

2013 Plan for Production activity Rompertrol Refinery

Petromidia Refinery

The main assumptions for production plan and sales plan 2013

Production Plan for PEM – 2013

TOTAL THROUGHPUT: 4,571,787 mt, out of which: 4,261,763 mt crude oil and 310,024 mt other feedstock.

1. Feedstock

The types of crude oil planned to be processed in 2013 (mt/year):

- REBCO: 4,176,761
- CPC Crude Oil: 85,002

Crude unit throughput: 4,261,763 mt/year (12,722 mt/day for 335 processing days).

Density and Sulphur (average value) for Crude unit throughput resulted after PIMS simulation: 0.8734 g/cm³, 1.39% wt sulphur content.

2. Commercial Assumptions

2.1 Prices

2.1.1 Crude oil price (Brent Dtd – 106.5\$/bbl and Ural RCMB – 105.67 \$/bbl)

2.1.2 Products (cracks to Brent: Prem Unl 10 ppm FOB Med – 122.8 \$/mt and ULSD 10 ppm FOB Med – 127.9\$/mt).

2.1.3 2011 Utilities costs are estimated to be **16.1\$/mt**, meaning **73.6 mil \$**.

2.2 Structure of products

| Product | domestic | export | Total |
|-----------------|----------------|----------------|----------------|
| | <i>mt/year</i> | <i>mt/year</i> | <i>mt/year</i> |
| Auto Gasoline | 319,493 | 760,763 | 1,080,256 |
| Jet+Auto Diesel | 1,669,964 | 621,786 | 2,291,750 |
| Fuel oil | 75,000 | 34,299 | 109,299 |
| Propylene | 104,826 | - | 104,826 |
| Coke | 176,037 | 34,200 | 210,237 |
| Sulphur | - | 54,939 | 54,939 |
| Other products | 585,187 | - | 585,187 |

2.2.1 Auto fuels for domestic market (mt/year) – total 1,785,338

2.2.2 Auto fuels for export (mt/year)- total 1,382,549

2.2.3 Products to be delivered to Vega refinery (mt/year)

- products to Vega:
 - 159,986 Raffinate
 - 48,367 C5-C6 cut
 - 30,177 Hydrotreated kerosene
 - 2,132 Slurry
 - 75,000 Fuel oil

2.2.4 Others:

- Jet A1-173,942 mt/year (for domestic market)

2011 White Products yield is 85.03 % wt.

Note: Regarding: raffinate, C5-C6 cut, hydrotreated kerosene, slurry and fuel oil, these products will be transferred to Vega Refinery to be processed in order to obtain valuable products.

Auto fuels are sold on domestic market to Rompetrol Downstream (Efix Gasoline, Gasoline Europlus 10 ppm, Efix S 98 Gasoline, Diesel Euro 5, Efix Diesel, Efix S 55 Diesel). The other products are sold on domestic market through: Rompetrol Gas, Rompetrol Petrochemicals, Rompetrol Downstream, Air BP Sales, Air Total, Carpatcement, Electrocarbon, Lafarge.

On the export market the products are sold to: Vector Energy (Serbia, Grecia, Georgia, Bulgaria, Turcia, Liban, Arabia Saudita, UAE, Nigeria), Rompetrol Moldova, Rompetrol Georgia, Rompetrol Bulgaria, Rompetrol Ucraina Rompetrol Albania and others.

Auto fuels are sold 56.4% on domestic market and 43.64% on export market.

3. Unfinished products

The production plan was done without consumption/accumulation of unfinished products.

4. Products Specifications / Technical Assumptions

Auto Gasoline and Diesel are made according Euro 5 specification due to "Package 2010" implementation starting with 2012.

Gasoline production for domestic market contents 6.0% wt Bio-ethanol according with internal reglementation.

Diesel production for domestic market contents 6.0% wt Bio-Diesel and Arctic Diesel production for domestic market without Biocomponent on winter time.

