

Attachment: Supplemental Information on Petroleum Exploration and Production Activities (Unaudited)**(A) PTTEP and Our Subsidiaries' Petroleum Reserves Report as of December 31, 2021**

The total Proved Reserves of PTTEP and our subsidiaries as of December 31, 2021 are shown in the attached table. The Proved Reserves are reviewed annually by Company's earth scientists and reservoir engineers to ensure rigorous professional standards. The Proved Reserves are reported on a gross basis, which includes the Company's net working interest and related host country's interest.

Furthermore, in order to improve efficiency, check and balance of the reserves estimation, reporting and disclosure, the company maintains a Reserves Committee which has the following roles and responsibilities:

- Review and endorse the Company's Annual Reserves
- Review and approve Major Changes of Reserves, and Reserves for Newly-Acquired Project
- Ensure that all activities that related to reserves estimation and disclosure of reserves information conform to regulatory and legal requirements as well as to corporate and international standards
- Approve Annual Reserves Audit Plan, appoint Reserves Auditor, as well as approve Reserves Audit Report to ensure compliance with Company's framework and continual process improvement

As of December 31, 2021, the total amount of Proved Reserves of PTTEP Group's projects¹ was 357 million stock-tank barrels (MMSTB) of crude oil and condensate² and 5,973 billion standard cubic feet (BSCF) of natural gas or 993 million barrels of oil equivalent (MMBOE). The total amount of Proved Reserves in terms of oil equivalent was therefore 1,350 MMBOE.

In 2021, the total production of PTTEP Group¹ was 181 MMBOE, consisting of 48 MMSTB of crude oil and condensate² and 821 BSCF of natural gas or 133 MMBOE. This was equivalent to the average production rate of 494,877 barrels of oil equivalent per day (BOED) which was approximately 72,599 BOED or 17% increase from the previous year. The increase in production mainly comes from the production of the newly acquired Oman Block 61 in 2021, and the first production from Rotan and Buluh offshore gas fields in Sabah, Malaysia Project.

¹ Include APICO Joint Venture project

² Include Natural Gas Liquids (NGL)

PTT Exploration and Production Public Company Limited
Crude Oil and Condensate and Natural Gas Proved Reserves⁽¹⁾

	Crude Oil and Condensate ⁽²⁾			Natural Gas			Barrel of Oil Equivalent		
	(MMSTB)			(BSCF)			(MMBOE)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Company's share of proved reserves of consolidated companies									
As of December 31, 2019	123	187	310	2,704	2,377	5,081	564	574	1,138
1) Revision of previous estimates	9	4	13	145	23	168	33	9	42
2) Improved recovery	1	6	7	1	0	1	1	6	7
3) Extensions and discoveries	6	6	12	165	2	167	33	6	39
4) Purchases/Sales of Petroleum in place	-	-	-	-	-	-	-	-	-
5) Production	(27)	(20)	(47)	(435)	(231)	(666)	(98)	(55)	(153)
As of December 31, 2020	112	183	295	2,580	2,171	4,751	533	540	1,073
Company's share of proved reserves of consolidated companies									
As of December 31, 2020	112	183	295	2,580	2,171	4,751	533	540	1,073
1) Revision of previous estimates	7	4	11	51	(25)	26	15	2	17
2) Improved recovery	2	-	2	2	-	2	3	-	3
3) Extensions and discoveries	20	8	28	781	48	829	147	15	162
4) Purchases/Sales of Petroleum in place	-	69	69	-	1,117	1,117	-	264	264
5) Production	(26)	(22)	(48)	(470)	(342)	(812)	(103)	(76)	(179)
As of December 31, 2021	115	242	357	2,944	2,969	5,913	595	745	1,340

⁽¹⁾ The Proved Reserves are reported on a gross basis which includes the Company's net working interest and the related host country's interest.

⁽²⁾ Include Natural Gas Liquids (NGL)

PTT Exploration and Production Public Company Limited
Crude Oil and Condensate and Natural Gas Proved Reserves⁽¹⁾

