# Management's Discussion and Analysis Of Financial Condition and Result Of Operations

## For Quarter 2/2019 and 6 months ended June 2019

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

SPRC

Star Petroleum Refining Public Company Limited

## 1) Company's Operating Result

| (US$ Million) | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) | 6M/19 | 6M/18 | +/(-) |
|---|---|---|---|---|---|---|---|---|
| Total Revenue | 1,553 | 1,492 | 61 | 1,650 | (97) | 3,045 | 3,210 | (165) |
| EBITDA | (6) | 86 | (91) | 116 | (122) | 80 | 233 | (153) |
| EBIT | (26) | 65 | (91) | 95 | (121) | 39 | 191 | (152) |
| Gain (Loss) on foreign exchange | 16 | 10 | 6 | (15) | 31 | 26 | 8 | 19 |
| Net income (Loss) | (19) | 53 | (72) | 73 | (92) | 34 | 154 | (120) |
| Net income (Loss) (US$ per share) | (0.00) | 0.01 | (0.02) | 0.02 | (0.02) | 0.01 | 0.04 | (0.03) |
| Accounting gross refining margin (US$/barrel) (1) | 2.29 | 7.87 | (5.58) | 10.51 | (8.22) | 5.17 | 9.46 | (4.29) |
| Market gross refining margin (US$/barrel) (2) | 2.57 | 3.07 | (0.50) | 6.02 | (3.45) | 2.83 | 6.59 | (3.76) |
| Crude intake (thousand barrels/day) | 151.5 | 163.8 | (12.3) | 165.1 | (13.6) | 157.6 | 165.1 | (7.5) |

| (Baht Million) | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) | 6M/19 | 6M/18 | +/(-) |
|---|---|---|---|---|---|---|---|---|
| Total Revenue | 49,332 | 47,397 | 1,935 | 52,984 | (3,652) | 96,729 | 102,442 | (5,712) |
| EBITDA | (174) | 2,734 | (2,908) | 3,717 | (3,891) | 2,560 | 7,448 | (4,888) |
| EBIT | (822) | 2,068 | (2,890) | 3,040 | (3,862) | 1,246 | 6,101 | (4,855) |
| Gain (Loss) on foreign exchange | 512 | 328 | 184 | (482) | 994 | 839 | 231 | 608 |
| Net income (Loss) | (599) | 1,690 | (2,290) | 2,323 | (2,923) | 1,091 | 4,896 | (3,805) |
| Net income (Loss) (Baht per share) | (0.14) | 0.39 | (0.53) | 0.54 | (0.67) | 0.25 | 1.13 | (0.88) |

(1) margin includes inventory gain/loss based on weighted average inventory cost.
(2) margin is calculated based on current replacement cost.

| Exchange rate (Baht/US$) | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) | 6M/19 | 6M/18 | +/(-) |
|---|---|---|---|---|---|---|---|---|
| Average FX | 31.76 | 31.79 | (0.03) | 32.12 | (0.36) | 31.78 | 31.91 | (0.13) |
| Closing FX | 30.92 | 31.98 | (1.06) | 33.33 | (2.41) | 30.92 | 33.33 | (2.41) |

In Q2/19 SPRC had sale revenue of US$1,553 million (Baht 49,332 million), slightly increased from Q1/19 due to higher average oil and product price while sale volume slightly decreased in Q2/19. SPRC crude intake In Q2/19 was 151.5 thousand barrels per day, or 92% of the refining capacity which is lower than Q1/19. The reduction in crude intake was due to refinery optimization during lower refining margin in the market which also impact to negative EBITDA, EBIT and net income of SPRC in Q2/19. Accounting gross refining margin in Q2/19 was relatively low at US$2.29/bbl comparing to US$7.87/bbl in Q1/19 which Q1/19 included stock gain from the recovery of oil price from a sharp decline in Dec 18, while there was a slight stock loss in Q2/19. If excluding stock gain (loss), market refining margin in Q2/19 was US$2.57/bbl which slightly lower than Q1/19 mainly impacted from continuing excess supply of refinery products in the market. The earnings in Q2/19 was also negatively impacted by the increase in costs relating to the preparation of the planned refinery turnaround in Q4/19. Despite lower refining margin and cost relating to the planned turnaround, Q2/19 earnings was partly offset by the exchange gain due to the appreciation of Baht against U.S.Dollar.

