



Management's Discussion and  
Analysis Of Financial Condition and  
Result Of Operations  
For Quarter 4/2018 and year 2018

**"One family...  
Fueling the future of Thailand"**

**SPRC**

Star Petroleum Refining Public Company Limited

## 1) Company's Operating Result

(US\$ Million)	Q4/18	Q3/18	+ /(-)	Q4/17	+ /(-)	2018	2017	+ /(-)
Total Revenue	1,658	1,571	87	1,370	288	6,439	5,009	1,430
EBITDA	(128)	71	(199)	117	(245)	177	406	(230)
EBIT	(149)	50	(199)	96	(245)	93	324	(231)
Gain on foreign exchange	1	16	(15)	12	(11)	24	44	(19)
Net income (loss)	(118)	38	(156)	78	(196)	74	261	(188)
Net income (loss) (US\$ per share)	(0.03)	0.01	(0.04)	0.02	(0.05)	0.02	0.06	(0.04)
Accounting gross refining margin (US\$/barrel) <sup>(1)</sup>	(5.96)	6.34	(12.30)	9.73	(15.69)	4.73	8.52	(3.8)
Market gross refining margin (US\$/barrel) <sup>(2)</sup>	4.40	5.05	(0.65)	5.51	(1.11)	5.67	7.34	(1.7)

Crude intake (thousand barrels/day)	165.3	143.3	22.0	159.2	6.1	159.6	152.4	7.2
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(Baht Million)	Q4/18	Q3/18	+ /(-)	Q4/17	+ /(-)	2018	2017	+ /(-)
Total Revenue	54,668	52,050	2,618	45,335	9,332	209,159	170,535	38,624
EBITDA	(4,216)	2,359	(6,575)	3,865	(8,081)	5,591	13,845	(8,254)
EBIT	(4,910)	1,662	(6,572)	3,178	(8,088)	2,854	11,017	(8,163)
Gain on foreign exchange	36	526	(490)	389	(353)	793	1,509	(716)
Net income (loss)	(3,881)	1,248	(5,129)	2,573	(6,454)	2,263	8,895	(6,632)
Net income (loss) (Baht per share)	(0.90)	0.29	(1.18)	0.59	(1.49)	0.52	2.05	(1.53)

<sup>(1)</sup> margin includes inventory gain/loss based on weighted average inventory cost.

<sup>(2)</sup> margin is calculated based on current replacement cost.

Exchange rate (Baht/US\$)	Q4/18	Q3/18	+ /(-)	Q4/17	+ /(-)	2018	2017	+ /(-)
Average FX	32.99	33.15	(0.16)	33.11	(0.12)	32.49	34.10	(1.61)
Closing FX	32.61	32.58	0.04	32.85	(0.23)	32.61	32.85	(0.23)

Compared Q4/18 with Q3/18, in Q4/18 SPRC operated at high utilization which crude intake reached 100% of the refining capacity or 165.3 thousand barrels per day, an increase of 22.0 thousand barrels per day from Q3/18. Total sale revenue in Q4/18 was US\$1,658 million (Baht 54,668 million) which increased from Q3/18 mainly due to higher sales volume from higher throughput while last quarter sales volume and throughput was impacted by the maintenance and cleaning activity of the Crude Distillation Unit (CDU) and Vacuum Distillation Unit (VDU) in August.

In Q4/18, SPRC had net loss of US\$118 million (Baht 3,881 million), opposing to net income of US\$38 million (Baht 1,248 million) in Q3/18. The net loss in Q4/18 was primarily due to (i) a significant stock loss during the quarter resulted from a sharp drop in global oil price in Nov and Dec 18. This stock loss also included a write down of inventory to net realizable value as at 31 Dec 18 of US\$62 million (Baht 2,048 million) while there was a stock gain during Q3/18; (ii) lower refining margin and poor crack spread over Dubai resulted from an ample supply of refinery products especially gasoline pool. Both EBITDA and EBIT for Q4/18 were negative. Q4/18 accounting gross refining margin was negative at US\$(5.96)/bbl which was unfavorably impacted from such significant stock loss, comparing to a positive gross margin of US\$6.34/bbl in Q3/18 which included stock gain due to an increasing oil price. Excluding stock gain or loss, Q4/18 market gross refining margin was US\$4.40/bbl which was lower than US\$5.05/bbl in Q3/18 mainly impacted from high gasoline inventory in the market and a sluggish demand. Stronger Baht during Q3/18 resulted to exchange gain of US\$16 million, while Baht moved slightly in Q4/18 with exchange gain of US\$1 million.

