

Supplemental Information on Petroleum Exploration and Production Activities

(A) PTTEP and Our Subsidiaries' Petroleum Reserve Report As of December 31, 2016

The total Proved Reserves of PTTEP and our subsidiaries as of December 31, 2016 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.

As of December 31, 2016, the total Proved Reserves of all projects of PTTEP Group are 170 million stock-tank barrels (MMSTB) of crude oil and condensate¹, and 3,371 billion standard cubic feet (BSCF) of natural gas (525 million barrels of oil equivalent (MMBOE)). The total Proved Reserves (consolidated companies) in term of oil equivalent is 695 MMBOE. Proved Reserves of crude and condensate are approximately 25% while, for gas, are 75% of the total Proved Reserves in terms of oil equivalent.

In 2016, the total production of PTTEP Group is 135 MMBOE (38 MMSTB of crude oil and condensate¹ and 610 BSCF of natural gas or 97 MMBOE) which is equivalent to the production rate of approximately 369,312 barrels of oil equivalent per day (BOED), approximately 4,576 BOED or 1.2% decrease from last year. The decrease was mainly due to temporary production facility shut down for maintenance and natural production decline of PTTEP Australasia, Vietnam 16-1, and Yetagun projects. However, the reduction of production is compensated by increasing of production from Algeria 433a & 416b Project.

¹ Include the proved reserves and production of LPG

	Proved Reserves of Crude Oil and Condensate ⁽²⁾			Proved Reserves of Natural Gas			Proved Reserves of Crude, Condensate and Natural Gas ⁽¹⁾ Barrel of Oil Equivalent		
	(MMSTB)			(BSCF)			(MMBOE)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Company's share of reserves of consolidated companies									
As of December 31, 2014	113	74	187	2,119	1,695	3,814	461	316	777
1) Revision of previous estimates	14	9	23	336	53	389	70	17	87
2) Improved recovery	4	1	5	2	1	3	4	2	6
3) Extensions and discoveries	4	-	4	(27)	30	3	(1)	5	4
4) Purchases/Sales of Petroleum in place	-	-	-	-	-	-	-	-	-
5) Production	(27)	(12)	(39)	(409)	(209)	(618)	(94)	(42)	(136)
As of December 31, 2015	108	72	180	2,021	1,570	3,591	440	298	738
Company's share of reserves of consolidated companies									
As of December 31, 2015	108	72	180	2,021	1,570	3,591	440	298	738
1) Revision of previous estimates	18	1	19	292	(18)	274	65	(1)	64
2) Improved recovery	4	-	4	5	-	5	5	-	5
3) Extensions and discoveries	5	-	5	111	-	111	23	-	23
4) Purchases/Sales of Petroleum in place	-	-	-	-	-	-	-	-	-
5) Production	(27)	(11)	(38)	(411)	(199)	(610)	(95)	(40)	(135)
As of December 31, 2016	108	62	170	2,018	1,353	3,371	438	257	695

(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) LPG Included

(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.

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

(Unit: Million US Dollar)	2016	2015
Proved properties	26,011	25,319
Unproved properties	<u>4,717</u>	<u>4,727</u>
Gross capitalized costs	30,728	30,046
Accumulated depreciation, depletion, amortization and allowance for impairment	<u>(18,703)</u>	<u>(16,871)</u>
Net capitalized costs	<u>12,025</u>	<u>13,175</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)	2016			2015		
	Domestic	Foreign	Total	Domestic	Foreign	Total
Acquisition of properties						
- Proved	-	-	-	-	-	-
- Unproved	-	1	1	-	-	-
Exploration costs	4	54	58	88	274	362
Development costs	<u>747</u>	<u>303</u>	<u>1,050</u>	<u>1,171</u>	<u>504</u>	<u>1,675</u>
Total	<u>751</u>	<u>358</u>	<u>1,109</u>	<u>1,259</u>	<u>778</u>	<u>2,037</u>

(D) Results of operations for producing activities

Results of operations from oil and gas producing activities for the year 2016 and 2015 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 write off expenses.

