





Prepared by MoP Marketing Team

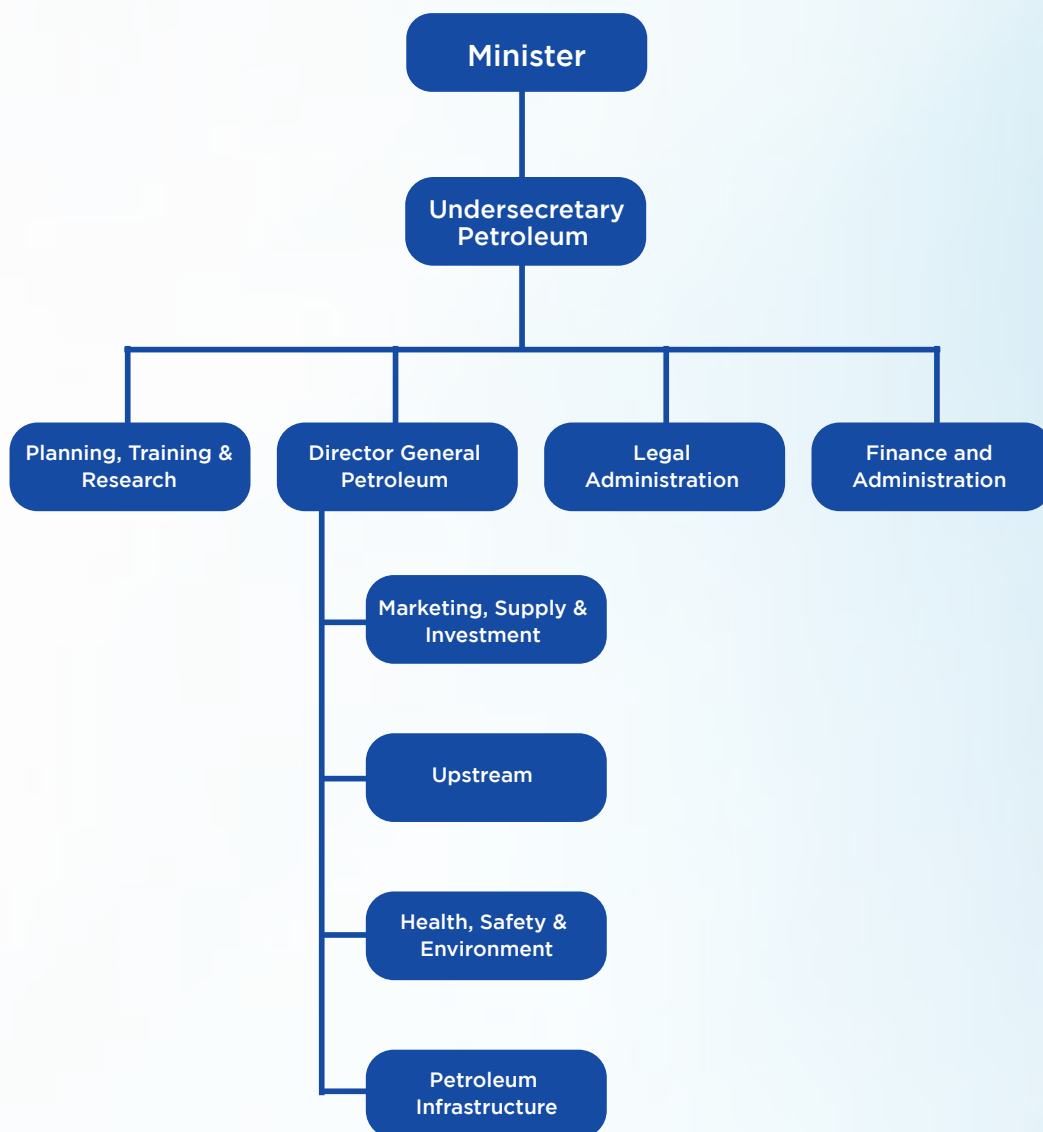
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# MINISTRY OF PETROLEUM ORGANIZATIONAL STRUCTURE

The mandate and functions of the Ministry of Petroleum (MoP) are provided for in Section 175 of the Transitional Constitution and are guided by the Petroleum Act, 2012 and various regulations.