In 2013 there will be 30 days of shutdown starting from 15th of March 2013:

- Catalyst regeneration for Reformer Unit starting from 15th of March 2013 and catalyst replacement for MTBE Unit, when the PEM refinery will be shutdown;
- Shutdown of the VGO Hydrotreater Unit for 38 days (15th of March 2013-21st of April) for the internal concrete replacement for reactors and also for catalyst replacement;
- Delayed Coker Unit Upgrade – for 55 days starting from 15th of March 2013 till 9th of May;
- Diesel Hydrotreater Unit – shutdown for 10 days in October 2013.
- Installing the new burners for Low NOx emissions for refinery heaters in order to comply with Romanian environmental legislation.

5. Operational Results

- Gross Refinery P/L: 273,870 k\$
- Gross Refinery Margin P/L: 59.9 \$/mt

The table below shows a summary of 2013 PEM-production plan:

| PEM 2013 | tons/year |
|--------------------------|------------------|
| Total Feedstock | 4,571,787 |
| Crude oil | 4,261,763 |
| Other raw materials | 310,024 |
| Finished Products | 4,436,494 |
| Gasoline | 1,240,242 |
| Jet | 204,119 |
| Diesel | 2,089,762 |
| LIGHT FUEL OIL | - |
| Fuel oil | 109,299 |
| Gases | 225,713 |
| Propylene | 104,826 |
| LPG | 197,356 |
| Petroleum coke | 210,237 |
| Sulfur | 54,939 |
| Total Loss | 135,293 |

Vega Refinery

The main assumptions for production plan and sales plan 2013

1. Feedstock

Vega refinery will process raw material from Petromidia Refinery. The total feedstock for 2013 will be **319,344** tonnes in the following structure:

- C5-C6 cut – 48,367 tonnes
- Raffinate – 159,986 tonnes
- Hydrotreated kerosene – 30,177 tonnes
- Slurry – 2,132 tonnes
- Fuel oil – 75,000 tonnes



- components for additives and polymer for bitumen – 1,682 tonnes.

2. Structure of products

| Products | Domestic | Export | Total |
|----------------------|----------------|----------------|----------------|
| | <i>mt/year</i> | <i>mt/year</i> | <i>mt/year</i> |
| Ecological Solvents | 7,766 | 30,399 | 38,465 |
| n-Hexane | 2,713 | 63,393 | 66,106 |
| Naphtha | 60,956 | 40,166 | 101,122 |
| White spirit | 6,006 | 22,700 | 28,706 |
| Heating oil | 8,142 | - | 8,142 |
| Fuel oil | 14,051 | - | 14,051 |
| Bitumen | 57,381 | - | 57,381 |
| Octane Booster ADD 8 | 25 | - | 25 |
| TOTAL | 157,040 | 156,958 | 313,998 |

Vega refinery is the only east European producer of n-Hexane, used in polypropylene production and extraction of vegetable oils in food industry.

Vega refinery is also the only Romanian producer of:

- Ecological Solvents – Rompetrol SE with lower sulphur and aromatics content and lower toxicity level;
- Special Bitumens used for making bituminous mastics and Hydroisolation works, anticorrosive protection for metallic pipes.

Total volume of petroleum products estimated to be delivered in 2013 is 328,998 tonnes, out of which:

- 52% domestic market;
- 48% export market.

On the export market the products are sold in Turkey, Ukraine, Moldova, Serbia, Montenegro, Hungary, Kazakhstan, Germany, Greece, Bulgaria, Poland, Austria.



3. Products Specifications

The finished products for Vega Refinery are produced according to Quality Specific Standards that are in use at the moment and comply with the internal and international standards for these products.