Compared Q4/18 with Q4/17, crude intake and sale revenue also increased. Sale revenue in Q4/18 increased US\$288 million (Baht 9,332 million) over prior year quarter as a result of the increase in product price and higher sales volume while crude intake and sale in prior year quarter were impacted by the maintenance activity in Oct 17. However, SPRC's EBITDA, EBIT and NIAT in Q4/18 were adversely impacted by stock loss from the declining in oil price during the quarter. On the contrary, prior year earnings were favorably impacted by stock gain. Excluding stock gain or loss, SPRC market refining margin in Q4/18 was still lower than Q4/17 resulted from a decreasing regional demand and an ample supply. There was also exchange gain in Q4/17 of US\$12 million from Baht appreciation.

In 2018 crude intake was 159.6 thousand barrels per day or 96.8% of the refining capacity, increased 7.2 thousand barrels per day from 2017. Lower crude intake in last year was resulted from the maintenance activity of CDU in Jun 17 and RFCCU in Oct 17. Total sale revenue also increased from US\$5,009 million (Baht 170,535 million) in 2017 to US\$6,439 million (Baht 209,159 million) in 2018 as a result of the increase in product price and sales volume. Despite the higher selling price and sales volume in 2018, SPRC's EBITDA, EBIT and net income in 2018 were below last year. In 2018, EBITDA EBIT and net income decrease 56%, 71% and 72% respectively from 2017. The decrease in oil price during Q4/18 resulted to a significant stock loss in 2018 and lower accounting gross refining margin. The stock loss in 2018 also included a loss from inventory write down to net realizable value of US\$62 million while there was stock gain in 2017 due to the rise in oil price during the year. Excluding stock gain or loss, SPRC market refining margin in 2018 was US\$5.67/bbl which was also down from US\$7.34/bbl in 2017 due to the unfavorable market especially on gasoline price.

## 2) Market Condition

MOPS Pricing	Q4/18	Q3/18	+/(-)	Q4/17	+/(-)	2018	2017	+/(-)
Dubai crude oil	67.44	74.25	-6.81	59.30	8.14	69.7	53.2	16.5
Light Naphtha (MOPJ)	63.07	74.08	-11.01	63.33	-0.26	68.4	55.1	13.3
Gasoline (premium)	72.16	85.80	-13.63	73.70	-1.54	80.2	68.0	12.2
Jet Fuel	83.07	88.73	-5.67	72.59	10.48	85.0	65.3	19.7
Diesel	82.20	88.63	-6.43	72.35	9.86	84.3	65.7	18.6
Fuel Oil	68.77	71.74	-2.97	56.25	12.52	67.0	50.8	16.2

Spread over Dubai	Q4/18	Q3/18	+/(-)	Q4/17	+/(-)	2018	2017	+/(-)
Light Naphtha (MOPJ)	-4.37	-0.18	-4.20	4.03	-8.40	-1.21	1.91	-3.12
Gasoline (premium)	4.72	11.54	-6.82	14.40	-9.68	10.50	14.86	-4.36
Jet Fuel	15.63	14.48	1.14	13.28	2.35	15.36	12.14	3.22
Diesel	14.76	14.38	0.38	13.04	1.72	14.63	12.53	2.10
Fuel Oil	1.32	-2.52	3.84	-3.05	4.38	-2.62	-2.33	-0.29

Average Dubai price for Q4/18 was US\$67.44/bbl, decreased from US\$74.25/bbl in Q3/18 as pressured by global supply increased, investors worried supply concerns ahead of lower economic growth, and U.S. and China trade disputes. Moreover the start to U.S. sanctions against Iran's fuel exports was softened by waivers that will allow some countries to still import Iranian crude which effect with excess supply. In Q1/19, Dubai price is expected to rise as signs OPEC and Russia agreed to cut their combined crude output by 1.2 million barrels per day from January in order to stem the fall in oil prices.

