

PTT EXPLORATION AND PRODUCTION PUBLIC COMPANY LIMITED

CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

31 DECEMBER 2022

Independent Auditor's Report

To the Shareholders of PTT Exploration and Production Public Company Limited

My opinion

In my opinion, the consolidated financial statements and the separate financial statements present fairly, in all material respects, the consolidated financial position of PTT Exploration and Production Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial position of the Company as at 31 December 2022, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRS).

What I have audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2022;
- the consolidated and separate statements of income for the year then ended;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include significant accounting policies and other explanatory information.

Basis for opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs) and the State Audit Standards. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Code of Ethics for Professional Accountants including Independence Standards issued by the Federation of Accounting Professions (TFAC Code) that are relevant to my audit of the consolidated and separate financial statements and the State Audit Standards as determined by the State Audit Commission, and I have fulfilled my other ethical responsibilities in accordance with the TFAC Code and the State Audit Standards. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Other matter

The State Audit Standards as described in the basis for opinion section and the auditor's responsibilities for the audit of the consolidated and separate financial statements section are relevant to the particular section of audit on the financial reporting by independent auditor.

Key audit matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Key audit matter	How my audit addressed the key audit matter
<p><i>Impairment assessment of goodwill</i></p> <p>As at 31 December 2022, the Group has recognised goodwill net of an allowance for impairment of US Dollar 1,548.62 million representing 6.15% of its total consolidated assets. In 2022, the Group recognised an impairment loss for the goodwill of US Dollar 190 million as disclosed in Note 19.</p> <p>The management tests impairment of goodwill annually or whenever there is an indicator of impairment. The impairment test is performed at the cash generating unit (CGU) level.</p> <p>Determining the CGUs' recoverable amount (the higher of value in use or fair value less costs of disposal), which includes goodwill, requires significant management judgement in identifying both the relevant CGUs and valuation assumptions. These assumptions include global oil price trends, estimated petroleum reserves, exploration, development and production plans, cost profiles, growth rate and discount rate applied to the discounted cash flow forecasts.</p>	<p>I carried out the following procedures to assess management's impairment testing of goodwill:</p> <ul style="list-style-type: none">• Evaluated the appropriateness of CGUs that the Group identified and the internal impairment assessment process of the Group.• Held discussions with management to understand the basis of the assumptions used to estimate the discounted cash flow to calculate the recoverable amount and assessed whether the impairment testing process and assumptions used in each CGU had been applied consistently across the Group.• Challenged management's significant assumptions for estimating the discounted cash flow, specifically global oil price trends, petroleum reserve estimates, exploration, development and production plans, cost profiles, growth rate and discount rate. The procedures included comparing key assumptions with reliable external sources and the approved business plan.• Assessed the reasonableness of the business plan by comparing the plan for 2022 with actual results.

Key audit matter	How my audit addressed the key audit matter
<p>I focused on the impairment assessment of the following goodwill from the acquisition of exploration and production businesses in each region due to their significant values. Also, determining the recoverable amount of each CGU depends on a number of assumptions and management judgement in determining the appropriate level of those assumptions, which were impacted from an uncertainty of current economic conditions.</p> <ul style="list-style-type: none"> • goodwill of US Dollar 520.46 million from acquiring the exploration and production business in Thailand; • goodwill of US Dollar 454.10 million from acquiring the exploration and production business in other Southeast Asia countries; and • goodwill of US Dollar 370.79 million from acquiring the exploration and production business in Africa. 	<ul style="list-style-type: none"> • Tested reasonableness of the discount rate by considering publicly available information on other companies in the industry, obtained independently by the auditor's expert, to assess whether the discount rate that management used was within an acceptable range compared to comparable companies in the industry. • Assessed the factors which were sensitive to assumptions and tested the sensitivity analysis of key assumptions in management's model to assess the potential impact of various possible outcomes from changing in those assumptions. <p>Based on the results of the procedures performed, I found that management's key assumptions were reasonable and within the acceptable range. They were consistent with supporting evidence.</p>

Key audit matter	How my audit addressed the key audit matter
<p><i>Asset acquisition of the G1/61 project</i></p> <p>Refer to Note 16.1. On 19 April 2022, the Group signed an agreement with MP G2 (Thailand) Limited, which resulted in the Group having control over the operation and entitlement to net assets related to the G1/61 project, including all revenue, costs and petroleum operating expenses related to the project since then and is considered as the business acquisition in accordance with Thai Financial Reporting Standards 3 - Business Combinations (TFRS 3).</p> <p>The management performed a concentration test of the fair value of the gross assets acquired from such agreement in accordance with TFRS 3 to assess such transaction is considered as an asset acquisition. The management determined the group of similar assets and engaged an external valuer to appraise the fair value of each group of assets acquired at the date which the Group had control over the operation to perform a concentration test of the fair value of the gross assets acquired. They found that the fair value of gross assets was substantially concentrated in the exploration and production assets, which is considered as an asset acquisition in accordance with TFRS 3.</p>	<p>I carried out the following procedures to obtain sufficient evidence on the fair value measurement of the gross assets acquired at the date which the Group had control over the operation.</p> <ul style="list-style-type: none"> • Obtained an agreement and all related documents. • Evaluated the competency, qualifications, experience and independence of management's experts. • Assessed the appropriateness of assumptions used to estimate the fair value of the gross assets acquired on the acquisition date by performing the following procedures: <ul style="list-style-type: none"> - Tested key assumptions applied in the fair valuation method, especially for global oil price trends, petroleum reserve estimates, exploration, development and production plans, cost profiles, growth rate and discount rate by comparing them with publicly available information, including approved project plans. - Tested reasonableness of the discount rate by considering publicly available information on other companies in the industry, and consulting with the auditor's expert, to assess whether the discount rate used by management was within an acceptable range compared to comparable companies in the industry. - Assessed the fair valuation method under TFRS requirements. • Assessed management's assessment in determining the group of similar assets and assembling the fair value of the gross assets whether it met the concentration test criteria and was appropriately considered as an asset acquisition in accordance with TFRS 3.

Key audit matter	How my audit addressed the key audit matter
<p>Determining the fair value of the gross assets acquired required significant management judgement regarding the fair valuation method, estimated operating results and projected cash flows of the G1/61 project, including the application of discount rate on those projected cash flows. Key assumptions used to determine the fair value were the global oil price trends, estimated petroleum reserves, exploration, development and production plans, cost profiles, growth rate and discount rate applied to the discounted cash flow forecasts.</p> <p>I focused on the fair value determination of the gross assets acquired of the G1/61 project used in a concentration test of the fair value of the gross assets due to the significance of this transaction. Also, the discounted cash flow model in determining the fair value involved significant assumptions and management judgement when determining the possibility of cash flow forecasts and the discount rate. The changes in such assumptions may significantly impact the result of a concentration test of the fair value of the gross assets acquired as well as the presentation and the amount recognised in the consolidated financial statements.</p>	<p>Based on the results of the procedures performed, I found that the method and assumptions management used to assess the fair value and a concentration test of the fair value of the gross assets in accordance with TFRS 3 were appropriate.</p>

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated and separate financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

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

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to the audit committee.

Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRS, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are responsible for assessing the Group's and the Company'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 and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group's and the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate 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 my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs and the State 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 on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs and the State Audit Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate 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 my 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 and the Company'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 and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate 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. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I 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 I identify during my audit.

I also provide the audit committee with a statement that I have complied with relevant ethical requirements and the State Audit Standards regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

PricewaterhouseCoopers ABAS Ltd.

Amornrat Pearmpoonvatanasuk

Certified Public Accountant (Thailand) No. 4599

Bangkok

10 February 2023

		Consolidated financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
Notes		2022	2021	2022	2021
Assets					
Current assets					
Cash and cash equivalents	10	3,539,220	2,559,189	122,323,890	85,527,810
Trade and other receivables	11	1,219,995	1,000,303	42,165,954	33,430,040
Short-term loans to a related party	15	1,317	-	45,516	-
Inventories	13	553,046	420,969	19,114,603	14,068,739
Current tax assets		53,878	59,366	1,862,144	1,984,024
Derivative assets	6	16,254	16,427	561,781	548,990
Other current financial assets	12	667	-	23,056	-
Other current assets	25	300,171	120,414	10,374,627	4,024,240
Assets held-for-sale	14	10,730	-	370,848	-
Total current assets		5,695,278	4,176,668	196,842,419	139,583,843
Non-current assets					
Investments in associates	16	115,345	220,880	3,986,595	7,381,771
Investments in joint ventures	16	162,230	210,235	5,607,066	7,026,037
Long-term loans to related parties	15	434	41,500	15,001	1,386,921
Property, plant and equipment	17	11,880,375	11,379,664	410,613,962	380,307,143
Right-of-use assets	18	974,706	519,711	33,688,151	17,368,709
Goodwill	19	1,548,622	1,740,803	53,524,061	58,177,427
Intangible assets		132,703	135,719	4,586,552	4,535,718
Exploration and evaluation assets	20	3,071,577	3,121,294	106,160,969	104,313,320
Deferred tax assets	21	929,484	1,317,826	32,125,179	44,041,594
Rights to receive reimbursement from decommissioning funds		317,176	290,546	10,962,362	9,710,013
Derivative assets	6	26,521	825	916,629	27,581
Other non-current financial assets		139,655	109,824	4,826,788	3,670,310
Other non-current assets	22	173,848	179,692	6,008,589	6,005,282
Total non-current assets		19,472,676	19,268,519	673,021,904	643,951,826
Total assets		25,167,954	23,445,187	869,864,323	783,535,669

(Montri Rawanchaikul)
Chief Executive Officer

(Serm Sak Satchawannakul)
Senior Vice President, Accounting Division

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited

Statement of Financial Position

As at 31 December 2022

		Consolidated financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
Notes		2022	2021	2022	2021
Liabilities and equity					
Current liabilities					
Trade and other payables	23	1,531,737	1,096,946	52,940,485	36,659,830
Current portion of long-term liabilities	24	303,193	633,346	10,479,059	21,166,366
Income tax payable		800,166	782,837	27,655,640	26,162,328
Short-term provisions		488,591	381,144	16,886,877	12,737,799
Derivative liabilities	6	53,027	49,209	1,832,740	1,644,539
Other current liabilities		137,787	183,466	4,762,261	6,131,426
Liabilities held-for-sale	14	1,704	-	58,887	-
Total current liabilities		3,316,205	3,126,948	114,615,949	104,502,288
Non-current liabilities					
Debentures	24	2,809,260	2,475,802	97,094,695	82,741,041
Long-term loans	24	-	596,057	-	19,920,163
Lease liabilities	24	720,569	388,510	24,904,569	12,983,959
Deferred tax liabilities	21	1,575,376	1,504,258	54,448,734	50,272,138
Provision for employee benefits	27	190,800	205,381	6,594,534	6,863,853
Provision for decommissioning costs	25	2,799,503	2,458,593	96,757,437	82,165,892
Provision for remuneration for production bonus and the renewal of petroleum production	26	193,533	120,727	6,688,963	4,034,672
Derivative liabilities	6	-	8,413	-	281,165
Other non-current liabilities		47,417	132,279	1,638,836	4,420,750
Total non-current liabilities		8,336,458	7,890,020	288,127,768	263,683,633
Total liabilities		11,652,663	11,016,968	402,743,717	368,185,921

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Financial Position
As at 31 December 2022

Consolidated financial statements				
Notes	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Liabilities and equity (continued)				
Equity				
Share capital				
Authorised share capital				
Ordinary shares, 3,969,985,400 shares at par value of Baht 1 each	28		3,969,985	3,969,985
Issued and paid-up share capital				
Ordinary shares, 3,969,985,400 shares paid-up at Baht 1 each		150,684	3,969,985	3,969,985
Share premium		3,439,037	105,417,620	105,417,620
Subordinated capital debentures		-	-	4,981,992
Retained earnings				
Appropriated				
Legal reserve		15,048	396,999	396,999
Reserve for expansion		431,231	16,900,000	16,900,000
Unappropriated		9,481,343	311,767,883	269,709,716
Other components of equity		(2,052)	28,668,119	13,973,436
Total equity		13,515,291	467,120,606	415,349,748
Total liabilities and equity		25,167,954	869,864,323	783,535,669

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited

Statement of Financial Position

As at 31 December 2022

	Notes	Separate financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
		2022	2021	2022	2021
Assets					
Current assets					
Cash and cash equivalents	10	1,189,891	788,461	41,125,443	26,350,301
Trade and other receivables	11	810,998	611,701	28,030,016	20,442,990
Short-term loans to a related party	15	-	527,281	-	17,621,666
Inventories	13	107,680	120,098	3,721,688	4,013,664
Current tax assets		21,252	16,584	734,530	554,226
Derivative assets	6	-	6,321	-	211,248
Other current assets	25	196,170	45,588	6,780,110	1,523,537
Total current assets		2,325,991	2,116,034	80,391,787	70,717,632
Non-current assets					
Investments in associates	16	25,577	25,577	884,017	854,795
Investments in subsidiaries	16	3,198,250	2,484,787	110,539,109	83,041,306
Long-term loans to a related party	15	6,982,835	6,440,835	241,343,325	215,251,993
Property, plant and equipment	17	1,631,053	2,146,452	56,373,052	71,734,200
Right-of-use assets	18	44,472	56,230	1,537,064	1,879,210
Goodwill	19	75,158	75,158	2,597,624	2,511,758
Intangible assets		79,659	86,554	2,753,203	2,892,612
Deferred tax assets	21	548,525	789,978	18,958,334	26,400,973
Derivative assets	6	17,743	-	613,234	-
Other non-current financial assets		212	226	7,307	7,552
Other non-current assets	22	24,439	22,437	844,682	749,862
Total non-current assets		12,627,923	12,128,234	436,450,951	405,324,261
Total assets		14,953,914	14,244,268	516,842,738	476,041,893

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

		Separate financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
Notes		2022	2021	2022	2021
Liabilities and equity					
Current liabilities					
Trade and other payables	23	385,854	359,366	13,336,041	12,009,981
Current portion of lease liabilities	24	31,264	30,801	1,080,538	1,029,366
Short-term loans from a related party	15	511,605	-	17,682,293	-
Income tax payable		541,373	601,185	18,711,148	20,091,535
Short-term provisions		277,561	339,913	9,593,157	11,359,848
Derivative liabilities	6	44,055	1,284	1,522,630	42,923
Other current liabilities		101,670	135,220	3,513,969	4,519,035
Total current liabilities		1,893,382	1,467,769	65,439,776	49,052,688
Non-current liabilities					
Debentures	24	503,055	520,170	17,386,788	17,384,009
Lease liabilities	24	19,294	29,393	666,844	982,326
Provision for employee benefits	27	106,931	121,516	3,695,792	4,061,055
Provision for decommissioning costs	25	825,031	1,076,113	28,515,021	35,963,586
Provision for remuneration for the renewal of petroleum production	26	21,953	39,711	758,758	1,327,146
Derivative liabilities	6	-	8,413	-	281,165
Other non-current liabilities		15,466	28,076	534,530	938,286
Total non-current liabilities		1,491,730	1,823,392	51,557,733	60,937,573
Total liabilities		3,385,112	3,291,161	116,997,509	109,990,261

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited

Statement of Financial Position

As at 31 December 2022

		Separate financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
Notes		2022	2021	2022	2021
Liabilities and equity (continued)					
Equity					
Share capital					
Authorised share capital					
	Ordinary shares, 3,969,985,400 shares				
	at par value of Baht 1 each	28		3,969,985	3,969,985
Issued and paid-up share capital					
	Ordinary shares, 3,969,985,400 shares				
	paid-up at Baht 1 each	150,684	150,684	3,969,985	3,969,985
	Share premium	3,439,037	3,439,037	105,417,620	105,417,620
	Subordinated capital debentures	-	156,570	-	4,981,992
Retained earnings					
Appropriated					
	Legal reserve	15,048	15,048	396,999	396,999
	Reserve for expansion	431,231	431,231	16,900,000	16,900,000
	Unappropriated	7,498,155	6,760,581	250,734,588	225,003,218
	Other components of equity	34,647	(44)	22,426,037	9,381,818
Total equity		11,568,802	10,953,107	399,845,229	366,051,632
Total liabilities and equity		14,953,914	14,244,268	516,842,738	476,041,893

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited

Statement of Income

For the year ended 31 December 2022

		Consolidated financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
Notes		2022	2021	2022	2021
Revenues					
	Revenue from sales	9,270,564	6,730,860	326,018,964	216,075,359
	Revenue from pipeline transportation	150,923	93,147	5,331,365	2,992,712
	Other income				
	Gain from a bargain purchase	-	341,874	-	10,693,779
	Interest income	44,031	16,750	1,566,585	531,645
	Other income	195,134	131,594	6,984,948	4,337,632
	Total revenues	9,660,652	7,314,225	339,901,862	234,631,127
Expenses					
	Operating expenses	1,110,010	861,495	39,091,978	27,723,557
	Exploration expenses	71,683	226,252	2,551,124	7,109,671
	Administrative expenses	578,363	355,039	20,386,490	11,416,409
	Petroleum royalties	687,723	530,215	24,137,820	16,994,689
	Depreciation, depletion and amortisation	2,363,135	2,202,064	83,168,048	70,293,971
	Other expenses				
	Loss on foreign exchange rate	91,064	37,592	3,277,904	1,312,707
	Loss on remeasuring of financial instruments	184,486	234,290	5,889,156	7,263,044
	Impairment loss on assets and goodwill	300,080	183,000	10,652,638	6,142,011
	Finance costs	233,583	202,226	8,218,448	6,471,932
	Total expenses	5,620,127	4,832,173	197,373,606	154,727,991
	Share of profit of associates and joint ventures	19,556	15,174	667,830	488,626
	Profit before income taxes	4,060,081	2,497,226	143,196,086	80,391,762
	Income taxes	(2,061,501)	(1,286,688)	(72,294,751)	(41,528,167)
	Profit for the year	1,998,580	1,210,538	70,901,335	38,863,595
		Unit: US Dollar		Unit: Baht	
		2022	2021	2022	2021
Earnings per share					
	Basic earnings per share	0.51	0.30	17.94	9.70

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Comprehensive Income
For the year ended 31 December 2022

	Consolidated financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Profit for the year	1,998,580	1,210,538	70,901,335	38,863,595
Other comprehensive income (expense)				
Items that will be reclassified subsequently to profit or loss				
Currency translation differences	(850)	4,222	468,895	5,229,507
Changes in hedging reserves	62,562	578	2,281,901	17,712
Income taxes relating to changes in hedging reserves	(12,512)	(116)	(456,380)	(3,543)
Share of other comprehensive expense of associates and joint ventures - net of tax	(2,607)	(8,494)	(92,647)	(267,960)
Total items that will be reclassified subsequently to profit or loss	46,593	(3,810)	2,201,769	4,975,716
Items that will not be reclassified subsequently to profit or loss				
Currency translation differences	-	-	11,798,378	35,010,773
Gain on remeasuring of financial assets	134	93	4,551	2,695
Share of other comprehensive income (expense) of associates	474	(580)	15,916	10,711
Gain from changes in actuarial assumptions of provision for employee benefits	14,787	71,723	514,420	2,360,601
Income taxes resulting from changes in actuarial assumptions of provision for employee benefits	(6,759)	(32,722)	(235,166)	(1,082,611)
Total items that will not be reclassified subsequently to profit or loss	8,636	38,514	12,098,099	36,302,169
Other comprehensive income for the year - net of tax	55,229	34,704	14,299,868	41,277,885
Total comprehensive income for the year	2,053,809	1,245,242	85,201,203	80,141,480

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Statement of Income

For the year ended 31 December 2022

		Separate financial statements			
		Unit: Thousand US Dollar		Unit: Thousand Baht	
Notes		2022	2021	2022	2021
Revenues					
	Revenue from sales	3,698,710	3,122,448	129,755,643	100,005,612
	Other income				
	Gain on foreign exchange rate	-	11,531	-	321,459
	Gain on remeasuring of financial instruments	1,228	42,024	25,671	1,339,605
	Interest income	346,864	372,026	12,126,601	11,884,659
	Other income	178,905	160,215	6,291,005	5,141,000
	Dividend income from related parties	136,107	71,814	4,810,495	2,369,985
	Total revenues	4,361,814	3,780,058	153,009,415	121,062,320
Expenses					
	Operating expenses	235,281	252,177	8,248,412	8,112,541
	Exploration expenses	1,038	49	35,732	1,558
	Administrative expenses	371,290	345,846	12,998,744	11,112,486
	Petroleum royalties	466,747	390,306	16,377,896	12,500,702
	Depreciation, depletion and amortisation	853,336	915,885	30,019,247	29,092,125
	Other expenses				
	Loss on remeasuring of financial instruments	37,040	-	1,345,189	-
	Finance costs	56,667	54,524	1,994,272	1,743,042
	Total expenses	2,021,399	1,958,787	71,019,492	62,562,454
	Profit before income taxes	2,340,415	1,821,271	81,989,923	58,499,866
	Income taxes	33 (799,452)	(545,428)	(28,046,043)	(17,533,527)
	Profit for the year	1,540,963	1,275,843	53,943,880	40,966,339
		Unit: US Dollar		Unit: Baht	
		2022	2021	2022	2021
Earnings per share					
	Basic earnings per share	34 0.39	0.32	13.67	10.23

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Comprehensive Income
For the year ended 31 December 2022

	Separate financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Profit for the year	1,540,963	1,275,843	53,943,880	40,966,339
Other comprehensive income (expense)				
Items that will be reclassified subsequently to profit or loss				
Changes in hedging reserves	43,366	(3,085)	1,557,346	(101,172)
Income taxes relating to remeasuring of financial assets	(8,673)	617	(311,469)	20,234
Total items that will be reclassified subsequently to profit or loss	34,693	(2,468)	1,245,877	(80,938)
Item that will not be reclassified subsequently to profit or loss				
Currency translation differences	-	-	11,798,378	35,010,773
Loss on remeasuring of financial assets	(2)	(5)	(36)	(163)
Gain from changes in actuarial assumptions of provision for employee benefits	13,557	65,484	471,686	2,166,547
Income taxes resulting from changes in actuarial assumptions of provision for employee benefits	(6,779)	(32,742)	(235,843)	(1,083,273)
Total items that will not be reclassified subsequently to profit or loss	6,776	32,737	12,034,185	36,093,884
Other comprehensive income for the year - net of tax	41,469	30,269	13,280,062	36,012,946
Total comprehensive income for the year	1,582,432	1,306,112	67,223,942	76,979,285

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

	Consolidated financial statements											
	Unit: Thousand US Dollar											
							Other components of equity					
							Other comprehensive income (expense)					
							Share of other comprehensive expense of associates and joint ventures					
Issued and paid-up share capital	Share premium	Subordinated capital debentures	Retained earnings			Currency translation differences	Remeasuring of financial assets	Cash flow hedge reserve	Total other components of equity	Total equity		
			Legal reserve	Reserve for expansion	Unappropriated							
Balance as at 1 January 2021	150,684	3,439,037	156,570	15,048	431,231	7,672,902	(52,178)	(767)	(1,188)	(12,221)	(66,354)	11,799,118
Changes in equity for the year												
Interest expenses for subordinated capital debentures	-	-	-	-	-	(9,138)	-	-	-	-	-	(9,138)
Income tax for subordinated capital debentures	-	-	-	-	-	(1,662)	-	-	-	-	-	(1,662)
Dividends paid	-	-	-	-	-	(605,341)	-	-	-	-	-	(605,341)
Profit for the year	-	-	-	-	-	1,210,538	-	-	-	-	-	1,210,538
Other comprehensive income (expense) for the year	-	-	-	-	-	38,862	4,222	93	462	(8,935)	(4,158)	34,704
Balance as at 31 December 2021	150,684	3,439,037	156,570	15,048	431,231	8,306,161	(47,956)	(674)	(726)	(21,156)	(70,512)	12,428,219

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

Consolidated financial statements													
Unit: Thousand US Dollar													
	Notes	Issued and paid-up share capital	Share premium	Subordinated capital debentures	Retained earnings			Other components of equity					Total equity
					Legal reserve	Reserve for expansion	Unappropriated	Currency translation differences	Remeasuring of financial assets	Cash flow hedge reserve	Share of other comprehensive income (expense) of associates and joint ventures	Total other components of equity	
Balance as at 1 January 2022		150,684	3,439,037	156,570	15,048	431,231	8,306,161	(47,956)	(674)	(726)	(21,156)	(70,512)	12,428,219
Changes in equity for the year													
Interest expenses for subordinated capital debentures		-	-	-	-	-	(4,256)	-	-	-	-	-	(4,256)
Redemption of subordinated capital debentures	30	-	-	(156,570)	-	-	13,980	-	-	-	-	-	(142,590)
Income tax for subordinated capital debentures		-	-	-	-	-	(399)	-	-	-	-	-	(399)
Dividends paid	31	-	-	-	-	-	(819,492)	-	-	-	-	-	(819,492)
Profit for the year		-	-	-	-	-	1,998,580	-	-	-	-	-	1,998,580
Other comprehensive income (expense) for the year		-	-	-	-	-	(13,231)	(850)	134	50,050	19,126	68,460	55,229
Balance as at 31 December 2022		150,684	3,439,037	-	15,048	431,231	9,481,343	(48,806)	(540)	49,324	(2,030)	(2,052)	13,515,291

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

	Consolidated financial statements											
	Unit: Thousand Baht											
							Other components of equity					
							Other comprehensive income (expense)					
							Share of other comprehensive					
Issued and	Share	Subordinated	Retained earnings			Currency	Remeasuring	Cash flow	expense	Total other	Total	
share capital	premium	capital debentures	Legal reserve	Reserve for expansion	Unappropriated	translation differences	of financial assets	hedge reserve	of associates and joint ventures	components of equity		
												equity
Balance as at 1 January 2021	3,969,985	105,417,620	4,981,992	396,999	16,900,000	248,775,592	(25,685,622)	(26,583)	95,044	(414,147)	(26,031,308)	354,410,880
Changes in equity for the year												
Interest expenses for subordinated capital debentures	-	-	-	-	-	(293,908)	-	-	-	-	-	(293,908)
Income tax for subordinated capital debentures	-	-	-	-	-	(51,491)	-	-	-	-	-	(51,491)
Dividends paid	-	-	-	-	-	(18,857,213)	-	-	-	-	-	(18,857,213)
Profit for the year	-	-	-	-	-	38,863,595	-	-	-	-	-	38,863,595
Other comprehensive income (expense) for the year	-	-	-	-	-	1,273,141	40,240,280	2,695	14,169	(252,400)	40,004,744	41,277,885
Balance as at 31 December 2021	3,969,985	105,417,620	4,981,992	396,999	16,900,000	269,709,716	14,554,658	(23,888)	109,213	(666,547)	13,973,436	415,349,748

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

Consolidated financial statements													
Unit: Thousand Baht													
	Notes	Issued and paid-up share capital	Share premium	Subordinated capital debentures	Retained earnings			Other components of equity					Total equity
					Legal reserve	Reserve for expansion	Unappropriated	Currency translation differences	Remeasuring of financial assets	Cash flow hedge reserve	Share of other comprehensive income (expense) of associates and joint ventures	Total other components of equity	
Balance as at 1 January 2022		3,969,985	105,417,620	4,981,992	396,999	16,900,000	269,709,716	14,554,658	(23,888)	109,213	(666,547)	13,973,436	415,349,748
Changes in equity for the year													
Interest expenses for subordinated capital debentures		-	-	-	-	-	(145,093)	-	-	-	-	-	(145,093)
Redemption of subordinated capital debentures	30	-	-	(4,981,992)	-	-	490,594	-	-	-	-	-	(4,491,398)
Income tax for subordinated capital debentures		-	-	-	-	-	(14,283)	-	-	-	-	-	(14,283)
Dividends paid	31	-	-	-	-	-	(28,779,571)	-	-	-	-	-	(28,779,571)
Profit for the year		-	-	-	-	-	70,901,335	-	-	-	-	-	70,901,335
Other comprehensive income (expense) for the year		-	-	-	-	-	(394,815)	12,267,273	4,551	1,825,521	597,338	14,694,683	14,299,868
Balance as at 31 December 2022		3,969,985	105,417,620	-	396,999	16,900,000	311,767,883	26,821,931	(19,337)	1,934,734	(69,209)	28,668,119	467,120,606

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

	Separate financial statements									
	Unit: Thousand US Dollar									
	Retained earnings						Other components of equity			
							Other comprehensive income (expense)			
	Issued and paid-up share capital	Share premium	Subordinated capital debentures	Legal reserve	Reserve for expansion	Unappropriated	Remeasuring of financial assets	Cash flow hedge reserve	Total other components of equity	Total equity
Balance as at 1 January 2021	150,684	3,439,037	156,570	15,048	431,231	6,067,984	-	2,429	2,429	10,262,983
Changes in equity for the year										
Interest expenses for subordinated capital debentures	-	-	-	-	-	(9,138)	-	-	-	(9,138)
Income tax for subordinated capital debentures	-	-	-	-	-	(1,509)	-	-	-	(1,509)
Dividends paid	-	-	-	-	-	(605,341)	-	-	-	(605,341)
Profit for the year	-	-	-	-	-	1,275,843	-	-	-	1,275,843
Other comprehensive income (expense) for the year	-	-	-	-	-	32,742	(5)	(2,468)	(2,473)	30,269
Balance as at 31 December 2021	150,684	3,439,037	156,570	15,048	431,231	6,760,581	(5)	(39)	(44)	10,953,107