	Crude Oil and Condensate ⁽²⁾			Natural Gas			Barrel of Oil Equivalent		
	(MMSTB)			(BSCF)			(MMBOE)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Company's share of proved reserves of equity companies ⁽³⁾									
As of December 31, 2019	0	-	0	16	-	16	2	-	2
1) Revision of previous estimates	-	-	-	-	-	-	0	-	0
2) Improved recovery	-	-	-	-	-	-	-	-	-
3) Extensions and discoveries	0	-	0	2	-	2	1	-	1
4) Purchases/Sales of Petroleum in place	-	-	-	-	-	-	-	-	-
5) Production	(0)	-	(0)	(9)	-	(9)	(2)	-	(2)
As of December 31, 2020	0	-	0	9	-	9	1	-	1
Company's share of proved reserves of equity companies ⁽³⁾									
As of December 31, 2020	0	-	0	9	-	9	1	-	1
1) Revision of previous estimates	-	-	-	(3)	-	(3)	(0)	-	(0)
2) Improved recovery	-	-	-	-	-	-	-	-	-
3) Extensions and discoveries	0	-	0	63	-	63	11	-	11
4) Purchases/Sales of Petroleum in place	-	-	-	-	-	-	-	-	-
5) Production	(0)	-	(0)	(9)	-	(9)	(2)	-	(2)
As of December 31, 2021	0	-	0	60	-	60	10	-	10
Total Proved Reserves									
As of December 31, 2021	115	242	357	3,004	2,969	5,973	605	745	1,350

⁽¹⁾ The Proved Reserves are reported on a gross basis which includes the Company's net working interest and the related host country's interest.

⁽²⁾ Natural Gas Liquids (NGL)

⁽³⁾ Reserves from APICO Joint Venture project

(B) Capitalized Costs Relating to Oil and Gas Producing Activities

Capitalized costs represent cumulative expenditures for proved and unproved properties together with related accumulated depreciation, depletion, amortization and allowance for impairment loss on assets.

Proved properties include exploration wells, development wells, transportation pipeline, producing facilities, right-of-use assets and decommissioning costs. Unproved properties represent amounts associated with capitalized cost of projects which have not yet found proved reserves.

(Unit : Million US Dollar)	2021	2020
Proved properties	36,055	32,435
Unproved properties	<u>4,446</u>	<u>4,694</u>
Gross capitalized costs	40,501	37,129
Accumulated depreciation, depletion, amortization and allowance for impairment	<u>(25,588)</u>	<u>(23,996)</u>
Net capitalized costs	<u>14,913</u>	<u>13,133</u>

(C) Costs Incurred in Oil and Gas Property Acquisition, Exploration, and Development Activities

Costs incurred in oil and gas property acquisition, exploration and development activities represent amounts both capitalized and charged to expense during the year.

Property acquisition costs include costs to purchase proved and unproved properties.

Exploration costs include geological and geophysical expenses, exploratory drilling cost as well as reservation fee for exploration blocks.

Development costs include costs associated with drilling and equipping development wells, improved recovery systems, facilities for extraction, treating, gathering and storage, producing facilities for existing developed reserves, and costs associated with transportation pipeline.

(Unit : Million US Dollar)	2021			2020		
	Domestic	Foreign	Total	Domestic	Foreign	Total
Acquisition of properties						
- Proved	19	2,300	2,319	8	-	8
- Unproved	-	3	3	-	1	1
Exploration costs	44	157	201	21	133	154
Development costs	<u>799</u>	<u>832</u>	<u>1,631</u>	<u>669</u>	<u>510</u>	<u>1,179</u>
Total	<u>862</u>	<u>3,292</u>	<u>4,154</u>	<u>698</u>	<u>644</u>	<u>1,342</u>

(D) Results of operations for producing activities

Results of operations from oil and gas producing activities for the year 2021 and 2020 are shown in the following table.

Operating expenses include lifting costs incurred to operate and maintain productive wells and related equipment.

Exploration expenses consist of geological and geophysical costs, and exploratory well including project cost write off expenses.

Administrative expenses are expenses directly related to oil and gas producing activities.

Depreciation, depletion and amortization expenses relates to capitalized costs incurred in acquisition, exploration and development activities, transportation pipeline, including amortized decommissioning costs.

Other expenses (income) mainly include impairment loss on assets, foreign exchange gains and losses directly related to oil and gas producing activities and other income.

Income tax expenses are based on the results of operations from petroleum producing activities.

General corporate overhead and finance costs are excluded from the results of operations for petroleum producing activities.

(Unit : Million US Dollar)	2021			2020		
	Domestic	Foreign	Total	Domestic	Foreign	Total
Revenues						
Revenues from sales – Related parties	4,074	1,029	5,103	3,290	864	4,154
Revenues from sales – Third parties	231	1,677	1,908	251	961	1,212
Total revenues from sales	4,305	2,706	7,011	3,541	1,825	5,366
Expenses						
Operating expenses	454	623	1,077	461	583	1,044
Exploration expenses	0	226	226	5	99	104
Administrative expenses	43	96	139	32	99	131
Petroleum royalties	501	29	530	408	2	410
Depreciation, depletion and amortization	1,339	825	2,164	1,392	659	2,051
Other (income) / expenses	3	(222)	(219)	(33)	89	56
Total expenses	2,340	1,577	3,917	2,265	1,531	3,796
Results before income taxes	1,965	1,129	3,094	1,276	294	1,570
Income tax expenses	691	630	1,321	385	198	583
Net results of operations	<u>1,274</u>	<u>499</u>	<u>1,773</u>	<u>891</u>	<u>96</u>	<u>987</u>