The MoP is responsible for the Petroleum Directorate which consists of the two Departments: Downstream activities of Marketing, Supply and Investment, the Upstream Operations, Health, Safety, Environment and Petroleum Infrastructure. Other Directorates and Departments include the Planning and Training Research Directorate, the Finance and Administration Directorate and the Legal Administration Department.



*Figure 1: MoP Organizational Structure*

# CRUDE OIL MARKETING DEPARTMENT OVERVIEW

In accordance with the MoP's obligation to manage the country's petroleum resources on behalf of the government of South Sudan, the Ministry has established a crude oil marketing department in 2011 under the Petroleum Directorate Downstream Group to market the country's entitlement share of production. The marketing department is responsible for the following activities:

1. reviewing the monthly crude oil lifting programs
2. vetting potential crude buyers
3. preparing the bid tenders
4. issuing the tenders
5. working with the Marketing Committee on tender award recommendations to the Minister
6. preparing the sales contracts
7. monitoring vessel arrivals, loadings and departures at the marine terminal Port Sudan
8. preparing the invoices to the buyers
9. ensuring that sales proceeds are received on time and deposited into the appropriate government bank accounts
10. Preparing detailed marketing reports for use by MoP officials, other government ministries and agencies and for public release through the minister's office.

To further develop the activities of the marketing department as well as those of other MoP Directorates and Departments, Ministry officials have been actively engaged in defining and developing a comprehensive strategic plan that will establish short and long term priorities and programs. Strategic planning is the first step to the preparation of annual work plans and assigning responsibility and accountability. The work plan is also used for identifying budget and resource requirements, including skilled personnel, which is fundamental for ensuring future petroleum sector growth in South Sudan.

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# CONTENTS

## Ministry of Petroleum Crude Oil Marketing Report

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|  |    |
|--|----|
| Abbreviations.....   | 1  |
| List of Figures, Graphs, Charts and Tables.....                          | 2  |
| Part 1 - Global Oil Environment  |    |
| 1.1 World Crude Oil Demand.....  | 3  |
| 1.2 World Crude Oil Supply.....  | 4  |
| 1.3 Crude Oil Price Outlook.....   | 6  |
| 1.4 Currency Exchange Rates.....   | 9  |
| 1.5 Africa and the South Sudan Region.....                               | 11 |
| Part 2 - Petroleum Upstream Framework and Analysis                       |    |
| 2.1 Republic of South Sudan - Petroleum Legislation and Regulations..... | 13 |
| 2.2 Exploration & Production Sharing Agreements (EPSA) Overview.....     | 16 |
| 2.3 Crude Oil Reserves and Analysis.....                                 | 19 |
| 2.4 Production Forecast and Recovery Factors.....                        | 20 |
| 2.5 September 2012 Cooperation Agreements - South Sudan and Sudan.....   | 21 |
| Part 3 - Transparency  |    |
| 3.1 International Best Practices.....                                    | 23 |
| 3.2 Pre-established Award Criteria.....                                  | 23 |
| 3.3 Other Transparency Initiatives.....                                  | 25 |
| Part 4 - Marketing Performance   |    |
| 4.1 The Marketing Team.....  | 26 |
| 4.2 Marketing and Transportation.....                                    | 28 |
| 4.3 Crude Oil Entitlement.....   | 30 |
| 4.4 Market Prices Achieved.....  | 32 |
| 4.5 Sales Price Differentials.....                                       | 33 |
| 4.6 Global Customer Base.....  | 34 |
| 4.7 Customer Invitations.....  | 35 |
| 4.8 Marketing Report Card.....   | 36 |
| 4.9 Transitional Financial Arrangement and Tariff Payments to Sudan..... | 36 |
| 4.10 Outstanding Issues.....   | 38 |
| Part 5 - Future Activities   |    |
| 5.1 Re-Start Unity State Oil Production.....                             | 39 |
| 5.2 Improved / Enhanced Oil Recovery Opportunities.....                  | 39 |
| 5.3 Infrastructure Options.....  | 39 |
| 5.4 Products Supply.....   | 41 |
| 5.5 Challenges and Opportunities Ahead.....                              | 42 |
| Closing Remarks.....   | 44 |