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

Separate financial statements											
Unit: Thousand US Dollar											
	Notes	Issued and paid-up share capital	Share premium	Subordinated capital debentures	Retained earnings			Other components of equity			Total equity
					Legal reserve	Reserve for expansion	Unappropriated	Other comprehensive income (expense)		Total other components of equity	
								Remeasuring of financial assets	Cash flow hedge reserve		
Balance as at 1 January 2022		150,684	3,439,037	156,570	15,048	431,231	6,760,581	(5)	(39)	(44)	10,953,107
Changes in equity for the year											
Interest expenses for subordinated capital debentures		-	-	-	-	-	(4,256)	-	-	-	(4,256)
Redemption of subordinated capital debentures	30	-	-	(156,570)	-	-	13,980	-	-	-	(142,590)
Income tax for subordinated capital debentures		-	-	-	-	-	(399)	-	-	-	(399)
Dividends paid	31	-	-	-	-	-	(819,492)	-	-	-	(819,492)
Profit for the year		-	-	-	-	-	1,540,963	-	-	-	1,540,963
Other comprehensive income (expense) for the year		-	-	-	-	-	6,778	(2)	34,693	34,691	41,469
Balance as at 31 December 2022		150,684	3,439,037	-	15,048	431,231	7,498,155	(7)	34,654	34,647	11,568,802

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

	Separate financial statements										
	Unit: Thousand Baht										
	Retained earnings						Other components of equity				
							Other comprehensive income (expense)				
	Issued and paid-up share capital	Share premium	Subordinated capital debentures	Legal reserve	Reserve for expansion	Unappropriated	Currency translation differences	Remeasuring of financial assets	Cash flow hedge reserve	Total other components of equity	Total equity
Balance as at 1 January 2021	3,969,985	105,417,620	4,981,992	396,999	16,900,000	202,151,174	(25,653,356)	-	105,502	(25,547,854)	308,269,916
Changes in equity for the year											
Interest expenses for subordinated capital debentures	-	-	-	-	-	(293,908)	-	-	-	-	(293,908)
Income tax for subordinated capital debentures	-	-	-	-	-	(46,448)	-	-	-	-	(46,448)
Dividends paid	-	-	-	-	-	(18,857,213)	-	-	-	-	(18,857,213)
Profit for the year	-	-	-	-	-	40,966,339	-	-	-	-	40,966,339
Other comprehensive income (expense) for the year	-	-	-	-	-	1,083,274	35,010,773	(163)	(80,938)	34,929,672	36,012,946
Balance as at 31 December 2021	3,969,985	105,417,620	4,981,992	396,999	16,900,000	225,003,218	9,357,417	(163)	24,564	9,381,818	366,051,632

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

Separate financial statements											
											Unit: Thousand Baht
Notes	Issued and paid-up share capital	Share premium	Subordinated capital debentures	Retained earnings			Other components of equity				Total equity
				Legal reserve	Reserve for expansion	Unappropriated	Other comprehensive income (expense)			Total other components of equity	
							Currency translation differences	Remeasuring of financial assets	Cash flow hedge reserve		
Balance as at 1 January 2022	3,969,985	105,417,620	4,981,992	396,999	16,900,000	225,003,218	9,357,417	(163)	24,564	9,381,818	366,051,632
Changes in equity for the year											
Interest expenses for subordinated capital debentures	-	-	-	-	-	(145,093)	-	-	-	-	(145,093)
Redemption of subordinated capital debentures	30	-	(4,981,992)	-	-	490,594	-	-	-	-	(4,491,398)
Income tax for subordinated capital debentures	-	-	-	-	-	(14,283)	-	-	-	-	(14,283)
Dividends paid	31	-	-	-	-	(28,779,571)	-	-	-	-	(28,779,571)
Profit for the year	-	-	-	-	-	53,943,880	-	-	-	-	53,943,880
Other comprehensive income (expense) for the year	-	-	-	-	-	235,843	11,798,378	(36)	1,245,877	13,044,219	13,280,062
Balance as at 31 December 2022	3,969,985	105,417,620	-	396,999	16,900,000	250,734,588	21,155,795	(199)	1,270,441	22,426,037	399,845,229

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

Statement of Cash Flows

For the year ended 31 December 2022

	Consolidated financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Cash flows from operating activities				
Profit before income taxes	4,060,081	2,497,226	143,196,086	80,391,762
Adjustments for:				
Share of profit of associates and joint ventures	(19,556)	(15,174)	(667,830)	(488,626)
Depreciation, depletion and amortisation	2,363,135	2,202,064	83,168,048	70,293,971
Impairment loss on assets and goodwill	300,080	183,000	10,652,638	6,142,011
Reversal for decrease in value of inventories				
to net realisable value	-	(882)	-	(27,657)
Write-off of exploration expenses	32,634	214,928	1,178,276	6,763,906
Other amortised expenses	12,426	10,976	442,492	350,393
Loss on disposal of assets	17,704	2,256	617,381	77,913
Income recognised from deferred income	(7,333)	(3,104)	(256,528)	(99,091)
Loss (gain) on remeasuring financial instruments	95,993	(15,718)	2,941,428	(849,979)
Loss on foreign exchange rates	8,142	9,132	284,850	291,535
Interest income lower than interest expenses	179,256	177,752	6,283,322	5,693,537
Gain from a bargain purchase	-	(341,874)	-	(10,693,779)
Other Income	(73,041)	(81,276)	(2,555,307)	(2,727,874)
Other expenses	147,840	19,176	5,173,469	607,935
Cash flows before changes in working capital	7,117,361	4,858,482	250,458,325	155,725,957
Changes in working capital				
Trade and other receivables	(201,830)	(229,783)	(7,060,925)	(7,335,644)
Inventories	(135,478)	(60,357)	(4,739,633)	(1,926,848)
Other current financial assets	(2,544)	(1,425)	(89,017)	(45,499)
Other current assets	(170,716)	(40,122)	(5,972,416)	(1,280,852)
Rights to receive reimbursement from				
decommissioning funds	(26,630)	(28,656)	(931,647)	(914,816)
Other non-current financial assets	(20,394)	(53,562)	(713,458)	(1,709,928)
Other non-current assets	(2,663)	(5,935)	(93,140)	(189,468)
Trade and other payables	55,656	124,016	1,947,086	3,959,105
Other current liabilities	(63,186)	(20,858)	(2,210,518)	(665,861)
Provisions	(281,543)	(136,019)	(9,849,625)	(4,342,316)
Other non-current liabilities	(12,228)	4,755	(427,783)	151,813
Net cash provided by operating activities	6,255,805	4,410,536	220,317,249	141,425,643
Interest received from bank deposits	27,644	6,855	967,113	218,854
Cash paid for income taxes	(1,611,247)	(989,083)	(56,368,631)	(31,575,682)
Net cash flows provided by operating activities	4,672,202	3,428,308	164,915,731	110,068,815

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited

Statement of Cash Flows

For the year ended 31 December 2022

	Consolidated financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Cash flows from investing activities				
Cash received from investing in short-term investment	-	100,000	-	3,192,420
Increase in short-term loans to a related party	(1,250)	-	(43,730)	-
Cash received from long-term loans to related parties	41,500	33,170	1,451,851	1,058,929
Cash paid for long-term loans to a related party	(428)	-	(14,962)	-
Dividend received from related parties	60,979	40,746	2,133,330	1,300,791
Net cash paid for business acquisition	-	(2,299,492)	-	(73,409,451)
Net cash received from asset acquisition	-	11,968	-	382,071
Cash paid for contingent considerations from business acquisition and participating interest in a joint venture	(955)	(54,670)	(33,397)	(1,745,296)
Cash received from disposal of investment in an associate	128,841	-	4,507,420	-
Cash paid for investment in associate and joint ventures	(17,642)	(15,506)	(617,193)	(495,014)
Cash received from lease receivables	234	374	8,181	11,945
Interest received from short-term investment	-	1,850	-	59,060
Interest received from long-term loans to related parties	772	1,010	27,022	32,243
Increase in property, plant and equipment	(1,765,221)	(1,512,174)	(61,755,355)	(48,274,943)
Increase in intangible assets	(31,077)	(29,067)	(1,087,226)	(927,946)
Increase in exploration and evaluation assets	(95,357)	(131,574)	(3,336,028)	(4,200,412)
Net cash flows used in investing activities	(1,679,604)	(3,853,365)	(58,760,087)	(123,015,603)
Cash flows from financing activities				
Cash received from short-term loans	-	200,000	-	6,384,840
Cash paid for repayment of short-term loans	-	(200,000)	-	(6,384,840)
Cash paid for repayment of debentures and long-term loans	(1,025,126)	-	(35,863,486)	-
Cash received from issuance of debentures	358,644	179,960	12,546,980	5,745,095
Cash paid for finance cost from issuance of debentures	(563)	(270)	(19,696)	(8,617)
Cash paid for lease liabilities	(177,008)	(128,482)	(6,192,521)	(4,101,696)
Interest paid	(144,365)	(133,914)	(5,050,512)	(4,275,080)
Cash paid for redemption of subordinated capital debentures	(142,590)	-	(4,988,476)	-
Interest paid for subordinated capital debentures	(4,256)	(9,138)	(148,892)	(291,719)
Net cash received (paid) from financial derivative contracts	(44,924)	1,826	(1,571,643)	58,280
Dividends paid	(819,492)	(605,341)	(28,669,512)	(19,325,041)
Net cash flows used in financing activities	(1,999,680)	(695,359)	(69,957,758)	(22,198,778)

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited
Statement of Cash Flows
For the year ended 31 December 2022

	Consolidated financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Net increase (decrease) in cash and cash equivalents	992,918	(1,120,416)	36,197,886	(35,145,566)
Cash and cash equivalents at the beginning of the year	2,559,189	3,704,003	85,527,810	111,257,372
Adjustment for the impact of exchange rate changes	(12,887)	(24,398)	598,194	9,416,004
Cash and cash equivalents at the end of the year	<u>3,539,220</u>	<u>2,559,189</u>	<u>122,323,890</u>	<u>85,527,810</u>
Significant non-cash transactions				
Outstanding payable from purchases of assets	595,710	387,058	20,840,593	12,356,505
Changes in right-of-use assets	645,890	187,153	22,596,116	5,974,704

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

	Separate financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Cash flows from operating activities				
Profit before income taxes	2,340,415	1,821,271	81,989,923	58,499,866
Adjustments for:				
Depreciation, depletion and amortisation	853,336	915,885	30,019,247	29,092,125
Write-off of exploration expenses	995	-	34,286	-
Other amortised expenses	1,386	2,524	47,602	80,735
Loss on disposal of assets	7,541	3,400	263,321	112,377
Income recognised from deferred income	(867)	(1,759)	(30,348)	(56,165)
Loss (gain) on remeasuring financial instruments	49,104	(29,514)	1,826,168	(881,452)
Dividend income from related parties	(136,107)	(71,814)	(4,810,495)	(2,369,985)
Loss (gain) on foreign exchange rates	10,186	(24,873)	356,335	(794,063)
Interest income higher than interest expenses	(290,626)	(317,744)	(10,148,901)	(10,149,495)
Other expenses	8,384	26,104	293,513	846,137
Cash flows before changes in working capital	2,843,747	2,323,480	99,840,651	74,380,080
Changes in working capital				
Trade and other receivables	(120,038)	(59,242)	(4,199,470)	(1,891,254)
Inventories	9,244	(15,173)	323,384	(484,384)
Other current assets	(149,487)	(9,258)	(5,229,710)	(295,559)
Other non-current assets	(2,402)	(1,686)	(84,020)	(53,836)
Trade and other payables	10,297	44,747	360,230	1,428,520
Other current liabilities	(33,918)	1,724	(1,186,604)	55,042
Provisions	(258,967)	(118,870)	(9,059,820)	(3,794,832)
Other non-current liabilities	(16,946)	(6,887)	(592,854)	(219,857)
Net cash provided by operating activities	2,281,530	2,158,835	80,171,787	69,123,920
Interest received from bank deposits	9,406	1,679	329,064	53,615
Cash paid for income taxes	(640,615)	(445,772)	(22,411,579)	(14,230,928)
Net cash flows provided by operating activities	1,650,321	1,714,742	58,089,272	54,946,607

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

PTT Exploration and Production Public Company Limited

Statement of Cash Flows

For the year ended 31 December 2022

	Separate financial statements			
	Unit: Thousand US Dollar		Unit: Thousand Baht	
	2022	2021	2022	2021
Cash flows from investing activities				
Cash received from investing in short-term investment	-	100,000	-	3,192,420
(Increase) decrease in short-term loans to a related party	449,944	(443,086)	15,741,066	(14,145,169)
Cash received from long-term loans to related parties	-	354,865	-	11,328,769
Cash paid for long-term loans to a related party	(542,000)	-	(18,961,590)	-
Dividend received from related parties	136,107	71,814	4,761,619	2,292,614
Net cash received from asset acquisition	-	11,968	-	382,071
Cash paid for investment in subsidiaries	(713,463)	(1,402,418)	(24,960,145)	(44,771,065)
Cash received from lease receivables	234	374	8,181	11,945
Interest received from short-term investment	-	1,850	-	59,060
Interest received from loans to related parties	272,538	190,841	9,534,610	6,092,435
Increase in property, plant and equipment	(375,047)	(424,426)	(13,120,807)	(13,549,448)
Increase in intangible assets	(12,604)	(21,544)	(440,957)	(687,767)
Net cash flows used in investing activities	(784,291)	(1,559,762)	(27,438,023)	(49,794,135)
Cash flows from financing activities				
Increase in short-term loans from a related party	571,268	-	19,985,504	-
Cash received from issuance of debentures	-	179,960	-	5,745,095
Cash paid for finance cost from issuance of debentures	-	(270)	-	(8,617)
Cash paid for lease liabilities	(42,626)	(30,443)	(1,491,233)	(971,858)
Interest paid	(29,298)	(19,560)	(1,024,963)	(624,431)
Cash paid for redemption of subordinated capital debentures	(142,590)	-	(4,988,476)	-
Interest paid for subordinated capital debentures	(4,256)	(9,138)	(148,892)	(291,719)
Net cash received from financial derivative contracts	-	1,826	-	58,280
Dividends paid	(819,492)	(605,341)	(28,669,512)	(19,325,041)
Net cash flows used in financing activities	(466,994)	(482,966)	(16,337,572)	(15,418,291)
Net increase (decrease) in cash and cash equivalents	399,036	(327,986)	14,313,677	(10,265,819)
Cash and cash equivalents at the beginning of the year	788,461	1,119,258	26,350,301	33,619,228
Adjustment for the impact of exchange rate changes	2,394	(2,811)	461,465	2,996,892
Cash and cash equivalents at the end of the year	1,189,891	788,461	41,125,443	26,350,301
Significant non-cash transactions				
Outstanding payable from purchases of assets	69,758	68,125	2,440,437	2,174,837
Changes in right-of-use assets	33,068	36,659	1,156,883	1,170,296

The notes to the consolidated and separate financial statements are an integral part of these financial statements.

1 General information

PTT Exploration and Production Public Company Limited (the Company) is registered as a company in Thailand and listed on the Stock Exchange of Thailand. The address of its registered office is 555/1 Energy Complex Building A, 6th, 19th - 36th Floor, Vibhavadi-Rangsit Road, Chatuchak, Bangkok 10900.

For reporting purposes, the Company and its subsidiaries are together referred to as the Group.

The principal business operations of the Group are exploration and production of petroleum in Thailand and overseas, and related business associated with the Group's strategy.

These consolidated and separate financial statements were authorised for issue by the Board of Directors on 10 February 2023.

2 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (TFRS) and the financial reporting requirements issued under the Securities and Exchange Act.

The Company's management has determined US Dollar as the functional currency of the Company and presents the consolidated and separate financial statements in US Dollar. However, the Stock Exchange of Thailand and the Department of Business Development require the Company to present its consolidated and separate financial statements in Thai Baht, so the Company also presents its financial statements in Thai Baht by translating from US Dollar.

Where the Group has entered into joint interest operations in the Concession or the Production Sharing Contract with other parties to participate in exploration and production of petroleum businesses, the Group records its share of expenses, assets and liabilities incurred in accordance with the Statements of Expenditures prepared by the operators of the Concession or the Production Sharing Contract. The Statements of Expenditures have been audited by other independent auditors and the joint venture committee on a regular basis.

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the accounting policies.

The preparation of financial statements in conformity with TFRS requires the Group's management to use certain critical accounting estimates and to exercise its judgement in applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas that are more likely to be materially adjusted due to changes in estimates and assumptions are disclosed in Note 7.

An English version of the consolidated and separate financial statements have been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

3 Amended financial reporting standards

3.1 Amended financial reporting standards that are effective for accounting period beginning on or after 1 January 2022 and related to the Group

a) Interest rate benchmark (IBOR) reform – phase 2, amendments to Thai Financial Reporting Standard (TFRS) 9, TFRS 7 and TFRS 16 provide the relief measures addressing issues that might affect the financial reporting during the reform, including the additional disclosures about IBOR reform. Key relief measures of the phase 2 amendments are as follows:

- When changing the basis for determining contractual cash flows for financial assets and financial liabilities (including lease liabilities), changes that are necessary as a direct result of the IBOR reform and which are considered economically equivalent, will not result in an immediate gain or loss in the statement of income.
- Most hedge accounting relationships that are directly affected by the IBOR reform will be allowed to continue. However, the entity is still required to recognise the hedged ineffectiveness portion.

Commencing from 1 January 2022, the Group has adopted these amended financial reporting standards. The adoption of the amended financial reporting standards did not have significant impacts to the Group.

3.2 Amended financial reporting standards that are effective for accounting period beginning on or after 1 January 2023 and related to the Group

The Group did not early adopt the amended financial reporting standards before effective date.

- a) **Amendment to Thai Accounting Standard (TAS) 16 - Property, plant and equipment** clarified to prohibit entities from deducting any proceeds received from selling any items produced, while preparing that asset for its intended use, from the cost of property, plant and equipment. The proceeds received shall be recognised as income.
- b) **Amendment to TAS 37 - Provisions, contingent liabilities and contingent assets** clarified that, in considering whether a contract is onerous, the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling the contract. Before recognising a separate provision for an onerous contract, entities must recognise any impairment losses that have occurred on the assets used in fulfilling the contract.
- c) **Amendment to TFRS 3 - Business combinations** clarified to update its references to the Conceptual Framework for Financial Reporting and added a consideration for the recognition of liabilities and contingent liabilities acquired from business combinations. The amendments also confirmed that contingent assets should not be recognised at the acquisition date.
- d) **Amendment to TFRS 9 - Financial instruments** clarified that only fees between the borrower and lender should be included in the 10% test for the derecognition of financial liabilities.

The Group's management has assessed and found the amended financial reporting standards will not have significant impacts to the Group.

4 Accounting policies

The principal accounting policies applied in the preparation of these consolidated and separate financial statements are set out below.

4.1 Principles of consolidation accounting

a) Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method less impairment (if any).

List of subsidiaries has been presented in Note 16.

b) Associates

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method less impairment (if any).

List of associates has been presented in Note 16.

c) Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

Joint operations

A joint operation is a joint arrangement whereby the Group has rights to the assets, and obligations for the liabilities relating to the arrangement. The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. These have been incorporated in the Group's financial statement line items.

Joint ventures

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method in the consolidated financial statements.

In the separate financial statements, investments in joint ventures are accounted for using cost less impairment (if any).

List of joint ventures and joint operations have been presented in Note 16.

d) Equity method

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

e) Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.

f) Intercompany transactions on consolidation

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

4.2 Business combination

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control. The consideration transferred for the acquisition of a subsidiary comprises.

- Fair value of the assets transferred,
- Liabilities incurred to the former owners of the acquiree,
- Equity interests issued by the Group.

Identifiable assets and liabilities acquired and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the identifiable net assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

Acquisition-related cost are recognised as expenses in consolidated financial statements.

Subsequent changes to the fair value of the contingent consideration that is an asset or liability is recognised in profit or loss. Contingent consideration that is classified as equity is not re-measured.

Business combination under common control

The Group accounts for business combination under common control by measuring acquired assets and liabilities of the acquiree at their carrying values presented in the highest level of the consolidation. The Group retrospectively adjusted the business combination under common control transactions as if the combination had occurred on the later of the beginning of the preceding comparative period and the date the acquiree has become under common control.

Consideration of business combination under common control are the aggregated amount of fair value of assets transferred, liabilities incurred and equity instruments issued by the acquirer at the date of which the exchange in control occurs.

The difference between consideration under business combination under common control and the acquirer's interests in the carrying value of the acquiree is presented as "surplus arising from business combination under common control" in equity and is derecognised when the investment is disposed.

4.3 Foreign currency translation

a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The financial statements are presented in US Dollar, which is the Company's functional currency and the Company's and Group's presentation currency.

b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

When a gain or loss on a non-monetary item is recognised in other comprehensive income, any exchange component of that gain or loss is recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit or loss, any exchange component of that gain or loss is recognised in profit or loss.

c) Group companies

The operational results and financial position of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a different functional currency from the Group's presentation currency are translated into the presentation currency.

To comply with the financial reporting requirements of the Stock Exchange of Thailand and the Department of Business Development, the Group presents the financial statements by translating from US Dollar to Thai Baht as follows:

- Assets and liabilities are translated at the closing rate at the date of respective statement of financial position;
- Income and expenses for statement of income and statement of comprehensive income are translated at average exchange rates during the period; and
- All resulting exchange differences from such translations are recognised in other comprehensive income (expense).

4.4 Cash and cash equivalents

Cash and cash equivalents includes cash on hand, deposits at bank, short-term highly liquid investments with maturities of three months or less from acquisition date.

4.5 Trade accounts receivable

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business.

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, they are recognised at fair value. The Group measures them subsequently at amortised cost.

The impairment of trade accounts receivable are disclosed in Note 4.8 (f).

4.6 Inventories

Inventories are stated at the lower of cost and net realisable value.

Cost of inventories is determined by the weighted average method. Net realisable value is the estimated selling price in the ordinary course of business less the costs of completion and selling expenses.

4.7 Materials and supplies

Materials and supplies are stated at cost less allowance for obsolescence. The costs of materials and supplies are determined using the weighted average cost method.

4.8 Financial asset

a) Classification

The Group classifies its debt instrument financial assets into the following measurement categories depending on i) business model for managing the asset and ii) the cash flow characteristics of the asset whether they represent solely payments of principal and interest (SPPI).

- Those to be measured subsequently at fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVPL); and
- Those to be measured at amortised cost.

For investments in equity instruments, the Group has an irrevocable election at the time of initial recognition to account for the equity investment at a) fair value through profit or loss or b) at fair value through other comprehensive income except those that are held for trading, they are measured at FVPL.

b) Recognition and derecognition

Regular way purchases, acquires and sales of financial assets are recognised on the trade date, which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

c) Measurement

At initial recognition, the Group measures a financial asset at its fair value plus or minus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether the cash flows are solely payment of principal and interest.

d) Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost - Financial assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in interest income using the effective interest rate method. Any gain or loss arising on derecognition and foreign exchange gains and losses are recognised in profit or loss and presented in other gains (losses) and gain (loss) on foreign exchange rates, respectively. Impairment losses are presented as a separate line item in the statement of income.

- FVOCI - Financial assets that are held for i) collection of contractual cash flows and ii) for selling the financial assets are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income (OCI), except for the recognition of impairment gains or losses, interest income using the effective interest method, and foreign exchange gains and losses which are recognised in profit or loss. When the financial assets is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains/(losses). Interest income is included in interest income. Impairment expenses are presented separately in the statement of income.
- FVPL - Financial assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented in gains (loss) on remeasuring of financial instruments from in the period in which it arises.

The Group reclassifies debt instruments only when its business model for managing those assets changes.

e) **Equity instruments**

The Group measures all equity investments at fair value. Where the Group has elected to present fair value gains and losses on equity instruments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as other income when the right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in gain on remeasuring financial instruments in the incurring period.

Impairment losses and reversal of impairment losses on equity investments are reported together with changes in fair value.

f) Impairment

The Group applies the TFRS 9 simplified approach in recognising the impairment of trade and other receivables, which applies lifetime expected credit loss, from initial recognition, for trade and other receivables.

To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected loss rates are based on the payment profiles and the corresponding historical credit losses experienced. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables.

For long-term loans to related parties and other financial assets carried at amortised cost and FVOCI, the Group applies TFRS 9 general approach in measuring the impairment of those financial assets. Under the general approach, the 12-month or the lifetime expected credit loss is applied depending on whether there has been a significant increase in credit risk since the initial recognition.

The credit risk assessment is performed at the end of each reporting period whether there is any significant increase in credit risk profile from the initial recognition by comparing i) expected risk of default as of the reporting date and ii) estimated risk of default on the date of initial recognition.

The Group assesses expected credit loss by taking into consideration forward-looking information and past experiences. The expected credit loss is a probability-weighted estimate of credit losses (probability-weighted present value of estimated cash shortfall). The cash shortfall is the difference between all contractual cash flows that are due to the Group and all cash flows expected to receive, discounted at the original effective interest rate.

When measuring expected credit losses, the Group reflects the following:

- Probability-weighted estimated uncollectible amounts;
- Time value of money; and
- Supportable and reasonable information as of the reporting date about past experience, current conditions and forecasts of future situations.

Impairment and reversal of impairment losses are recognised in profit or loss and included in administrative expenses.

4.9 Group of non-current assets held-for-sale

Non-current assets (or disposal groups) are classified as assets held-for-sale when their carrying amount will be recovered principally through a sale transaction and a sale is considered highly probable. They are measured at the lower of the carrying amount and fair value less costs to sell.

An impairment loss is recognised for initial and subsequent write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognised.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortised.

4.10 Property, plant and equipment

Property, plant and equipment are presented at cost, after deducting accumulated depreciation and the provision for the impairment of assets.

Land is not depreciated. Depreciation on other assets is calculated as follows:

a) Exploration and production assets

The Group follows the Successful Efforts Method in accounting for its assets used for exploration and production activities as follows:

Cost of exploration and production assets

- Costs of exploration and production assets comprise total acquisition costs of petroleum rights or the acquisition costs of the portion of properties, decommissioning costs as well as support equipment and facilities.
- Exploratory drilling costs are capitalised as exploration and evaluation assets and will be classified as oil and gas properties of the projects if their exploratory wells have identified proved reserves that have been found to be commercially producible. However, if the exploratory wells have not identified proved reserves or have identified proved reserves but have not been found to be commercially producible, such drilling costs will be expensed in the statements of income.

- Exploration costs, comprising geological and geophysical costs as well as area reservation fees during the exploration stage, are charged to expenses in the statement of income when incurred.
- Development costs, whether relating to the successful or unsuccessful development of wells, are capitalised as oil and gas properties.

Depreciation and depletion

- The capitalised acquisition costs of petroleum rights are depreciated using the unit of production method based on proved reserves. Depreciation of exploratory wells, development costs as well as decommissioning costs, except unsuccessful projects, are calculated using the unit of production method based on proved reserves or proved developed reserves. The Group recognises changes in reserve estimates prospectively.
- Proved reserves and proved developed reserves are calculated by the engineers of the Company and are based on the information received from the joint operators.
- Depreciation for support equipment and facilities is calculated using the straight-line method with an estimated useful life of assets not exceeding 20 years.
- Depreciation for remuneration for the renewal of petroleum production is calculated using the straight-line method with an estimated useful life not exceeding 10 years in accordance with the agreement.

b) Pipelines and others

Costs of properties comprises of other direct costs necessary to bring the asset to working condition suitable for its intended use.

Depreciation of pipelines and others is determined using the straight-line method with an estimated useful life of assets not exceeding 30 years.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Subsequent costs are included in the asset's carrying amount, only when it is probable that future economic benefits associated with the item will flow to the Group. The carrying amount of the replaced part is derecognised.

Repair and maintenance costs are recognised as expenses when incurred.

Gains and losses on disposal of property, plant and equipment are determined by comparing proceeds from disposal with the carrying amount and are recognised in the statement of income when incurred.

4.11 Rights to receive reimbursement from decommissioning funds

Rights to receive reimbursement from decommissioning funds is recognised at present value when the Group contribute cash into the fund in accordance to terms and it is certainly probable that it can reimburse the cost of decommissioning from the funds. When funds reimburse cash to the Group after the completion of the decommissioning activities, cash will be adjusted against the right to receive reimbursement from decommissioning funds. The differences between the amount received and the remaining carrying amount of the decommissioning fund is recognised profit or loss.

The Group will not offset the rights to receive reimbursement from decommissioning fund with provisions for decommissioning costs if the Group is still obligated to the decommissioning liabilities. The Group does not have control, joint control or significant influence over the funds.

4.12 Goodwill

Goodwill arises from the business combination which represents the excess of the fair value of the consideration transferred over the fair value of the net identifiable assets, liabilities and contingent liabilities of the acquired subsidiaries, joint operations, associates or joint ventures undertaking at the date of the acquisition.

Goodwill on acquisitions of subsidiaries and joint operations is separately reported in the statements of financial position, while goodwill on acquisitions of associates and joint ventures is included in investment in associates and joint ventures.

Goodwill is not amortised but is annually tested for impairment. Goodwill is allocated to cash-generating unit of group of cash-generating units that are expected to gain benefit from the business combination that caused goodwill. Goodwill is presented at cost less accumulated impairment losses.

Impairment losses on goodwill are not reversed. The carrying amount of goodwill is included in the gains and losses on the disposal of business when it is divested.

4.13 Intangible assets

Intangible assets are presented at cost, after deducting accumulated amortisation and the allowance for the impairment of assets.

Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down to its recoverable amount.

Intangible assets are amortised using the straight-line method according to asset's useful life but not exceeding 10 years.

Research and development/ internally generated intangible assets

Research expenditure is recognised as an expense as incurred.

Development expenditure is recognised as an asset when the Group can demonstrate all of the following:

- The expenditure attributable to its development can be measured reliably and feasibility in technical, financial, commercial, and resource and;
- The Group intends to and has the ability to complete the development for the purpose of using or selling.

Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Other intangible assets

Other intangible assets comprise expenditures incurred to acquire computer software licenses and concession rights in midstream oil and gas business.

4.14 Exploration and evaluation assets

Exploration and evaluation expenditures are capitalised at cost as exploration and evaluation assets. If the projects have identified the proved reserves that have been found to be commercially producible, the capitalised exploration and evaluation expenditures under these projects will be transferred to oil and gas properties of the projects with proved reserves. Subsequent accounting of such costs is described in the accounting policy for property, plant and equipment in Note 4.10 - Property, Plant and Equipment. The capitalised exploration and evaluation expenditure is written off as expenses in the statements of income in the period in which the projects have not identified proved reserves or have identified proved reserves, but have not been found to be commercially producible.

4.15 Impairment of assets

The Group's assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may exceed the recoverable amount. Intangible assets that have an indefinite useful life or are not ready to be used are tested for impairment annually.

An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount which is the higher of an asset's fair value less costs to sell and its value in use, and is recorded in the statement of income. For the purposes of assessing impairment, assets are grouped at the lowest levels in which they are separately identifiable.

Estimates of future cash flows used in the evaluation for impairment of assets which relate to petroleum production are made with consideration of the risk assessment on field and reservoir performance which includes the estimate of proved and unproved reserves.

Allowance for impairment of assets, except when relating to goodwill, is reversed as applicable to the extent that the events or circumstances that triggered the original allowance for impairment change. For this circumstance, the increased carrying amount of the assets from the reversal could not exceed the carrying amount (net of amortisation or depreciation), if the Group did not recognise the impairment loss for assets in the prior period.

4.16 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

Current tax

The current income tax is calculated on the basis of the tax laws enacted or substantially enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax will be recognised when there are temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- Initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss is not recognised
- Investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not be reversed in the foreseeable future.

Deferred income tax is measured using tax rates of the period in which temporary difference is expected to be reversed, based on tax rates and tax laws that have been enacted or substantially enacted by the end of the reporting period.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax assets and liabilities balances relate to the same or different taxable entities which intend either to settle current tax liabilities and assets on a net basis.

4.17 Deferred remuneration under agreement

The Company has an obligation to make a payment to the buyer (PTT) under the conditions in the Gas Sales Agreement of Arthit project. The remuneration is classified as non-current asset, presented under the caption "Other non-current assets", and amortised over contract life using the straight-line method.

4.18 Leases

Leases – where the Group is lessee

Leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. In the event that the Group cannot allocate the lease and non-lease components, the Group elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Assets and liabilities arising from a lease are initially measured at a present value basis. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable
- Variable lease payment that are based on an index or a rate
- Amounts expected to be payable by the lessee under residual value guarantees
- The exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and
- Payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Lease payments under the extension options period are also included in the measurement of the liability, if the Group is reasonably certain about exercising its extension options.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Right-of-use assets are measured at cost comprising the following:

- The amount of the initial measurement of lease liability
- Any lease payments made at or before the commencement date less any lease incentives received
- Any initial direct costs; and
- Restoration costs.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise computer and IT equipment.

Leases - where the Group is the lessor

Assets leased under operating leases are included in property, plant and equipment in the statements of financial position. They are depreciated over their expected useful lives on a basis consistent with other similar property, plant and equipment owned by the Group. Rental income is recognised on a straight-line basis over the lease term.

4.19 Financial liabilities

a) Classification

Financial instruments issued by the Group are classified as either financial liabilities or equity securities by considering contractual obligations.

- Where the Group has an unconditional contractual obligation to deliver cash or another financial asset to another entity, it is considered a financial liability unless there is a predetermined or possible settlement for a fixed amount of cash in exchange of a fixed number of the Group's own equity instruments.
- Where the Group has no contractual obligation or has an unconditional right to avoid delivering cash or another financial asset in settlement of the obligation, it is considered an equity instrument.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

b) Measurement

Financial liabilities are initially recognised at fair value and are subsequently measured at amortised cost.

c) Derecognition and modification

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled, or expired.

Where the terms of a financial liability are renegotiated/modified, the Group assesses whether the renegotiation / modification results in the derecognition of that financial liability. Where the modification results in an extinguishment, the new financial liability is recognised based on fair value of its obligation. The remaining carrying amount of financial liability is derecognised. The difference as well as proceed paid is recognised as other gains (losses) in profit or loss.

Where the modification does not result in the derecognition of the financial liability, the carrying amount of the financial liability is recalculated as the present value of the renegotiated / modified contractual cash flows discounted at its original effective interest rate. The difference is recognised in other gains/(losses) in profit or loss.

4.20 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, are added to the cost of those assets less investment income earned from these specific borrowings. The capitalisation of borrowing costs is ceased when substantially all of the activities necessary to prepare the qualifying assets for its intended use or sale are complete.

Other borrowing costs are recognised as expenses in the period in which they are incurred.

4.21 Employee benefits

The Group has recognised employee benefits based on the types of benefits which are post-employment benefits and other long-term benefits.

a) Post-employment benefits

The Group has recognised both defined contribution and defined benefit plans as follows:

Defined contribution plan

The Group's employees have become members of the following provident funds: "Employee of PTTEP Registered Provident Fund", "Sinsataporn Registered Provident Fund" and "TISCO Master Pooled Fund Registered Provident Fund".

The provident funds are funded by payments from employees and from the Group which are held in a separate trustee-administered fund. The Group contributes to the funds at a rate of 3% - 15% of the employees' salaries which are charged to the statements of income in the period the contributions are made.

Employee retirement benefits

The Group's obligation in respect of the retirement benefit plans is calculated by estimating the amount of future benefits that employees will earn in return for their services to the Group in current and future periods. Such benefits are discounted to the present value. The employee benefits obligation is calculated by an independent actuary using the projected unit credit method. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income (loss) in the period in which they arise.

Past-service costs are recognised immediately in the statements of income.

b) Other long-term benefits

The Group's other long-term benefits are benefits based on employees' length of service. The Group calculates the amount of these benefits according to the employees' service period.

The expected obligation of these benefits is calculated by independent actuarial experts and accrued over the period of employment based on the same accounting practice used for the employee retirement benefits. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions will be recognised in the statements of income in the period in which they arise.

The Group recognises the obligation in respect of employee benefits in the statements of financial position under "Provision for Employee Benefits" as disclosed in Note 28.

4.22 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation. The increase in the provision due to passage of time is recognised as interest expense.

4.23 Capital management

The Group's objectives when managing capital are to safeguard its ability to continue as a going concern, to provide returns for shareholders and benefits for other stakeholders, and maintain an optimal capital structure to reduce the cost of capital.

4.24 Other reserve for expansion

The Group considers to set aside a reserve for expanding its investments in new projects in the exploration phase, which is generally susceptible to high risk, and for exploration of additional petroleum reserves. The reserve for expansion is set aside at no more than 35% of the net taxable income from its exploration and production activities.

4.25 Revenue recognition

Revenue are recorded net of value added tax. They are recognised in accordance with the provision of goods or services, provided that collectability of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into individual distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfilment of the obligation to the customer.

The Group has the revenue recognition in each category as follows:

Revenue from contracts with customers

Revenue from contracts with customers is recognised when the Group complete performance obligations at a point in time by transferring petroleum product to a customer and the control over the product is transferred to a customer whom the product is physically possessed. The revenue is measured at the fair value of the consideration which the Group expects to be entitled in exchange for petroleum product, provided that collectability of the consideration is probable. Inter-company sales revenue is excluded in the consolidated financial statements.

Deferred income under agreements (Take-or-Pay)

Under the Gas Sales Agreements, the Group has obligations to supply minimum quantities of gas to a customer in each contract year. If in any contract year, the customer has not taken the minimum quantities of gas according to the Gas Sales Agreements, the customer shall pay for quantities of gas not taken (Take-or-Pay). If the customer is unable to take the minimum contracted quantities in a given year, the volume of gas that the customer has paid for but has not taken in that year (Make-up) can be taken free of charge in subsequent years. Payments received in advance under these agreements are recognised as deferred income. This deferred income is recognised in the statements of income when the gas is subsequently taken.

Interest income

Interest income is recognised based on time proportion basis considering on an effective interest rate of one point of time until the end of term and considering on an outstanding balance of the principal recognised in deferred income account of the Group.

Dividend income

Dividend income is recognised when the right to receive payment is established.

Other income

Other income is recognised on an accrual basis.

4.26 Share capital

Ordinary shares with discretionary dividends are classified as equity.

Incremental costs directly attributable to the issue of new shares or options (net of tax) are shown as a deduction in equity.

4.27 Dividend distribution

Dividend distributed to the Company's shareholders is recognised as a liability when interim dividends are approved by the Board of Directors' meeting, and when the annual dividends are approved by the shareholders' meeting.

4.28 Earnings per share

Basic earnings per share are calculated by dividing the income for the year attributable to ordinary shareholders less interest expense for subordinated capital debentures by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share are calculated by dividing the income for the year attributable to shareholders less interest expense for subordinated capital debentures by the weighted average number of ordinary shares outstanding during the year, adjusted with dilutive potential ordinary shares. The Company assumes that all dilutive potential ordinary shares are converted into ordinary shares.

4.29 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker is a person responsible for allocating resources and assessing performance of the operating segments that makes strategic decisions.

In considering the segment reporting, the chief operating decision-maker considers product types as well as geographical areas classified by business segments which are identified by different business activities that are subject to risks and returns that are different from those of other business segments.

4.30 Derivatives and hedging activities

a) Embedded derivative and derivatives that do not qualify for hedge accounting

Embedded derivative that is separately accounted for and derivatives that do not qualify for hedge accounting is initially recognised at fair value. Changes in the fair value are included in other income or other expenses.

Fair value of derivatives is classified as a current or non-current following its remaining maturity.

b) Hedge accounting

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The Group designates certain derivatives as either 1) hedges of the fair value of recognised assets or liabilities or 2) hedges of a particular risk associated with the cash flows of highly probable forecast transactions (cash flow hedges).

At inception of the hedge relationship, the Group documents i) the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items and ii) its risk management objective and strategy for undertaking its hedge transactions.

The full fair value of a hedging derivative is classified as a current or non-current asset or liability following the maturity of related hedged item.

The fair values of derivative financial instruments designated in cash flow hedge relationships and movements in the hedging reserve in shareholders' equity are disclosed in Note 6.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualified as cash flow hedges is recognised in the cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss.

The Group applies hedge accounting on cross currency and interest rate swap and interest rate collar (zero cost collar) in hedge relationships that were being used to hedge the underlying assets and liabilities. The Group only designates the spot component of cross currency and interest rate swap and the intrinsic value of interest rate collar (zero cost collar) as hedging instrument. Gains or losses relating to the effective portion of the change in the spot component and intrinsic value are recognised in the cash flow hedge reserve within equity and recognised the changes in foreign currency basis spreads of cross currency and interest rate swap and time value of interest rate collar (zero cost collar) that relate to hedged items as the costs of hedging reserve within other comprehensive income of equity.

Amounts accumulated in equity are reclassified in the periods when the hedged item affects profit or loss.

The gain or loss relating to the effective portion of cross currency and interest rate swap and interest rate collar (zero cost collar) hedging variable rates borrowings and debentures is recognised in profit or loss within finance costs at the same time as the interest expense on the hedged borrowings and debentures.

4.31 Financial guarantee contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- The amount determined in accordance with the expected credit loss model under TFRS 9; and
- The amount initially recognised less the cumulative amount of income recognised in accordance with the principles of TFRS 15.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between a) the contractual payments required under the debt instrument; and b) the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

The Group recognised guarantees associated with loans or other payables without compensation as part of the cost of the investment.

5 Financial risk management

The Group exposes to various risks from its business operations as follows:

5.1 Financial risk

The Group exposes to a variety of financial risks which comprise market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential effects on the Group's financial performance to an acceptable level. The Group also uses derivative financial instruments to hedge certain exposures.

Financial risk management is centralised and carried out by the financial risk management function. The Group's financial risk management includes areas such as foreign exchange risk, interest rate risk, price risk, credit risk and liquidity risk. The framework parameters are approved by the Board of Directors and used as the key communication and control tools for financial risk management function of the Group's subsidiaries.

5.1.1 Market risk

a) Foreign exchange risk

The vast majority of the Group's domestic and overseas business (revenues and expenses) are in US Dollar and most companies in the Group has determined the US Dollar as the functional currency by considering from revenue and operating expenses used in the primary economic environment in which the entity operates. The Group's exposure to the foreign exchange risk arises from transactions which are denominated in currencies that are not the functional currency.

Exposure

The Group and the Company have significant exposure to financial statements from transactions denominated in Baht at the end of the reporting period as follows:

	Consolidated financial statements			
	31 December 2022		31 December 2021	
	Unit: Million US Dollar	Unit: Million Baht	Unit: Million US Dollar	Unit: Million Baht
Cash and cash equivalents	462	15,966	339	11,341
Trade and other receivables	561	19,396	409	13,653
Cross currency and interest rate swaps				
- hedge derivative *	843	29,120	969	32,400
Other current financial assets	1	23	-	-
Other non-current financial assets	-	8	-	8
Other non-current assets	4	148	4	150
Trade and other payables	(462)	(15,974)	(322)	(10,774)
Forward foreign exchange contracts				
- trading *	(1,197)	(41,368)	(1,001)	(33,467)
Other current liabilities	(50)	(1,731)	(100)	(3,333)
Lease liabilities	(55)	(1,891)	(36)	(1,208)
Debentures	(850)	(29,376)	(969)	(32,384)

	Separate financial statements			
	31 December 2022		31 December 2021	
	Unit: Million US Dollar	Unit: Million Baht	Unit: Million US Dollar	Unit: Million Baht
Cash and cash equivalents	52	1,794	65	2,184
Trade and other receivables	383	13,227	316	10,564
Cross currency and interest rate swaps				
- hedge derivative *	503	17,400	521	17,400
Short-term loans to related parties	15	528	-	-
Other non-current financial assets	-	7	-	8
Other non-current assets	4	147	4	147
Trade and other payables	(291)	(10,050)	(247)	(8,243)
Short-term loans from a related party	-	-	(16)	(548)
Forward foreign exchange contracts				
- trading *	(1,087)	(37,560)	(901)	(30,125)
Other current liabilities	(50)	(1,731)	(100)	(3,333)
Lease liabilities	(37)	(1,275)	(26)	(884)
Debentures	(503)	(17,387)	(520)	(17,384)

* These are disclosed with notional amount.

Financial instruments used by the Group for risk management

The Group manages its foreign exchange risks on financial assets and financial liabilities those are not the Group's functional currency by balancing the structure and transactions, types of assets, liabilities and equity. In addition, the Group uses derivative instruments to manage and hedge the risks exposure of the foreign currency transaction while it also considers costs, effectiveness, and risks that may arise in each interval.

The Group used cross currency and interest rate swaps, forward foreign exchange contracts and foreign currency options in a consistent manner to hedge firm and anticipated foreign exchange commitments and to manage its foreign exchange risk arising from future commercial transactions. The Group does not usually hedge its net investments in foreign operations except in circumstances where there is a material exposure arising from a currency that is anticipated to be volatile and the hedging is cost effective. The Group manages its foreign exchange risks by swapping into the entity's functional currency. Foreign currency borrowings are swapped into the entity's functional currency using cross currency and interest rate swaps, except where the foreign currency borrowings are repaid with cash flows generated in the same foreign currency. The purpose of these hedges is to mitigate the impact of movements in foreign exchange rates on assets and liabilities and the profit or loss of the Group.

The Group enters into cross currency and interest rate swaps, forward foreign exchange contracts and foreign currency options to hedge its exposure to foreign exchange risk. Under the Group's policy, the critical terms of these contracts must align with the hedged items. However, the Group do not apply hedge accounting for forward foreign exchange contracts and foreign currency options. As a result, gain or loss is recognised in profit or loss.

The Group only designates the spot component of cross currency and interest rate swap in hedge relationships. The spot component is determined with reference to relevant spot market exchange rates. The difference between the contracted forward rate and the spot market exchange rate is defined as the forward points. It is discounted, where material.

The changes in the forward element of the cross currency and interest rate swaps that relate to hedged items are deferred in the costs of hedging reserve.

The Group and the Company entered into a cross currency and interest rate swaps with 99.05% of total Thai Baht borrowings which are not matched with the Company's and each subsidiary's functional currency.

Cross currency and interest rate swaps comprise of accrued interest income and expense which will be made twice a year. The due date of interest and principal of the cross currency and interest rate swaps are the same date as loan maturity date.

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The Group's exposure of hedging instrument to financial position and performance are as follows:

Consolidated financial statements									
31 December 2022									
Type of hedge	Hedging instrument		Carrying amount of hedging instrument		Hedge ratio	Maturity date	Contractual exchange rate	Swap rate received	Swap rate paid
	Derivative	Total contractual amount (Million US Dollar)	Unit: Million US Dollar	Unit: Million Baht					
Cash flow hedge	Cross currency and interest rate swap	349	15	497	1:1	6 June 2029	32.66	4.82%	4.99%
		182	3	116	1:1	5 November 2026	33.00	2.00% - 2.75%	2.46% - 2.55%
		148	2	77	1:1	5 April 2027	33.75	2.09%	2.88% - 3.26%
		30	1	20	1:1	5 April 2029	33.60	2.69%	3.68%
		171	6	206	1:1	5 April 2032	33.50	3.05%	4.05% - 4.16%

Consolidated financial statements									
31 December 2021									
Type of hedge	Hedging instrument		Carrying amount of hedging instrument		Hedge ratio	Maturity date	Contractual exchange rate	Swap rate received	Swap rate paid
	Derivative	Total contractual amount (Million US Dollar)	Unit: Million US Dollar	Unit: Million Baht					
Cash flow hedge	Cross currency and interest rate swap	349	(6)	(201)	1:1	6 June 2029	32.66	4.82%	4.99%
		480	(33)	(1,098)	1:1	19 June 2022	31.25	2.26%	2.63% - 3.05%
		182	(2)	(80)	1:1	5 November 2026	33.00	2.00% - 2.75%	2.46% - 2.55%

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Separate financial statements

31 December 2022

Type of hedge	Hedging instrument		Carrying amount of hedging instrument		Hedge ratio	Maturity date	Contractual exchange rate	Swap rate received	Swap rate paid
	Derivative	Total contractual amount (Million US Dollar)	Unit: Million US Dollar	Unit: Million Baht					
Cash flow hedge	Cross currency and	349	15	497	1:1	6 June 2029	32.66	4.82%	4.99%
	interest rate swap	182	3	116	1:1	5 November 2026	33.00	2.00% - 2.75%	2.46% - 2.55%

Separate financial statements

31 December 2021

Type of hedge	Hedging instrument		Carrying amount of hedging instrument		Hedge ratio	Maturity date	Contractual exchange rate	Swap rate received	Swap rate paid
	Derivative	Total contractual amount (Million US Dollar)	Unit: Million US Dollar	Unit: Million Baht					
Cash flow hedge	Cross currency and	349	(6)	(201)	1:1	6 June 2029	32.66	4.82%	4.99%
	interest rate swap	182	(2)	(80)	1:1	5 November 2026	33.00	2.00% - 2.75%	2.46% - 2.55%

Sensitivity analysis

As shown in the table above, the Group is primarily exposed to changes in Baht and US Dollar exchange rates. The sensitivity of profit or loss to changes in the exchange rates arises mainly from financial assets and financial liabilities denominated in foreign currency other than its functional currency and the impact on profit before income tax arises. If the Group determines the exchange rate as at 31 December 2022 and 2021 to be changed by 10% and holding all other variables constant, the impact on profit before income tax of the Group will be as follows:

	Consolidated financial statements	
	Unit:	Unit:
	Million US Dollar	Million Baht
2022		
Baht to US Dollar exchange rate		
- increase 10%	36	1,258
- decrease 10%	(36)	(1,258)

	Consolidated financial statements	
	Unit:	Unit:
	Million US Dollar	Million Baht
2021		
Baht to US Dollar exchange rate		
- increase 10%	32	1,058
- decrease 10%	(32)	(1,058)

	Separate financial statements	
	Unit:	Unit:
	Million US Dollar	Million Baht
2022		
Baht to US Dollar exchange rate		
- increase 10%	57	1,973
- decrease 10%	(57)	(1,973)

	Separate financial statements	
	Unit:	Unit:
	Million US Dollar	Million Baht
2021		
Baht to US Dollar exchange rate		
- increase 10%	51	1,718
- decrease 10%	(51)	(1,718)

b) Interest rate risk

Interest rate risk is the risk of changes in market value of interest rate which affect to the cash flow from assets and liabilities at variable rates. Therefore, the borrowing at variable rates is the cause of the Group's interest rate risk. The Group's policy is to maintain an appropriate proportion of its borrowings at fixed rates and variable rates considering the Group's business operation. In doing so, the Group maintains its fixed interest rate borrowings not less than 80%. In addition, the Group considers entering into derivative such as interest rate collar (zero cost collar). The Group also considers costs, market conditions, and acceptable risk before entering into the financial instrument to manage interest rate risk.

Following interest rate benchmark reform, there are cessations in several benchmark interest rates including LIBOR, which is applied by the Group as part of the variable rate calculation. The Group had monitored and managed the transition to alternative benchmark rates for loan agreements and financial instruments. As a result, the uncertainty does not significantly impact the Group. As at 31 December 2022 and 2021, the financial instruments that have not yet to transition to alternative benchmark rates did not have significant impact

The exposure of the Group's borrowings to interest rate changes of the borrowings at the end of the reporting period are as follows:

	Consolidated financial statements					
	31 December 2022			31 December 2021		
	Unit: Million US Dollar	Unit: Million Baht	% of total borrowings	Unit: Million US Dollar	Unit: Million Baht	% of total borrowings
Variable rate borrowings -						
LIBOR	-	-	-	596	19,920	17
Fixed rate borrowings	2,636	91,102	94	2,746	91,747	78
Fixed rate borrowings -						
repricing 1 - 5 years	173	5,993	6	179	5,991	5
	2,809	97,095	100	3,521	117,658	100
	Separate financial statements					
	31 December 2022			31 December 2021		
	Unit: Million US Dollar	Unit: Million Baht	% of total borrowings	Unit: Million US Dollar	Unit: Million Baht	% of total borrowings
Fixed rate borrowings	330	11,394	66	341	11,393	66
Fixed rate borrowings -						
repricing 1 - 5 years	173	5,993	34	179	5,991	34
	503	17,387	100	520	17,384	100

The percentage of total borrowings shows the proportion of borrowings that are currently at variable rates and fixed rates in relation to the total amount of borrowings. An analysis by maturities is provided in Note 24.

Financial instruments used by the Group for risk management

The Group had entered into interest rate collar (zero cost collar), which represents 50% of total variable rate borrowing. The interest rate collar (zero cost collar) comprises of put option with interest rate cap at 2.42% per annum and call option with interest rate floor at 0.20% per annum. The variable interest rate is reference to 6M LIBOR. However, during 2022 the Group cancelled the interest rate collar due to the repayment of the variable interest rate loan in full.

The Group's exposure of interest rate-related hedging instrument to financial position and performance are as follows:

Consolidated financial statements								
31 December 2021								
Type of hedge	Hedging instrument		Carrying amount of hedging instrument		Hedge ratio	Maturity date	Swap rate received	Swap rate paid
	Derivative	Total contractual amount (Million US Dollar)	Unit: Million US Dollar	Unit: Million Baht				
Cash flow hedge	Interest rate collar (zero cost collar)	300	1	28	1:1	21 October 2024	Reference interest rate, as of borrowing's interest rate reset date, floats over 2.42% per annum	Reference interest rate, as of borrowing's interest rate reset date, floats below 0.20% per annum

Sensitivity analysis

Profit or loss is mainly sensitive to higher or lower interest expenses from borrowings as a result of changes in interest rates.

The Group is exposed to change in market rate of variable interest rate borrowings from financial institutions. If the Group determines the interest rate to be changed and holding all other variables constant, the impact on profit before income tax of the Group will be as follows:

	Consolidated financial statements	
	Unit:	Unit:
	Million US Dollar	Million Baht
2021		
Interest rate		
- Increase 1%	(3)	(97)
- Decrease 1%	3	97

c) **Price risk**

Exposure

The Group's exposure to price risk arises from petroleum product prices because the Group's selling price of petroleum products is reference to the world's crude oil price, which are fluctuated subject to various factors beyond its control.

Fluctuations in the world's crude oil prices directly affect the prices of the Group's crude oil and condensate, while the prices of natural gas, which is the main product of the Group, change in the same direction with the reference oil prices and other factors in the gas price formula. Natural gas prices have adjusted periods that reflect actual price delayed by every 3 to 21 months (lag time) depending on each contract. The natural gas price will move corresponding to lower volatility compared to the prices of crude oil and condensate.

The Group has managed the price risk by analysing the impact of the level of oil price changes to revenue, cash flow and net profit of the Group annually. The risk mitigation plan is reviewed by the Risk Management Committee and the Board of Directors in order to be used as the Group's operation framework.

As at 31 December 2022, the Group entered into oil price hedging derivatives for the year 2023 totalling 3.3 million barrel (2021: the Group entered into oil price hedging derivatives for the year 2022 totalling 15.4 million barrel).

Sensitivity analysis

The changes in oil price, holding all other variables constant, will impact fair value of oil price hedging derivative as at 31 December 2022 and 2021 as follows:

	Consolidated financial statements	
	Unit: Million US Dollar	Unit: Million Baht
2022		
Price per barrel		
- Increase 1 US Dollar	(1)	(40)
- Decrease 1 US Dollar	1	37

	Consolidated financial statements	
	Unit:	Unit:
	Million US Dollar	Million Baht
2021		
Price per barrel		
- Increase 1 US Dollar	(8)	(269)
- Decrease 1 US Dollar	8	273

5.1.2 Credit risk

a) Risk management

The Group's policy to manage its credit risk is to enter into transactions with the customers who have good credit profiles. The majority of sales is made with PTT Public Company Limited, the parent company. In addition, the Group carefully assesses and regularly reviews the credit profiles of its customers.

The Group places deposits with the banks which are rated at investment grade level. The Group regularly assesses credit quality and stability of these banks by taking into account of their credit rating, investment portfolio and other financial ratios which demonstrate their performance and the ability to control their business risks, such as non-performing loan to total loan ratio. These factors are used to manage risks and to consider the amount of bank deposit limit in order to ensure that deposits are well-diversified and to avoid concentration risks with individual bank together with the consideration yields and acceptable risk in each time interval.

Before entering into financial derivative contracts, the Group has assessed the financial position and credit worthiness, including setting up credit exposure limit, of counterparty bank in the same way as when the Group assesses banks before placing deposit as described above. Currently all banks in which the Group has entered into financial derivative contracts are rated at investment grade level. In addition, the Group has adjusted, based on the timing and type of transactions, the outstanding balance of each derivative financial instrument made with banks to reflect the risk-adjusted exposure and has diversified transactions to avoid concentration risks with individual bank together with the costs, consideration yields and risks arising in each interval.

b) Security

For some trade receivables, the Group may obtain security in the form of guarantees or letters of credit which can be called upon if the counterparty is in default under the terms of the agreement.

c) Impairment of financial assets

The Group has following financial assets that are subject to the expected credit loss model as follows:

- Cash and cash equivalents
- Trade and other receivables
- Other current assets
- Short-term loans to a related party
- Long-term loans to related parties
- Other non-current financial assets
- Other non-current assets

Management consider that impairment loss of financial assets mentioned above are immaterial.

5.1.3 Liquidity risk

Liquidity risk is the risk that suitable sources of funding for the Group's business activities may not be available. The Group's contractual maturity of liabilities and interest, including the derivative contracts are as follows:

a) **Maturity of financial liabilities**

The tables below analyse the maturity of financial liabilities grouping based on their contractual maturities. The amounts disclosed are the contractual undiscounted cash flows as at 31 December 2022 and 2021.