(E) **Standardized Measure of Discounted Future Net Cash Flows (SMDCF) Relating to the Proved Oil and Gas Reserves**

The standardized measure of discounted future net cash flows related to the above proved oil and gas reserves, is computed by applying 12-month average prices* (with consideration of price changes only to the extent provided by contractual arrangements), to the estimated future production of year-end remaining proved oil and gas reserves less estimated future expenditures (based on year-end costs) to be incurred in developing and producing the proved reserves.

Future income taxes are calculated by applying the appropriate year-end statutory tax rates to the future pre-tax net cash flows and deducted by applicable tax deductions or tax credits.

Net Cash flows are discounted using a rate of 10% per year to reflect the estimated timing of the future cash flows.

The estimation of discounted future net cash flow shown below is not intended to represent the fair value of oil and gas properties. The fair value should take into account of several factors, such as probable and possible reserves which may turn into proved reserves in the future, anticipated future oil and gas prices, interest rates, changes in development and production costs and risks associated with future production. Therefore, the fair value will subject to the view and perception of analyst.

* Twelve-month average prices are calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month.

Standardized Measure of Discounted Future Net Cash Flows Relating to Prove Oil and Gas Reserves

(Unit : Million US Dollar)	Domestic		Foreign		Total	
	2021	2020	2021	2020	2021	2020
Future cash inflows	15,555	14,293	23,197	13,375	38,752	27,668
Future production costs	(5,872)	(2,578)	(5,797)	(3,932)	(11,669)	(6,510)
Future development costs	(4,758)	(7,124)	(3,603)	(3,343)	(8,361)	(10,467)
Future income tax expenses	(1,261)	(1,307)	(3,456)	(1,410)	(4,717)	(2,717)
Future net cash flows	3,664	3,284	10,341	4,690	14,005	7,974
10% annual discount	(678)	(569)	(5,243)	(2,247)	(5,921)	(2,816)
Standardized measure of discounted future net cash flows (SMDCF) of consolidated companies	2,986	2,715	5,098	2,443	8,084	5,158
SMDCF of equity companies ⁽¹⁾	145	14	-	-	145	14
Total SMDCF	3,131	2,729	5,098	2,443	8,229	5,172

Changes in Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Oil and Gas Reserves

(Unit : Million US Dollar)	2021	2020
Present value at beginning of year of consolidated companies	5,158	8,477
Sales and transfers of oil and gas produced, net of production costs during period	(4,624)	(3,624)
Development costs incurred during the period	1,842	1,437
Net changes in prices and production costs	5,794	(7,387)
Net changes in development costs	(343)	340
Extensions, discoveries and improved recovery	1,334	399
Revisions of previous quantity estimates	233	559
Purchases / sales of petroleum in place	3,795	-
Accretions of discount	(3,105)	2,314
Net changes in income taxes	(2,000)	2,643
Present value at the year end of consolidated companies	8,084	5,158
Present value at the year end of equity company ⁽¹⁾	145	14
Total Present value at the year end	8,229	5,172

⁽¹⁾ included investment in APICO Joint Venture project

(F) Other Information

Producing Oil and Gas Wells

The numbers of producing wells⁽¹⁾ as of December 31, 2021 were as follows:

	Oil	Gas
Thailand	1,440	1,616
Overseas:		
Southeast Asia	118	363
Others	9,307	124
Total	<u>10,865</u>	<u>2,103</u>

Definition of producing wells:

- Producing wells: wells which are either currently producing or temporary closed, but exclude water disposal wells or wells which have been plugged & abandoned.
- Producing Oil wells: wells which primarily produce oil, with or without associated gas.
- Producing Gas wells: wells which primarily produce natural gas, with or without associated liquids.