# ABBREVIATIONS

## MoP Crude Oil Marketing Report

|         |  |
|---------|--|
| bbbl    | barrel   |
| boe     | barrels of oil equivalent                              |
| BOSS    | Bank of South Sudan                                    |
| DM      | developed markets                                      |
| EIA     | Energy Information Administration                      |
| EITI    | Extractive Industries Transparency Initiatives         |
| EM      | emerging markets                                       |
| EPSA    | Exploration and Production Sharing Agreement           |
| GOS     | Government of Sudan                                    |
| ICP     | Indonesia Crude Price                                  |
| IEA     | International Energy Agency                            |
| IMF     | International Monetary Fund                            |
| Mbbl    | thousand barrels                                       |
| M3/D    | thousand cubic meters per day                          |
| Mbbl/d  | thousand barrels per day                               |
| MMbbl   | million barrels  |
| MMbbl/d | million barrels per day                                |
| MOFEP   | Ministry of Finance and Economic Planning              |
| MoP     | Ministry of Petroleum                                  |
| OECD    | Organization for Economic Co-operation and Development |
| OPEC    | Organization of the Petroleum Exporting Countries      |
| RSS     | Republic of South Sudan                                |
| STB     | standard tank barrels                                  |
| STP     | standard temperature and pressure                      |
| STEO    | short term energy outlook                              |
| SSP     | South Sudan Pound                                      |
| USAID   | United States Agency for International Development     |
| USD     | United States Dollar                                   |
| WTI     | West Texas Intermediate                                |
| WB      | World Bank   |

# LIST OF FIGURES, GRAPHS, CHARTS and Tables

## MoP Crude Oil Marketing Report

| Figures       |   | Page |
|---------------|---|------|
| Figure 1      | MoP Organizational Structure.....                     | iv   |
| Figure 2      | Price vs. USD-From the website marketrealist.com..... | 10   |
| Figure 3      | South Sudan Petroleum Blocks.....                     | 16   |
| Figure 4      | RSS Refined Product Demand Map.....                   | 42   |
| <b>Graphs</b> |   |      |
| Graph 1       | Oil Demand / Source-International Energy Agency.....  | 3    |
| Graph 2       | Oil Supply / Source-International Energy Agency.....  | 5    |
| Graph 3       | Brent vs. West Texas Intermediate (WTI) Price.....    | 6    |
| Graph 4       | World Bank Price Forecast.....                        | 7    |
| Graph 5       | IMF Spot Price Forecast.....                          | 8    |
| Graph 6       | Euro to USD Exchange Rate.....                        | 9    |
| Graph 7       | USD / SSP Parallel Exchange Rate.....                 | 11   |
| Graph 8       | Historical Production & Production Forecast.....      | 20   |
| Graph 9       | International Pricing – Brent vs. ICP Minas.....      | 32   |
| Graph 10      | Monthly Evolution of Crude Oil Sales - Volumes.....   | 36   |
| Graph 11      | Monthly Evolution of Crude Oil Sales - Revenues.....  | 36   |
| <b>Charts</b> |   |      |
| Chart 1       | Africa Crude Oil Production Share - 2014.....         | 11   |
| <b>Tables</b> |   |      |
| Table 1       | EIA Crude Price Forecast .....                        | 8    |
| Table 2       | Selected Currency Exchange Rates.....                 | 9    |
| Table 3       | GPOC EPSA Fiscal Terms.....                           | 17   |
| Table 4       | SPOC EPSA Fiscal Terms .....                          | 17   |
| Table 5       | DPOC EPSA Fiscal Terms.....                           | 18   |
| Table 6       | South Sudan Crude Oil Reserves.....                   | 19   |
| Table 7       | Net Change in RSS Crude Oil Reserves.....             | 20   |
| Table 8       | Summary of Financial Arrangement with Sudan.....      | 22   |
| Table 9       | Summary of RSS Crude Oil Marketing Activity.....      | 27   |
| Table 10      | Crude Oil Sales Volumes by Month - RSS Share.....     | 28   |
| Table 11      | Crude Oil Sales Revenues by Month - RSS Share.....    | 28   |
| Table 12      | Republic of South Sudan Crude Oil Entitlement.....    | 30   |
| Table 13      | Dated Brent and ICP Minas Actual Crude Pricing.....   | 31   |
| Table 14      | RSS Realized Weighted Average Price Differential..... | 32   |
| Table 15      | RSS Crude Oil Customers and Cargoes Loaded.....       | 33   |
| Table 16      | Pre-approved Customer List.....                       | 34   |
| Table 17      | Payments to Sudan.....                                | 37   |
| Table 18      | Payment In Kind to Sudan.....                         | 38   |