	Consolidated financial statements				
	Unit: Million US Dollar				
					Total carrying amount
	Within 1 year	1 - 5 years	Over 5 years	Total	
2022					
Trade and other payables	1,514	-	-	1,514	1,514
Other current liabilities	74	-	-	74	74
Lease liabilities	322	578	197	1,097	1,024
Contingent considerations from business acquisition	-	1	-	1	1
Debentures - fixed interest rate					
Principal	-	818	2,022	2,840	2,809
Interest expense *	108	424	1,338	1,870	13
Forward foreign exchange contracts - net **	71	-	-	71	53

Consolidated financial statements					
Unit: Million US Dollar					
	Within 1 year	1 - 5 years	Over 5 years	Total	Total carrying amount
2021					
Trade and other payables	1,082	-	-	1,082	1,082
Other current liabilities	132	-	-	132	132
Lease liabilities	196	331	89	616	572
Contingent considerations from business acquisition	1	76	-	77	72
Loans from financial institutions - variable interest rate					
Principal	-	600	-	600	596
Interest expense *	7	17	-	24	1
Debentures - fixed interest rate					
Principal	449	179	2,331	2,959	2,925
Interest expense *	105	402	1,404	1,911	11
Cross currency and interest rate swaps - net **	35	9	11	55	41
Forward foreign exchange contracts - net **	1	-	-	1	2

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	Consolidated financial statements				
	Unit: Million Baht				
	Within 1 year	1 - 5 years	Over 5 years	Total	Total carrying amount
2022					
Trade and other payables	52,303	-	-	52,303	52,303
Other current liabilities	2,570	-	-	2,570	2,570
Lease liabilities	11,143	19,983	6,797	37,923	35,384
Contingent considerations from business acquisition	25	25	-	50	50
Debentures - fixed interest rate					
Principal	-	28,281	69,898	98,179	97,095
Interest expense *	3,745	14,660	46,245	64,650	462
Forward foreign exchange contracts – net **	2,445	-	-	2,445	1,833

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	Consolidated financial statements				
	Unit: Million Baht				
					Total carrying amount
	Within 1 year	1 - 5 years	Over 5 years	Total	
2021					
Trade and other payables	36,163	-	-	36,163	36,163
Other current liabilities	4,422	-	-	4,422	4,422
Lease liabilities	6,553	11,072	2,954	20,579	19,153
Contingent considerations from business acquisition	32	2,555	-	2,587	2,412
Loans from financial institutions – variable interest rate					
Principal	-	20,052	-	20,052	19,920
Interest expense *	245	558	-	803	42
Debentures - fixed interest rate					
Principal	15,000	6,000	77,905	98,905	97,738
Interest expense *	3,509	13,433	46,912	63,854	373
Cross currency and interest rate swaps - net **	1,176	308	367	1,851	1,379
Forward foreign exchange contracts - net **	49	-	-	49	55

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	Separate financial statements				
	Unit: Million US Dollar				
					Total carrying amount
	Within 1 year	1 - 5 years	Over 5 years	Total	
2022					
Trade and other payables	380	-	-	380	380
Other current liabilities	57	-	-	57	57
Lease liabilities	32	19	1	52	50
Debentures – fixed interest rate					
Principal	-	173	330	503	503
Interest expense *	19	76	24	119	2
Forward foreign exchange contracts – net **	64	-	-	64	44

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	Separate financial statements				
	Unit: Million US Dollar				
	Within 1 year	1 - 5 years	Over 5 years	Total	Total carrying amount
2021					
Trade and other payables	356	-	-	356	356
Other current liabilities	102	-	-	102	102
Lease liabilities	31	29	1	61	60
Debentures – fixed interest rate					
Principal	-	180	341	521	520
Interest expense *	20	83	41	144	4
Cross currency and interest rate swaps - net **	2	9	11	22	8
Forward foreign exchange contracts - net **	1	-	-	1	1

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	Separate financial statements				
	Unit: Million Baht				
	Total carrying				amount
	Within 1 year	1 - 5 years	Over 5 years	Total	
2022					
Trade and other payables	13,138	-	-	13,138	13,138
Other current liabilities	1,986	-	-	1,986	1,986
Lease liabilities	1,102	648	44	1,794	1,748
Debentures – fixed interest rate					
Principal	-	6,000	11,400	17,400	17,387
Interest expense *	669	2,633	824	4,126	75
Forward foreign exchange contracts – net **	2,203	-	-	2,203	1,523

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	Separate financial statements				
	Unit: Million Baht				
	Within 1 year	1 - 5 years	Over 5 years	Total	Total carrying amount
2021					
Trade and other payables	11,883	-	-	11,883	11,883
Other current liabilities	3,414	-	-	3,414	3,414
Lease liabilities	1,025	954	45	2,024	2,011
Debentures – fixed interest rate					
Principal	-	6,000	11,400	17,400	17,384
Interest expense *	669	2,753	1,374	4,796	127
Cross currency and interest rate swaps - net **	77	308	367	752	281
Forward foreign exchange contracts - net **	38	-	-	38	43

The major assumptions for the data presented in the table above are that all the interest expenses are calculated based on the nominal interest rate and there is no change in aggregate principal amounts of loans other than repayment at scheduled maturity.

- Thai Baht liabilities were equivalent to US Dollar at the closing rate at the date respective statement of financial position.

* Interest paid represents the interest payment due within year.

** Derivatives were presented at the net amount between cash inflow and cash outflow.

As at 31 December 2022, the Company has commitments from the guarantees of debentures and loans of its subsidiaries as disclosed in Note 35.3, the maturity date of obligations follows the maturity of loan agreements, debentures and loans of subsidiaries.

b) Financing arrangements

The Group manages its liquidity risks by preparing cash flow forecasts and adjusting financial forecasts on a regular basis, entering into financing program, issuing short-term debt securities in order to access Thailand's capital market, as well as entering into credit facilities with financial institutions with the interest rate agreed in advance.

As at 31 December 2022 and 2021, the outstanding principal amount and undrawn facilities are summarised below.

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	Undrawn		Undrawn	
	Credit limit	amount	Credit limit	amount
2022				
Committed credit facility	574	574	19,825	19,825
Uncommitted credit facility	281	281	9,708	9,708
	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	Undrawn		Undrawn	
	Credit limit	amount	Credit limit	amount
2021				
Committed credit facility	580	580	19,368	19,368
Uncommitted credit facility	374	374	12,504	12,504

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	Undrawn		Undrawn	
	Credit limit	amount	Credit limit	amount
2022				
Committed credit facility	174	174	6,000	6,000
Uncommitted credit facility	266	266	9,190	9,190

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	Undrawn		Undrawn	
	Credit limit	amount	Credit limit	amount
2021				
Committed credit facility	180	180	6,000	6,000
Uncommitted credit facility	373	373	12,451	12,451

Thai Baht credit facility is translated to US Dollar using the closing rate at the date respective statement of financial position.

The Company's International Credit Rating is comparable with the Sovereign Rating of Thailand and the National Credit Rating is at the AAA. As a result, the Company can access to the source of fund for the long-term loan at the interest rate approximate the market interest rate. For the years 2022 and 2021, the Company's credit ratings as assigned by prominent credit rating agencies are as follows:

	2022		2021	
	Foreign Currency	Domestic Currency	Foreign Currency	Domestic Currency
Rating Agency				
Moody's	Baa1	Baa1	Baa1	Baa1
Standard and Poor's	BBB+	BBB+	BBB+	BBB+
Fitch Ratings	BBB+	-	BBB+	-
TRIS Rating (National Rating)	-	AAA	-	AAA

5.2 Capital management

5.2.1 Risk management

Capital Risk Management

The Group manages capital to keep financial strength comparable with the leading companies in the same industry, alignment with the business strategy, economy, market positioning and finance cost as well as impact to the financial ratio and credit rating of the Company and providing the ultimate returns to shareholders and benefits to other stakeholders.

6 Derivatives and hedge accounting

Book value of derivatives as at 31 December 2022 and 2021 are disclosed in Note 9.

6.1 Classification of derivative financial instruments

Derivatives are only used for economic hedging purposes, not for speculative investments. The Group adopts hedge accounting for some derivatives which meet the condition of cash flow hedges instruments and determines the hedge ratio at 1:1 considering the relationship of the relevant transactions and risk factors between hedged items and hedging instruments. However, where derivatives do not meet the hedge accounting criteria, they are classified as 'held for trading' for accounting purposes and are accounted for at fair value through profit or loss.

The fair value of a hedging derivative is presented as current or non-current following the maturity of related hedged items.

6.2 Hedge effectiveness

Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic effectiveness assessments, to ensure that an economic relationship exists between the hedged items and hedging instruments.

Foreign exchange risk

For cross currency and interest rate swap, the Group enters into hedging transaction where the critical terms of the hedging instrument match exactly with the terms of the hedged item. The Group therefore performs a qualitative assessment of effectiveness. If changes in circumstances affect the terms of the hedged item such that the critical terms no longer match exactly with the critical terms of the hedging instrument, the Group uses the hypothetical derivative method to assess effectiveness.

In hedging of foreign currency on cross currency and interest rate swap, ineffectiveness may arise if there are changes in the credit risk of the derivative counterparty, a reduction in value of the hedged items, or a significant change in components of cross currency and interest rate swap.

Interest rate risk

The Group enters into interest rate collar (zero cost collar) that have similar critical terms as the hedged item, such as reference rate, payment dates, maturities and notional amount. The Group does not hedge 100% of its loans, therefore the hedged item is identified as a proportion of the outstanding loans up to the notional amount of the interest rate collar (zero cost collar). Because, all critical terms of the hedging instruments and hedged items are matched, it considered as hedging of economic relationship.

Hedge ineffectiveness for interest rate collar (zero cost collar) is assessed using the same principles as for hedges of cross currency and interest rate swap. It may occur due to changes in the credit risk of the derivative counterparty and changes in critical terms between the interest rate collar (zero cost collar) and loans and potentiality effects of the uncertainty caused by Interest rate benchmark (IBOR) reform.

However, during the year 2022, the Group cancelled the interest rate collar (zero cost collar) due to the repayment of the hedged loan in full.

6.3 Cash flow hedge reserve

Hedging reserve includes costs of hedging and cash flow hedge reserve. The cash flow hedge reserve is used to recognise the effective portion of gains or losses on changes in fair value of derivatives that are qualified for hedge accounting.

The Group has hedging reserve presented in other comprehensive income comprising financial instruments as follows:

	Consolidated financial statements							
	Unit: Million US Dollar				Unit: Million Baht			
	Cost of hedging reserve	Spot component of currency forwards	Intrinsic value of option	Total	Cost of hedging reserve	Spot component of currency forwards	Intrinsic value of option	Total
As at 1 January 2022	10	(13)	2	(1)	425	(354)	38	109
Changes in fair value of hedging instruments recognised in OCI	-	51	(2)	49	-	1,846	(49)	1,797
Costs of hedging deferred and recognised in OCI	18	-	-	18	645	-	-	645
Reclassified from OCI to profit or loss								
- Loss on foreign exchange rate	-	(4)	-	(4)	-	(160)	-	(160)
Deferred tax	(3)	(10)	-	(13)	(129)	(338)	11	(456)
As at 31 December 2022	25	24	-	49	941	994	-	1,935

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	Consolidated financial statements							
	Unit: Million US Dollar				Unit: Million Baht			
	Cost of hedging reserve	Spot component of currency forwards	Intrinsic value of option	Total	Cost of hedging reserve	Spot component of currency forwards	Intrinsic value of option	Total
As at 1 January 2021	8	(9)	-	(1)	340	(245)	-	95
Changes in fair value of hedging instruments recognised in OCI	-	(94)	2	(92)	-	(2,874)	47	(2,827)
Costs of hedging deferred and recognised in OCI	3	-	-	3	106	-	-	106
Reclassified from OCI to profit or loss								
- Gain on foreign exchange rate	-	89	-	89	-	2,738	-	2,738
Deferred tax	(1)	1	-	-	(21)	27	(9)	(3)
As at 31 December 2021	10	(13)	2	(1)	425	(354)	38	109

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	Separate financial statements					
	Unit: Million US Dollar			Unit: Million Baht		
	Cost of hedging reserve	Spot component of currency forwards	Total	Cost of hedging reserve	Spot component of currency forwards	Total
As at 1 January 2022	11	(11)	-	378	(353)	25
Changes in fair value of hedging instruments recognised in OCI	-	24	24	-	838	838
Costs of hedging deferred and recognised in OCI	3	-	3	101	-	101
Reclassified from OCI to profit or loss						
- Gain on foreign exchange rate	-	17	17	-	618	618
Deferred tax	(1)	(8)	(9)	(20)	(292)	(312)
As at 31 December 2022	13	22	35	459	811	1,270

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	Separate financial statements					
	Unit: Million US Dollar			Unit: Million Baht		
	Cost of hedging reserve	Spot component of currency forwards	Total	Cost of hedging reserve	Spot component of currency forwards	Total
As at 1 January 2021	8	(6)	2	270	(165)	105
Changes in fair value of hedging instruments recognised in OCI	-	(46)	(46)	-	(1,509)	(1,509)
Costs of hedging deferred and recognised in OCI	4	-	4	135	-	135
Reclassified from OCI to profit or loss						
- Gain on foreign exchange rate	-	39	39	-	1,274	1,274
Deferred tax	(1)	2	1	(27)	47	20
As at 31 December 2021	11	(11)	-	378	(353)	25

6.4 Amounts recognised in profit or loss

In addition to the amounts reclassified from hedge reserve as disclosed in Note 6.3, the following amounts recognised in profit or loss relating to derivatives:

	Consolidated financial statements	
	Unit: Million US Dollar	
For the year ended 31 December	2022	2021

Net loss on derivatives that do not qualify for hedge accounting, presented in loss on revaluation of financial instruments	(125)	(241)
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	Consolidated financial statements	
	Unit: Million Baht	
For the year ended 31 December	2022	2021

Net loss on derivatives that do not qualify for hedge accounting, presented in loss on revaluation of financial instruments	(3,817)	(7,471)
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	Separate financial statements	
	Unit: Million US Dollar	
For the year ended 31 December	2022	2021

Net gain on derivatives that do not qualify for hedge accounting, presented in gain on revaluation of financial instruments	1	28
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	Separate financial statements	
	Unit: Million Baht	
For the year ended 31 December	2022	2021

Net gain on derivatives that do not qualify for hedge accounting, presented in gain on revaluation of financial instruments	26	907
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7 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

7.1 Impairment of assets and goodwill

In assessing the impairment of assets and goodwill the Group estimates using the discounted future cash flows which are based on management's key assumptions in relation to selling price using the future oil price, estimated future production volume based on a proved and probable reserves and gross margin rate. These assumptions are based on management's judgment and past experience as well as the future prediction that is believed to be reasonable in the present situation. Changes in the information or new noticeable information may lead to the change in the assumptions and the discount rate for the estimation of the discounted future cash flows. The assumption of selling price is determined from the short-term oil price based on forward oil price curve and long-term oil price based on demand and supply of oil in the world market.

7.2 Estimation related to the fair values of gross assets used in a concentration test

In assessing the fair value of property, plant and equipment and exploration and evaluation assets used in concentration test on acquisition date, the Group estimates using the discounted future cash flows applying uncertain estimated information including management's key assumptions which mainly comprise discount rate, selling price using the future oil price, estimated future production volume and estimated expenditure.

7.3 Estimation of petroleum reserves

Petroleum reserves are key elements in the Group's investment decision-making process. They are also important elements in testing for impairment. Changes in proved reserves will also affect the present value of the net cash flows and depreciation calculated using the unit-of-production method.

Proved reserves are the quantities of petroleum that are demonstrated with reasonable certainty to be commercially producible in future years from known reservoirs under existing economic and operating conditions including government rules and regulations. The proved reserves have to be examined and assessed annually by the Group's geologists and reservoir engineers.

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8 Segment and revenue information

	Consolidated financial statements									
	Unit: Million US Dollar									
	Exploration and production							Others	Intercompany elimination	Total
	Southeast Asia	Other								
For the year ended 31 December 2022	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others			
Revenues - Third parties	283	1,542	429	-	-	-	50	70	-	2,374
- Related parties	5,369	1,060	811	-	-	160	-	-	(353)	7,047
Other income	110	2	72	-	-	14	-	134	(180)	152
Interest income	-	3	1	-	-	10	-	-	-	14
Total revenues	5,762	2,607	1,313	-	-	184	50	204	(533)	9,587
Operating expenses	674	672	86	-	-	17	13	67	(419)	1,110
Exploration expenses	4	4	28	31	5	-	-	-	-	72
Administrative expenses	63	96	12	132	5	10	2	104	(114)	310
Petroleum royalties	596	78	-	-	-	14	-	-	-	688
Depreciation, depletion and amortisation	1,399	608	261	-	-	36	15	9	(4)	2,324
Loss on foreign exchange rates	54	10	-	2	5	-	-	-	-	71
Finance costs	65	23	5	-	-	2	-	-	-	95
Share of profit of associates and joint ventures	-	-	(19)	(1)	-	-	-	-	-	(20)
Impairment loss on assets and goodwill	-	-	-	-	95	205	-	-	-	300
Total expenses	2,855	1,491	373	164	110	284	30	180	(537)	4,950
Segment profit (loss)	2,907	1,116	940	(164)	(110)	(100)	20	24	4	4,637
Depreciation - general										(39)
Administrative expenses										(268)
Operating profit										4,330
Other income, net										43
Interest income										30
Finance costs										(139)
Loss on foreign exchange rates										(20)
Loss on remeasuring financial instruments										(184)
Profit before income taxes										4,060
Income tax - Project	(1,064)	(333)	(648)	-	-	(67)	(8)	(13)		(2,133)
- Group										72
Profit (loss) for the year	1,843	783	292	(164)	(110)	(167)	12	11		1,999

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	Consolidated financial statements									
	Unit: Million Baht									
	Exploration and production							Others	Intercompany elimination	Total
	Southeast Asia	Other								
For the year ended 31 December 2022	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others			
Revenues - Third parties	9,964	54,187	15,108	-	-	-	1,745	2,465	-	83,469
- Related parties	188,739	37,368	28,470	-	-	5,742	-	-	(12,438)	247,881
Other income	3,918	85	2,639	4	-	509	-	4,693	(6,363)	5,485
Interest income	11	125	21	-	-	327	4	9	-	497
Total revenues	202,632	91,765	46,238	4	-	6,578	1,749	7,167	(18,801)	337,332
Operating expenses	23,787	23,630	3,035	-	-	609	449	2,367	(14,785)	39,092
Exploration expenses	152	130	976	1,105	181	7	-	-	-	2,551
Administrative expenses	2,203	3,345	433	4,817	172	366	73	3,647	(4,015)	11,041
Petroleum royalties	20,891	2,750	-	-	-	497	-	-	-	24,138
Depreciation, depletion and amortisation	49,332	21,353	9,138	6	-	1,271	521	302	(130)	81,793
Loss (gain) on foreign exchange rates	1,933	380	-	54	161	(12)	5	9	-	2,530
Finance costs	2,291	820	170	-	-	55	4	7	(4)	3,343
Share of (profit) loss of associates and joint ventures	-	-	(657)	(23)	-	-	-	12	-	(668)
Impairment loss on assets and goodwill	-	-	-	-	3,517	7,136	-	-	-	10,653
Total expenses	100,589	52,408	13,095	5,959	4,031	9,929	1,052	6,344	(18,934)	174,473
Segment profit (loss)	102,043	39,357	33,143	(5,955)	(4,031)	(3,351)	697	823	133	162,859
Depreciation - general										(1,375)
Administrative expenses										(9,345)
Operating profit										152,139
Other income, net										1,500
Interest income										1,069
Finance costs										(4,875)
Loss on foreign exchange rates										(748)
Loss on remeasuring financial instruments										(5,889)
Profit before income taxes										143,196
Income tax - Project	(37,320)	(11,654)	(22,793)	-	-	(2,346)	(295)	(464)		(74,872)
- Group										2,577
Profit (loss) for the year	64,723	27,703	10,350	(5,955)	(4,031)	(5,697)	402	359		70,901

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	Consolidated financial statements								
	Unit: Million US Dollar								
	Exploration and production							Others	Total
	Southeast Asia								
		Other							
As at 31 December 2022	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others		
Segment assets	7,294	6,127	3,229	272	72	4,001	222	144	21,361
Investments under equity method	-	-	33	-	-	-	-	245	278
Unallocated assets									3,529
Total assets									25,168
Segment liabilities	5,250	1,875	589	132	2	643	64	54	8,609
Unallocated liabilities									3,044
Total liabilities									11,653
Capital expenditures	2,814	543	182	-	1	156	11	88	3,795

	Consolidated financial statements								
	Unit: Million Baht								
	Exploration and production							Others	Total
	Southeast Asia								
		Other							
As at 31 December 2022	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others		
Segment assets	252,107	211,768	111,587	9,393	2,498	138,300	7,660	4,968	738,281
Investments under equity method	-	-	1,149	-	-	-	-	8,445	9,594
Unallocated assets									121,989
Total assets									869,864
Segment liabilities	181,473	64,796	20,350	4,551	66	22,211	2,234	1,863	297,544
Unallocated liabilities									105,200
Total liabilities									402,744
Capital expenditures	98,453	18,984	6,347	-	51	5,452	372	3,092	132,751

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For the year ended 31 December 2022

	Consolidated financial statements									
	Unit: Million US Dollar									
	Exploration and production							Others	Intercompany elimination	Total
	Southeast Asia									
	Thailand	Other Southeast Asia	Middle East	Australia	America	Africa	Others			
For the year ended 31 December 2021										
Revenues - Third parties	231	926	702	-	2	-	47	63	-	1,971
- Related parties	4,074	844	127	-	-	58	-	-	(250)	4,853
Other income	35	81	-	-	-	-	-	119	(119)	116
Gain from a bargain purchase	-	-	342	-	-	-	-	-	-	342
Interest income	-	1	-	-	-	9	-	-	-	10
Total revenues	4,340	1,852	1,171	-	2	67	47	182	(369)	7,292
Operating expenses	454	512	84	-	1	13	13	53	(269)	861
Exploration expenses	-	59	9	(11)	168	1	-	-	-	226
Administrative expenses	43	58	13	2	7	16	-	91	(101)	129
Petroleum royalties	501	29	-	-	-	-	-	-	-	530
Depreciation, depletion and amortisation	1,339	550	237	-	-	23	15	9	(4)	2,169
Loss on foreign exchange rates	38	14	-	-	1	-	-	-	-	53
Finance costs	54	26	4	-	-	1	-	-	-	85
Share of (profit) loss of associates and joint ventures	-	-	(1)	4	-	-	-	(18)	-	(15)
Impairment loss on assets and goodwill	-	20	-	-	-	163	-	-	-	183
Total expenses	2,429	1,268	346	(5)	177	217	28	135	(374)	4,221
Segment profit (loss)	1,911	584	825	5	(175)	(150)	19	47	5	3,071
Depreciation - general										(33)
Administrative expenses										(226)
Operating profit										2,812
Other income, net										15
Interest income										7
Finance costs										(117)
Gain on foreign exchange rates										15
Loss on remeasuring financial instruments										(234)
Profit before income taxes										2,498
Income tax - Project	(691)	(228)	(399)	-	-	3	(6)	(10)		(1,331)
- Group										44
Profit (loss) for the year	1,220	356	426	5	(175)	(147)	13	37		1,211

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	Consolidated financial statements									
	Unit: Million Baht									
	Exploration and production							Others	Intercompany elimination	Total
	Southeast Asia	Other								
For the year ended 31 December 2021	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others			
Revenues - Third parties	7,393	29,893	22,661	-	68	-	1,522	2,027	-	63,564
- Related parties	130,461	26,992	4,217	-	-	1,848	-	-	(8,014)	155,504
Other income	1,103	2,704	8	2	2	-	-	3,815	(3,797)	3,837
Gain from a bargain purchase	-	-	10,694	-	-	-	-	-	-	10,694
Interest income	2	30	1	-	1	290	-	-	-	324
Total revenues	138,959	59,619	37,581	2	71	2,138	1,522	5,842	(11,811)	233,923
Operating expenses	14,600	16,459	2,698	-	33	402	407	1,728	(8,603)	27,724
Exploration expenses	4	1,930	276	(366)	5,222	44	-	-	-	7,110
Administrative expenses	1,380	1,865	496	41	234	531	6	2,858	(3,245)	4,166
Petroleum royalties	16,052	938	-	-	5	-	-	-	-	16,995
Depreciation, depletion and amortisation	42,617	17,604	7,614	2	4	727	484	285	(115)	69,222
Loss (gain) on foreign exchange rates	1,242	446	-	5	9	(3)	-	5	-	1,704
Finance costs	1,736	802	132	-	1	35	6	2	(10)	2,704
Share of (profit) loss of associates and joint ventures	-	-	(25)	142	-	-	-	(606)	-	(489)
Impairment loss on assets and goodwill	-	671	-	-	-	5,471	-	-	-	6,142
Total expenses	77,631	40,715	11,191	(176)	5,508	7,207	903	4,272	(11,973)	135,278
Segment profit (loss)	61,328	18,904	26,390	178	(5,437)	(5,069)	619	1,570	162	98,645
Depreciation - general										(1,072)
Administrative expenses										(7,250)
Operating profit										90,323
Other income, net										501
Interest income										208
Finance costs										(3,768)
Gain on foreign exchange rates										391
Loss on remeasuring financial instruments										(7,263)
Profit before income taxes										80,392
Income tax - Project	(22,204)	(7,324)	(13,012)	-	(5)	95	(191)	(317)		(42,958)
- Group										1,430
Profit (loss) for the year	39,124	11,580	13,378	178	(5,442)	(4,974)	428	1,253		38,864

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	Consolidated financial statements								
	Unit: Million US Dollar								
	Exploration and production							Others	Total
	Southeast Asia								
		Other							
As at 31 December 2021	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others		
Segment assets	5,859	6,180	3,477	305	166	4,061	227	111	20,386
Investments under equity method	-	-	48	-	-	-	-	383	431
Unallocated assets									2,628
Total assets									23,445
Segment liabilities	4,039	1,826	641	2	7	620	72	48	7,255
Unallocated liabilities									3,762
Total liabilities									11,017
Capital expenditures	1,149	542	2,658	-	34	355	4	80	4,822

	Consolidated financial statements								
	Unit: Million Baht								
	Exploration and production							Others	Total
	Southeast Asia								
		Other							
As at 31 December 2021	Thailand	Southeast Asia	Middle East	Australia	America	Africa	Others		
Segment assets	195,806	206,531	116,192	10,186	5,562	135,702	7,578	3,726	681,283
Investments under equity method	-	-	1,590	-	-	-	-	12,818	14,408
Unallocated assets									87,845
Total assets									783,536
Segment liabilities	135,001	61,010	21,416	64	228	20,734	2,408	1,594	242,455
Unallocated liabilities									125,731
Total liabilities									368,186
Capital expenditures	36,688	17,290	82,415	-	1,098	11,340	142	2,547	151,520

The Group is organised into the following business segments:

- Exploration and production: The Group operates in oil and gas exploration and production both domestically and overseas including gas transportation pipeline in overseas, either as an operator or as a joint venture partner with international oil and gas companies. Most domestic projects are located in the Gulf of Thailand. Overseas projects are located in Southeast Asia, Middle East, Australia, America, Africa and others.
- The Group's other operations consist mainly of investments in related business associated with the Group's strategy, and other operations. These do not constitute a separately reportable segment.

For the year ended 31 December 2022 and 2021, the Group has one major customer from revenues under the exploration and production segment, representing 70% of total revenues from sales. The mentioned revenue is presented in Note 15 (a) under the topic transactions with parent company.

9 Fair value

9.1 Fair value estimation

The following tables present financial assets and liabilities recognised by their fair value hierarchy.

Consolidated financial statements							
Unit: Million US Dollar							
Level 1		Level 2		Level 3		Total	
31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Assets							
Financial derivatives assets							
Derivatives assets used for hedging							
- Cross currency and interest rate swap	-	-	27	-	-	-	27
- Interest rate collar (zero cost collar)	-	-	-	1	-	-	1
Derivatives assets measured at fair value through profit or loss							
- Oil price hedge	-	-	14	9	-	-	14
- Forward foreign exchange contracts	-	-	2	7	-	-	2
Other financial assets							
Financial assets measured at fair value through profit or loss							
- Investment in debt instruments	1	-	-	-	-	-	1
Financial assets measured at fair value through other comprehensive income							
- Investment in equity instruments	1	1	-	-	-	-	1
Other non-current assets							
Assets measured at fair value through profit or loss							
- Pension scheme investments from joint operation	74	61	-	-	-	-	74
Total assets	76	62	43	17	-	-	119

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Consolidated financial statements							
Unit: Million US Dollar							
Level 1		Level 2		Level 3		Total	
31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Liabilities							
Financial derivatives liabilities							
Derivatives liabilities used for hedging							
- Cross currency and interest rate swap	-	-	-	41	-	-	41
Derivatives liabilities measured at fair value through profit or loss							
- Oil price hedge	-	-	-	15	-	-	15
- Forward foreign exchange contracts	-	-	53	2	-	-	2
Other current liabilities							
Financial liabilities measured at fair value through profit or loss							
- Contingent considerations from business acquisition	-	-	-	-	-	1	1
Other non-current liabilities							
Financial liabilities measured at fair value through profit or loss							
- Contingent considerations from business acquisition	-	-	-	-	1	71	1
Total liabilities	-	-	53	58	1	72	130

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	Consolidated financial statements							
	Unit: Million Baht							
	Level 1		Level 2		Level 3		Total	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Assets								
Financial derivatives assets								
Derivatives assets used for hedging								
- Cross currency and interest rate swap	-	-	917	-	-	-	917	-
- Interest rate collar (zero cost collar)	-	-	-	28	-	-	-	28
Derivatives assets measured at fair value through profit or loss								
- Oil price hedge	-	-	508	304	-	-	508	304
- Forward foreign exchange contracts	-	-	53	245	-	-	53	245
Other financial assets								
Financial assets measured at fair value through profit or loss								
- Investment in debt instruments	29	6	-	-	-	-	29	6
Financial assets measured at fair value through other comprehensive income								
- Investment in equity instruments	26	21	-	-	1	1	27	22
Other non-current assets								
Assets measured at fair value through profit or loss								
- Pension scheme investments from joint operation	2,559	2,048	-	-	-	-	2,559	2,048
Total assets	2,614	2,075	1,478	577	1	1	4,093	2,653

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Consolidated financial statements							
Unit: Million Baht							
Level 1		Level 2		Level 3		Total	
31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Liabilities							
Financial derivatives liabilities							
Derivatives liabilities used for hedging							
- Cross currency and interest rate swap	-	-	-	1,379	-	-	1,379
Derivatives liabilities measured at fair value through profit or loss							
- Oil price hedge	-	-	-	493	-	-	493
- Forward foreign exchange contracts	-	-	1,833	54	-	-	1,833
Other current liabilities							
Financial liabilities measured at fair value through profit or loss							
- Contingent considerations from business acquisition	-	-	-	-	25	32	25
Other non-current liabilities							
Financial liabilities measured at fair value through profit or loss							
- Contingent considerations from business acquisition	-	-	-	-	25	2,380	25
Total liabilities	-	-	1,833	1,926	50	2,412	1,883

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	Separate financial statements							
	Unit: Million US Dollar							
	Level 1		Level 2		Level 3		Total	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Assets								
Financial derivatives assets								
Derivatives assets used for hedging								
- Cross currency and interest rate swap	-	-	18	-	-	-	18	-
Derivatives assets measured at fair value through profit or loss								
- Forward foreign exchange contracts	-	-	-	6	-	-	-	6
Total assets	-	-	18	6	-	-	18	6
Liabilities								
Financial derivatives liabilities								
Derivatives liabilities used for hedging								
- Cross currency and interest rate swap	-	-	-	8	-	-	-	8
Derivatives liabilities measured at fair value through profit or loss								
- Forward foreign exchange contracts	-	-	44	1	-	-	44	1
Total liabilities	-	-	44	9	-	-	44	9

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Separate financial statements							
Unit: Million Baht							
Level 1		Level 2		Level 3		Total	
31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Assets							
Financial derivatives assets							
Derivatives assets used for hedging							
- Cross currency and interest rate swap	-	-	613	-	-	-	613
Derivatives assets measured at fair value through profit or loss							
- Forward foreign exchange contracts	-	-	-	211	-	-	211
Other financial assets							
Financial assets measured at fair value through profit or loss							
- Investment in debt instruments	6	6	-	-	-	-	6
Financial assets measured at fair value through other comprehensive income							
- Investment in equity instruments	-	-	-	-	1	1	1
Total assets	6	6	613	211	1	1	620

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Separate financial statements							
Unit: Million Baht							
Level 1		Level 2		Level 3		Total	
31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Liabilities							
Financial derivatives liabilities							
Derivatives liabilities used for hedging							
- Cross currency and interest rate swap	-	-	281	-	-	-	281
Derivatives liabilities measured at fair value through profit or loss							
- Forward foreign exchange contracts	-	1,523	43	-	-	1,523	43
Total liabilities	-	1,523	324	-	-	1,523	324

The valuation of financial assets and financial liabilities fair value is based on accounting policy disclosed in Note 4.8 Financial assets and Note 4.19 Financial liabilities

Transfer between fair value hierarchy

The Group has no transaction transfer between Level 1, Level 2, and Level 3 of the fair value hierarchy during the year.