Drilling in Progress of Oil and Gas Wells

The numbers of wells in progress as at December 31, 2021 were as follows:

	Number of Well ⁽¹⁾
<u>Exploratory</u>	
Thailand	1
Overseas:	
Southeast Asia	-
Others	1
Total	<u>2</u>
<u>Development</u>	
Thailand	17
Overseas:	
Southeast Asia	3
Others	5
Total	<u>25</u>

⁽¹⁾ Total number of wells reported at 100% (Gross), not only PTTEP's participating interest

Oil and Gas Wells⁽¹⁾ Drilled Annually in 2021

	<u>Technical Success</u>	<u>Dry Well</u>
<u>Exploratory</u>		
Thailand	5	-
Overseas:		
Southeast Asia	5	1
Others	1	2
Total	<u>11</u>	<u>3</u>
	<u>Productive Well</u>	<u>Dry Well</u>
<u>Development</u>		
Thailand	245	6
Overseas:		
Southeast Asia	48	-
Others	20	-
Total	<u>313</u>	<u>6</u>

⁽¹⁾ Total number of wells reported at 100% (Gross), not only PTTEP's participating interest

Quarterly information in 2021 and 2020 for the consolidated financial statements are as follows:

Unit: Thousand US Dollar

<u>Year 2021</u>	<u>4thQ</u>	<u>3rdQ</u>	<u>2ndQ</u>	<u>1stQ</u>
Revenues				
Revenue from sales	1,867,008	1,743,639	1,728,895	1,391,318
Revenue from pipeline transportation	26,248	26,686	19,804	20,409
Other income				
Gain on foreign exchange rates	4,946	-	-	-
Gain from a bargain purchase	(8,097)	-	-	349,971
Interest income	3,428	3,465	4,726	5,131
Other income	95,068	10,459	14,392	11,675
Total Revenues	1,988,601	1,784,249	1,767,817	1,778,504
Expenses				
Operating expenses	275,037	219,801	192,455	174,202
Exploration expenses	19,698	50,285	7,464	148,805
Administrative expenses	125,534	71,625	82,935	74,945
Petroleum royalties	142,654	131,997	137,964	117,600
Depreciation, depletion and amortisation	419,870	605,821	629,714	546,659
Other expenses				
Loss on foreign exchange rates	-	36,323	1,753	4,462
Loss on remeasuring of financial instruments	6,529	5,052	124,350	98,359
Impairment loss on assets and goodwill	183,000	-	-	-
Finance costs	50,826	52,008	51,372	48,020
Total Expenses	1,223,148	1,172,912	1,228,007	1,213,052
Share of profit of associates and joint ventures	3,305	6,895	2,795	2,179
Profit before income taxes	768,758	618,232	542,605	567,631
Income taxes	(447,941)	(326,179)	(320,957)	(191,611)
Profit for the period	320,817	292,053	221,648	376,020
Earnings per share				
Basic earnings per share	0.08	0.07	0.06	0.09

Unit: Thousand US Dollar

Year 2020	4thQ	3rdQ	2ndQ	1stQ
Revenues				
Revenue from sales	1,292,490	1,228,270	1,040,554	1,481,856
Revenue from pipeline transportation	18,582	25,150	24,965	23,653
Other income				
Gain on foreign exchange rates	19,279	9,532	9,256	-
Gain on remeasuring of financial instruments	-	27,424	-	221,687
Gain on debt modification	-	-	-	22,307
Interest income	7,451	7,639	8,398	13,241
Other income	9,698	7,222	11,439	8,653
Total Revenues	1,347,500	1,305,237	1,094,612	1,771,397
Expenses				
Operating expenses	234,095	181,110	183,427	196,480
Exploration expenses	26,821	8,311	30,558	38,624
Administrative expenses	117,061	68,934	62,362	65,760
Petroleum royalties	103,709	105,316	78,221	122,908
Depreciation, depletion and amortisation	547,871	514,705	487,111	536,396
Other expenses				
Loss on foreign exchange rates	-	-	-	12,005
Loss on remeasuring of financial instruments	72,158	-	77,622	-
Impairment loss on assets and goodwill	44,072	-	47,504	-
Other expenses	-	-	-	20,341
Finance costs	66,930	61,816	60,872	64,858
Total Expenses	1,212,717	940,192	1,027,677	1,057,372
Share of profit (loss) of associates and joint ventures	25,083	4,593	(1,811)	13,771
Profit before income taxes	159,866	369,638	65,124	727,796
Income taxes	(79,321)	(139,745)	68,661	(452,475)
Profit for the period	80,545	229,893	133,785	275,321
Earnings per share				
Basic earnings per share	0.02	0.06	0.03	0.07

Petroleum Sales Volume and Average Unit Prices

	2021	2020
Net sales of petroleum (BOED)	416,141	354,052
Average petroleum unit prices		
Average unit prices of crude oil and condensate (USD/BBL)	66.70	41.55
Average unit prices of natural gas (USD/MMBTU)	5.69	6.27
Average unit prices of petroleum (USD/BOE)	43.49	38.92
Lifting cost (USD/BOE)	4.13	4.47