Compared Q2/19 with Q2/18, total sale revenue in Q2/19 decreased mainly as a result of lower product price and lower sales volume. Lower sales volume was impacted from the slowdown of CDU and other refinery units as a result of refinery optimization due to low refining margin in the market with ample supply of refinery products. Such low margin negatively and significantly impacted to EBITDA and net income in Q2/19. Accounting gross refining margin in Q2/19 also included a slight stock loss while there was a stock gain in Q2/18. Excluding stock gain (loss), market gross refining margin in Q2/19 was also lower than Q2/18 due to the declining in crack spread of refinery products especially gasoline. However, the negative earnings in Q2/19 was partly offset by the exchange gain from Baht strengthening comparing to exchange loss in Q2/18 due to Baht depreciation.

Compared 6M/19 with 6M/18, crude intake was 96% utilization or 157.6 thousand barrels per day, decreased from 165.1 thousand barrels per day in 6M/18, impacted from the reduction in CDU and other refinery unit's throughput to optimize the refinery run during low refining margin in the market. The unit slowdown resulted to lower sales volume and sale revenue. EBITDA and net income for 6M/19 decreased from 6M/18 as a result of lower in both accounting refining margin and market refining margin. Excluding stock gain, market gross refining margin in 6M/19 was lower than 6M/18 due to weak demand and excess supply especially in gasoline. However, the appreciation of Baht in 2019 resulted to exchange gain in 6M/19 and favorably supported the earnings.

## 2) Market Condition

| MOPS Pricing | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) |
|---|---|---|---|---|---|
| Dubai crude oil | 67.38 | 63.49 | 3.89 | 72.12 | -4.73 |
| Light Naphtha (MOPJ) | 60.08 | 57.68 | 2.40 | 71.21 | -11.13 |
| Gasoline (premium) | 74.89 | 67.27 | 7.62 | 84.25 | -9.36 |
| Jet Fuel | 79.60 | 76.46 | 3.14 | 87.37 | -7.78 |
| Diesel | 79.76 | 76.27 | 3.49 | 86.73 | -6.97 |
| Fuel Oil | 65.08 | 64.05 | 1.03 | 67.69 | -2.61 |

| Spread over Dubai | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) |
|---|---|---|---|---|---|
| Light Naphtha (MOPJ) | -7.31 | -5.81 | -1.49 | -0.91 | -6.39 |
| Gasoline (premium) | 7.51 | 3.77 | 3.74 | 12.13 | -4.62 |
| Jet Fuel | 12.21 | 12.96 | -0.75 | 15.26 | -3.04 |
| Diesel | 12.38 | 12.78 | -0.40 | 14.61 | -2.24 |
| Fuel Oil | -2.31 | 0.55 | -2.86 | -4.43 | 2.12 |

Average Dubai price for Q2/19 was US$67.38/bbl, increased from US$63.49/bbl in Q1/19, as supply cuts led by producer club OPEC and U.S. sanctions on Iran and Venezuela's fuel exports outweighed concerns about an economic slowdown. Russia's oil production continued to fall which under pressure from lower exports after shipments via the Druzhba pipeline to Europe were found to be contaminated and global oil prices rose sharply on fears of a U.S. military attack on Iran that would disrupt flows from the Middle East.

Gasoline spread over Dubai rise to US$7.51/bbl. Gasoline market in this quarter was increased due to peak Asian refinery turnarounds in May and June provided some support to market sentiment and refiners are expected to limit fuel output for planned maintenance. Moreover, Philadelphia Energy Solutions to permanently shut oil refinery after fire in the United States also support market. Singapore light distillates stocks were 10.2 million barrels on average which was a little bit higher from last year.