Gasoline spread over Dubai fell to US\$4.72/bbl. Gasoline market trended downward in this quarter mainly influenced by on ample global supply. Oversupply of gasoline across regions from Singapore to Europe remained an issue for sellers. The inflated stockpiles in Europe mirrored the trend in the United States and gasoline becoming a byproduct as increasing refinery capacity gain benefit from middle distillate. Moreover Singapore light distillates stock was 14.46 million barrels on average. Overall, inventories were about 13 percent higher than a year ago.

Naphtha spread over Dubai in Q4/18 averaged minus US\$4.37/bbl. Naphtha margins were still weak due to high regional refinery crude runs and processing of lighter crudes that increased light distillates production while surplus naphtha in Europe leading to arbitrage volumes from West to Asia, depressed gasoline market also kept the regional naphtha market under pressure.

Jet and Diesel crack spreads over Dubai was stronger than previous quarter, averaged at US\$15.63/bbl and US\$14.76/bbl, respectively. Middle distillate cracks were supported by higher aviation demand during the holiday season and winter heating demand in Japan. Gasoil margins improved on robust demand, lower-than-average inventories and tighter supplies ahead of upcoming winter demand.

Fuel oil spread over Dubai in Q4/18 was US\$1.32/bbl, was better than Q3/18 supported by falling in crude price and tightening global supplies of the residual fuel. Market was concerned on lower Iranian fuel oil exports and the loss of heavy crude amidst declining Venezuelan heavy crude supply. In this quarter, Singapore onshore fuel oil inventories decreased by 20% Q-o-Q to 20.2 MMB.

Due to product market effect and weak in gasoline crack, SPRC's average market refining margin in Q4/18 was US\$4.40/bbl as compared to US\$5.05/bbl in Q3/18 and US\$5.51bbl in Q4/17. In Q4/18, SPRC maximized margin by maximizing crude throughput and process optimization, maximized synergy transfer with GC and maximized domestic placement for all products.

Sources: Reuters, IHS, Platts

### 3) Financial Results

	US\$ Million			US\$ Million		US\$ Million		
	Q4/18	Q3/18	+/-	Q4/17	+/-	2018	2017	+/-
Total Revenue	1,658	1,571	87	1,370	288	6,439	5,009	1,430
Cost of sales	(1,800)	(1,530)	(270)	(1,278)	(522)	(6,342)	(4,703)	(1,639)
<b>Gross profit</b>	<b>(143)</b>	<b>41</b>	<b>(183)</b>	<b>91</b>	<b>(234)</b>	<b>96</b>	<b>306</b>	<b>(210)</b>
Other income	0	0	0	0	0	3	1	1
Gain on exchange rate	1	16	(15)	12	(11)	24	44	(19)
Administrative expenses	(8)	(6)	(1)	(7)	(0)	(29)	(28)	(2)
Income tax	32	(12)	44	(18)	49	(17)	(60)	42
<b>Net income</b>	<b>(118)</b>	<b>38</b>	<b>(156)</b>	<b>78</b>	<b>(196)</b>	<b>74</b>	<b>261</b>	<b>(188)</b>

	Baht Million			Baht Million		Baht Million		
	Q4/18	Q3/18	+/-	Q4/17	+/-	2018	2017	+/-
Total Revenue	54,668	52,050	2,618	45,335	9,332	209,159	170,535	38,624
Cost of sales	(59,369)	(50,709)	(8,660)	(42,315)	(17,054)	(206,188)	(160,131)	(46,057)
<b>Gross profit</b>	<b>(4,701)</b>	<b>1,341</b>	<b>(6,043)</b>	<b>3,021</b>	<b>(7,722)</b>	<b>2,972</b>	<b>10,405</b>	<b>(7,433)</b>
Other income	12	11	1	12	0	84	47	37
Gain on exchange rate	36	526	(490)	389	(353)	793	1,509	(716)
Administrative expenses	(252)	(213)	(39)	(243)	(9)	(947)	(943)	(4)
Income tax	1,040	(398)	1,438	(587)	1,627	(541)	(2,029)	1,489
<b>Net income</b>	<b>(3,881)</b>	<b>1,248</b>	<b>(5,129)</b>	<b>2,573</b>	<b>(6,454)</b>	<b>2,263</b>	<b>8,895</b>	<b>(6,632)</b>