9.2 Fair value valuation techniques

Fair values are categorised into hierarchy based on inputs used as follows:

9.2.1 Valuation techniques used to derive level 1 fair values

The fair value of financial instruments is based on quoted prices of each asset or liability by reference of active markets.

9.2.2 Valuation techniques used to derive level 2 fair values

The fair value of financial instruments is determined using valuation techniques which significantly use observable data and, as little as possible, the Group specific estimates.

Valuation techniques used to derive level 2 fair values of financial derivative instruments are as follows:

- Oil price hedge comprises oil price swaps and options. The fair value of oil price swaps is assessed based on the price level calculated using the market price of future contracts. The fair value of oil price options is calculated using premium which requires various variable factors, such as the price level of swap, timing of exercise, and price volatility.
- The fair value of forward contracts, including forward foreign exchange contracts with resettable option, are calculated using forward foreign exchange rates that are quoted in an active market for the forward contract portion. The fair value of resettable option is assessed based on various variable factors, such as future forward foreign exchange rate, the market value of swap price, timing of exercise, and foreign exchange rate volatility.

- The fair value of cross currency and interest rate swaps including Memorandum of Understanding on Cross Currency Swap (MOU) in relation to interest rate adjustment with the financial institution, is calculated using forward interest rates derived from the yield curves in an observable interest market and forward foreign exchange rates that are quoted in an active market including assessing the possibilities of interest rate adjustment according to MOU.
- The fair value of interest rate collar which is zero cost collar (option) is assessed based on various variable factors, such as the market price level of swap, reference rate, timing of exercise, and price volatility.

9.2.3 Valuation techniques used to derive level 3 fair values

The fair value of financial instruments is measured using unobservable inputs in which the Group uses discounted cash flows method to derive level 3 fair value.

Changes in level 3 fair value of financial instruments for the year ended as at 31 December 2022 and 2021 are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar			
	Contingent considerations from business acquisition	Contingent from participating interest acquisition in joint venture	Financial assets measured at fair value through comprehensive income	Total
Opening balance as at 1 January 2021	6	53	-	59
Business acquisition	69	-	-	69
Decrease	(4)	(54)	-	(58)
Changes recognised in profit or loss	1	1	-	2
Closing balance as at 31 December 2021	72	-	-	72
Increase	-	-	-	-
Changes recognised in profit or loss	(71)	-	-	(71)
Closing balance as at 31 December 2022	1	-	-	1

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	Consolidated financial statements			
	Unit: Million Baht			
	Contingent considerations from business acquisition	Contingent considerations from participating interest acquisition in joint venture	Financial assets measured at fair value through comprehensive income	Total
Opening balance as at 1 January 2021	169	1,601	1	1,771
Business acquisition	2,132	-	-	2,132
Decrease	(108)	(1,745)	-	(1,853)
Changes recognised in profit or loss	33	43	-	76
Currency translation differences	186	101	-	287
Closing balance as at 31 December 2021	2,412	-	1	2,413
Increase	3	-	-	3
Changes recognised in profit or loss	(2,478)	-	-	(2,478)
Currency translation differences	113	-	-	113
Closing balance as at 31 December 2022	50	-	1	51

During 2022, the contingent consideration in a business acquisition of Block 61 Sultanate of Oman (Oman Block 61) was changed due to possibilities in relation to conditions as specified in sale and purchase agreement (SPA). The Group recognised such changes in contingent consideration in the consolidated statement of income.

	Separate financial statements
	Unit: Million US Dollar
	Financial assets measured at fair value through other comprehensive income
Opening balance as at 1 January 2021	-
Changes recognised in other comprehensive income	-
Closing balance as at 31 December 2021	-
Changes recognised in other comprehensive income	-
Closing balance as at 31 December 2022	-
	Separate financial statements
	Unit: Million Baht
	Financial assets measured at fair value through other comprehensive income
Opening balance as at 1 January 2021	1
Changes recognised in other comprehensive income	-
Closing balance as at 31 December 2021	1
Changes recognised in other comprehensive income	-
Closing balance as at 31 December 2022	1

The following table summarises the quantitative information about the significant unobservable inputs used in level 3 fair value measurements.

	Fair value				Unobservable inputs	Inputs	
	Unit: Million US Dollar		Unit: Million Baht			2022	2021
	2022	2021	2022	2021			
Contingent consideration							
in a business combination	1	72	50	2,412	Risk-adjusted discount rate	2.71% - 2.84%	1.79% - 2.84%

The following table presents the relationship of unobservable inputs to fair value:

	Unobservable input	Movement	Change in fair value	
			Increase in assumption	Decrease in assumption
			2022	2022
Contingent consideration in a business combination	Risk-adjusted discount rate	1.00%	Decrease by 0.64%	Increase by 0.66%

The Group's valuation processes

Significant unobservable input of fair value hierarchy level 3 is risk adjusted discount rate. It is estimated based on the Group's cost of debt and assumptions relating to possibilities in accordance to conditions as specified in sale and purchase agreement (SPA).

The fair value of investments in unquoted equity, classified as financial assets and measured at fair value through comprehensive income, were assessed based on business plan and market conditions. Management considers that the book value of the financial assets approximates their fair value.

The following figures presented fair value and book value of assets and financial liabilities for each category, but not include transaction which has a book value similar to fair value.

The details of fair values of long-term loans and long-term liabilities as at 31 December 2022 and 2021 calculated by using the discounted cash flow based on a discount rate of borrowing with similar terms are as follows:

Consolidated financial statements				
Unit: Million US Dollar				
	Book value		Fair value	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Unsecured and unsubordinated				
debentures	2,809	2,925	2,567	3,278

Consolidated financial statements				
Unit: Million Baht				
	Book value		Fair value	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Unsecured and unsubordinated				
debentures	97,095	97,738	88,723	109,542

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	Separate financial statements			
	Unit: Million US Dollar			
	Book value		Fair value	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Long-term loans to related parties	6,983	6,441	7,479	7,035
Unsecured and unsubordinated debentures	503	520	537	574

	Separate financial statements			
	Unit: Million Baht			
	Book value		Fair value	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Long-term loans to related parties	241,343	215,252	258,501	235,123
Unsecured and unsubordinated debentures	17,387	17,384	18,570	19,176

Book value of long-term loans to related parties and unsecured and unsubordinated debentures is measured at amortised cost.

The fair value of debentures in Thai Baht is calculated using the reference price in the secondary market of Thai Bond Market Association that are quoted in an active market and classified as level 2 fair value.

The fair value of debentures in US Dollar is calculated using the reference observable price in the secondary market of foreign bond that are quoted in an active market and classified as level 2 fair value.

The fair value of long-term loans to related parties is calculated by the discounted cash flow method using the reference discount rate in the market and classified as level 3 fair value.

The fair value of the following financial assets and liabilities approximates their book value.

The book value of long-term loans approximates their fair value, since their interest rates are close to market rate.

Consolidated financial statements	Separate financial statements
Financial assets	Financial assets
<ul style="list-style-type: none"> • Cash and cash equivalents • Trade and other receivables • Other current assets • Long-term loans to related parties • Other non-current financial assets • Other non-current assets 	<ul style="list-style-type: none"> • Cash and cash equivalents • Trade and other receivables • Short-term loans to related parties • Other current assets • Other non-current assets
Financial liabilities	Financial liabilities
<ul style="list-style-type: none"> • Trade and other payables • Lease liabilities • Other current liabilities • Long-term loans 	<ul style="list-style-type: none"> • Trade and other payables • Short-term loans from related parties • Lease liabilities • Other current liabilities

Book value of the above financial assets and liabilities is measured at amortised cost.

10 Cash and cash equivalents

Cash and cash equivalents comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Cash and bank deposits	2,069	1,756	71,503	58,681
Cash equivalents				
Fixed deposits with banks	1,114	803	38,501	26,841
Money market funds	356	-	12,320	6
Total cash and cash equivalents	3,539	2,559	122,324	85,528

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Cash and bank deposits	253	298	8,749	9,968
Cash equivalents				
Fixed deposits with banks	581	490	20,056	16,376
Money market funds	356	-	12,320	6
Total cash and cash equivalents	1,190	788	41,125	26,350

11 Trade and other receivables

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Trade receivables, net (Note 15)	996	796	34,439	26,613
Other receivables, net	224	204	7,727	6,817
Total trade and other receivables, net	1,220	1,000	42,166	33,430

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Trade receivables, net (Note 15)	409	311	14,141	10,377
Other receivables, net	402	301	13,889	10,066
Total trade and other receivables, net	811	612	28,030	20,443

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Aging of trade receivables can be analysed as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Not yet due	964	769	33,325	25,726
Over due				
- Up to 3 months	6	-	221	-
- Over 3 months but not over 6 months	-	-	-	-
- Over 6 months but not over 12 months	1	-	26	-
- Over 12 months	25	28	867	920
	996	797	34,439	26,646
<u>Less</u> Loss allowance from impairment	-	(1)	-	(33)
Total	996	796	34,439	26,613
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Not yet due	384	284	13,275	9,492
Over due				
- Up to 3 months	-	-	-	-
- Over 3 months but not over 6 months	-	-	-	-
- Over 6 months but not over 12 months	-	-	-	-
- Over 12 months	25	28	866	918
	409	312	14,141	10,410
<u>Less</u> Loss allowance from impairment	-	(1)	-	(33)
Total	409	311	14,141	10,377

Due to the short-term nature of the current receivables, their carrying amount is considered to be the same as their fair values.

12 Other current financial assets

Other current financial assets comprised investments in fixed income fund. The movements of other current financial assets for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening book value	-	-	-	-
Increase	226	368	7,915	11,771
Decrease	(223)	(367)	(7,826)	(11,724)
Foreign exchange differences	(2)	(1)	(66)	(47)
Closing book value	1	-	23	-

Other current financial assets above is financial assets at fair value through profit or loss (FVPL). The Group's exposure on credit risk is related to investment in debt measured at FVPL. The ultimate risk at the end of reporting period is equivalent to the book value of the investment.

13 Inventories

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Inventory	40	36	1,368	1,217
Materials and supplies	537	426	18,569	14,237
	577	462	19,937	15,454
<u>Less</u> Allowance for slow moving and obsolete	(24)	(41)	(822)	(1,385)
Total	553	421	19,115	14,069

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Inventory	11	5	391	159
Materials and supplies	108	138	3,745	4,617
	119	143	4,136	4,776
<u>Less Allowance for slow moving and obsolete</u>	(11)	(23)	(414)	(762)
Total	108	120	3,722	4,014

14 Assets and liabilities held-for-sale

- On 31 August 2022, PTTEP Netherlands Holding Holding Coöperatie U.A. (PTTEP NH) and PTTEP Brazil Investment B.V. (PTTEP BI), subsidiaries of the Group, signed a sale and purchase agreement to sell all of the investment in PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL), a subsidiary of the Group, which registered in Federative Republic of Brazil, to Ubuntu Engenharia e Serviços Ltda. PTTEP BL has participating interests in Barreirinhas AP1 project at 25% and Brazil BM-ES-23 project at 20%. The sale and purchase shall be completed when the conditions specified in the sale and purchase agreement are met.

On 31 December 2022, the Group had classified such investment as assets and liabilities held-for-sale at the lower of the carrying amount and the fair value less costs to sell and recognised the impairment loss amounting to US Dollar 95.00 million (Baht 3,517.27 million) in 2022.

- On 16 December 2022, PTTEP (Angola) Corporation (PANG), a subsidiary of the Group, signed a sale and purchase agreement to sell all of the investment in Block 17/6 in Angola at 2.5% to SOMOIL BLOCO 17/06 (SU), S.A. The sale and purchase shall be completed when the conditions specified in the sale and purchase agreement are met, which is expected to be completed by the mid of 2023.

On 31 December 2022, the Group had classified such investment as assets and liabilities held-for-sale at the lower of the carrying amount and the fair value less costs to sell and recognised the impairment loss amounting to US Dollar 15.08 million (Baht 524.79 million) in 2022.

15 Significant transactions with related parties

Individuals or entities that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the Company, including holding companies, subsidiaries and fellow subsidiaries are related parties of the Company. Individuals and associates owning, directly or indirectly, an interest in the voting power of the Company that gives them significant influence over the enterprise, key management personnel, directors and close members of the family of these individuals and companies associated with these individuals also constitute related parties.

In considering each possible related party relationship, the Company's attention is directed to the substance of the relationship, and not merely the legal form.

PTT Public Company Limited, a company registered in Thailand, is the major shareholder of the Company and holds in proportion of 63.79% of the shareholding interest. The general public hold the remaining shares.

Other related parties include major shareholders, associates and joint ventures of the Company, which have control in other related parties.

The pricing policies for transactions between parent company, subsidiaries, associates, joint ventures, joint operations and related parties are as follows:

- Sales are set based on market price.
- Interest income is calculated using weighted average cost of debt plus profit markup.
- Other income is calculated based on rate in the agreement.
- Dividend income is approved by shareholders of subsidiaries, associates and joint ventures.
- The prices of purchases and services charged are in accordance with the conditions in the agreement.
- Rental expenses are set based on price in the agreement.
- Other expenses comprise management and service fees charged to the parent company, subsidiaries and related parties for rendering the management services in the normal course of business. The fees are based on the service costs plus profit markup and loss on oil price hedge is calculated based on rate in the agreement.

Significant transactions with related parties are summarised as follows:

a) Transactions with related parties

Transactions with related parties for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Parent company				
Revenue from sales	6,498	4,712	227,961	151,070
Other income	7	5	231	159
Purchase and other expenses	5	6	179	190
Subsidiaries, associates, joint ventures and joint operations				
Interest income	-	-	1	6
Other income	1	2	38	61
Dividend income	61	41	2,133	1,301
Rental and service expenses	59	49	2,058	1,552
Purchase and other expenses	-	-	2	-
Other related parties				
Revenue from sales	549	140	19,920	4,434
Interest income	-	1	13	31
Other income	2	1	72	18
Purchase and other expenses	100	82	3,513	2,632

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Parent company				
Revenue from sales	3,621	3,115	126,935	99,763
Other income	2	2	64	69
Purchase and other expenses	5	5	163	148
Subsidiaries, associates, joint ventures and joint operations				
Interest income	334	367	11,667	11,719
Other income	1	2	48	71
Dividend income	136	72	4,810	2,293
Rental and service expenses	38	47	1,317	1,496
Other related parties				
Revenue from sales	74	-	2,697	-
Other income	-	1	12	18
Purchase and other expenses	10	33	351	1,053

b) Account receivable - related parties

Account receivable - related parties comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Parent company	676	503	23,360	16,817

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Parent company	377	310	13,033	10,353

c) Short-term loans from a related party

Short-term loans from a related party comprised:

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Subsidiary	512	-	17,682	-

The Group has a loan from subsidiary and the interest rate for the year ended 31 December 2022 was 2.00 – 3.80 % per annum.

d) Short-term loans to related parties

Short-term loans to related parties comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Joint venture	1	-	46	-

The Group has provided loans to a joint venture and the interest rate for the year ended 31 December 2022 was 7% per annum.

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Subsidiary	-	527	-	17,622

The Company has provided loans to a subsidiary and the interest rate for the year ended 31 December 2021 was 0.05% per annum.

e) Long-term loans to related parties

Long-term loans to related parties comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Associate	-	-	15	-
Other related party	-	42	-	1,387
	-	42	15	1,387

The Company has provided loans to an associate and the interest rate for the year ended 31 December 2022 was 6.25% - 6.85% per annum

The Group has provided loans to another related party and the interest rate for the year ended 31 December 2021 was 1.96% - 2.06% per annum.

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Subsidiary	6,983	6,441	241,343	215,252

The Company has provided loans to a subsidiary and the interest rate for the year ended 31 December 2022 was 4.74% per annum (2021: interest rate was 5.48% per annum). The borrower shall make the repayment notice within this loan term which is over than 1 year.

The movements of the long-term loans to related parties for the year are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	Unit: Million US Dollar	Unit: Million Baht	Unit: Million US Dollar	Unit: Million Baht
Balance as at 1 January 2022	42	1,387	6,441	215,252
Increase	-	15	542	18,961
Decrease	(42)	(1,452)	-	-
Currency translation differences	-	65	-	7,130
Balance as at 31 December 2022	-	15	6,983	241,343

Loans to related parties

Loans to related parties measured at amortised cost are considered to have low credit risk, and the expected credit loss in the following 12 months and lifetime expected credit losses of the loans from increasing in credit risk is insignificant.

e) Director and executive management fees

Director and executive management fees for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Short-term benefits	7	7	244	233
Post-employment and other long-term benefits	-	-	8	12
	7	7	252	245
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Short-term benefits	7	7	244	232
Post-employment and other long-term benefits	-	-	8	12
	7	7	252	244

16 Investments in subsidiaries, associates, joint ventures and joint operations

The amounts of investments recognised in the statement of financial position are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Investments in associates	116	221	3,987	7,382
Investments in joint ventures	162	210	5,607	7,026
Total	278	431	9,594	14,408

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Investments in associates	3,198	2,485	110,539	83,041
Investments in joint ventures	26	26	884	855
Total	3,224	2,511	111,423	83,896

16.1 Significant events during the current year

On 3 December 2021, PTTEP MENA Limited (PTTEP MENA), a subsidiary of the Group, signed Farm-Out Agreement to acquire 25% stake in Sharjah Onshore Area C Project, the Emirate of Sharjah from Eni Sharjah B.V. The acquisition of the shareholding interest is an asset acquisition and was completed on 1 March 2022. The Group classified this investment as an investment in a joint operation.

On 21 January 2022, TotalEnergies EP Myanmar (TotalEnergies), an operator and joint partner of Yadana and Moattama Gas Transportation Company (MGTC) with participating interest of 31.2375%, notified its joint partners for its intention to withdraw, as both operator and joint partner, from the projects. On 14 March 2022, the project's joint partners subsequently approved PTTEP International Limited (PTTEPI), a subsidiary of the Company and a joint partner of the projects to be the operator of the projects and was effective on 20 July 2022. The participating interest of PTTEPI in Yadana and MGTC is 37.0842%.

On 19 April 2022, PTTEP Energy Development Company Limited (PTTEP ED), a subsidiary of the Group, entered into an agreement with MP G2 (Thailand) Limited. As a result, PTTEP ED is a sole investment operator who has control over the operation and entitlement to net assets related to G1/61 project including of all revenue, costs and petroleum operating expenses related to the project since then. The Group performed a concentration test of the gross assets acquired from such agreement in accordance to the requirement of TFRS 3 Business Combination and found that all of the fair value of gross assets is substantially concentrated in the exploration and production assets which is considered as an asset acquisition in accordance to TFRS 3. Therefore, PTTEP ED recognised the asset acquisition transaction as property, plant and equipment amounting to US Dollar 117.85 million (Baht 3,974.01 million) and the remainings were recognised as relevant assets and liabilities.

On 26 October 2022, PTTEP MENA signed Farm-Out Agreement to acquire 25% stake in Sharjah Onshore Area A Project, the Emirate of Sharjah from Eni Sharjah B.V. The acquisition of the shareholding interest is an asset acquisition and was completed on 23 December 2022. The Group classified this investment as an investment in a joint operation.

16.2 Investments in subsidiaries

Changes of investments in subsidiaries during the year are as follows:

For the year ended 31 December	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening book value	2,485	1,082	83,041	32,511
Increase in investments	713	1,403	24,960	44,771
Currency translation differences	-	-	2,538	5,759
Closing book value	3,198	2,485	110,539	83,041

On 20 January 2022, PTTEP Energy Holding (Thailand) Company Limited (PTTEP EH), a subsidiary of the Company, increased its authorised share capital amounting to Baht 182.85 million by issuing of 1.83 million new ordinary shares at a par value of Baht 100 each. The Company paid the share subscription according to the Company's shareholding portion with an amount equivalent to US Dollar 5.45 million.

On 3 March 2022, PTTEP EH increased its authorised share capital amounting to Baht 2,591.99 million by issuing of 25.92 million new ordinary shares at a par value of Baht 100 each. The Company paid the share subscription according to the Company's shareholding portion with an amount equivalent to US Dollar 78.75 million.

On 15 March 2022, PTTEP HK Holding Limited (PTTEP HK), a subsidiary of the Company, increased its authorised share capital of Hong Kong Dollar (HK Dollar) 156.45 million by increasing its par value to be HK Dollar 1.50 million per share. The Company paid the share subscription according to the Company's shareholding portion with an amount equivalent to US Dollar 5 million.

On 20 May 2022, PTTEP EH increased its authorised share capital amounting to Baht 9,282 million by issuing of 92.82 million new ordinary shares at a par value of Baht 100 each. The Company paid the share subscription according to the Company's shareholding portion with an amount equivalent to US Dollar 273 million.

On 29 August 2022, PTTEP EH increased its authorised share capital amounting to Baht 46 million by issuing 0.46 million new ordinary shares at a par value of Baht 100 each. The Company paid the share subscription to the Company's shareholding portion with an amount equivalent to US Dollar 1.26 million.

On 3 October 2022, PTTEP EH increased its authorised share capital amounting to Baht 12,668 million by issuing of 126.68 million new ordinary shares at a par value of Baht 100 each. The Company paid the share subscription according to the Company's shareholding portion with an amount equivalent to US Dollar 350 million.

On 22 November 2022, EP-Tech Ventures Holding Company Limited (EP-Tech), a subsidiary of the Group, established Xplore Ventures Company Limited (XPV) with a registered capital of Baht 5 million. The registered capital comprises 0.05 million ordinary shares at a par value of Baht 100 each. EP-Tech holds 100% interest in XPV. Its registered shares were fully paid with an amount equivalent to US Dollar 0.13 million. The Group classifies the investment in XPV as an investment in a subsidiary.

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Details of investments in subsidiaries of the Company are as follows:

List of subsidiaries	Country of incorporation	Type of business	Separate financial statements (Cost method)							
			Participating interest (%)		Participating interest (%)		Unit: Million US Dollar		Unit: Million Baht	
			(including direct holding)	(including indirect holding)	(including indirect holding)	(including indirect holding)	(including indirect holding)	(including indirect holding)	(including indirect holding)	(including indirect holding)
			31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
PTTEP International Limited (PTTEPI)	Thailand	Petroleum	100	100	-	-	516	516	17,847	17,257
PTTEP Services Limited (PTTEP Services)	Thailand	Human resource support	25	25	75	75	-	-	3	3
PTTEP Siam Limited (PTTEPS)	Thailand	Petroleum	51	51	49	49	100	100	3,449	3,335
PTTEP Offshore Investment Company Limited (PTTEPO)	Cayman Islands	Petroleum	75	75	25	25	-	-	-	-
PTTEP HK Holding Limited (PTTEP HK)	Hong Kong	Petroleum	25	25	75	75	484	479	16,728	16,008
PTTEP Treasury Center Company Limited (PTTEP TC)	Thailand	Treasury center for the Group's business	25	25	75	75	-	-	3	2
PTTEP Energy Holding (Thailand) Company Limited (PTTEP EH)	Thailand	Petroleum	100	100	-	-	2,098	1,390	72,509	46,436

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Investments in subsidiaries of the Company for the consolidated financial statements are as follows:

List of subsidiaries	Country of incorporation	Type of business	Participating interest (%) (including indirect holding)	
			31 December 2022	31 December 2021
PTTEP Business Center Company Limited (PTTEP BC)	Thailand	Petroleum	100	100
PTTEP Energy Development Company Limited (PTTEP ED)	Thailand	Petroleum	100	100
EP-Tech Ventures Holding Company Limited (EP-Tech)	Thailand	Petroleum related technology	100	100
AI and Robotics Ventures Company Limited (ARV)	Thailand	Technology	100	100
PTTEP Southwest Vietnam Company Limited (PTTEP SV)	Cayman Islands	Petroleum	100	100
PTTEP Kim Long Vietnam Company Limited (PTTEP KV)	Cayman Islands	Petroleum	100	100
PTTEP Hoang-Long Company Limited (PTTEP HL)	Cayman Islands	Petroleum	100	100
PTTEP Hoan-Vu Company Limited (PTTEP HV)	Cayman Islands	Petroleum	100	100
PTTEP Algeria Company Limited (PTTEP AG)	Cayman Islands	Petroleum	100	100
PTTEP Holding Company Limited (PTTEPH)	Cayman Islands	Petroleum	100	100
PTTEP Indonesia Company Limited (PTTEP ID)	Cayman Islands	Petroleum	100	100
PTTEP Africa Investment Limited (PTTEP AI)	Cayman Islands	Petroleum	100	100
PTTEP Australia Pty Ltd (PTTEP AU)	Commonwealth of Australia	Petroleum	100	100
PTTEP Australia Offshore Pty Ltd (PTTEP AO)	Commonwealth of Australia	Petroleum	100	100
PTTEP South Asia Limited (PTTEP SA)	Cayman Islands	Petroleum	100	100
PTTEP Australia Perth Pty Ltd (PTTEP AP)	Commonwealth of Australia	Petroleum	100	100
PTTEP Australia Browse Basin Pty Ltd (PTTEP AB)	Commonwealth of Australia	Petroleum	100	100
PTTEP Australia Timor Sea Pty Ltd (PTTEP AT)	Commonwealth of Australia	Petroleum	100	100
PTTEP Australasia (Operations) Pty Ltd (PTTEP AAO)	Commonwealth of Australia	Petroleum	100	100
PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA)	Commonwealth of Australia	Petroleum	100	100
PTTEP Australasia (Staff) Pty Ltd (PTTEP AAS)	Commonwealth of Australia	Petroleum	100	100

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List of subsidiaries	Country of incorporation	Type of business	Participating interest (%) (including indirect holding)	
			31 December 2022	31 December 2021
PTTEP International Holding Company Limited (PTTEP IH)	Cayman Islands	Petroleum	100	100
PTTEP Southwest Vietnam Pipeline Company Limited (PTTEP SVPC)	Cayman Islands	Gas pipeline transportation	100	100
PTTEP FLNG Holding Company Limited (PTTEP FH) ¹	Hong Kong	Petroleum	-	100
PTTEP Netherland Holding Limited (PTTEP NL)	Cayman Islands	Petroleum	100	100
JV Marine Limited (JV Marine)	Cayman Islands	Petroleum	100	100
PTTEP South Mandar Limited (PTTEP SMD)	Cayman Islands	Petroleum	100	100
PTTEP South Sageri Limited (PTTEP SS) ²	Cayman Islands	Petroleum	-	100
PTTEP Sadang Limited (PTTEP SD) ³	Cayman Islands	Petroleum	-	100
PTTEP Malunda Limited (PTTEP ML)	Cayman Islands	Petroleum	100	100
PTTEP Netherlands Coöperatie U.A. (PTTEP NC)	Netherlands	Petroleum	100	100
PTTEP Canada Limited (PTTEP CA)	Canada	Petroleum	100	100
PTTEP Canada International Finance Limited (PTTEP CIF)	Canada	Investment funding for the Group's business	100	100
Cove Energy Limited (Cove)	United Kingdom of Great Britain and Northern Ireland	Petroleum	100	100
Cove Energy East Africa Limited (CEEAL)	Republic of Cyprus	Petroleum	100	100
PTTEP Mozambique Area 1 Limited (PTTEP MZA1)	Republic of Cyprus	Petroleum	100	100
PTTEP Netherlands Holding Coöperatie U.A. (PTTEP NH)	Netherlands	Petroleum	100	100
PTTEP Brazil Investment B.V. (PTTEP BI)	Netherlands	Petroleum	100	100
PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL)	Federative Republic of Brazil	Petroleum	100	100
Sinphuhorm Holdings Limited (SHL)	Cayman Islands	Petroleum	100	100
PTTEP SP Limited (PTTEP SP)	United Kingdom of Great Britain and Northern Ireland	Petroleum	100	100
PTTEP G7 Limited (PTTEP G7) ⁴	Thailand	Petroleum	100	100
PTTEP HK Offshore Limited (PTTEP HKO)	Hong Kong	Petroleum	100	100
PTTEP MENA Limited (PTTEP MENA)	Hong Kong	Petroleum	100	100
PTTEP Mexico E&P Limited, S. de R.L. de C.V. (PTTEP MEP)	Mexico	Petroleum	100	100
PTTEP Sabah Oil Limited (PTTEP SBO)	Bahamas	Petroleum	100	100
PTTEP Sarawak Oil Limited (PTTEP SKO)	Bahamas	Petroleum	100	100

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List of subsidiaries	Country of incorporation	Type of business	Participating interest (%) (including indirect holding)	
			31 December 2022	31 December 2021
PTTEP Group Holding B.V. (PGH)	Netherlands	Petroleum	100	100
PTTEP (Kazakhstan) Corporation (PKC)	Cayman Islands	Petroleum	100	100
PTTEP (Angola) Corporation (PANG)	Cayman Islands	Petroleum	100	100
Partex (Brazil) Corporation (PBC) ⁵	Cayman Islands	Petroleum	100	100
PTTEP Gas Corporation (PGC)	Republic of Panama	Petroleum	100	100
Partex Services Corporation (PSC)	Republic of Panama	Human resource support	100	100
Participations and Explorations Corporation (PEC) ⁶	Republic of Panama	Petroleum	-	100
PTTEP Oman E&P Corporation (POC)	Republic of Panama	Petroleum	100	100
Partex Services Portugal – Serviços para a Indústria Petrolífera, S.A. (PSP) ⁷	Portugal	Human resource support	-	100
Asia Power and Transportation SG Holding PTE. LTD. (APT)	Singapore	Petroleum related business	100	100
Delta Gas Transportation SG Holding PTE. LTD. (DGH)	Singapore	Gas pipeline transportation	100	100
Delta Gas Transportation Limited (DGT)	Republic of the Union of Myanmar	Gas pipeline transportation	100	100
Rovula (Thailand) Co., Ltd. (Rovula)	Thailand	Technology	100	100
Skyller Solutions Co., Ltd. (Skyller)	Thailand	Technology	100	100
Varuna (Thailand) Co., Ltd. (Varuna)	Thailand	Technology	100	100
Cariva (Thailand) Co., Ltd. (Cariva)	Thailand	Technology	100	100
FutureTech Energy Ventures Co., Ltd. (FEV)	Thailand	Renewable energy and related new business	100	100
FutureTech Solar (Thailand) Co., Ltd. (FST)	Thailand	Solar power	100	100
Xplore Ventures Company Limited. (XPV)	Thailand	Technology and innovation	100	-

¹ On 15 July 2022, PTTEP FLNG Holding Company Limited (PTTEP FH), a subsidiary of the Group, received the approval for company dissolution from the registrar.