Naphtha spread over Dubai in Q2/19 was minus US$7.31/bbl. Asia's naphtha crack reflected a weak market which down 40% from a year-ago period as higher supplies, cracker maintenance season and Ethylene crackers in Northeast Asia are in the midst of peak maintenance while a few unplanned outages of petrochemical units in South Korea and Taiwan. Cheap alternative liquefied petroleum gas (LPG) prices also weighed on naphtha.

Jet and Diesel crack spread over Dubai was relatively strong compare to gasoline, averaging US$12.21/bbl and US$12.38/bbl, respectively. Middle distillate cracks were supported by upcoming refinery turnarounds in China, which should cut some of the excess supply in the market, steady seasonal demand for the aviation fuel and a late start to India's monsoon season has lent support to gasoil cracks and help soak up some of the excess diesel in the market. Overall, Singapore inventories were about 17% higher year-on-year. The market still has ample supplies, while demand is weak and arbitrage opportunities are limited.

Fuel oil spread over Dubai in Q2/19 was minus US$2.31/bbl, lower than Q1/19. The fuel oil market continued to languish as bunker demand saw no sign of recovery due the escalating trade war between the United States and China, rising crude prices and heavy rainfall caused massive flooding in many parts of Iran and Iraq, led to higher outflows of fuel oil. In this quarter, Singaporean and Fujairah fuel oil inventories maintained topped-up, averaging 25% and 30% higher y/y, respectively.

Due to higher crude price and weak in fuel oil and gasoline market, SPRC's average market refining margin in Q2/19 was US$2.57/bbl as compared to US$3.07/bbl in Q1/19 and US$6.02/bbl in Q2/18. In Q2/19, SPRC maximized margin by maximizing crude benefit captured and process optimization, maximized synergy transfer and maximized domestic placement for all products.

Sources: Reuters, IHS, Platts

## 3) Financial Results

| | US$ Million | | | US$ Million | | US$ Million | | |
|---|---|---|---|---|---|---|---|---|
| | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) | 6M/19 | 6M/18 | +/(-) |
| Total Revenue | 1,553 | 1,492 | 61 | 1,650 | (97) | 3,045 | 3,210 | (165) |
| Cost of sales | (1,588) | (1,429) | (159) | (1,535) | (53) | (3,017) | (3,012) | (5) |
| **Gross profit** | **(35)** | **63** | **(98)** | **116** | **(151)** | **28** | **198** | **(170)** |
| Other income | 0 | 0 | (0) | 1 | (1) | 1 | 2 | (1) |
| Gain (Loss) on exchange rate | 16 | 10 | 6 | (15) | 31 | 26 | 8 | 19 |
| Administrative expenses | (8) | (9) | 1 | (7) | (1) | (16) | (15) | (1) |
| Income tax | 7 | (12) | 19 | (22) | 29 | (4) | (37) | 33 |
| **Net income (Loss)** | **(19)** | **53** | **(72)** | **73** | **(92)** | **34** | **154** | **(120)** |

| | Baht Million | | | Baht Million | | Baht Million | | |
|---|---|---|---|---|---|---|---|---|
| | Q2/19 | Q1/19 | +/(-) | Q2/18 | +/(-) | 6M/19 | 6M/18 | +/(-) |
| Total Revenue | 49,332 | 47,397 | 1,935 | 52,984 | (3,652) | 96,729 | 102,442 | (5,712) |
| Cost of sales | (50,435) | (45,390) | (5,045) | (49,278) | (1,157) | (95,825) | (96,109) | 284 |
| **Gross profit** | **(1,103)** | **2,007** | **(3,110)** | **3,706** | **(4,809)** | **904** | **6,332** | **(5,428)** |
| Other income | 8 | 13 | (5) | 35 | (27) | 21 | 61 | (40) |
| Gain (loss) on exchange rate | 512 | 328 | 184 | (482) | 994 | 839 | 231 | 608 |
| Administrative expenses | (238) | (276) | 37 | (218) | (20) | (514) | (482) | (31) |
| Income tax | 232 | (373) | 605 | (707) | 939 | (141) | (1,182) | 1,041 |
| **Net income (Loss)** | **(599)** | **1,690** | **(2,290)** | **2,323** | **(2,923)** | **1,091** | **4,896** | **(3,805)** |