The table below shows a summary of 2013 VEGA-production plan:

| VGA 2013 | tones |
|---------------------------|----------------|
| Feedstock | 319,344 |
| Crude oil | - |
| Other feedstock | 319,344 |
| Finished products | 313,998 |
| Ecological solvents | 38,465 |
| Hexane | 66,106 |
| Naphtha | 101,122 |
| White spirit | 28,706 |
| Gasoil | 3,681 |
| Light liquid fuel | 4,461 |
| Fuel oil | 14,051 |
| Bitumen | 57,381 |
| Octane Booster ADD 8 | 25 |
| Technological loss | 5,346 |



4. Operational results

- Gross Refinery P/L: 30,977 k\$
- Gross Refinery Margin P/L: 97.00 \$/mt

Refinery Manager

Nicolae Nitu

PPM BU Refining Director

Raluca Lainer

| | | | | |
|---|-------------------|------------------|---------------|------------------|
| Petromidia REFINERY PRODUCTION BUDGET_2013 | Brent Dt | \$ 106.50 | 7.567 | \$ 805.87 |
| | | bbl | CF | mt |
| | Ural | \$ 105.67 | 7.310 | \$ 772.47 |
| | Crude Unit | | 12,722 | to/day |
| | Total | | | |
| No. of Days: | 335 | | | |
| Petromidia REFINERY | Yield % | Quantity mt | Price USD/mt | Value (,000\$) |
| TOTAL FEEDSTOCK : | 100.0 | 4,571,787 | 775 | 3,544,290 |
| CRUDE OIL/UNIT | 93.2 | 4,261,763 | 766 | 3,262,527 |
| Sour | 91.4 | 4,176,761 | 764 | 3,190,540 |
| REBCO | 91.4 | 4,176,761 | 764 | 3,190,540 |
| Sweet | 1.9 | 85,002 | 847 | 71,988 |
| CPC Crude Oil | 1.9 | 85,002 | 847 | 71,988 |
| OTHER FEEDSTOCK : | 6.8 | 310,024 | 909 | 281,763 |
| Naphtha | 0.2 | 9,628 | 1,240 | 11,936 |
| Light Naphtha type A | 0.2 | 9,628 | 1,240 | 11,936 |
| Bioethanol feedstock | 0.4 | 19,523 | 1,008 | 19,680 |
| ETBE | 0.0 | 1,289 | 1,473 | 1,898 |
| ETBE Feedstock | 0.0 | 1,289 | 1,473 | 1,898 |
| Feedstock for Coke Briquetting | 0.2 | 6,907 | 110 | 757 |
| Feedstock for Coke Briquetting | 0.2 | 6,907 | 110 | 757 |
| Molasses | 0.1 | 3,272 | 132 | 433 |
| Lime | 0.1 | 3,635 | 89 | 324 |
| Methanol | 0.2 | 8,900 | 401 | 3,571 |
| Methanol | 0.2 | 8,900 | 401 | 3,571 |
| MTBE | 0.8 | 37,814 | 1,236 | 46,724 |
| MTBE Feedstock | 0.8 | 37,814 | 1,236 | 46,724 |
| Chemical grade gas | 1.7 | 78,573 | 811 | 63,696 |
| Naphta gasoline/Light Naphtha type II | 1.1 | 51,329 | 859 | 44,100 |
| Pyrolysis Propane | 0.6 | 27,244 | 719 | 19,595 |
| Imported VGO | - | - | - | - |
| Biodiesel | 1.6 | 70,877 | 1,365 | 96,739 |
| Biodiesel Feedstock | 1.6 | 70,877 | 1,365 | 96,739 |
| Imported Methane | 1.7 | 76,514 | 480 | 36,761 |
| Imported Methane | 1.7 | 76,514 | 480 | 36,761 |
| FINISHED PRODUCTS: | 97.0 | 4,436,494 | 861 | 3,818,161 |
| GASOLINE | 27.1 | 1,240,242 | 925 | 1,146,683 |
| Natural gasoline | 2.2 | 100,526 | 921 | 92,543 |
| Natural Gasoline RON 92 --- export | 1.7 | 76,883 | 913 | 70,172 |
| RON 95& Ron 98 - RPGeorgia | 0.5 | 23,642 | 946 | 22,371 |
| Unleaded Gasoline | 21.4 | 979,731 | 940 | 920,517 |
| Euro Unleaded Gasoline EFIX Euro 5 | 0.8 | 38,196 | 976 | 37,280 |
| ---export with bio component | 0.2 | 8,402 | 956 | 8,032 |
| ---intern with bio component | 0.7 | 29,794 | 982 | 29,247 |
| EuroPlus Unleaded Gasoline Euro 5 | 20.3 | 928,609 | 937 | 870,069 |
| ---export | 14.2 | 647,030 | 921 | 595,799 |
| ---intern with bio component | 6.2 | 281,579 | 974 | 274,270 |
| Gasoline Efix S 98 | 0.3 | 12,926 | 1,019 | 13,169 |
| ---export | 0.1 | 4,805 | 1,003 | 4,818 |
| ---intern with bio component | 0.2 | 8,120 | 1,028 | 8,350 |
| Gasoline for chemical use | 3.5 | 159,986 | 835 | 133,623 |
| Raffinate - for Vega | 3.5 | 159,986 | 835 | 133,623 |
| JET FUEL | 4.5 | 204,119 | 1,005 | 205,204 |
| Jet | 4.5 | 204,119 | 1,005 | 205,204 |
| Aviation Turbine Fuel Jet A1 | 4.5 | 204,119 | 1,005 | 205,204 |
| ---intern | 3.8 | 173,942 | 1,010 | 175,628 |
| ---intern- for VGA | 0.7 | 30,177 | 980 | 29,576 |
| Solvents | - | - | - | - |
| DIESEL FUEL | 45.7 | 2,089,762 | 974 | 2,035,966 |
| Diesel Fuel | 45.7 | 2,087,630 | 975 | 2,034,962 |