² On 30 December 2022, PTTEP South Sageri Limited (PTTEP SS), a subsidiary of the Group, received the approval for company dissolution from the registrar.

³ On 31 March 2022, PTTEP Sadang Limited (PTTEP SD), a subsidiary of the Group, received the approval for company dissolution from the registrar.

- ⁴ On 4 November 2022, PTTEP G7 Limited (PTTEP G7), a subsidiary of the Group, has registered for the dissolution with the Ministry of Commerce and in the process of liquidation.
- ⁵ On 28 December 2022, Partex (Brazil) Corporation (PBC), a subsidiary of the Group, received the approval for company dissolution from the registrar and is in the process of dissolution.
- ⁶ On 23 December 2022, Participations and Explorations Corporation (PEC), a subsidiary of the Group, received the approval for company dissolution from the registrar.
- ⁷ On 1 April 2022, Partex Services Portugal – Serviços para a Indústria Petrolífera, S.A. (PSP), a subsidiary of the Group, completed the dissolution and liquidation.

16.3 Investment in associates

Changes of investments in associates during the year are as follows:

For the year ended 31 December	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening book value	221	217	7,382	6,514
Share of net profit after income taxes	11	5	377	141
Dividends received	(3)	(4)	(119)	(119)
Share of other comprehensive income (expenses)				
- Remeasurement of employee benefits	-	-	7	2
- Measurement of financial assets	-	-	9	9
- Currency difference arising from translation of financial statements of associates	(3)	(9)	(92)	(267)
Increase in investments	17	12	577	391
Disposal of investment	(127)	-	(4,451)	-
Currency translation differences	-	-	297	711
Closing book value	116	221	3,987	7,382

For the year ended 31 December	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening book value	26	26	855	768
Currency translation differences	-	-	29	87
Closing book value	26	26	884	855

On 10 January 2022, MoZ LNG1 Holding Company Ltd (HoldCo), an associate of the Group, increased its authorised share capital amounting to US Dollar 20.66 million by issuing of 20.66 million new ordinary shares at a par value of US Dollar 1 each. The Group paid the share subscription according to the Group's shareholding portion amounting to US Dollar 1.76 million.

On 18 January 2022, HoldCo increased its authorised share capital amounting to US Dollar 54.07 million by issuing of 54.07 million new ordinary shares at a par value of US Dollar 1 each. The Group paid the share subscription according to the Group's shareholding portion amounting to US Dollar 4.60 million.

On 21 April 2022, HoldCo increased its authorised share capital amounting to US Dollar 54.60 million by issuing of 54.60 million new ordinary shares at a par value of US Dollar 1 each. The Group paid the share subscription according to the Group's shareholding portion amounting to US Dollar 4.64 million.

On 1 July 2022, HoldCo increased its authorised share capital amounting to US Dollar 8 million by issuing of 8 million new ordinary shares at a par value of US Dollar 1 each. The Group paid the share subscription according to the Group's shareholding portion amounting to US Dollar 0.68 million.

On 15 December 2022, HoldCo increased its authorised share capital amounting to US Dollar 56.85 million by issuing of 56.85 million new ordinary shares at a par value of US Dollar 1 each. The Group paid the share subscription according to the Group's shareholding portion amounting to US Dollar 4.83 million.

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Details of investment in associates of the Group and the Company are as follows:

List of associates ^{1,2}	Country of incorporation	Type of business	Consolidated financial statements (Equity method)					
			Participating interest (%) (including indirect holding)		Unit: Million US Dollar		Unit: Million Baht	
			31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Energy Complex Company Limited (Energy Complex)	Thailand	Property rental services	50	50	69	64	2,367	2,130
PTT Digital Solutions Company Limited (PTT Digital)	Thailand	Information technology and communication services	20	20	19	17	658	569
PTTEP AP Group's Associates ³	Commonwealth of Australia	Air base services	50	50	-	-	-	-
PTT Global LNG Company Limited (PTT GL) ⁴	Thailand	Petroleum	-	50	-	127	-	4,258
Leismer Aerodrome Limited (LAL)	Canada	Air transportation	32	32	-	-	-	-
MoZ LNG1 Holding Company Ltd (HoldCo)	United Arab Emirates	Petroleum	8.5	8.5	28	13	962	425
Gas Investments and Services Company Limited (GISCO)	Bermuda	Investment funding, technology, and human resource support	5	5	-	-	-	-

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List of associates ^{1, 2}	Country of incorporation	Type of business	Consolidated financial statements (Cost method)					
			Participating interest (%) (including indirect holding)		Unit: Million US Dollar		Unit: Million Baht	
			31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Energy Complex Company Limited (Energy Complex)	Thailand	Property rental services	50	50	25	25	857	829
PTT Digital Solutions Company Limited (PTT Digital)	Thailand	Information technology and communication services	20	20	1	1	27	26

¹ All investments in associates have been assessed as immaterial to the Group.

² The Group has no contingent liabilities with participating interest in investment in associates.

³ PTTEP AP's Group Associates are North Kimberley Airport Pty Ltd (Former name is Munggalalu Truscott Airbase Pty Ltd) and Troughton Island Pty Ltd.

⁴ On 17 May 2022, PTTEP Business Center Company Limited (PTTEP BC), a subsidiary of the Group, entered into Sale and Purchase Agreement (SPA) to sell all shares of PTT Global LNG Company Limited, which registered in Thailand, to Siam Management Holding Company Limited, a company under PTT Group. The transaction was completed on 1 June 2022. The Group recognised gain on disposal of the investment amounting to US Dollar 2.17 million (Baht 75.91 million) in the consolidated statement of income.

Individually immaterial associates

The Group's immaterial associates accounted for using equity method are as follows:

	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Aggregate carrying amount of share of individually immaterial associates	116	221	3,987	7,382
	Unit: Million US Dollar		Unit: Million Baht	
For the year ended 31 December	2022	2021	2022	2021
Aggregate amounts of the Group's share of associates:				
Profit from continuing operations	11	5	377	141
Other comprehensive income	(2)	(9)	(76)	(256)
Total comprehensive income for the year	9	(4)	301	(115)

16.4 Investments in Joint Ventures

Changes of investments in Joint Ventures during the year are as follows:

For the year ended 31 December	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening book value	210	233	7,026	7,009
Share of net profit after income taxes	9	11	290	347
Dividends received	(58)	(37)	(2,014)	(1,182)
Share of other comprehensive income				
- Currency differences arising from translation of financial statements of joint ventures	-	-		(1)
Increase in investments	1	3	40	104
Currency translation differences	-	-	265	749
Closing book value	162	210	5,607	7,026

On 21 April 2022, Cariva (Thailand) Company Limited (Cariva), a subsidiary of the Group, co-invested in B-Med X Company Limited (B-Med X) with a registered capital of Baht 1 million. The registered capital comprises 0.01 million ordinary shares at a par value of Baht 100 each. Cariva holds 50% interest in B-Med X. The Group classifies the investment in B-Med X as an investment in a joint venture.

On 27 July 2022, B-Med X increased its authorised share capital amounting to Baht 19 million by issuing of 0.19 million new ordinary shares at a par value of Baht 100 each. The Group paid the share subscription according to the Group's shareholding portion with an amount equivalent to US Dollar 0.25 million.

On 29 November 2022, Skyller Solutions Co., Ltd. (Skyller), a subsidiary of the Group, co-invested in SkyVIV Company Limited (SkyVIV) with a registered capital of Baht 40 million. The registered capital comprises 0.40 million ordinary shares at a par value of Baht 100 each. Skyller holds 23.2% interest in SkyVIV. The Group paid the share subscription according to the Group's shareholding portion with an amount equivalent to US Dollar 0.55 million. The Group classifies the investment in SkyVIV as an investment in a joint venture.

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Details of investments in joint ventures of the Group are as follows:

List of joint ventures ^{1, 2}	Country of incorporation	Type of business	Participating interest (%)		Consolidated financial statements (Equity method)			
			(including indirect holding)		Unit: Million US Dollar		Unit: Million Baht	
			31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Erawan 2 FSO PTE. Ltd. (Erawan 2 FSO PTE.)	Singapore	FSO rental services	13.11	13.11	32	37	1,117	1,238
APICO LLC (APICO)	United States of America	Petroleum	72.8215	72.8215	95	123	3,285	4,125
Oman LNG LLC (OLNG)	Sultanate of Oman	Petroleum	2	2	33	48	1,149	1,590
ATI Technologies Company Limited (ATI)	Thailand	Technology	50	50	-	-	-	5
Zeaquest Company Limited (Zeaquest)	Thailand	Technology	50	50	1	2	23	59
AeroSky Solutions Co., Ltd. (AeroSky)	Thailand	Technology	33	33	-	-	4	9
B-Med X Company Limited (B-Med X)	Thailand	Technology	50	-	-	-	10	-
SkyVIV Company Limited (SkyVIV)	Thailand	Technology	23.2	-	1	-	19	-

¹ All investments in joint ventures have been assessed as immaterial to the Group.

² The Group has no contingent liabilities with participating interest in investment in joint ventures.

Individually immaterial joint ventures

The Group's immaterial joint ventures accounted for using equity method are as follows:

	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Aggregate carrying amount of share of individually immaterial joint ventures	162	210	5,607	7,026
For the year ended 31 December	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Aggregate amounts of the Group's share of joint ventures:				
Profit from continuing operations	9	11	290	347
Other comprehensive income	-	-	-	(1)
Total comprehensive income for the year	9	11	290	346

16.5 Investments in Joint Operations

Details of investments in joint operations of the Group are as follows:

List of joint operations	Country of incorporation	Type of business	Participating interest (%) (including indirect holding)	
			31 December 2022	31 December 2021
Carigali - PTTEPI Operating Company Sdn Bhd. (CPOC)	Malaysia	Petroleum	50	50
Moattama Gas Transportation Company (MGTC) ¹	Bermuda	Gas pipeline transportation	37.0842	25.5
Yadana Suboo Company Limited	Bermuda	Community enterprise	37.0842	25.5
Taninthayi Pipeline Company LLC (TPC) ²	Cayman Islands	Gas pipeline transportation	19.3178	19.3178
Orange Energy Limited (Orange)	Thailand	Petroleum	53.9496	53.9496
B8/32 Partners Limited (B8/32 Partners)	Thailand	Petroleum	25.0009	25.0009
Hoang-Long Joint Operating Company	Socialist Republic of Vietnam	Petroleum	28.5	28.5
Hoan-Vu Joint Operating Company	Socialist Republic of Vietnam	Petroleum	25	25
Groupement Bir Seba (GBRS)	People's Democratic Republic of Algeria	Petroleum	35	35
Andaman Transportation Limited (ATL)	Cayman Islands	Gas pipeline transportation	80	80
Natuna 2 B.V. (Natuna)	Netherlands	Petroleum	50	50
Petroleum Development Oman LLC (PDO)	Sultanate of Oman	Petroleum	2	2
Abu Dhabi Gas Industries Limited (AGP)	United Arab Emirates	Petroleum	2	2
Private Oil Holdings Oman Limited (POHOL)	United Kingdom of Great Britain and Northern Ireland	Petroleum	5	5
Petroleum Development Oman Services LLC (PDO-S)	Sultanate of Oman	Petroleum	1.9998	1.9998
Groupement Hassi Bir Rekaiz (GHBR) ³	People's Democratic Republic of Algeria	Petroleum	49	-

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¹ On 14 March 2022, the Moattama Gas Transportation Company (MGTC)'s joint partners subsequently approved PTTEP International Limited (PTTEPI), a subsidiary of the Company and a joint partner of MTGC, to be the operator of MGTC and was effective on 20 July 2022. The participating interest of PTTEPI in MGTC is 37.0842% as disclosed in Note 16.1 Significant events during the current year.

² On 29 April 2022, PTTEP Offshore Investment Company Limited (PTTEPO), subsidiary of the Company, notified its intention to withdraw from Taninthayi Pipeline Company LLC (TPC), with participating interest 19.31% and proceeded to withdraw all shares in TPC. This will be effective upon receiving official regulator approval from Myanmar Government.

³ On 3 August 2022, the Company co-established Groupement Hassi Bir Rekaiz (GHBR) in People's Democratic Republic of Algeria with 49% shareholding interest. The Company classifies the investment as an investment in a joint operation.

Details of exploration and production projects operated by the Group are as follows:

Project	Country	Operator	Participating interest (%)	
			31 December 2022	31 December 2021
PTT Exploration and Production Public Company Limited				
Bongkot	Thailand	PTT Exploration and Production Public Company Limited	66.6667	66.6667
Arthit	Thailand	PTT Exploration and Production Public Company Limited	80	80
Contract 4 (B12/27)	Thailand	Chevron Thailand Exploration and Production, Ltd.	45	45
Sinphuhorm (E5 North)	Thailand	PTTEP SP Limited	20	20
S1	Thailand	PTTEP Siam Limited	25	25
Contract 3 (B10, B11, B12 and B13) ¹	Thailand	Chevron Thailand Exploration and Production, Ltd.	5	5
E5	Thailand	ExxonMobil Exploration and Production Khorat Inc.	20	20
Algeria Hassi Bir Rekaiz	People's Democratic Republic of Algeria	Groupement Hassi Bir Rekaiz	49	49

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Project	Country	Operator	Participating interest (%)	
			31 December 2022	31 December 2021
PTTEP International Limited (PTTEPI)				
Yadana ²	Republic of the Union of Myanmar	PTTEP International Limited	37.0842	25.5
Yetagun ³	Republic of the Union of Myanmar	Gulf Petroleum Myanmar Company Limited.	19.31784	19.31784
PTTEP 1	Thailand	PTTEP International Limited	100	100
G4/43	Thailand	Chevron Offshore (Thailand) Ltd.	21.375	21.375
G9/43	Thailand - Kingdom of Cambodia	PTTEP International Limited	100	100
L22/43	Thailand	PTTEP International Limited	100	100
L53/43 & L54/43	Thailand	PTTEP International Limited	100	100
G4/48	Thailand	Chevron Pattani, Ltd.	5	5
Bongkot (G12/48)	Thailand	PTTEP International Limited	66.6667	66.6667
Contract 4 (G7/50)	Thailand	Chevron Pattani, Ltd.	60	60
Arthit (G8/50)	Thailand	PTTEP International Limited	80	80
Zawtika	Republic of the Union of Myanmar	PTTEP International Limited	80	80
Myanmar M3 ⁴	Republic of the Union of Myanmar	PTTEP International Limited	100	100
MTJDA	Thailand - Malaysia	Carigali-PTTEPI Operating Company Sdn Bhd.	50	50
PTTEP Offshore Investment Company Limited (PTTEPO)				
B8/32 & 9A ⁵	Thailand	Chevron Offshore (Thailand) Ltd.	25.001	25.001
PTTEP Southwest Vietnam Company Limited (PTTEP SV)				
Vietnam 52/97	Socialist Republic of Vietnam	Vietnam Oil and Gas Group	7	7

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Project	Country	Operator	Participating interest (%)	
			31 December 2022	31 December 2021
PTTEP Kim Long Vietnam Company Limited (PTTEP KV)				
Vietnam B & 48/95	Socialist Republic of Vietnam	Vietnam Oil and Gas Group	8.5	8.5
PTTEP Hoang-Long Company Limited (PTTEP HL)				
Vietnam 16-1	Socialist Republic of Vietnam	Hoang-Long Joint Operating Company	28.5	28.5
PTTEP Hoan-Vu Company Limited (PTTEP HV)				
Vietnam 9-2	Socialist Republic of Vietnam	Hoan-Vu Joint Operating Company	25	25
PTTEP Algeria Company Limited (PTTEP AG)				
Algeria 433A & 416B	People's Democratic Republic of Algeria	Groupement Bir Seba	35	35
PTTEP Siam Limited (PTTEPS)				
Sinphuhorm (EU-1)	Thailand	PTTEP SP Limited	20	20
B6/27	Thailand	PTTEP Siam Limited	100	100
S1	Thailand	PTTEP Siam Limited	75	75
PTTEP South Asia Limited (PTTEP SA)				
Myanmar MD-7 ⁶	Republic of the Union of Myanmar	PTTEP South Asia Limited	-	50
PTTEP Canada Limited (PTTEP CA)				
Mariana Oil Sands	Canada	PTTEP Canada Limited	100	100
PTTEP Australia Perth Pty Ltd (PTTEP AP)				
PTTEP Australasia*	Commonwealth of Australia			

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* Details of operators and participating interests in PTTEP Australasia Project are as follows:

Block	Operator	Participating interest (%)	
		31 December 2022	31 December 2021
AC/RL7, AC/RL12 and AC/P54 ⁷	PTTEP Australasia (Ashmore Cartier) Pty Ltd	100	100
AC/L3 ⁸	PTTEP Australasia (Ashmore Cartier) Pty Ltd	-	100
AC/RL10	PTTEP Australia Timor Sea Pty Ltd	90	90
AC/RL4 (Tenacious)	PTTEP Australia Timor Sea Pty Ltd	100	100
AC/RL6 (Audacious), AC/RL6 (exclusive of Audacious) ⁹	PTTEP Australia Timor Sea Pty Ltd	100	100
AC/RL4 (exclusive of Tenacious)	PTTEP Australia Timor Sea Pty Ltd	100	100

Project	Country	Operator	Participating interest (%)	
			31 December 2022	31 December 2021
PTTEP Mozambique Area 1 Limited (PTTEP MZA1)				
Mozambique Area 1	Republic of Mozambique	TotalEnergies EP Mozambique Area 1 Limitada	8.5	8.5
Natuna 2 B.V. (Natuna)				
Natuna Sea A	Republic of Indonesia	Premier Oil Natuna Sea BV	11.5	11.5
PTTEP Brazil Investments in Oil and Gas Exploration and Production Limitada (PTTEP BL)				
Barreirinhas AP1	Federative Republic of Brazil	Shell Brasil Petroleo Ltda.	25	25
Brazil BM-ES-23	Federative Republic of Brazil	Petróleo Brasileiro S.A. (Petrobas)	20	20
PTTEP SP Limited (PTTEP SP)				
Contract 4 (B12/27)	Thailand	Chevron Thailand Exploration and Production, Ltd.	15	15
Sinphuhorm (E5 North and EU-1)	Thailand	PTTEP SP Limited	35	35

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Project	Country	Operator	Participating interest (%)	
			31 December 2022	31 December 2021
PTTEP HK Offshore Limited (PTTEP HKO)				
Sarawak SK 410B	Malaysia	PTTEP HK Offshore Limited	42.5	42.5
Sarawak SK 417	Malaysia	PTTEP HK Offshore Limited	80	80
Sarawak SK 438	Malaysia	PTTEP HK Offshore Limited	80	80
Peninsular PM 407	Malaysia	PTTEP HK Offshore Limited	55	55
Peninsular PM 415	Malaysia	PTTEP HK Offshore Limited	70	70
Sabah SB 412 ¹⁰	Malaysia	PTTEP HK Offshore Limited	60	-
PTTEP Mexico E&P Limited, S. de R.L. de C.V. (PTTEP MEP)				
Mexico block 12 (2.4)	Mexico	PC Carigali Mexico Operations, S.A. de C.V.	20	20
Mexico block 29 (2.4)	Mexico	Repsol Exploración México, S.A. de C.V.	16.67	16.67
PTTEP Energy Development Company Limited (PTTEP ED)				
G1/61 ¹¹	Thailand	PTTEP Energy Development Company Limited	60	60
G2/61	Thailand	PTTEP Energy Development Company Limited	100	100
PTTEP MENA Limited (PTTEP MENA)				
Abu Dhabi Offshore 1	United Arab Emirates	Eni Abu Dhabi B.V.	30	30
Abu Dhabi Offshore 2	United Arab Emirates	Eni Abu Dhabi B.V.	30	30
Oman Onshore Block 12	Sultanate of Oman	TotalEnergies EP Oman Block 12 B.V.	20	20
Abu Dhabi Offshore 3	United Arab Emirates	Eni Abu Dhabi B.V.	30	30
Oman Block 61	Sultanate of Oman	BP Exploration (Epsilon) Limited (BP)	20	20
Sharjah Onshore Area A ¹²	United Arab Emirates	Eni Sharjah B.V.	25	-
Sharjah Onshore Area C ¹³	United Arab Emirates	Eni Sharjah B.V.	25	-

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Project	Country	Operator	Participating interest (%)	
			31 December	31 December
			2022	2021

PTTEP Sabah Oil Limited (PTTEP SBO)

Malaysia Block K **	Malaysia
Malaysia Block H ***	Malaysia

** Details of operators and participating interests in Malaysia Block K project are as follows:

Block	Operator	Participating interest (%)	
		31 December	31 December
		2022	2021
Kikeh	PTTEP Sabah Oil Limited	56	56
SNP	PTTEP Sabah Oil Limited	22.4	22.4
GK	Sabah Shell Petroleum Co., Ltd.	7.1657292	7.1657292

*** Details of operators and participating interests in Malaysia Block H project are as follows:

Block	Operator	Participating interest (%)	
		31 December	31 December
		2022	2021
Rotan	PTTEP Sabah Oil Limited	56	56
Others	PTTEP Sabah Oil Limited	42	42

Project	Country	Operator	Participating interest (%)	
			31 December	31 December
			2022	2021

PTTEP Sarawak Oil Limited (PTTEP SKO)

Sarawak SK 314A	Malaysia	PTTEP Sarawak Oil Limited	59.5	59.5
Sarawak SK 405B	Malaysia	PTTEP Sarawak Oil Limited	59.5	59.5
Sarawak SK 309 and SK 311 ****	Malaysia			

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**** Details of operators and participating interests in Sarawak SK 309 and Sarawak SK 311 projects are as follows:

Block	Operator	Participating interest (%)	
		31 December 2022	31 December 2021
East Patricia	PTTEP Sarawak Oil Limited	42	42
Others	PTTEP Sarawak Oil Limited	59.5	59.5

Project	Country	Operator	Participating interest (%)	
			31 December 2022	31 December 2021

PTTEP Holding Group B.V. (PGH)

Block 17/06 ¹⁴	Angola	TotalEnergies E&P Angola Block 17.06 (TEPA)	2.5	2.5
Dunga	Kazakhstan	Total E&P Dunga GmbH	20	20
PDO (Block 6)	Sultanate of Oman	Petroleum Development Oman LLC	2	2
Mukhaizna (Block 53)	Sultanate of Oman	Occidental Mukhaizna, LLC	1	1

¹ On 23 April 2022, the concession of Contract 3 Project, which the Company had a participating interest of 5 %, was terminated. The operator returned the exploration block. However, a joint partner still has obligations for decommission of assets until it has been finished as required by the specific laws.

² On 14 March 2022, the Yadana's joint partners subsequently approved PTTEP International Limited (PTTEPI), a subsidiary of the Company and a joint partner of Yadana to be the operator of the project and was effective on 20 July 2022. The participating interest of PTTEPI in Yadana is increased to 37.0842% as disclosed in Note 16.1 Significant events during the current year.

³ On 29 April 2022, PTTEPI notified its intentions to withdraw from Yetagun project, which the Group had the participating interest at 19.31%. This will be effective upon receiving official regulator approval from Myanmar Government. However, the Company did not recognise assets, liabilities and expenses from operation in according to such investing proportion since then.

- ⁴ On 30 December 2022, the Government of the Republic of the Union of Myanmar approved the withdrawal of shareholding interest at 20% of Mitsui Oil Exploration Company Limited (MOECO), a joint partner of Myanmar M3 project. As a result, the participating interest of PTTEPI, the operator of Myanmar M3 project, is increased to 100%, which was effective on 22 November 2022.
- ⁵ PTTEP Offshore Investment Company Limited (PTTEPO) has shareholding interest in Orange Energy Limited and B8/32 Partners Limited, which hold the project's concession.
- ⁶ On 25 October 2022, PTTEP South Asia Limited (PTTEP SA), a subsidiary of the Group, signed termination agreement with joint partner and the Government of the Republic of the Union of Myanmar to terminate and return 50% of the exploration block of Myanmar MD-7 Project. The termination agreement has effect on 14 November 2020.
- ⁷ On 22 December 2022, PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA), a subsidiary of the Group, submitted a request to terminate and return the exploration block of AC/P 54 Project. The termination will be effective after receiving the official approval from the Government of the Commonwealth of Australia (Australia).
- ⁸ On 19 November 2021, PTTEP AAA submitted a request to terminate and return the exploration block of AC/L3 Project. The termination received the official approval from the Government of the Commonwealth of Australia (Australia) on 2 August 2022.
- ⁹ On 20 December 2022, PTTEP Australia Timor Sea Pty Ltd (PTTEP AT), a subsidiary of the Group, submitted a request not to extend the exploration block of AC/RL 6 Project. The termination will be effective after receiving the official approval from the Government of the Commonwealth of Australia (Australia).
- ¹⁰ On 22 March 2022, PTTEP HK Offshore Limited (PTTEP HKO), a subsidiary of the Group, signed a Production Sharing Contract (PSC) with Petroliaam Nasional Berhad (PETRONAS), for exploration and production rights of Sabah SB412 Project, located offshore northwest of Sabah, Malaysia. PTTEP HKO holds 60% participation interests in this Block and is the operator. The Group classified this investment as an investment in a joint operation.
- ¹¹ On 19 April 2022, PTTEP Energy Development Company Limited (PTTEP ED), a subsidiary of the Group, entered into an agreement with MP G2 (Thailand) Limited. As a result, PTTEP ED is a sole investment operator who has control over the operation and entitlement to net assets related to G1/61 project including of all revenue, costs and petroleum operating expenses related to the project since then.

- ¹² On 26 October 2022, PTTEP MENA Limited (PTTEP MENA), a subsidiary of the Group, signed Farm-Out Agreement to acquire 25% stake in Sharjah Onshore Area A Project and the acquisition was completed on 23 December 2022 as disclosed in Note 16.1 Significant events during the current year.
- ¹³ On 3 December 2021, PTTEP MENA signed Farm-Out Agreement to acquire 25% stake in Sharjah Onshore Area C Project and the acquisition was completed on 1 March 2022. The Group classified this investment as an investment in a joint operation as disclosed in Note 16.1 Significant events during the current year.
- ¹⁴ On 16 December 2022, PTTEP (Angola) Corporation (PANG), a subsidiary of the Group, has signed a sale and purchase agreement to sell all of the investment in Block 17/06 which registered in Republic of Angola, to SOMOIL BLOCO 17/06 (SU), S.A. PANG has participating interests in Block 17/06 at 2.5%. The sale and purchase shall be completed when the conditions specified in the sale and purchase agreement are met, which is expected to be completed by mid of 2022.