**Production Volumes**

Thousands barrels

| Petroleum products | Q2/19 | Q1/19 | Q2/18 | 6M/19 | 6M/18 |
|---|---|---|---|---|---|
| Polymer Grade Propylene | 356 | 360 | 362 | 715 | 737 |
| Liquefied Petroleum Gas | 641 | 697 | 650 | 1,338 | 1,315 |
| Light Naphtha | 681 | 680 | 662 | 1,361 | 1,327 |
| Gasoline | 3,577 | 3,748 | 4,110 | 7,326 | 8,112 |
| Jet Fuel | 1,124 | 1,335 | 1,188 | 2,459 | 2,632 |
| Diesel | 5,372 | 5,782 | 6,055 | 11,154 | 12,015 |
| Fuel Oil | 1,355 | 1,394 | 1,796 | 2,749 | 3,502 |
| Asphalt | 233 | 243 | 226 | 476 | 399 |
| Mix C4 | 405 | 391 | 467 | 797 | 910 |
| Other (1) | 1,510 | 1,620 | 1,199 | 3,130 | 2,234 |
| **Total production** | **15,254** | **16,251** | **16,715** | **31,505** | **33,181** |

(1) Includes sulfur and reformate and products sold pursuant to our cracker feed exchange with PTT Global Chemical (PTTGC).

**Total Sale Revenue**

US$ Million

| Petroleum products (1) | Q2/19 | Q1/19 | Q2/18 | 6M/19 | 6M/18 |
|---|---|---|---|---|---|
| Polymer Grade Propylene | 24 | 25 | 31 | 49 | 61 |
| Liquefied Petroleum Gas | 31 | 30 | 32 | 61 | 63 |
| Light Naphtha | 39 | 39 | 49 | 78 | 88 |
| Gasoline | 463 | 415 | 486 | 878 | 959 |
| Jet Fuel | 97 | 102 | 113 | 199 | 234 |
| Diesel | 666 | 631 | 692 | 1,298 | 1,351 |
| Fuel Oil | 83 | 80 | 111 | 163 | 203 |
| Asphalt | 13 | 16 | 12 | 30 | 24 |
| Mix C4 | 29 | 25 | 43 | 54 | 72 |
| Crude | 0 | 10 | 0 | 10 | 0 |
| Others (2) | 107 | 118 | 81 | 225 | 155 |
| **Total Revenue** | **1,553** | **1,492** | **1,650** | **3,045** | **3,210** |

(1) Includes Government LPG and oil subsidies.
(2) Includes sulfur, reformate and products sold pursuant to our cracker feed exchange with PTT Global Chemical (PTTGC).

Q2/19 sale revenue increased 4% compared to Q1/19. The increase was mainly due to higher petroleum products price which was in line with the increase in crude oil price, but partly offset with lower sale volumes which slightly decreased from 16.6 million barrels in Q1/19 to 16.5 million barrels in Q2/19.

Comparing Q2/19 with Q2/18 sale revenue decreased 6% mainly from the lower petroleum product price in this year and a slight decrease in sale volume from 16.6 million barrels in Q2/18 to 16.5 million barrels in Q2/19).

Sale revenue for 6M/19 also decreased 5% compared to 6M/18. The decrease was mainly due to the decrease in petroleum product price. The decrease in product price was mainly resulted from 1) a decrease in global oil price and 2) weak product crack spread comparing to crude oil. Sales volume of petroleum products was also lower at 33.0 million barrels in 6M/19 as compared to 33.4 million barrels in 6M/18.

In Q2/19, the company sold its petroleum products based on sale revenue to Chevron, PTT&PTTOR and other oil and petrochemical companies in the proportion of 53%, 34% and 13%, respectively.

*Cost of Sales*

Cost of sale in Q2/19 increased 11% from Q1/19 due to the increase in crude oil price in Q2/19 while cost of sales in Q1/19 also included the reversal of the inventory write down to net realizable value of US$62 million at 31 Dec 2018 (impact to the decrease in cost of sale in Q1/19).