| Petromidia REFINERY PRODUCTION BUDGET_2013 | Brent Dt | \$ 106.50 | 7.567 | \$ 805.87 |
|---|-------------------|----------------|---------------|----------------|
| | | bbl | CF | mt |
| | Ural | \$ 105.67 | 7.310 | \$ 772.47 |
| | Crude Unit | 12,722 | to/day | |
| | Total | | | |
| No. of Days: | 335 | | | |
| Petromidia REFINERY | Yield % | Quantity mt | Price USD/mt | Value (,000\$) |
| Diesel Euro 5 | 42.6 | 1,947,219 | 974 | 1,895,844 |
| ---export | 13.2 | 602,652 | 943 | 568,005 |
| ---intern with bio component | 29.4 | 1,344,568 | 988 | 1,327,839 |
| Diesel EFIX (Euro 5) | 2.6 | 119,514 | 989 | 118,162 |
| ---export | 0.4 | 18,908 | 948 | 17,923 |
| ---intern with bio component | 2.2 | 100,605 | 996 | 100,239 |
| Diesel Efix S | 0.5 | 20,898 | 1,003 | 20,956 |
| ---export | 0.0 | 226 | 952 | 215 |
| ---intern | 0.5 | 20,672 | 1,003 | 20,741 |
| Slurry | 0.0 | 2,132 | 471 | 1,004 |
| Slurry | 0.0 | 2,132 | 471 | 1,004 |
| LIGHT FUEL OIL | - | - | - | - |
| FUEL OIL | 2.4 | 109,299 | 561 | 61,330 |
| Fuel Oil | 2.4 | 109,299 | 561 | 61,330 |
| Heavy Fuel Oil-vega | 1.6 | 75,000 | 550 | 41,271 |
| Fuel Oil-exp+UTM | 0.8 | 34,299 | 585 | 20,059 |
| Vacuum distillate/VGO | - | - | - | - |
| GASES | 4.9 | 225,713 | 484 | 109,184 |
| Chemical grade gas | 1.1 | 51,129 | 823 | 42,099 |
| Propane fuel | 0.1 | 2,762 | 695 | 1,918 |
| ---export | - | - | - | - |
| ---intern | 0.1 | 2,762 | 695 | 1,918 |
| C5-C6 Cut | 1.1 | 48,367 | 831 | 40,180 |
| Fuel gas | 3.8 | 174,584 | 384 | 67,085 |
| Fuel gas | 3.8 | 174,584 | 384 | 67,085 |
| PROPYLENE | 2.3 | 104,826 | 870 | 91,237 |
| Propylene | 2.3 | 104,826 | 870 | 91,237 |
| Propylene | 2.3 | 104,826 | 870 | 91,237 |
| LIQUIFIED PETROLEUM GAS | 4.3 | 197,356 | 677 | 133,646 |
| Liquified petroleum gas | 4.3 | 197,356 | 677 | 133,646 |
| Liquified petroleum gas | - | - | - | - |
| Bottled LPG for Domestic Use | 0.7 | 33,793 | 638 | 21,565 |
| Automotive LPG | 3.6 | 163,563 | 685 | 112,081 |
| Propane-butane Commercial | - | - | 678 | - |
| PETROLEUM COKE | 4.6 | 210,237 | 137 | 28,757 |
| Petroleum Coke | 4.6 | 210,237 | 137 | 28,757 |
| 50% of Coke Briquettes + 50% of Sorted Coke | 0.6 | 28,996 | 230 | 6,669 |
| Petroleum Coke type 3.0-4.0 | 4.0 | 181,241 | 122 | 22,088 |
| ---export | 0.7 | 34,200 | 142 | 4,854 |
| ---intern | 3.2 | 147,041 | 117 | 17,234 |
| SULPHUR | 1.2 | 54,939 | 112 | 6,153 |
| Petroleum Sulphur | 1.2 | 54,939 | 112 | 6,153 |
| Petroleum Sulphur | 1.2 | 54,939 | 112 | 6,153 |
| ---export | 1.2 | 54,939 | 112 | 6,153 |
| TOTAL UNFINISHED PRODUCTS: | - | - | - | - |
| TOTAL LOSS | 3.0 | 135,293 | | - |
| LOSS | 3.0 | 135,293 | | - |
| Loss | 3.0 | 135,293 | | - |
| Fuel gas for burning | 0.8 | 34,431 | | |
| Coke/Catalyst | 1.2 | 56,201 | | |
| Technological Loss | 1.0 | 44,661 | | |
| GROSS REFINERY P/L | | | | 273,870 |
| GROSS REFINERY MARGIN | | | | 59.9 |