## Production Volumes

Petroleum products	Q4/18	Q3/18	Q4/17	Thousands barrels	
				2018	2017
Polymer Grade Propylene	352	399	262	1,488	1,416
Liquefied Petroleum Gas	753	665	643	2,733	2,691
Light Naphtha	709	504	603	2,540	2,415
Gasoline	3,918	3,818	3,469	15,847	15,045
Jet Fuel	1,380	1,194	1,084	5,206	4,057
Diesel	6,156	5,308	5,722	23,479	21,530
Fuel Oil	1,757	1,597	1,889	6,856	7,186
Asphalt	215	197	358	810	1,198
Mix C4	337	439	251	1,685	1,729
Other <sup>(1)</sup>	1,549	1,215	1,398	4,999	4,336
<b>Total production</b>	<b>17,126</b>	<b>15,336</b>	<b>15,680</b>	<b>65,643</b>	<b>61,605</b>

<sup>(1)</sup> Includes sulfur and reformat and products sold pursuant to our cracker feed exchange with PTT Global Chemical (PTTGC).

## Total Sale Revenue

Petroleum products <sup>(1)</sup>	Q4/18	Q3/18	Q4/17	US\$ Million	
				2018	2017
Polymer Grade Propylene	28	34	19	122	99
Liquefied Petroleum Gas	37	37	32	137	129
Light Naphtha	48	45	37	182	132
Gasoline	440	470	399	1,869	1,556
Jet Fuel	129	104	96	467	286
Diesel	699	645	572	2,695	2,053
Fuel Oil	123	112	98	438	349
Asphalt	16	10	17	49	55
Mix C4	22	31	16	126	116
Crude	0	0	0	0	1
Others <sup>(2)</sup>	116	83	83	354	233
<b>Total Revenue</b>	<b>1,658</b>	<b>1,571</b>	<b>1,370</b>	<b>6,439</b>	<b>5,009</b>

<sup>(1)</sup> Includes Government LPG and oil subsidies.

<sup>(2)</sup> Includes sulfur, reformat and products sold pursuant to our cracker feed exchange with PTT Global Chemical (PTTGC).

Q4/18 sale revenue increased 6% compared to Q3/18. The increase was mainly from increase in sales volume of petroleum products to 17.9 million barrels in Q4/18 compared to 15.5 million barrels in Q3/18. This was partly offset by lower petroleum products price following the world crude price dropped.

Q4/18 sale revenue increased 21% compared to Q4/17 mainly from increase in sales volume of petroleum products compared to 16.4 million barrels in Q4/17.

2018 Sale revenue increased 29% compared to 2017. The increase was mainly due to average selling price for petroleum product increased, and increase in volume of petroleum product sold to 66.9 million barrels in 2018 compared to 63.5 million barrels in 2017.

In Q4/18, the company sold its petroleum products based on sale revenue to Chevron, PTT and other oil and petrochemical companies in the proportion of 52%, 34% and 14%, respectively.

In 2018, the company sold its petroleum products based on sale revenue to Chevron, PTT and other oil and petrochemical companies in the proportion of 52%, 35% and 13%, respectively.

### Cost of Sales

Cost of sales in Q4/18 included cost of inventory write down to net realizable value of US\$62 million. Excluding inventory write down, cost of sale in Q4/18 was still higher than Q3/18 due to higher sales volume.

Compared Q4/18 with Q4/17, cost of sales increased 41% which was due to an increase in average cost of crude oil, higher sale volume and cost of inventory write down at 31 Dec 2018.

Compared 2018 with 2017, cost of sales also increased 35% due higher average cost of crude oil, higher sales volume and inventory write down.

### Gain on Foreign Exchange

Foreign exchange gain was US\$1 million (Baht 36 million) in Q4/18, comparing to exchange gain of US\$16 million (Baht 526 million) in Q3/18 and US\$12 million (Baht 389 million) in Q4/17. Baht relative to the U.S. dollar at the end of Q4/18 was almost the same with at the end of Q3/18 which reflected to only US\$1 million gain in foreign exchange in Q4/18 while Baht relative to the U.S. dollar appreciated during Q3/18 and Q4/17 which resulted to foreign exchange gain in those quarters because the value of Baht denominated receivables was higher when converted to US\$ equivalent.