Compared Q2/19 with Q2/18, sales volume in Q2/19 was slightly lower but cost of sales slightly increased due to inventory accounting on weighted average cost reflecting from the movement of crude and oil price. Cost of sale in Q2/19 also included the cost relating to the planned refinery turnaround.

Cost of sale in 6M/19 approximated with 6M/18. The lower sales volume in 6M/19 was offset by the cost relating to planned turnaround which also included in cost of sale.

*Gain on Foreign Exchange*

Foreign exchange gain was US$16 million (Baht 512 million) in Q2/19, increased from exchange gain of US$10 million (Baht 328 million) in Q1/19 due to the higher appreciation of Baht relative to the U.S. dollar in Q2/19 comparing to Q1/19. Baht appreciation resulted in an increase in the value of Baht denominated receivables when converted to US$ equivalent.

Q2/19 foreign exchange gain increased significantly comparing to Q2/18 when there was foreign exchange loss. The increase was US$31 million (Baht 994 million) from Baht appreciation relative to U.S.dollar during Q2/19 while there was Baht depreciation during Q2/18.

Foreign exchange gain for 6M/19 was also higher than the same period of prior year due to higher appreciation of Baht relating to U.S. dollar.

*Administrative Expenses*

Administrative expenses in Q2/19 decreased US$1 million (Baht 37 million) from Q1/19 mainly due to the provision of employee benefit impacted from the change in Labor Protection Act on the severance pay recorded in Q1/19.

Comparing Q2/19 with Q2/18, administrative expenses slightly increased US$1 million (Baht 22 million) mainly due to higher provision on stock obsolete in Q2/19.

Comparing 6M/19 with 6M/18, administrative expense was slightly higher due to the provision of employee benefit impacted from the change in Labor Protection Act recorded in 2019.

## 4) Analysis of Financial Position

| | US$ Million | | | | Baht Million | | |
|---|---|---|---|---|---|---|---|
| | 30 Jun 2019 | 31 Dec 2018 | +/(-) | % +/(-) | 30 Jun 2019 | 31 Dec 2018 | +/(-) |
| **Assets** | | | | | | | |
| Cash & cash equivalent | 1 | 2 | (1) | -49% | 36 | 74 | (38) |
| Other current assets | 902 | 781 | 122 | 16% | 27,886 | 25,448 | 2,438 |
| Non-current assets | 883 | 904 | (21) | -2% | 27,296 | 29,489 | (2,194) |
| **Total assets** | **1,786** | **1,687** | **99** | **6%** | **55,217** | **55,011** | **207** |
| **Liabilities** | | | | | | | |
| Current liabilities | 555 | 482 | 73 | 15% | 17,143 | 15,704 | 1,439 |
| Non-current liabilities | 16 | 24 | (7) | -31% | 509 | 778 | (268) |
| **Total liabilities** | **571** | **505** | **66** | **13%** | **17,652** | **16,482** | **1,170** |
| **Equity** | | | | | | | |
| Share capital & retained earnings | 1,215 | 1,182 | 34 | 3% | 44,571 | 43,493 | 1,078 |
| Other component of shareholders'equity | | | | | (7,006) | (4,965) | (2,041) |
| **Total equity** | **1,215** | **1,182** | **34** | **3%** | **37,565** | **38,529** | **(964)** |
| **Total liabilities & equity** | **1,786** | **1,687** | **99** | **6%** | **55,217** | **55,011** | **207** |

***Assets***

Total assets as of 30 Jun 2019 increased by US$99 million (Baht 207 million) from 31 Dec 2018.

Total current assets increased US$120 million (Baht 2,400 million) mainly due to:

a) an increase in inventory of US$111 million (Baht 2,774 million) from higher in inventory volume, due to timing of crude shipment, and inventory price reflecting from the increasing in oil price comparing to Dec 2018; and
b) an increase in other current asset of US$12 million (Baht 362 million) partly from increase in VAT receivable of US$8 million (Baht 260 million)

The increase in current asset was partly offset by a decrease in non-current assets which were lower period-over-period mainly from a decrease in property, plant and equipment of US$22 million (Baht 2,182 million) as depreciation expenses for 6M/19 more than offset the additional capital investment in refinery reliability and efficiency projects.

