to credit risk is the carrying amount of each financial asset in the statement of financial position as stated in Note 41.1. The Group did not provide any other guarantees that may pose credit risk to the Group.

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.2 Financial risk factors (Continued)

(c) Liquidity risk

Liquidity risk refers to the risks that the Group will not be able to meet its obligations associated with its financial liabilities that are settled by delivering cash or other financial assets.

Regarding to the management of liquidity risk, the Group's management monitors cash and cash equivalents to meet operational needs and reduce the effect of floating cash flow. The Group's management monitors the usage of bank loan so that the Group does not breach borrowing limits or covenants while maintaining sufficient commitment on reserve fund from major financial institute to meet needs of short-term and long-term liquidity. Besides, to improve the cash flow position, the Group also considers to negotiate with suppliers with a view to lower the amount due.

The Group raised working capital through its operations, bank and other borrowings. As at 31 December 2022, the Group's unused line of credit was RMB13,189,601,000 (2021: RMB15,937,997,000).

The financial assets and liabilities of the Group at the reporting date are analysed by their maturity date as below at their undiscounted contractual cash flows:

	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
As at 31 December 2022						
Restricted cash and cash and cash equivalents	**1,838,229**	–	–	–	**1,838,229**	**1,838,229**
Trade receivables	**10,537,217**	–	–	–	**10,537,217**	**10,537,217**
Financial assets at FVTOCI – Notes receivables	**1,468,340**	–	–	–	**1,468,340**	**1,468,340**
Other receivables	**4,101,802**	–	–	–	**4,101,802**	**4,101,802**
Notes and trade payables	**(33,591,453)**	–	–	–	**(33,591,453)**	**(33,591,453)**
Other payables	**(4,119,259)**	–	–	–	**(4,119,259)**	**(4,119,259)**
Borrowings	**(19,484,283)**	**(857,807)**	**(94,685)**	**(50,939)**	**(20,487,714)**	**(20,418,000)**
	(39,249,407)	**(857,807)**	**(94,685)**	**(50,939)**	**(40,252,838)**	**(40,183,124)**
As at 31 December 2021						
Restricted cash and cash and cash equivalents	2,508,224	–	–	–	2,508,224	2,508,224
Trade receivables	8,151,019	–	–	–	8,151,019	8,151,019
Financial assets at FVTOCI – Notes receivables	1,295,971	–	–	–	1,295,971	1,295,971
Other receivables	3,390,997	–	–	–	3,390,997	3,390,997
Notes and trade payables	(29,890,348)	–	–	–	(29,890,348)	(29,890,348)
Other payables	(3,555,046)	–	–	–	(3,555,046)	(3,555,046)
Borrowings	(18,186,863)	(1,863,738)	(195,470)	(10,835)	(20,256,906)	(19,761,588)
	(36,286,046)	(1,863,738)	(195,470)	(10,835)	(38,356,089)	(37,860,771)

41.3 Capital risk management

The objectives of the Group's capital risk management is to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or disposes assets to reduce its liabilities.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net liabilities divided by total capital. Net liabilities are calculated as total borrowings (including "current and non-current borrowings" as shown in the consolidated statement of financial position) less cash and cash equivalents. Total capital is the sum of total equity and net liabilities as shown in the consolidated statement of financial position. Total equity includes the equity attributable to shareholders of the parent and non-controlling interests.

41. FINANCIAL AND CAPITAL RISKS MANAGEMENT (CONTINUED)

41.3 Capital risk management (Continued)

At the reporting date, the gearing ratio is set out as below:

	2022 RMB'000	2021 RMB'000
Total borrowings (Note 34)	**20,418,000**	19,761,588
Less: Cash and cash equivalents (Note 26)	**(1,801,150)**	(2,475,307)
Net debts	**18,616,850**	17,286,281
Total equity	**7,427,319**	6,861,517
Total capital	**26,044,169**	24,147,798
Gearing ratio	**71%**	72%

41.4 Fair value estimation

Fair value measurements

Other than noted as below, the carrying value of the Group's financial assets and liabilities stated at the consolidated statement of financial position are not materially different from their fair values.

Fair value is the price that would be received to sell assets or paid to transfer liabilities in an orderly transaction between market participants at the measurement date. The Group discloses fair value measurements of financial instruments by level of the following fair value measurement hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly (level 2).
- Inputs for the asset or liability that are not based on observable market data (level 3).