# PART 1 – GLOBAL OIL ENVIRONMENT

## June 2015 – May 2016

### 1.1 World Crude Oil Demand

The worldwide Oil demand for crude oil growth remains unchanged from previous reports at (1.20mb/d) million barrels per day (MMbbl/d) in 2016. According to the U.S. Energy Information Administration (EIA), the estimate for world oil demand in 2015 averaged 92.98MMbbl/d. The EIA is predicting global consumption to grow by 1.8MMbbl/d in both 2015 and 2016. OPEC is also forecasting global oil demand to grow at 1.18 MMbbl/d in 2015 and predicts that total oil consumption is expected to peak up pace in 2016, leading to a total oil demand of 94.18MMbbl/d for 2016.

**OECD Consumption** – The Organization for Economic Co-operation and Development countries (OECD) member states consumption fell by 0.4 MMbbl/d in 2014 but is expected to grow by 0.4 MMbbl/d in 2015 and by 0.2MMbbl/d in 2016. Japan and Europe accounted for nearly the entire 2015 decline in OECD oil consumption. Japan’s consumption is expected to continue declining at a slower rate over the next two years while Europe’s consumption is expected to grow slowly. The United States is the leading contributor to projected OECD consumption growth in 2015, with U.S. consumption increasing by 0.4 MMbbl/d, while consumption in both the United States and Europe increase by about 0.1 MMbbl/d in 2016



**Non OECD Consumption** – Consumption in non OECD countries grew by 1.2 MMbbl/d in 2014 and is projected to grow by 0.8MMbbl/d in 2015 and by 1.2 MMbbl/d in 2016. Lower forecast growth for non-OECD consumption in 2015 mostly reflects a 0.2 MMbbl/d decline in Russia’s consumption as a result of its economic downturn. Russia’s oil consumption is expected to decline by a similar amount in 2016, although it is offset by growth elsewhere. China’s economic growth slowed in the second half of 2014 and in the beginning of 2015. Nonetheless, China remains the main source



of non-OECD oil consumption growth, with a projected annual average increase of 0.3 MMbbl/d in both 2015 and 2016, down from growth of 0.4 MMbbl/d in 2014. India's economic and manufacturing growth continued to rise in the first half of 2015, and projected petroleum and other liquids consumption growth is 0.2 MMbbl/d in 2015 and 2016, compared with 0.1 MMbbl/d in 2014.

The degree to which global oil demand responds to lower oil prices is only beginning to become apparent. South Sudan Dar Blend oil is primarily sold into the Chinese market and refineries in that country as well as some power plants in Japan are capable of handling and welcome the heavy, slightly acidic, low sulfur grade. With the prediction of slightly increasing consumption in China over the next few years it is unlikely that demand for South Sudanese crude will be impacted.

## **1.2 World Crude Oil Supply**

Global oil supplies have recently raised to about 95.3 MMbbl/d in 2015, an increase of more than 3.4% or 3.1 MMbbl/d in according to the International Energy Agency (IEA). The US Energy Information Administration (EIA) notes that global oil production continues to exceed consumption resulting in the buildup of inventories worldwide. Inventory build average 2.2 MMbbl/d in the first half of 2015 and are forecast to average 1.6 MMbbl/d in 2016. The reduction in inventory build levels in 2016 reflects a projected rising demand and a slowing in non OPEC production growth, particularly in the United States. Continuing high inventory levels indicate that the remaining limited storage could result in a drop in production in future periods if supply continues to exceed demand.