***Liabilities***

Total liabilities as of 30 Jun 2019 increased US$66 million (Baht 1,170 million) from 31 Dec 2018. The increase in total liabilities is mainly from:

a) an increase in S-T borrowing of US$104 million (Baht 3,210 million) to support movement in working capital;
b) an increase in income tax payable of US$5 million (Baht 160 million) due to taxable profit in 6M/19;
c) an increase in employee benefit obligation of US$5 million (Baht 142 million) due to the provision of employee benefit impacted from the change in Thai Labor Act on severance pay; but partially offset by

d) a decrease in trade and other account payables of US$25 million (Baht 1,403 million) from lower crude purchase in Jun 19 comparing to Dec 18 but slight offset by higher crude price;
e) a decrease in excise tax payable of US$7 million (Baht 403 million) due to lower sales volume in Jun 2019 comparing to Dec 2018; and
f) a decrease in deferred tax liabilities of US$13 million (Baht 410 million) resulted from exchange rate impact on temporary difference between accounting and tax book.

***Shareholders' Equity***

Shareholders' equity as of 30 Jun 2019 increased US$34 million (but decrease Baht 964 million due to foreign exchange impact) from 31 Dec 2018 resulted from the net profit in 6M/2019.

## 5) Statement of Cash Flow

| 6M/2019 | US$ Million | Baht Million |
|---|---|---|
| Net cash used in operating activities | (83) | (2,609) |
| Net cash used in investing activities | (21) | (677) |
| Net cash generated from financing activities | 103 | 3,247 |
| **Net decrease in cash and cash equivalents** | **(1)** | **(39)** |
| **Cash and cash equivalents at the beginning of the period** | **2** | **74** |
| Adjustments from foreign exchange translation | 0 | 1 |
| **Cash and cash equivalents at the end of the period** | **1** | **36** |

SPRC cash and cash equivalents slightly decreased from US$2 million (Baht 74 million) at 31 Dec 2018 to US$1 million (Baht 36 million) at 30 Jun 2019.

Details of cash flow activities in 6M/19 are as follow.

a) Net cash used for operating activities of US$83 million (Baht 2,609 million) which was primarily due to:
   a. cash used in operating assets of US$67 million (Baht 2,114 million), mainly from an increase in inventory value of US$57 million (Baht 1,810 million) from higher in both inventory volume and price and an increase in other current assets and other assets of US$12 million (Baht 373 million) due to higher VAT receivable;
   b. cash used in operating liabilities of US$35 million (Baht 1,107 million), mainly from a decrease in trade and other payable of US$23 million (Baht 745 million) due to timing of crude oil purchase and payment, and a decrease in other current liabilities of US$11 million (Baht 362 million) due to lower excise tax payable and VAT payable from lower sale volume; but partially offset by
   c. 6M/19 net profit of US$34 million (Baht 1,091 million) and deduct non-cash items of US$15 million (Baht 479 million);

b) Net cash used in investing activities of US$21 million (Baht 677 million), primarily on projects spending to increase refinery reliability, efficiency and upgrading.

c) Net cash provided from financing activities of US$103 million (Baht 3,247 million) which is from short term borrowing primarily to support the increase in working capital.

## 6) Financial Ratios

| | | Q2/19 | Q1/19 | Q2/18 | 6M/19 | 6M/18 |
|---|---|---|---|---|---|---|
| Current Ratio | (Time) | 1.6 | 1.7 | 1.7 | 1.6 | 1.7 |
| Net Profit Margin | (%) | (1.2) | 3.5 | 4.4 | 1.1 | 4.8 |
| Debt to Equity ratio | (Time) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Net Interest-Bearing Debt to Equity ratio | (Time) | 0.1 | 0.0 | 0.0 | 0.1 | 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) |