(a) Recurring fair value measurement of the Group's financial assets measured at fair value

The financial assets measured at fair value in the consolidated statement of financial position on a recurring basis are grouped into the fair value hierarchy as follows:

	Level 3	
	2022 RMB'000	2021 RMB'000
Financial assets at FVTOCI (non-recycling)		
– Unlisted equity investments	**134,492**	21,760
Financial assets at FVTOCI		
– Notes receivables	**1,468,340**	1,295,971
	1,602,832	1,317,731

The reconciliation of the carrying amounts of assets classified within Level 3 of the fair value hierarchy is as follows:

	2022 RMB'000	2021 RMB'000
At 1 January	**1,317,731**	1,346,260
Addition/(Deduction)	**277,562**	(26,377)
Movement in fair value recognized in other comprehensive income	**7,539**	(2,152)
At 31 December	**1,602,832**	1,317,731

The fair value of the unlisted equity securities and notes receivables is measured using valuation techniques with reference to the net asset value and asset-based valuation and discounted cash flow, where appropriate. The Directors believe that the change in fair value (which is included in other comprehensive income) derived from the valuation technique is reasonable and is the most appropriate value at the end of the reporting period.

There have been no transfers into or out of Level 3 during the year ended 31 December 2022 (2021: Nil).

(b) Fair values of financial assets and liabilities carried at other than fair value

The carrying value of the Group's financial instruments carried at cost or amortised cost are not materially different from fair value as at 31 December 2022 and 2021.

42. POST BALANCE SHEET EVENTS

As at 28 March 2023, there are no other material events after reporting period to be disclosed.

43. PARTICULARS OF PRINCIPAL SUBSIDIARIES

As at 31 December 2022 and 2021, the Group has direct and indirect interests in the following principal subsidiaries:

Name	Establishment/Place of incorporation and type of legal entity	Registered capital	Actual interest held		Principal activities and place of operation
			Direct held	Indirect held	
Sinopec Oilfield Service Co., Ltd.	The PRC/Limited Company	RMB4,000,000	100% (2021: 100%)	–	Petroleum engineering and technical services/The PRC
Sinopec Shengli Oil Engineering Company Limited*	The PRC/Limited Company	RMB700,000	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec Zhongyuan Oil Engineering Company Limited*	The PRC/Limited Company	RMB450,000	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec Jianghan Oil Engineering Company Limited*	The PRC/Limited Company	RMB250,000	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec East China Oil Engineering Company Limited*	The PRC/Limited Company	RMB864,297	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec North China Oil Engineering Company Limited*	The PRC/Limited Company	RMB886,300	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec Southwest China Oil Engineering Company Limited*	The PRC/Limited Company	RMB300,000	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec Oil Engineering Geophysical Company Limited*	The PRC/Limited Company	RMB300,000	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec Oil Engineering and Construction Corporation*	The PRC/Limited Company	RMB500,000	–	100% (2021: 100%)	Engineering and Construction/ The PRC
Sinopec Shanghai Offshore Oil Engineering Company Limited*	The PRC/Limited Company	RMB2,000,000	–	100% (2021: 100%)	Offshore Oil engineering and technical services/The PRC
Sinopec International Oil Engineering Company Limited*	The PRC/Limited Company	RMB700,000	–	100% (2021: 100%)	Petroleum engineering and technical services/The PRC
Sinopec Jingwei Company Limited*	The PRC/Limited Company	RMB1,000,000,000	–	100% (2021: 100%)	Testing, logging and locating service

* The Company holds shares through Sinopec Oilfield Service Co., Ltd.

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 net assets of the Group. To give details of other subsidiaries would, in the opinion of the directors, results in particulars of excessive length.

Section XI Documents Available for Inspection

The following documents are available for inspection at the legal address of the Company from 29 March 2023 (Wednesday) upon requests by related supervisory institute and shareholders in accordance with the Articles of Association of the Company and relevant regulations:

1. The original copy of the annual report signed by the Chairman of the Company;
2. The financial statements signed by the Chairman, General Manager, Chief Financial Officer and the Head of the Accounting Department;
3. The original reports of the auditors and the accounts prepared in accordance with the PRC Accounting Standards for Business Enterprises signed by the Certified Public Accountants, registered the PRC under the seal of BDO China Shu Lun Pan Certified Public Accountants LLP; The original reports of the auditors and the financial statements prepared in accordance with IFRSs signed by BDO Limited;
4. Documents and Announcements disclosed in the reporting period;
5. The Article of Associations of the Company;
6. Copies of the Annual Reports and Interim Reports from 1993 to 2022 and the First Quarter Report and the Third Quarter Report from 2002 to 2022 of the Company.

This Annual Report has been drafted in both English and Chinese. In the event that different interpretation occurs, except the financial statements prepared in accordance with IFRSs and its related reports of the auditors, the Chinese version is considered to be more accurate.