For 2018, foreign exchange gain decreased from US\$44 million (Baht 1,509 million) in 2017 to US\$24 million (Baht 793 million) in 2018, primarily due to the lower appreciation of the Baht relative to the U.S. dollar during 2018 compared to the appreciation in 2017. Baht appreciation resulted in an increase in the value of Baht denominated receivables when converted to US\$ equivalent.

### Administrative Expenses

Administrative expenses in Q4/18 was US\$8 million (Baht 252 million) which slightly increase from US\$6 million (Baht 213 million) in Q3/18 and US\$ 7 million (Baht 243 million) in Q4/17. The increase was primarily due to the general maintenance.

Compared 2018 with 2017, administrative expenses for 2018 in US\$ slightly increased US\$2 million (Baht 4 million) mainly from the impact of stronger Baht during the year. The appreciation of Baht also resulted to higher US\$ expense when converted Baht denominated expenses to US\$ equivalent.

## 4) Analysis of Financial Position

	US\$ Million				Baht Million		
	31 Dec 2018	31 Dec 2017	+ / (-)	% + / (-)	31 Dec 2018	31 Dec 2017	+ / (-)
<b>Assets</b>							
Cash & cash equivalent	2	66	(64)	-97%	74	2,171	(2,097)
Other current assets	781	810	(29)	-4%	25,448	26,593	(1,146)
Non-current assets	904	945	(41)	-4%	29,489	31,032	(1,543)
<b>Total assets</b>	<b>1,687</b>	<b>1,821</b>	<b>(134)</b>	<b>-7%</b>	<b>55,011</b>	<b>59,797</b>	<b>(4,786)</b>
<b>Liabilities</b>							
Current liabilities	482	513	(31)	-6%	15,704	16,848	(1,144)
Non-current liabilities	24	26	(2)	-8%	778	848	(70)
<b>Total liabilities</b>	<b>505</b>	<b>539</b>	<b>(33)</b>	<b>-6%</b>	<b>16,482</b>	<b>17,696</b>	<b>(1,214)</b>
<b>Equity</b>							
Share capital & retained earnings	1,182	1,282	(100)	-8%	43,493	46,751	(3,258)

Other component of shareholders' equity					(4,965)	(4,650)	(314)
<b>Total equity</b>	<b>1,182</b>	<b>1,282</b>	<b>(100)</b>	<b>-8%</b>	<b>38,529</b>	<b>42,101</b>	<b>(3,572)</b>
<b>Total liabilities &amp; equity</b>	<b>1,687</b>	<b>1,821</b>	<b>(134)</b>	<b>-7%</b>	<b>55,011</b>	<b>59,797</b>	<b>(4,786)</b>

### Assets

Total assets as of 31 Dec 2018 decreased by US\$134 million (Baht 4,786 million) from 31 Dec 2017.

Total current assets decreased US\$93 million (Baht 3,243 million) due to:

- a decrease in cash & cash equivalent of US\$64 million (Baht 2,097 million);
- a decrease in inventory of US\$41 million (Baht 1,424 million) from lower inventory price reflecting from the declining oil price comparing to Dec 2017; but partially offset by
- a slight increase in trade and other account receivable of US\$12 million (Baht 287 million) from higher sales volume in Dec 2018 comparing to sales volume in Dec 2017 which partly offset by lower average selling price.

Non-current assets were lower year-over-year mainly from a decrease in property, plant and equipment of US\$57 million (Baht 2,093 million) as depreciation expenses for 2018 more than offset the additional capital investment in refinery reliability and efficiency projects. The decrease in property, plant and equipment was partially offset by an increase in prepaid income tax for year 2018 of US\$19 million (Baht 622 million) which was paid in Aug 18 based on the taxable income of 1H/18. Such amount would be refunded from the Revenue department because of taxable loss in 2H/18.