17 Property, plant and equipment

Consolidated financial statements					
Unit: Million US Dollar					
	Exploration and production assets	Pipeline	Others	Assets under construction	Total
As at 1 January 2021					
Cost	28,968	896	153	2,020	32,037
<u>Less</u> Accumulated depreciation	(21,423)	(308)	(100)	-	(21,831)
<u>Less</u> Accumulated impairment	(362)	(6)	-	-	(368)
Net book value	7,183	582	53	2,020	9,838
For the year ended 31 December 2021					
Opening net book value	7,183	582	53	2,020	9,838
Business acquisition	1,862	-	-	304	2,166
Additions	705	1	5	1,267	1,978
Disposals and write-off, net	(385)	(2)	(1)	(28)	(416)
Reclassification	674	-	1	(631)	44
Depreciation charged	(2,170)	(30)	(10)	-	(2,210)
Allowance for impairment of assets	(14)	(6)	-	-	(20)
Closing net book value	7,855	545	48	2,932	11,380
As at 31 December 2021					
Cost	31,583	894	153	2,932	35,562
<u>Less</u> Accumulated depreciation	(23,367)	(338)	(105)	-	(23,810)
<u>Less</u> Accumulated impairment	(361)	(11)	-	-	(372)
Net book value	7,855	545	48	2,932	11,380

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Unit: Million US Dollar					
	Exploration and production assets	Pipeline	Others	Assets under construction	Total
For the year ended 31 December 2022					
Opening net book value	7,855	545	48	2,932	11,380
Additions	1,751	-	22	1,253	3,026
Disposals and write-off, net	(274)	(12)	(1)	(4)	(291)
Reclassification	579	-	18	(601)	(4)
Reclassification to assets held-for-sale (Note 14)	(10)	-	-	-	(10)
Depreciation charged	(2,184)	(28)	(9)	-	(2,221)
Closing net book value	7,717	505	78	3,580	11,880
As at 31 December 2022					
Cost	31,644	819	188	3,580	36,231
<u>Less</u> Accumulated depreciation	(23,648)	(314)	(110)	-	(24,072)
<u>Less</u> Accumulated impairment	(279)	-	-	-	(279)
Net book value	7,717	505	78	3,580	11,880

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	Consolidated financial statements				
	Unit: Million Baht				
	Exploration and production assets	Pipeline	Others	Assets under construction	Total
As at 1 January 2021					
Cost	870,110	26,903	4,584	60,683	962,280
<u>Less</u> Accumulated depreciation	(643,493)	(9,254)	(2,996)	-	(655,743)
<u>Less</u> Accumulated impairment	(10,876)	(170)	-	-	(11,046)
Net book value	215,741	17,479	1,588	60,683	295,491
For the year ended 31 December 2021					
Opening net book value	215,741	17,479	1,588	60,683	295,491
Business acquisition	59,651	-	-	9,730	69,381
Additions	22,517	19	181	40,455	63,172
Disposals and write-off, net	(12,298)	(72)	(39)	(894)	(13,303)
Reclassification	21,535	-	24	(20,146)	1,413
Depreciation charged	(69,373)	(954)	(317)	-	(70,644)
Allowance for impairment of assets	(470)	(201)	-	-	(671)
Currency translation differences	25,214	1,924	167	8,163	35,468
Closing net book value	262,517	18,195	1,604	97,991	380,307
As at 31 December 2021					
Cost	1,055,511	29,878	5,106	97,991	1,188,486
<u>Less</u> Accumulated depreciation	(780,932)	(11,293)	(3,502)	-	(795,727)
<u>Less</u> Accumulated impairment	(12,062)	(390)	-	-	(12,452)
Net book value	262,517	18,195	1,604	97,991	380,307

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	Consolidated financial statements				
	Unit: Million Baht				
	Exploration and production assets	Pipeline	Others	Assets under construction	Total
For the year ended 31 December 2022					
Opening net book value	262,517	18,195	1,604	97,991	380,307
Additions	61,265	12	775	43,830	105,882
Disposals and write-off, net	(9,591)	(426)	(28)	(138)	(10,183)
Reclassification	20,252	-	641	(21,014)	(121)
Reclassification to assets held-for-sale (Note 14)	(345)	-	-	-	(345)
Depreciation charged	(76,876)	(954)	(342)	-	(78,172)
Currency translation differences	9,480	641	39	3,086	13,246
Closing net book value	266,702	17,468	2,689	123,755	410,614
As at 31 December 2022					
Cost	1,093,703	28,314	6,478	123,755	1,252,250
<u>Less</u> Accumulated depreciation	(817,353)	(10,846)	(3,789)	-	(831,988)
<u>Less</u> Accumulated impairment	(9,648)	-	-	-	(9,648)
Net book value	266,702	17,468	2,689	123,755	410,614

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	Separate financial statements			
	Unit: Million US Dollar			
	Exploration and production assets	Others	Assets under construction	Total
As at 1 January 2021				
Cost	13,514	89	500	14,103
<u>Less</u> Accumulated depreciation	(11,285)	(64)	-	(11,349)
Net book value	2,229	25	500	2,754
For the year ended 31 December 2021				
Opening net book value	2,229	25	500	2,754
Additions	326	1	324	651
Disposals and write-off, net	(259)	-	-	(259)
Reclassification	175	1	(176)	-
Depreciation charged	(996)	(4)	-	(1,000)
Closing net book value	1,475	23	648	2,146
As at 31 December 2021				
Cost	13,628	87	648	14,363
<u>Less</u> Accumulated depreciation	(12,153)	(64)	-	(12,217)
Net book value	1,475	23	648	2,146

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	Separate financial statements			
	Unit: Million US Dollar			
	Exploration and production assets	Others	Assets under construction	Total
For the year ended 31 December 2022				
Opening net book value	1,475	23	648	2,146
Additions	331	9	135	475
Disposals and write-off, net	(168)	-	(1)	(169)
Reclassification	295	17	(312)	-
Depreciation charged	(816)	(5)	-	(821)
Closing net book value	1,117	44	470	1,631
As at 31 December 2022				
Cost	12,573	111	470	13,154
<u>Less</u> Accumulated depreciation	(11,456)	(67)	-	(11,523)
Net book value	1,117	44	470	1,631

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	Separate financial statements			
	Unit: Million Baht			
	Exploration and production assets	Others	Assets under construction	Total
As at 1 January 2021				
Cost	405,914	2,683	15,017	423,614
<u>Less</u> Accumulated depreciation	(338,973)	(1,911)	-	(340,884)
Net book value	66,941	772	15,017	82,730
For the year ended 31 December 2021				
Opening net book value	66,941	772	15,017	82,730
Additions	10,402	48	10,347	20,797
Disposals and write-off, net	(8,261)	(3)	(13)	(8,277)
Reclassification	5,575	22	(5,597)	-
Depreciation charged	(31,760)	(145)	-	(31,905)
Currency translation differences	6,392	84	1,913	8,389
Closing net book value	49,289	778	21,667	71,734
As at 31 December 2021				
Cost	455,445	2,895	21,667	480,007
<u>Less</u> Accumulated depreciation	(406,156)	(2,117)	-	(408,273)
Net book value	49,289	778	21,667	71,734

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	Separate financial statements			
	Unit: Million Baht			
	Exploration and production assets	Others	Assets under construction	Total
For the year ended 31 December 2022				
Opening net book value	49,289	778	21,667	71,734
Additions	11,572	319	4,706	16,597
Disposals and write-off, net	(5,861)	(7)	(35)	(5,903)
Reclassification	10,316	604	(10,920)	-
Depreciation charged	(28,737)	(155)	-	(28,892)
Currency translation differences	2,025	(4)	816	2,837
Closing net book value	38,604	1,535	16,234	56,373
As at 31 December 2022				
Cost	434,566	3,843	16,234	454,643
<u>Less</u> Accumulated depreciation	(395,962)	(2,308)	-	(398,270)
Net book value	38,604	1,535	16,234	56,373

As at 31 December 2022 and 2021, the Group has capital expenditure commitments as disclosed in Note 35.1.

18 Right-of-use assets

	Consolidated financial statements		
	Unit: Million US Dollar		
	Exploration and production assets	Others	Total
As at 1 January 2021			
Cost	558	35	593
<u>Less Accumulated amortisation</u>	(90)	(20)	(110)
Net book value	468	15	483
For the year ended 31 December 2021			
Opening net book value	468	15	483
Additions	149	33	182
Decreases	(9)	-	(9)
Agreement modification	5	-	5
Amortisation charged	(127)	(14)	(141)
Closing net book value	486	34	520
As at 31 December 2021			
Cost	672	44	716
<u>Less Accumulated amortisation</u>	(186)	(10)	(196)
Net book value	486	34	520

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	Consolidated financial statements		
	Unit: Million US Dollar		
	Exploration and production assets	Others	Total
For the year ended 31 December 2022			
Opening net book value	486	34	520
Additions	619	20	639
Decreases	(7)	-	(7)
Reclassification	21	-	21
Agreement modification	7	-	7
Amortisation charged	(190)	(15)	(205)
Closing net book value	936	39	975
As at 31 December 2022			
Cost	1,234	61	1,295
<u>Less</u> Accumulated amortisation	(298)	(22)	(320)
Net book value	936	39	975

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	Consolidated financial statements		
	Unit: Million Baht		
	Exploration and production assets	Others	Total
As at 1 January 2021			
Cost	16,756	1,045	17,801
<u>Less</u> Accumulated amortisation	(2,700)	(600)	(3,300)
Net book value	14,056	445	14,501
For the year ended 31 December 2021			
Opening net book value	14,056	445	14,501
Additions	4,763	1,051	5,814
Decreases	(280)	(7)	(287)
Agreement modification	159	2	161
Amortisation charged	(4,098)	(426)	(4,524)
Currency translation differences	1,626	78	1,704
Closing net book value	16,226	1,143	17,369
As at 31 December 2021			
Cost	22,459	1,463	23,922
<u>Less</u> Accumulated amortisation	(6,233)	(320)	(6,553)
Net book value	16,226	1,143	17,369

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	Consolidated financial statements		
	Unit: Million Baht		
	Exploration and production assets	Others	Total
For the year ended 31 December 2022			
Opening net book value	16,226	1,143	17,369
Additions	21,658	697	22,355
Decreases	(254)	(6)	(260)
Reclassification	724	-	724
Agreement modification	240	1	241
Amortisation charged	(6,705)	(514)	(7,219)
Currency translation differences	439	39	478
Closing net book value	32,328	1,360	33,688
As at 31 December 2022			
Cost	42,644	2,113	44,757
<u>Less</u> Accumulated amortisation	(10,316)	(753)	(11,069)
Net book value	32,328	1,360	33,688

	Separate financial statements		
	Unit: Million US Dollar		
	Exploration and production assets	Others	Total
As at 1 January 2021			
Cost	48	31	79
<u>Less</u> Accumulated amortisation	(8)	(19)	(27)
Net book value	40	12	52
For the year ended 31 December 2021			
Opening net book value	40	12	52
Additions	9	25	34
Decreases	(2)	-	(2)
Agreement modification	2	-	2
Amortisation charged	(19)	(11)	(30)
Closing net book value	30	26	56
As at 31 December 2021			
Cost	55	33	88
<u>Less</u> Accumulated amortisation	(25)	(7)	(32)
Net book value	30	26	56

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	Separate financial statements		
	Unit: Million US Dollar		
	Exploration and production assets	Others	Total
For the year ended 31 December 2022			
Opening net book value	30	26	56
Additions	11	18	29
Decreases	(2)	-	(2)
Agreement modification	4	-	4
Amortisation charged	(30)	(13)	(43)
Closing net book value	13	31	44
As at 31 December 2022			
Cost	41	50	91
<u>Less</u> Accumulated amortisation	(28)	(19)	(47)
Net book value	13	31	44

	Separate financial statements		
	Unit: Million Baht		
	Exploration and production assets	Others	Total
As at 1 January 2021			
Cost	1,440	927	2,367
<u>Less</u> Accumulated amortisation	(239)	(554)	(793)
Net book value	1,201	373	1,574
For the year ended 31 December 2021			
Opening net book value	1,201	373	1,574
Additions	296	792	1,088
Decreases	(67)	(1)	(68)
Agreement modification	82	1	83
Amortisation charged	(620)	(365)	(985)
Currency translation differences	126	61	187
Closing net book value	1,018	861	1,879
As at 31 December 2021			
Cost	1,862	1,099	2,961
<u>Less</u> Accumulated amortisation	(844)	(238)	(1,082)
Net book value	1,018	861	1,879

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	Separate financial statements		
	Unit: Million Baht		
	Exploration and production assets	Others	Total
For the year ended 31 December 2022			
Opening net book value	1,018	861	1,879
Additions	381	622	1,003
Decreases	(57)	6	(51)
Agreement modification	153	1	154
Amortisation charged	(1,085)	(448)	(1,533)
Currency translation differences	55	30	85
Closing net book value	465	1,072	1,537
As at 31 December 2022			
Cost	1,445	1,717	3,162
<u>Less</u> Accumulated amortisation	(980)	(645)	(1,625)
Net book value	465	1,072	1,537

19 Goodwill

	Consolidated		Separate	
	financial statements		financial statements	
	Unit: Million US Dollar	Unit: Million Baht	Unit: Million US Dollar	Unit: Million Baht
As at 1 January 2021				
Cost	2,016	60,561	75	2,258
<u>Less</u> Provision for impairment	(112)	(3,376)	-	-
Net book value	1,904	57,185	75	2,258
For the year ended 31 December 2021				
Opening net book value	1,904	57,185	75	2,258
Allowance for impairment of assets	(163)	(5,471)	-	-
Currency translation differences	-	6,463	-	254
Closing net book value	1,741	58,177	75	2,512
As at 31 December 2021				
Cost	2,016	67,381	75	2,512
<u>Less</u> Provision for impairment	(275)	(9,204)	-	-
Net book value	1,741	58,177	75	2,512
For the year ended 31 December 2022				
Opening net book value	1,741	58,177	75	2,512
Reclassification to assets held-for-sale (Note 14)	(2)	(76)	-	-
Allowance for impairment of assets	(190)	(6,611)	-	-
Currency translation differences	-	2,034	-	86
Closing net book value	1,549	53,524	75	2,598

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	Consolidated		Separate	
	financial statements		financial statements	
	Unit: Million US Dollar	Unit: Million Baht	Unit: Million US Dollar	Unit: Million Baht
As at 31 December 2022				
Cost	2,014	69,609	75	2,598
<u>Less</u> Provision for impairment	(465)	(16,085)	-	-
Net book value	1,549	53,524	75	2,598

Goodwill is allocated to the Group's cash-generating units (CGUs).

Goodwill allocation net from impairment presented by the CGUs as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
As at 31 December				
Exploration and production				
Thailand	521	521	17,988	17,393
Other Southeast Asia	454	454	15,695	15,176
Middle East	142	142	4,909	4,747
Africa	371	563	12,815	18,814
Others	44	44	1,515	1,465
Others	17	17	602	582
Total	1,549	1,741	53,524	58,177
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
As at 31 December				
Exploration and production				
Thailand	75	75	2,598	2,512
Total	75	75	2,598	2,512

Goodwill impairment testing

The Group tested impairment of goodwill from business acquisition annually, or more frequently if events or changes in circumstances indicate that it might be impaired. The Group compares the carrying amount of the goodwill with the recoverable amount of each cash-generating units which is the higher of the fair value less cost to sell or value-in-use.

An asset or group of assets described as cash-generating unit (CGU) is the smallest identifiable group of assets that generates inflows that are largely independent from the cash flows from other CGUs. The Group considers the CGU at the individual project level assessing the expected future cash flows over the average life of the project with a growth rate along with the industry's information.

The measurements of fair value less cost to sell and value-in-use are based on a proved and probable reserve production profile including other key estimates and assumptions such as the short-term forward oil price curve, long-term oil price based on supply and demand of oil in the global market, project management team estimate of the capital expenditure and operating expenditure using the constant inflation rate for periods beyond five years, exchange rates, discount rates, and as well as past industry performance which were consistent with the external sources of information. The weighted average cost of capital of each project in each region is used for discount rate for financial estimation. For consolidated financial statements, the discount rate for exploration and production segment consists of Southeast Asia at rate of 7% - 9% per annum (2021: 6% - 7% per annum), Africa at rate of 10% - 11% per annum (2021: 8% - 9% per annum), Middle East at rate of 8% - 11% per annum (2021: 5% - 8% per annum) and others at rate of 8% - 9% per annum (2021: 5% - 6% per annum), and for others segment is at rate of 7% - 9% per annum (2021: 4% - 5% per annum). For separate financial statements, the discount rate for exploration and production segment consists of Southeast Asia at rate of 7% - 9% per annum (2021: 6% - 7% per annum).

If the discount rate using for goodwill impairment testing of CGUs which are not recognised impairment loss in current year increases approximately 0.34% - 10% per annum, there still would be no allowance for goodwill impairment recognised in the consolidated and separate financial statements for the year ended 31 December 2022.

Impairment loss on goodwill

During the year 2022, the Group considered and found that some projects in development phase have changed their development plan based on current situation resulting in a significant delay of its operation. These events are the key indicators that require the Group to perform impairment assessment for its projects. The Group found that there was impairment loss on goodwill occurred.

The Group measures recoverable amount of assets using fair value less cost to sell which are based on a proved and probable reserve production profile including other key estimates and assumptions such as the long-term oil price based on supply and demand of oil in the global market, project management team estimate of the capital expenditure and operating expenditure using the constant inflation rate for periods beyond five years, exchange rates, discount rates, and as well as past industry performance which were consistent with the external sources of information. The Group used the discounted cash flows based on the average life of the project greater than 5 years with discount rates around 10% - 11%.

During the year ended 31 December 2022, the Group recognised impairment loss on goodwill in the consolidated statement of income as follows:

		Consolidated financial statements	
		Unit: Million US Dollar	Unit: Million Baht
Impairment loss on goodwill		190	6,611
Total		190	6,611

		Consolidated financial statements		
		Unit: Million US Dollar		
Group of assets	Basis using to identify the recoverable amount	The carrying amount of group of assets before impairment	The carrying amount of group of assets after impairment	Impairment loss
Overseas	Fair value less cost to sell	2,649	2,459	190
			Total	190

		Consolidated financial statements		
		Unit: Million Baht		
Group of assets	Basis using to identify the recoverable amount	The carrying amount of group of assets before impairment	The carrying amount of group of assets after impairment	Impairment loss
Overseas	Fair value less cost to sell	91,605	84,994	6,611
			Total	6,611

The amount of impairment loss on goodwill is disclosed in Note 8 Segment and revenue information.

20 Exploration and evaluation assets

		Consolidated financial statements	
		Unit: Million US Dollar	Unit: Million Baht
As at 1 January 2021			
Cost		4,694	140,982
<u>Less</u> Accumulated impairment		(1,808)	(54,288)
Net book value		2,886	86,694
For the year ended 31 December 2021			
Opening net book value		2,886	86,694
Business acquisition		332	10,286
Additions		134	4,280
Decreases		(187)	(5,971)
Reclassification		(44)	(1,413)
Currency translation differences		-	10,437
Closing net book value		3,121	104,313

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	Consolidated financial statements	
	Unit: Million US Dollar	Unit: Million Baht
As at 31 December 2021		
Cost	4,446	148,599
<u>Less</u> Accumulated impairment	(1,325)	(44,286)
Net book value	3,121	104,313
For the year ended 31 December 2022		
Opening net book value	3,121	104,313
Additions	95	3,329
Decreases	(28)	(995)
Reclassification	(17)	(603)
Reclassification to assets held-for-sale (Note 14)	(99)	(3,470)
Currency translation differences	-	3,587
Closing net book value	3,072	106,161
As at 31 December 2022		
Cost	4,312	149,032
<u>Less</u> Accumulated impairment	(1,240)	(42,871)
Net book value	3,072	106,161

21 Deferred income taxes

Deferred tax assets and liabilities comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Deferred tax assets	929	1,318	32,125	44,042
Deferred tax liabilities	(1,575)	(1,504)	(54,449)	(50,272)
Deferred taxes, net	(646)	(186)	(22,324)	(6,230)
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Deferred tax assets	549	790	18,958	26,401
Deferred tax liabilities	-	-	-	-
Deferred taxes, net	549	790	18,958	26,401

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The movements in deferred tax assets and liabilities during the year are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar			
	As at 1 January 2022	Statement of income	Statement of comprehensive income	As at 31 December 2022
Deferred tax assets				
Decommissioning costs	1,100	(106)	-	994
Provision for employee benefits	79	(9)	(7)	63
Property, plant and equipment and intangible assets	5	1	-	6
Loss carried forward	235	(119)	-	116
Financial derivatives	7	11	(9)	9
Allowance for impairment loss on assets	128	6	-	134
Lease liabilities	8	8	-	16
Cost recovery	252	(226)	-	26
Others	131	(15)	-	116
	1,945	(449)	(16)	1,480
Tax effect of currency translation on tax base	-	-	-	-
	1,945	(449)	(16)	1,480
Deferred tax liabilities				
Property, plant and equipment and intangible assets	2,113	(82)	-	2,031
Financial derivatives	1	(3)	4	2
Others	15	61	-	76
	2,129	(24)	4	2,109
Tax effect of currency translation on tax base	2	15	-	17
	2,131	(9)	4	2,126
Deferred taxes, net	(186)	(440)	(20)	(646)

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	Consolidated financial statements				
	Unit: Million US Dollar				
	As at 1 January 2021	Statement of income	Statement of comprehensive income	Business acquisition	As at 31 December 2021
Deferred tax assets					
Decommissioning costs	1,112	(12)	-	-	1,100
Provision for employee benefits	111	-	(32)	-	79
Property, plant and equipment and intangible assets	6	(1)	-	-	5
Loss carried forward	316	(79)	(2)	-	235
Financial derivatives	2	5	-	-	7
Allowance for impairment loss on assets	135	(7)	-	-	128
Lease liabilities	5	3	-	-	8
Cost recovery	36	(110)	-	326	252
Others	167	(36)	-	-	131
	1,890	(237)	(34)	326	1,945
Tax effect of currency translation on tax base	8	(8)	-	-	-
	1,898	(245)	(34)	326	1,945
Deferred tax liabilities					
Property, plant and equipment and intangible assets	2,222	(218)	-	109	2,113
Financial derivatives	6	(5)	-	-	1
Others	17	(2)	-	-	15
	2,245	(225)	-	109	2,129
Tax effect of currency translation on tax base	-	2	-	-	2
	2,245	(223)	-	109	2,131
Deferred taxes, net	(347)	(22)	(34)	217	(186)

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Consolidated financial statements					
Unit: Million Baht					
	As at 1 January 2022	Statement of income	Statement of comprehensive income	Currency translation differences	As at 31 December 2022
Deferred tax assets					
Decommissioning costs	36,776	(3,649)	-	1,259	34,386
Provision for employee benefits	2,602	(326)	(235)	93	2,134
Property, plant and equipment and intangible assets	167	30	-	5	202
Loss carried forward	7,854	(4,105)	(14)	279	4,014
Financial derivatives	238	393	(316)	20	335
Allowance for impairment loss on assets	4,286	211	-	152	4,649
Lease liabilities	268	298	-	(21)	545
Cost recovery	8,427	(7,976)	-	453	904
Others	4,352	(484)	-	100	3,968
	64,970	(15,608)	(565)	2,340	51,137
Tax effect of currency translation on tax base	-	-	-	-	-
	64,970	(15,608)	(565)	2,340	51,137
Deferred tax liabilities					
Property, plant and equipment and intangible assets	70,634	(2,726)	-	2,310	70,218
Financial derivatives	12	(93)	140	(5)	54
Others	503	2,144	-	(21)	2,626
	71,149	(675)	140	2,284	72,898
Tax effect of currency translation on tax base	51	526	-	(14)	563
	71,200	(149)	140	2,270	73,461
Deferred taxes, net	(6,230)	(15,459)	(705)	70	(22,324)

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Consolidated financial statements						
Unit: Million Baht						
	As at 1 January 2021	Statement of income of income	Statement of comprehensive income	Business acquisition	Currency translation differences	As at 31 December 2021
Deferred tax assets						
Decommissioning costs	33,400	(260)	-	21	3,615	36,776
Provision for employee benefits	3,335	(13)	(1,083)	-	363	2,602
Property, plant and equipment and intangible assets	172	(24)	-	-	19	167
Loss carried forward	9,477	(2,535)	(51)	-	963	7,854
Financial derivatives	53	172	(4)	-	17	238
Allowance for impairment loss on assets	4,060	(149)	-	-	375	4,286
Lease liabilities	147	102	-	-	19	268
Cost recovery	1,090	(3,581)	-	10,094	824	8,427
Others	5,013	(1,154)	-	-	493	4,352
	56,747	(7,442)	(1,138)	10,115	6,688	64,970
Tax effect of currency translation on tax base	246	(248)	-	-	2	-
	56,993	(7,690)	(1,138)	10,115	6,690	64,970
Deferred tax liabilities						
Property, plant and equipment and intangible assets	66,748	(6,644)	-	3,378	7,152	70,634
Financial derivatives	154	(148)	-	-	6	12
Others	517	(71)	-	-	57	503
	67,419	(6,863)	-	3,378	7,215	71,149
Tax effect of currency translation on tax base	-	46	-	-	5	51
	67,419	(6,817)	-	3,378	7,220	71,200
Deferred taxes, net	(10,426)	(873)	(1,138)	6,737	(530)	(6,230)

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Separate financial statements				
Unit: Million US Dollar				
	As at 1 January 2022	Statement of income	Statement of comprehensive income	As at 31 December 2022
Deferred tax assets				
Decommissioning costs	680	(149)	-	531
Provision for employee benefits	71	(6)	(7)	58
Loss carried forward	131	(79)	-	52
Others	40	(19)	(9)	12
	922	(253)	(16)	653
Deferred tax liabilities				
Property, plant and equipment and intangible assets	132	(75)	-	57
Others	-	47	-	47
	132	(28)	-	104
Deferred taxes, net	790	(225)	(16)	549
Separate financial statements				
Unit: Million US Dollar				
	As at 1 January 2021	Statement of income	Statement of comprehensive income	As at 31 December 2021
Deferred tax assets				
Decommissioning costs	732	(52)	-	680
Provision for employee benefits	105	(1)	(33)	71
Loss carried forward	211	(78)	(2)	131
Others	62	(23)	1	40
	1,110	(154)	(34)	922
Deferred tax liabilities				
Property, plant and equipment and intangible assets	338	(206)	-	132
Others	2	(2)	-	-
	340	(208)	-	132
Deferred taxes, net	770	54	(34)	790

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Separate financial statements					
Unit: Million Baht					
	As at 1 January 2022	Statement of income	Statement of comprehensive income	Currency translation differences	As at 31 December 2022
Deferred tax assets					
Decommissioning costs	22,721	(5,235)	-	861	18,347
Provision for employee benefits	2,375	(226)	(236)	86	1,999
Loss carried forward	4,387	(2,769)	(14)	194	1,798
Others	1,339	(676)	(311)	67	419
	30,822	(8,906)	(561)	1,208	22,563
Deferred tax liabilities					
Property, plant and equipment and intangible assets	4,398	(2,632)	-	192	1,958
Lease liabilities	20	(20)	-	-	-
Others	3	1,669	-	(25)	1,647
	4,421	(983)	-	167	3,605
Deferred taxes, net	26,401	(7,923)	(561)	1,041	18,958
Separate financial statements					
Unit: Million Baht					
	As at 1 January 2021	Statement of income	Statement of comprehensive income	Currency translation differences	As at 31 December 2021
Deferred tax assets					
Decommissioning costs	21,992	(1,601)	-	2,330	22,721
Provision for employee benefits	3,139	(22)	(1,083)	341	2,375
Loss carried forward	6,331	(2,390)	(46)	492	4,387
Others	1,872	(701)	20	148	1,339
	33,334	(4,714)	(1,109)	3,311	30,822
Deferred tax liabilities					
Property, plant and equipment and intangible assets	10,140	(6,311)	-	569	4,398
Lease liabilities	4	14	-	2	20
Others	68	(66)	-	1	3
	10,212	(6,363)	-	572	4,421
Deferred taxes, net	23,122	1,649	(1,109)	2,739	26,401

Deferred income tax assets are recognised for tax loss and carried forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable. The Group does not recognise deferred tax asset from tax losses of US Dollar 1,159 million (2021: US Dollar 1,025 million) to carry forward against future taxable income. Some portions of tax losses could be carried forward against future taxable income without expiration invalid and some portions will be expired during 2023 to 2041.