General 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)	2016			2015		
	Domestic	Foreign	Total	Domestic	Foreign	Total
Gross revenues						
Sales – Related parties	2,873	1,018	3,891	3,529	1,456	4,985
Sales – Third parties	249	355	604	242	541	783
Total Sales	3,122	1,373	4,495	3,771	1,997	5,768
Expenses						
Operating expenses	366	461	827	446	608	1,054
Exploration expenses	3	70	73	16	167	183
General administrative expenses	36	58	94	53	62	115
Petroleum royalties and remuneration	353	0	353	426	0	426
Depreciation, depletion and amortization	1,434	623	2,057	1,836	849	2,685
Other (income)/ expenses	<u>(33)</u>	<u>45</u>	<u>12</u>	<u>171</u>	<u>1,169</u>	<u>1,340</u>
Total expenses	2,159	1,257	3,416	2,948	2,855	5,803
Results before income taxes	963	116	1,079	823	(858)	(35)
Income tax expenses	<u>271</u>	<u>26</u>	<u>297</u>	<u>374</u>	<u>119</u>	<u>493</u>
Net results of operations	<u>692</u>	<u>90</u>	<u>782</u>	<u>449</u>	<u>(977)</u>	<u>(528)</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 Proved Oil and Gas Reserves

(Unit: Million US Dollar)	Domestic		Foreign		Total	
	2016	2015	2016	2015	2016	2015
Future cash inflows	13,565	14,538	6,106	10,558	19,671	25,096
Future production costs	(2,283)	(2,730)	(1,614)	(2,077)	(3,897)	(4,807)
Future development costs	(4,718)	(5,990)	(1,612)	(1,900)	(6,330)	(7,890)
Future income tax expenses	<u>(2,177)</u>	<u>(1,944)</u>	<u>(626)</u>	<u>(1,200)</u>	<u>(2,803)</u>	<u>(3,144)</u>
Future net cash flows	4,387	3,874	2,254	5,381	6,641	9,255
10% annual discount	<u>(337)</u>	<u>(136)</u>	<u>(651)</u>	<u>(1,691)</u>	<u>(988)</u>	<u>(1,827)</u>
Standardized measure of discounted future net cash flows (SMDCF)	<u>4,050</u>	<u>3,738</u>	<u>1,603</u>	<u>3,690</u>	<u>5,653</u>	<u>7,428</u>

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

(Unit: Million US Dollar)	2016	2015
Present value at beginning of year	7,428	12,229
Sales and transfers of oil and gas produced, net of production costs	(3,210)	(4,106)
Development costs incurred during the period	1,103	1,844
Net changes in prices and production costs	(3,779)	(9,470)
Net changes in development costs	1,495	(270)
Extensions, discoveries and improved recovery	469	186
Revisions of previous quantity estimates	967	1,540
Purchases / sales of petroleum in place	-	-
Accretions of discount	839	2,955
Net changes in income taxes	<u>341</u>	<u>2,520</u>
Present value at the year end	<u>5,653</u>	<u>7,428</u>

(E) Other Information

Productive Oil/Condensate and Gas Wells

The numbers of productive wells at December 31, 2016 were as follows:

	Oil/Condensate		Gas	
	Gross	Net	Gross	Net
Thailand	902	476	1,307	572
Foreign				
Southeast Asia	42	14	183	84
Others	17	10	10	10
Total	961	500	1,500	666

Drilling in Progress of Oil/Condensate and Gas Wells

The numbers of wells in progress at December 31, 2016 were as follows:

	Gross	Net
<u>Exploratory</u>		
Thailand	-	-
Foreign		
Southeast Asia	-	-
Others	-	-
Total	-	-

Development

Thailand	55	11.05
Foreign		
Southeast Asia	18	10.59
Others	-	-
Total	73	21.64

Net Oil/Condensate and Gas Wells Drilled in 2016

	Net Productive wells drilled	Net dry well drilled
<u>Exploratory</u>		
Thailand	2.65	2.00
Foreign		
Southeast Asia	-	-
Others	0.69	-
Total	<u>3.34</u>	<u>2.00</u>
 <u>Development</u>		
Thailand	182.32	8.74
Foreign		
Southeast Asia	24.48	-
Others	-	-
Total	<u>206.80</u>	<u>8.74</u>

Gross wells include the total number of wells in which the Company has an interest excluding utility wells.

Net wells are the sum of the Company's fractional interests in gross wells.

Quarterly Information in 2016 and 2015 for the consolidated financial statement are as follows:

Unit: US Dollar

<u>Year2016</u>	<u>4thQ</u>	<u>3thQ</u>	<u>2thQ</u>	<u>1thQ</u>
Revenues				
Sales	1,037,434,592	1,046,476,331	1,061,000,216	1,044,652,922
Revenue from pipeline transportation	14,225,854	18,934,315	16,701,593	16,624,759
Other income	-	-	-	-
Gain on foreign exchange	-	14,351,726	6,572,364	6,223,387
Interest income	9,659,695	7,210,535	7,452,250	5,742,545
Gain on financial derivatives	14,311,187	14,620,515	-	-
Other income	12,375,135	7,127,104	10,675,096	11,305,277
Total Revenues	1,088,006,463	1,108,720,526	1,102,401,519	1,084,548,890
Expenses				
Operating expenses	167,386,453	146,011,694	138,679,994	130,052,595
Exploration expenses	11,920,878	20,361,689	15,583,064	25,486,002
Administrative expenses	92,016,021	38,466,880	58,134,551	30,325,339
Petroleum royalties and remuneration	87,892,910	88,924,530	87,967,397	88,323,501
Depreciation, depletion and amortization	509,335,454	534,407,622	517,658,659	517,980,644
Other expenses				
Loss on foreign exchange	15,560,457	-	-	-
Loss on financial derivatives	-	-	97,533,923	49,586,533
Management's remuneration	1,580,811	797,861	820,214	785,642
Impairment loss on assets	47,150,837	-	-	-
Finance costs	57,896,251	59,241,885	59,035,265	58,292,332
Total Expenses	990,740,072	888,212,161	975,413,067	900,832,588
Share of gain from associates and joint ventures	2,359,011	2,341,048	1,828,615	2,018,422
Profit before income taxes	99,625,402	222,849,413	128,817,067	185,734,724
Income tax expenses	(133,322,118)	(67,481,839)	(54,598,693)	(29,904,152)
Profit (loss) for the period from continuing operations	(33,696,716)	155,367,574	74,218,374	155,830,572
Profit (loss) for the period from discontinued operations - net of tax	17,635,015	272,758	1,135,156	1,291,184
Profit (loss) for the year	(16,061,701)	155,640,332	75,353,530	157,121,756
Earnings per share				
Basic earnings per share				
Continuing operations	(0.01)	0.04	0.01	0.04
Discontinued operations	0.004	0.0001	0.0003	0.0003

Unit: US Dollar

	<u>Year2015</u>	<u>4thQ</u>	<u>3thQ</u>	<u>2thQ</u>	<u>1thQ</u>
Revenues					
Sales		1,203,142,435	1,307,063,718	1,389,039,254	1,387,426,514
Revenue from pipeline transportation		22,964,786	29,836,406	30,536,212	35,150,233
Other income		-	-	-	-
Gain on foreign exchange		3,970,383	-	-	-
Interest income		6,367,880	5,385,246	11,170,866	8,992,329
Gain on financial derivatives		78,032,960	101,724,886	-	7,045,036
Other income		13,061,506	13,410,017	8,485,622	10,242,618
Total Revenues		1,327,539,950	1,457,420,273	1,439,231,954	1,448,856,730
Expenses					
Operating expenses		170,426,047	177,055,939	174,880,888	162,743,240
Exploration expenses		53,211,965	78,104,557	38,281,590	13,016,551
Administrative expenses		96,908,756	54,472,978	71,999,752	51,219,154
Petroleum royalties and remuneration		97,160,368	107,121,360	112,714,666	109,048,079
Depreciation, depletion and amortization		612,667,852	644,241,169	723,921,564	726,702,763
Other expenses					
Loss on foreign exchange		-	20,172,882	18,831,803	34,370,270
Loss on financial derivatives		-	-	54,641,472	-
Management's remuneration		169,881	956,325	1,165,405	1,486,834
Impairment loss on assets		-	1,349,618,465	-	-
Finance costs		49,455,780	61,457,418	72,234,408	68,549,454
Total Expenses		1,080,000,649	2,493,201,093	1,268,671,548	1,167,136,345
Share of gain from associates and joint ventures		2,072,797	2,474,224	1,861,150	2,619,506
Profit before income taxes		249,612,098	(1,033,306,596)	172,421,556	284,339,891
Income tax expenses		(118,140,229)	(220,335,593)	(137,176,866)	(19,865,479)
Profit (loss) for the period from continuing operations		131,471,869	(1,253,642,189)	35,244,690	264,474,412
Profit (loss) for the period from discontinued operations - net		477,347	(30,812,564)	(115,818)	(688,186)
Profit (loss) for the year		131,949,216	(1,284,454,753)	35,128,872	263,786,226
Earnings per share					
Basic earnings per share					
Continuing operations		0.03	(0.31)	0.005	0.07
Discontinued operations		0.0001	(0.008)	(0.00003)	(0.0002)

Petroleum Sales Volume and Average Unit Prices

	2016	2015
Net sales of petroleum (BOED)	319,521	322,167
Average petroleum unit prices		
Average unit prices of crude oil and condensate (USD/BBL)	41.17	50.05
Average unit prices of natural gas (USD/MMBTU)	5.60	7.20
Average unit prices of petroleum (USD/BOE)	35.91	45.29
Lifting cost (USD/BOE)	4.18	4.62