### Liabilities

Total liabilities as of 31 Dec 2018 decreased US\$33 million (Baht 1,214 million) from 31 Dec 2017. The decrease in total liabilities are mainly from:

- a decrease in long term borrowing of US\$72 million (Baht 2,354 million) for final payment of its obligation;
- a decrease in income tax payable of US\$38 million (Baht 1,236 million). Because of the taxable loss in 2H/18, there is no corporate income tax for payment and part of the income tax for 1H/18 which was paid in Aug will be recovered from the Revenue department; but partially offset by
- an increase in trade and other account payables of US\$67 million (Baht 2,101 million). Trade payables increased mainly from timing of crude oil purchase and payment; and
- an increase in excise tax payable of US\$13 million (Baht 419 million) due to higher sale volume in Dec 18 comparing to Dec 17.

### Shareholders' Equity

Shareholders' equity as of 31 Dec 2018 decreased US\$100 million (Baht 3,572 million) from 31 Dec 2017 resulted from the net profit in 2018 minus dividend payment for 2H/2017 profit and 1H/2018 profit.

## 5) Statement of Cash Flow

	US\$ Million		Baht Million	
	2018	2017	2018	2017
Net cash generated from operating activities	204	321	6,483	10,860
Net cash used in investing activities	(25)	(15)	(804)	(503)
Net cash used in financing activities	(243)	(245)	(7,811)	(8,413)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(64)</b>	<b>61</b>	<b>(2,132)</b>	<b>1,944</b>
<b>Cash and cash equivalents at the beginning of the period</b>	<b>66</b>	<b>6</b>	<b>2,171</b>	<b>233</b>
Adjustments from foreign exchange translation	1	(1)	35	(6)
<b>Cash and cash equivalents at the end of the period</b>	<b>2</b>	<b>66</b>	<b>74</b>	<b>2,171</b>

SPRC cash and cash equivalents was down from US\$66 million (Baht 2,171 million) at 31 Dec 2017 to US\$2 million (Baht 73 million) at 31 Dec 2018.

Details of cash flow activities in 2018 are as follow.

- a) Net cash generated from operating activities of US\$204 million (Baht 6,483 million) which was primarily due to:
  - a. 2018 net profit of US\$74 million (Baht 2,263 million) and added back non-cash items of US\$85 million (Baht 2,748 million);
  - b. cash generated from operating liabilities of US\$75 million (Baht 2,426 million), mainly from an increase in trade and other payables of US\$64 million (Baht 2,095 million) due to timing of crude oil purchase and payment and an increase in other current liabilities of US\$10 million (Baht 331 million) mainly from the higher excise tax payable resulting from higher sale volume
  - c. partially offset by cash used in operating assets of US\$29 million (Baht 954 million), mainly from an increase in inventory value (excluding write down of inventory to net realizable value which is non-cash item) of US\$22 million (Baht 711 million) and an increase in trade receivable of US\$9 million (Baht 290 million) due to higher sales volume in Dec 18 comparing to Dec 17.
- b) Net cash used in investing activities of US\$25 million (Baht 804 million), primarily on projects spending to increase refinery reliability and efficiency.
- c) Net cash used in financing activities of US\$243 million (Baht 7,811 million) mainly from:
  - a. cash used for dividends paid of US\$172 million (Baht 5,521 million) for 2H/ 2017 and 1H/2018 net profit; and
  - b. repayment for long term borrowing of US\$72 million (Baht 2,289 million).



## 6) Financial Ratios

		Q4/18	Q3/18	Q4/17	2018	2017
Current Ratio	(Time)	1.6	1.7	1.7	1.6	1.7
Net Profit Margin	(%)	(7.1)	2.4	5.7	1.1	5.2
Debt to Equity ratio	(Time)	0.4	0.5	0.4	0.4	0.4
Net Interest-Bearing Debt to Equity ratio	(Time)	0.0	0.2	0.0	0.0	0.0

**Note:**

Current Ratio	= Current Assets / Current Liabilities	(Time)
Net Profit Margin	= Quarter (Net Profit(Loss) / Total Revenue)	(%)
Debt to Equity Ratio	= Total Liabilities / Total Shareholders' Equity	(Time)
Net Interest Bearing Debt to Equity ratio	= Interest Bearing Debt - Cash / Total Shareholders' Equity	(Time)