22 Other non-current assets

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Land usage fee	18	20	635	664
Advance payment	44	49	1,529	1,640
Pension scheme investments from				
joint operation	76	61	2,626	2,048
Prepaid expenses	12	10	397	341
Deferred remuneration under agreement	6	8	208	260
Others	18	32	614	1,052
	174	180	6,009	6,005
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Deposits	4	4	148	145
Land usage fee	5	5	159	166
Prepaid expenses	2	1	69	22
Deferred remuneration under agreement	6	8	208	260
Others	7	4	261	157
	24	22	845	750

23 Trade and other payable

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Trade payable	158	148	5,446	4,952
Working capital to co-ventures	19	21	640	691
Account payable - related parties	25	16	872	529
Accrued expenses	1,312	897	45,345	29,990
Accrued interest expense	18	15	637	498
	1,532	1,097	52,940	36,660
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Trade payable	24	26	810	865
Account payable - related parties	7	9	253	310
Accrued expenses	349	320	12,075	10,708
Accrued interest expense	6	4	198	127
	386	359	13,336	12,010

24 Loans, debentures and lease liabilities

Loans, debentures and lease liabilities comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Current portion				
Current portion of debentures	-	449	-	14,997
Current portion of lease liabilities	303	184	10,479	6,169
	303	633	10,479	21,166
Non-current portion				
Debentures	2,809	2,476	97,095	82,741
Long-term loans	-	596	-	19,920
Lease liabilities	721	388	24,905	12,984
	3,530	3,460	122,000	115,645
Total loans, debentures and lease liabilities	3,833	4,093	132,479	136,811
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Current portion				
Current portion of lease liabilities	31	31	1,081	1,029
	31	31	1,081	1,029
Non-current portion				
Debentures	503	520	17,387	17,384
Lease liabilities	19	29	667	982
	522	549	18,054	18,366
Total debentures and lease liabilities	553	580	19,135	19,395

a) **Debentures**

The carrying value of unsecured and unsubordinated debentures comprised:

				Consolidated financial statements			
				Unit: Million US Dollar		Unit: Million Baht	
	Interest rates (% per annum)	Effective interest rates (% per annum)	Maturity date	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Maturity date within 1 year							
- Debentures Baht 15,000 million	2.26	2.314	19 June 2022	-	449	-	14,997
Maturity date over 3 years but not exceeding 5 years							
- Debentures Baht 6,000 million	2.00 - 2.75	2.284	5 November 2026	173	179	5,993	5,991
- Debentures US Dollar 500 million	2.587	2.637	10 June 2027	499	499	17,241	16,663
- Debentures Baht 5,000 million	2.09	2.121	5 April 2027	144	-	4,996	-
Maturity date over 5 years							
- Debentures Baht 11,400 million	4.82	4.89	6 June 2029	330	341	11,394	11,393
- Debentures US Dollar 350 million	2.993	3.063	15 January 2030	325	322	11,239	10,759
- Debentures US Dollar 490 million	6.35	6.507	12 June 2042	488	487	16,856	16,295
- Debentures US Dollar 650 million	3.903	3.958	6 December 2059	648	648	22,382	21,640

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				Consolidated financial statements			
				Unit: Million US Dollar		Unit: Million Baht	
	Interest rates (% per annum)	Effective interest rates (% per annum)	Maturity date	31 December 2022	31 December 2021	31 December 2022	31 December 2021
- Debentures Baht 1,000 million	2.69	2.725	5 April 2029	29	-	999	-
- Debentures Baht 6,000 million	3.05	3.084	5 April 2032	173	-	5,995	-
Total carrying value				2,809	2,925	97,095	97,738
				Separate financial statements			
				Unit: Million US Dollar		Unit: Million Baht	
	Interest rates (% per annum)	Effective interest rates (% per annum)	Maturity date	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Maturity date over 3 years but not exceeding 5 years							
- Debentures Baht 6,000 million	2.00 - 2.75	2.284	5 November 2026	173	179	5,993	5,991
Maturity date over 5 years							
- Debentures Baht 11,400 million	4.82	4.89	6 June 2029	330	341	11,394	11,393
Total carrying value				503	520	17,387	17,384

The fair values of debentures as at 31 December 2022 and 2021 are disclosed in Note 9.2.3.

The movements of debentures for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening net book value	2,925	2,830	97,738	85,016
Cash flows:				
Increase	359	180	12,547	5,745
Repayment of debentures	(425)	-	(14,873)	-
Deferred finance cost	(1)	-	(24)	(5)
Non-cash movement:				
Amortisation of deferred finance cost	4	4	149	118
Foreign exchange differences	(53)	(89)	(1,832)	(2,851)
Currency translation differences	-	-	3,390	9,715
Closing net book value	2,809	2,925	97,095	97,738
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening net book value	520	379	17,384	11,392
Cash flows:				
Increase	-	180	-	5,745
Non-cash movement:				
Amortisation of deferred finance cost	-	-	1	(8)
Foreign exchange differences	(17)	(39)	(600)	(1,239)
Currency translation differences	-	-	602	1,494
Closing net book value	503	520	17,387	17,384

Repurchase and issuance of debentures

The details of movements of debentures during the year ended 31 December 2022 are as follows:

On 5 April 2022, PTTEP Treasury Center Company Limited (PTTEP TC), a subsidiary of the company, has completed the issuance of senior guaranteed debentures with a bondholders' representative to institutional and high net-worth investors, for a total of Baht 12,000 million (US Dollar 358.64 million). The debentures have three tranches consisting of 5-year tranche totalling Baht 5,000 million (US Dollar 149.44 million), 7-year tranche totalling Baht 1,000 million (US Dollar 29.88 million), and 10-year tranche totalling Baht 6,000 million (US Dollar 179.32 million), carrying the fixed coupon rates of 2.09%, 2.69% and 3.05% per annum, respectively. PTTEP TC, then, has entered into cross currency swap transactions with the financial institutions to swap Baht 11,720 million debentures to US Dollar 348.66 million at the average exchange rate of Baht 33.62 per US Dollar with an average interest rate of 3.63 per annum. The debentures and cross currency swap transactions are fully guaranteed by the Company.

On 20 June 2022, PTTEP TC has redeemed the senior guaranteed debentures with a bondholders' representative of Baht 15,000 million (US Dollar 425.13 million).

b) Long-term loans

Long-term loans from financial institutions comprised:

				Consolidated financial statements			
				Unit: Million US Dollar		Unit: Million Baht	
Interest rates (% per annum)	Effective interest rates (% per annum)	Maturity date		31 December 2022	31 December 2021	31 December 2022	31 December 2021
Maturity date over 1 years but not exceeding 3 years							
- Loans US Dollar 480 million	6M LIBOR + 0.85	1.67	20 October 2024	-	477	-	15,927
- Loans US Dollar 120 million	6M LIBOR + 0.95	1.667	20 October 2024	-	119	-	3,993
Total carrying value				-	596	-	19,920

The fair values of long-term loans are close to their carrying amounts, as disclosed in Note 9.2.3.

The movements of long-term loans for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening net book value	596	595	19,920	17,862
Cash flows:				
Repayment of long-term loans	(600)	-	(20,991)	-
Non-cash movement:				
Amortisation of deferred finance cost	4	1	138	45
Currency translation differences	-	-	933	2,013
Closing net book value	-	596	-	19,920

On 20 October 2022, PTTEP Treasury Center Company Limited (PTTEP TC) had early repaid the unsecured and unsubordinated loans, in the amount of US Dollar 600 million (Baht 20,991 million).

c) Lease liabilities

The movements of lease liabilities for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening net book value	572	507	19,153	15,230
Cash flows:				
Repayment of lease liabilities	(197)	(145)	(6,915)	(4,621)
Non-cash movements:				
Deferred finance cost	18	16	637	520
Increase of lease liabilities	635	194	22,216	6,186
Decrease of lease liabilities	(9)	(3)	(339)	(85)
Agreement modification	7	5	234	161
Foreign exchange differences	(2)	(2)	(66)	(52)
Currency translation differences	-	-	464	1,814
Lease liabilities	1,024	572	35,384	19,153
<u>Less</u> current portion of lease liabilities	(303)	(184)	(10,479)	(6,169)
Closing net book value	721	388	24,905	12,984

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Opening net book value	60	57	2,011	1,707
Cash flows:				
Repayment of lease liabilities	(42)	(31)	(1,481)	(999)
Non-cash movements:				
Deferred finance cost	1	1	44	45
Additions of lease liabilities	29	34	1,008	1,088
Decreases of lease liabilities	(2)	(3)	(58)	(82)
Agreement modification	4	3	145	82
Foreign exchange differences	-	(1)	6	(27)
Currency translation differences	-	-	73	197
Lease liabilities	50	60	1,748	2,011
<u>Less</u> Current portion	(31)	(31)	(1,081)	(1,029)
Closing net book value	19	29	667	982

Related leases transaction recognised in the statement of income for the year ended 31 December are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million US Baht	
	2022	2021	2022	2021
Expenses related to short-term lease	16	9	564	288
Expenses related to low-value assets lease	5	5	163	148
Expenses related to variable lease payment, which does not include in lease liabilities	-	-	4	3

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million US Baht	
	2022	2021	2022	2021
Expenses related to short-term lease	1	2	36	60
Expenses related to low-value assets lease	4	4	152	137
Expenses related to variable lease payment, which does not include in lease liabilities	-	-	2	2

25 Provision for decommissioning costs

Provision for decommissioning costs are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Provision for decommissioning costs	3,114	2,724	107,623	91,044
<u>Less</u> Current portion	(314)	(265)	(10,866)	(8,878)
Non-current portion of provision for decommissioning costs	2,800	2,459	96,757	82,166

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Provision for decommissioning costs	1,080	1,310	37,336	43,795
<u>Less</u> Current portion	(255)	(234)	(8,821)	(7,831)
Non-current portion of provision for decommissioning costs	825	1,076	28,515	35,964

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The movements of provision for decommissioning costs during the year are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Balance as at 1 January	2,724	3,203	91,044	96,209
Business acquisition	-	4	-	138
Additional provision	711	49	24,858	1,564
Provision used during the year	(157)	(36)	(5,494)	(1,152)
Finance costs	76	64	2,683	2,042
Reversal of provision	(238)	(556)	(8,340)	(17,762)
Foreign exchange differences	(2)	(4)	(57)	(117)
Currency translation differences	-	-	2,929	10,122
Balance as at 31 December	3,114	2,724	107,623	91,044
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Balance as at 1 January	1,310	1,713	43,795	51,468
Additional provision	1	12	30	393
Provision used during the year	(153)	(29)	(5,364)	(929)
Finance costs	25	31	871	989
Reversal of provision	(101)	(413)	(3,532)	(13,200)
Foreign exchange differences	(2)	(4)	(57)	(120)
Currency translation differences	-	-	1,593	5,194
Balance as at 31 December	1,080	1,310	37,336	43,795

During the year ended 31 December 2022, the Group recognised provision for decommissioning costs of production projects under production sharing contracts. The recognition is in accordance with the related laws and there is a probable possibility of the present obligation. In addition, the Company has paid the decommissioning costs for a portion of the project that had come to the end of concession, resulting in the decrease in provision for decommissioning costs, and prepaid the related decommissioning costs which was presented as part of other current assets in the statements of financial position.

The Group records a provision for decommissioning costs whenever it is probable that there would be an obligation as a result of a past event and the amount of that obligation is reliably estimated by the Group's engineers and management's judgment. The Group recognises provision for decommissioning costs as part of oil and gas properties, using the discounted present value before tax based on the estimated eventual costs that relate to the removal of the production facilities and amortised based on the unit of production of the proved reserve or the proved developed reserve. The Group recognises an increase that reflects the passage of time from the unwinding discount in each period, as a finance cost in the statements of income.

The provisions are based on the current situation such as regulations, technologies and prices. The actual results could differ from these estimates as future confirming events occur.

26 Provision for remuneration for production bonus and the renewal of petroleum production

Provision for remuneration for production bonus and the renewal of petroleum production are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Provision for remuneration for production bonus and the renewal of petroleum production	237	236	8,202	7,894
<u>Less</u> Current portion	(43)	(115)	(1,513)	(3,859)
Non-current portion of provision for remuneration for production bonus and the renewal of petroleum production	194	121	6,689	4,035

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Provision for remuneration for the renewal of petroleum production	44	145	1,531	4,856
<u>Less</u> Current portion	(22)	(105)	(772)	(3,529)
Non-current portion of provision for remuneration for the renewal of petroleum production	22	40	759	1,327

Movements of provision for remuneration for production bonus and the renewal of petroleum production during the year are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Balance as at 1 January	236	191	7,894	5,732
Additional provision during the year	113	157	3,963	5,018
Remuneration paid during the year	(126)	(117)	(4,414)	(3,736)
Finance costs	-	5	13	168
Reversal of provision	9	-	310	-
Currency translation differences	5	-	436	712
Balance as at 31 December	237	236	8,202	7,894

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
As at 1 January 2021	145	173	4,856	5,206
Additional provision during the year	5	75	186	2,403
Remuneration paid during the year	(109)	(106)	(3,823)	(3,396)
Finance costs	1	3	28	99
Reversal of provision	2	-	76	-
Currency translation differences	-	-	208	544
Balance as at 31 December	44	145	1,531	4,856

The Group recognised provision for remuneration for production bonus and the renewal of petroleum production which has to pay remuneration fee to the Ministry of Energy by using the discounted cash flows based on the significant assumptions, such as sales volume data, accumulate volume of total petroleum production, oil price and discounted rate, etc.

27 Provision for employee benefits

Provision for employee benefits are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Statements of financial position				
Retirement benefits	181	194	6,246	6,495
Other long-term benefits	10	11	349	369
Liabilities in the statements of financial position	191	205	6,595	6,864
Statement of income				
Retirement benefits	19	37	663	1,184
Other long-term benefits	1	1	48	43
	20	38	711	1,227

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Statements of financial position				
Retirement benefits	97	111	3,362	3,692
Other long-term benefits	10	11	334	369
Liabilities in the statements of financial position	107	122	3,696	4,061
Statement of income				
Retirement benefits	8	27	302	872
Other long-term benefits	1	1	33	43
	9	28	335	915

The movements of provision for retirement benefits during the year are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
As at 1 January	194	252	6,495	7,571
Current service cost	13	16	444	509
Past service cost	-	14	-	440
Interest expense	6	7	219	235
	213	289	7,158	8,755
Gain from actuarial assumptions	(15)	(72)	(514)	(2,361)
Benefits paid	(8)	(10)	(303)	(314)
Foreign exchange differences	(9)	(13)	(319)	(421)
Currency translation differences	-	-	224	836
	(32)	(95)	(912)	(2,260)
As at 31 December	181	194	6,246	6,495

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
As at 1 January	111	175	3,692	5,253
Current service cost	6	10	228	336
Past service cost	-	13	-	434
Interest expense	2	3	74	102
	119	201	3,994	6,125
Gain from actuarial assumptions	(14)	(65)	(472)	(2,167)
Benefits paid	(5)	(7)	(173)	(248)
Foreign exchange differences	(3)	(18)	(116)	(589)
Currency translation differences	-	-	129	571
	(22)	(90)	(632)	(2,433)
As at 31 December	97	111	3,362	3,692

Expenses recognised in the statements of income for the years are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Current service cost	13	16	444	509
Past service cost	-	14	-	440
Interest expense	6	7	219	235
Total	19	37	663	1,184
Other long-term benefits	1	1	48	43
Expenses recognised in statement of income	20	38	711	1,227

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Current service cost	6	11	228	336
Past service cost	-	13	-	434
Interest expense	2	3	74	102
Total	8	27	302	872
Other long-term benefits	1	1	33	43
Expenses recognised in statement of income	9	28	335	915

(Gain) loss from actuarial assumptions recognised in the statements of comprehensive income are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Change in financial assumptions	(21)	(59)	(726)	(1,951)
Change in demographic assumptions	-	3	-	105
Experience adjustment	6	(16)	212	(515)
Total	(15)	(72)	(514)	(2,361)

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Change in financial assumptions	(18)	(51)	(626)	(1,706)
Change in demographic assumptions	-	-	-	3
Experience adjustment	4	(14)	154	(464)
Total	(14)	(65)	(472)	(2,167)

The significant actuarial assumptions used were as follows:

	% per annum	
	2022	2021
Discount rate	1.37 - 7.26	0.52 - 6.70
Inflation rate	2.0	2.0
Turnover rate	0.0 - 15.0	0.0 - 15.0

Sensitivity analysis for each significant assumption used is as follows:

	Increase (Decrease) in impact on defined retirement benefit obligation			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Discount rate				
Increase 1%	(11)	(15)	(377)	(506)
Decrease 1%	13	19	451	630

The above sensitivity analysis is based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method has been applied as when calculating the retirement benefits recognised in the statement of financial position.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the previous year.

As at 31 December 2022, the weighted average duration of the defined retirement benefit obligation is 23 years (2021: 23.6 years).

Maturity analysis of undiscounted retirement benefits are as follows:

	Consolidated		Separate	
	financial statements		financial statements	
	Unit: Million US Dollar	Unit: Million Baht	Unit: Million US Dollar	Unit: Million Baht
As at 31 December 2022				
Not later than 1 year	8	283	3	97
Over 1 to 5 years	40	1,373	28	983
Over 5 to 10 years	48	1,645	45	1,550
Over than 10 years	354	12,249	307	10,606
	450	15,550	383	13,236

28 Share capital

The total number of authorised ordinary shares is 3,969.98 million shares (2021: 3,969.98 million shares) with a par value of Baht 1 each (2021: a par value of Baht 1 each). All authorised ordinary shares are fully paid.

29 Legal reserve

Under the Public Companies Act., B.E. 2535, the Company is required to set aside as a legal reserve at least 5% of its net profit for the year until the reserve is not less than 10% of the authorised ordinary shares capital. The legal reserve is not available for dividend distribution. The Company has already set aside full legal reserve at 10% of the authorised ordinary shares capital.

30 Subordinated capital debentures

On 15 June 2022, the Company has redeemed and repaid the Baht nominated subordinated capital debentures with issuance and offering values of Baht 5,000 million as follows:

	Consolidated financial statements					
	Unit: Million US Dollar			Unit: Million Baht		
	Before	After	Before	After	Before	After
	Redemption	(Redeemed)	Redemption	Redemption	(Redeemed)	Redemption
Net value from finance cost	157	(157)	-	4,982	(4,982)	-

	Separate financial statements					
	Unit: Million US Dollar			Unit: Million Baht		
	Before	After	Before	After	Before	After
	Redemption	(Redeemed)	Redemption	Redemption	(Redeemed)	Redemption
Net value from finance cost	157	(157)	-	4,982	(4,982)	-

31 Dividends

On 28 March 2022, the Annual General Meeting of Shareholder approved payment of dividend payment for the year 2021 at the rate of Baht 5.00 per share. The Company had made an interim dividend payment for the first half-year operations of 2021 at the rate of Baht 2.00 per share on 27 August 2021. The remaining is for the second half-year operations of 2021 at the rate of Baht 3.00 per share on 18 April 2022.

On 30 January 2023, the Company's Board of Directors endorsed the proposal of dividend payment for the year 2022 at the rate of Baht 9.25 per share. The Company had made an interim dividend payment for the first half-year operations of 2022 at the rate of Baht 4.25 per share on 26 August 2022. The remaining is for the second half-year operations of 2022 at the rate of Baht 5.00 per share which will be paid after receiving approval from the Annual General Meeting of the Shareholders.

32 Expense by nature

Significant expenses by nature of the Group which comprise the expenses based on its participating interest in each project for the years are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Salary, wages and employees' benefits	294	287	10,235	9,116
Repair and maintenance	293	188	10,247	6,002
Exploration well and projects write-off	33	215	1,178	6,764
Geological and geophysical expenses	34	7	1,206	226
Logistics	283	149	9,888	4,757
	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Salary, wages and employees' benefits	259	273	9,042	8,713
Repair and maintenance	53	69	1,865	2,214
Exploration well and projects write-off	1	-	34	-
Geological and geophysical expenses	-	-	1	1
Logistics	73	62	2,560	1,975

33 Income tax expense

Income tax rates for the year ended 31 December 2022 are as follows:

	Tax Rate (%)
Income tax in Thailand	
- Corporate income tax under Revenue Code	3, 20
- Petroleum income tax on petroleum businesses in Thailand pursuant to Petroleum Income Tax Act, B.E. 2514 and 2532	50
- Petroleum income tax on petroleum business in Thailand pursuant to Petroleum Income Tax Act, B.E. 2560	20
Income tax from the Petroleum business in the Thailand - Malaysia Joint Development Area under the Petroleum Income Tax Act (No.5), B.E. 2541 and Petroleum Income tax in Malaysia	
- From the first to the eighth accounting period	Exempt
- From the ninth to the fifteenth accounting period	10
- From the sixteenth accounting period onwards	20
Income tax in Malaysia	
- Corporate income tax	24
- Petroleum income tax	25, 38
Corporate income tax in the Republic of the Union of Myanmar	25
Corporate income tax in the Socialist Republic of Vietnam	20, 50
Corporate income tax in the Republic of Indonesia	
- Corporate income tax	30
- Income tax from the profit distribution	20
Corporate income tax in the Republic of Singapore	17
Corporate income tax in Hong Kong Special Administrative Region of the People's Republic of China	16.5
Corporate income tax in the Republic of Portugal	21
Corporate income tax in United Kingdom	19
Corporate income tax in the Kingdom of the Netherlands	15, 25.8
Corporate income tax in the Republic of Cyprus	12.5

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	Tax Rate (%)
Corporate income tax in the Commonwealth of Australia	
- Corporate income tax	30
- Petroleum resource rent tax in the Commonwealth of Australia	40
Corporate income tax in the Federative Republic of Brazil	24, 34
Corporate income tax in Canada	23
Corporate income tax in the United Mexican States	30
Corporate income tax in the Republic of Panama	25
Corporate income tax in the People's Democratic Republic of Algeria	
- Corporate income tax	38, 19 - 80
- Petroleum income tax	20 - 70
Income tax in Sultanate of Oman	
- Corporate income tax	15
- Petroleum income tax	55, 80
Corporate income tax in the United Arab Emirates	50, 55
Corporate income tax in the Republic of Kazakhstan	
- Corporate income tax	30
- Income tax from the profit distribution	15
Corporate income tax in the Republic of Mozambique	32
Petroleum income tax in the Republic of Angola	50

Income tax expenses for the year ended 31 December comprised:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Current income tax	1,622	1,265	56,836	40,655
Deferred income tax	440	22	15,459	873
Total income tax expenses	2,062	1,287	72,295	41,528

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Current income tax	574	599	20,123	19,183
Deferred income tax	225	(54)	7,923	(1,649)
Total income tax expenses	799	545	28,046	17,534

The income tax on the Group's profit before income tax differs from the theoretical amount that would arise using the basic tax rate of the home country of the Company are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Profit before income tax	4,060	2,497	143,196	80,392
Tax calculated at a tax rate of 50%	2,030	1,249	71,598	40,196
Tax effect of:				
Loss of the entities not subject to tax	205	246	7,232	7,920
Expenses not deductible for tax purpose	312	155	11,002	4,988
Adjustment in respect of prior year	6	(15)	190	(474)
Results of operations of associates and joint ventures, net of tax	(10)	(8)	(334)	(244)
Tax credit on petroleum royalty	(576)	(485)	(20,330)	(15,606)
Deferred tax on functional currency	15	10	526	294
Foreign income tax	66	30	2,342	964
Difference in tax rate of the Group's operating countries	14	105	491	3,387
Others	-	-	(422)	103
Tax charge	2,062	1,287	72,295	41,528

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	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	2022	2021	2022	2021
Profit before income tax	2,340	1,821	81,990	58,500
Tax calculated at a tax rate of 50%	1,170	911	40,995	29,250
Tax effect of:				
Gain from the entities not subject to tax	(27)	(15)	(954)	(461)
Expenses not deductible for tax purpose	222	173	7,782	5,573
Adjustment in respect of prior year	12	(1)	399	(23)
Tax credit on petroleum royalty	(453)	(390)	(15,881)	(12,501)
Foreign income tax	18	-	636	-
Tax rate difference impact on				
profits before tax	(143)	(133)	(4,988)	(4,282)
Others	-	-	57	(22)
Tax charge	799	545	28,046	17,534

34 Earnings per share

Basic earnings per share for the year ended 31 December are calculated as follows:

	Consolidated financial statements			
	Unit: US Dollar		Unit: Baht	
	2022	2021	2022	2021
Profit attributable to equity holders of parent (unit: million)	1,999	1,211	70,901	38,864
<u>Less</u> Interest expenses for subordinated capital debentures (unit: million)	(4)	(9)	(145)	(294)
Redemption of subordinated capital debentures (unit: million)	14	-	490	-
Income tax for subordinated capital debentures (unit: million)	(1)	(2)	(14)	(52)
Profit used to determine basic earnings per share (unit: million)	2,008	1,200	71,232	38,518
Weighted average number of ordinary shares outstanding during the year (million shares)	3,970	3,970	3,970	3,970
Basic earnings per share	0.51	0.30	17.94	9.70

	Separate financial statements			
	Unit: US Dollar		Unit: Baht	
	2022	2021	2022	2021
Profit attributable to equity holders of parent (unit: million)	1,541	1,276	53,944	40,966
<u>Less</u> Interest expenses for subordinated capital debentures (unit: million)	(4)	(9)	(145)	(294)
Redemption of subordinated capital debentures (unit: million)	14	-	490	-
Income tax for subordinated capital debentures (unit: million)	(1)	(2)	(14)	(46)
Profit used to determine basic earnings per share (unit: million)	1,550	1,265	54,275	40,626
Weighted average number of ordinary shares outstanding during the year (million shares)	3,970	3,970	3,970	3,970
Basic earnings per share	0.39	0.32	13.67	10.23

35 Commitments and contingent liabilities

35.1 Contractual commitments

As at 31 December 2022 and 2021, significant contractual commitments contracted but not recognised as liabilities are as follows:

	Consolidated financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021
Capital commitments	2,085	1,637	72,079	54,708
Other commitments	168	72	5,797	2,406
Total	2,253	1,709	77,876	57,114

	Separate financial statements			
	Unit: Million US Dollar		Unit: Million Baht	
	31 December	31 December	31 December	31 December
	2022	2021	2022	2021
Capital commitments	227	310	7,815	10,360
Other commitments	8	22	292	735
Total	235	332	8,107	11,095

35.2 Contingent liabilities

- On 9 August 2016, PTTEP Australasia (Ashmore Cartier) Pty Ltd (PTTEP AAA) was notified of a claim made in the Sydney Registry of the Federal Court of Australia seeking damages on behalf of a group of West Timorese seaweed farmers (Class Action) for compensation relating to the Montara oil spill incident in the Timor Sea in 2009. Subsequently, on 19 March 2021, the court found that oil from the Montara oil spill incident, on the balance of probabilities, reached the lead plaintiff's seaweed farm in late 2009, destroying his seaweed crops and making it difficult for him to re-establish his crops in the following five years. The court determined the damages caused only to the lead plaintiff of the class action of approximately Indonesian Rupiah 253 million or equivalent to US Dollar 0.02 million (Baht 0.54 million). Interest on these damages was agreed to be approximately Indonesian Rupiah 165 million or equivalent to US Dollar 0.01 million (Baht 0.35 million).

On 25 October 2021, the court delivered its judgment on the remaining unanswered common questions in the class action. The court identified the impacted areas, on the balance of probabilities, from the Montara oil spill incident, from the period September to at least November 2009. The judgment related to the lead plaintiff's claim and the common questions raised at trial only. Claims of all the class members are presently statute barred and must be determined separately. The court's decision did not negate the requirement for individual class members to demonstrate their actual loss and damage.

PTTEP AAA lodged an appeal on 13 December 2021 against the court's first instance judgment in its entirety. The court also made orders requiring a mediation to occur in the Class Action proceeding and PTTEP AAA participated in that mediation. The mediation resulted in PTTEP AAA reaching an in-principle agreement with the group of Indonesian seaweed farmers resulting in signature of a settlement deed in November 2022, that PTTEP AAA will pay Australian Dollar 192.5 million, in full, and finalise settlement of the Class Action (including PTTEP AAA's appeal). The in-principle settlement was made on a no admission of liability basis and is still subject to court approval.

As at 31 December 2022, PTTEP AAA recognised a provision for the Class Action settlement of Australian Dollar 192.5 million or equivalent to US Dollar 130.42 million (Baht 4,507.58 million).

- As at 31 December 2022, the Company had contingent liabilities in the form of letters of guarantee with an amount equivalent to US Dollar 342.46 million (Baht 11,836.32 million) for the separate financial statements and with an amount equivalent to US Dollar 504.21 million (Baht 17,426.74 million) for the consolidated financial statements.

35.3 Commitments

Commitment from the guarantee of debentures and loans of subsidiaries

The Company has commitment for the guarantee of unsecured and unsubordinated capital debenture of US Dollar 490 million for PTTEP Canada International Finance Limited (PTTEP CIF), a subsidiary of the Group.

The Company has commitment for the guarantee of unsecured and unsubordinated capital debenture of US Dollar 1,500 million and the senior guaranteed debentures with a bondholders' representative of Baht 12,000 million for PTTEP Treasury Center Company Limited (PTTEP TC), a subsidiary of the Company.

The Company has commitment for the guarantee of cross currency swap transactions for PTTEP TC to swap Baht debenture to US Dollar with guaranteed amount of US Dollar 348.66 million.

The Company has commitment for the guarantee of senior debt financing agreements in the form of Project Finance of a subsidiary of MoZ LNG1 Holding Company Ltd (HoldCo) with the facility in the amount of US Dollar 14,900 million, which is guaranteed by the Company based on the Group's participating interest in HoldCo of 8.5%, which is equivalent to US Dollar 1,267 million.

The Company has commitment for the guarantee of PTTEP TC's US Dollar loan agreement which is a committed revolving credit facilities with a financial institution. The total loan facility is in amount of US Dollar 400 million. As at 31 December 2022, there is unutilised credit facilities of US Dollar 400 million.

36 Events occurring after the reporting date

On 10 January 2023, AI and Robotics Ventures Company Limited (ARV), a subsidiary of the Group, established Bind Analytics Company Limited (BIND) with a registered capital of Baht 5 million. The registered capital comprises 0.5 million ordinary shares at a par value of Baht 10 each. ARV holds 100% interest in BIND. Its registered shares were unpaid. The Group classifies the investment in BIND as an investment in a subsidiary.

On 10 January 2023, ARV established Bedrock Analytics Company Limited (Bedrock) with a registered capital of Baht 5 million. The registered capital comprises 0.5 million ordinary shares at a par value of Baht 10 each. ARV holds 100% interest in Bedrock. Its registered shares were unpaid. The Group classifies the investment in Bedrock as an investment in a subsidiary.

On 10 January 2023, Rovula (Thailand) Co., Ltd. (Rovula), a subsidiary of the Group, established S2 Robotics Company Limited (S2) with a registered capital of Baht 1 million. The registered capital comprises 0.01 million ordinary shares at a par value of Baht 100 each. Rovula holds 100% interest in S2. Its registered shares were unpaid. The Group classifies the investment in S2 as an investment in a subsidiary.