| | | | | |
|---|------------|-------------|--------------|----------------|
| Petromidia REFINERY PRODUCTION BUDGET_2013 | Brent Dt | \$ 106.50 | 7.567 | \$ 805.87 |
| | | bbl | CF | mt |
| | Ural | \$ 105.67 | 7.310 | \$ 772.47 |
| | Crude Unit | | 12,722 | to/day |
| No. of Days: | | Total | | |
| | | 335 | | |
| Petromidia REFINERY | Yield % | Quantity mt | Price USD/mt | Value (,000\$) |
| Gasoline & Diesel | | 3,167,887 | | |
| Export | | 1,382,549 | | |
| Intern | | 1,785,338 | | |

| | |
|-----------------|-----------|
| Gasoline intern | 319,493 |
| Diesel intern | 1,465,845 |

white products, % 85.03

PRESIDENT OF THE BOARD OF DIRECTORS
Azamat Zhangulov

MEMBERS OF THE BOARD OF DIRECTORS:

Alexandru Nicolcioiu



Sorin Graure

Iulian-Marian Butnaru

Dumitru-Remus Vulpescu

CHIEF FINANCIAL OFFICER
Vasile-Gabriel Manole

REFINERY MANAGER
Nicolae Nitu

PPM BU REFINING DIRECTOR
Raluca Lainer