U.S. production has risen to a three-decade high of 9.61 MMbbl/d, while OPEC has continued to exceed its target of 30 MMbbl/d for more than a year. OPEC recently agreed to maintain its output quota to defend market share. In addition the U.S. shale oil sector has a number of wells that have been drilled but not yet placed on production due to the current economic situation. This additional production capacity may serve to balance OPEC vs. non OPEC crude oil supply should the former decide to reduce production levels in the future.

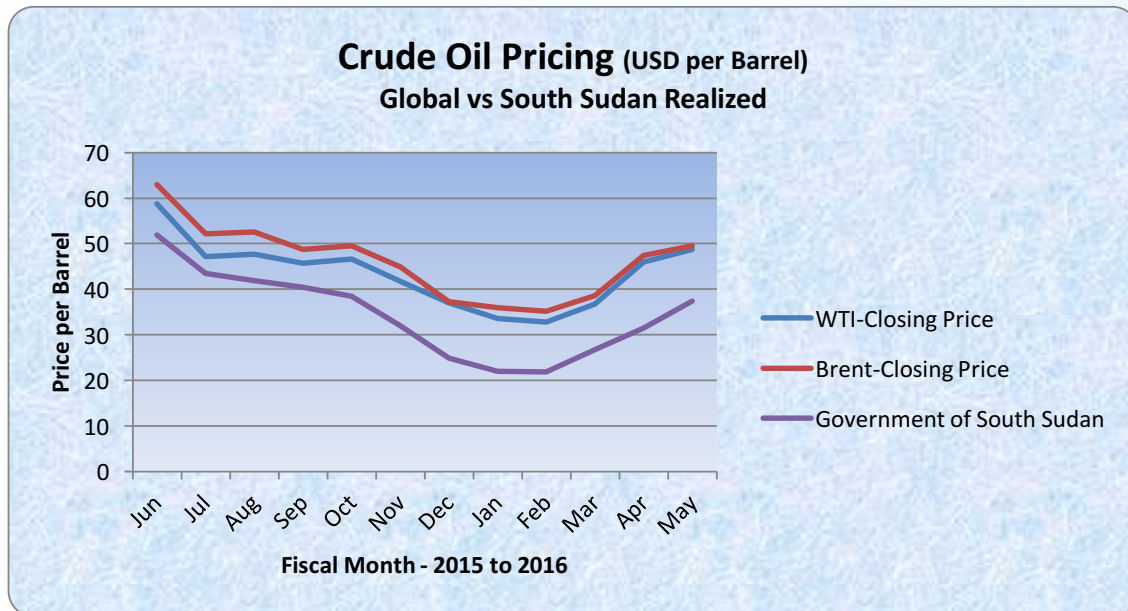
South Sudan crude oil output represents a small fraction of total daily global production. Typical buyers of the country's crude oil are also investors in South Sudan's petroleum sector and it is therefore likely that all crude oil produced in the future will be able to be marketed irrespective of total global supply levels.

***Non OPEC Supply***– Non OPEC production grew by 2.3 MMbbl/d in 2014, mainly from the United States shale oil operations and non OPEC production is expected to continue to grow by 1.3 MMbbl/d in 2015 and by 0.2 MMbbl/d in 2016. U.S. and Canadian production growth will account for much of the increase while reductions in Russia due to reduced investments and sanctions will offset some of these gains.

***OPEC Supply*** – The EIA has estimated that OPEC crude production averaged 30.1 MMbbl/d in 2014 and is predicted to rise by 0.6 MMbbl/d in 2015 before falling by 0.2 MMbbl/d in 2016. Crude oil production declines in Libya, Angola, Algeria and Kuwait were offset by production growth in Iraq and Iran. A nuclear agreement with Iran could result in as much as 1.0 MMbbl/d of shut in oil being released to the market.

### 1.3 Crude Oil Price Outlook

The Dated Brent crude oil price upon which all South Sudan sales are based has fallen by more than 60% since June 2014 when it was trading at nearly \$112 per barrel. The crude oil in the plat-wires market price had reached a low price of \$47.86/bbl in January 2015 before climbing back to a range of \$50-\$54 at the end of this fiscal reporting period.



Graph 3: Brent vs. West Texas Intermediate (WTI) Price

These price reductions during the past year can be mainly attributed to the following factors:

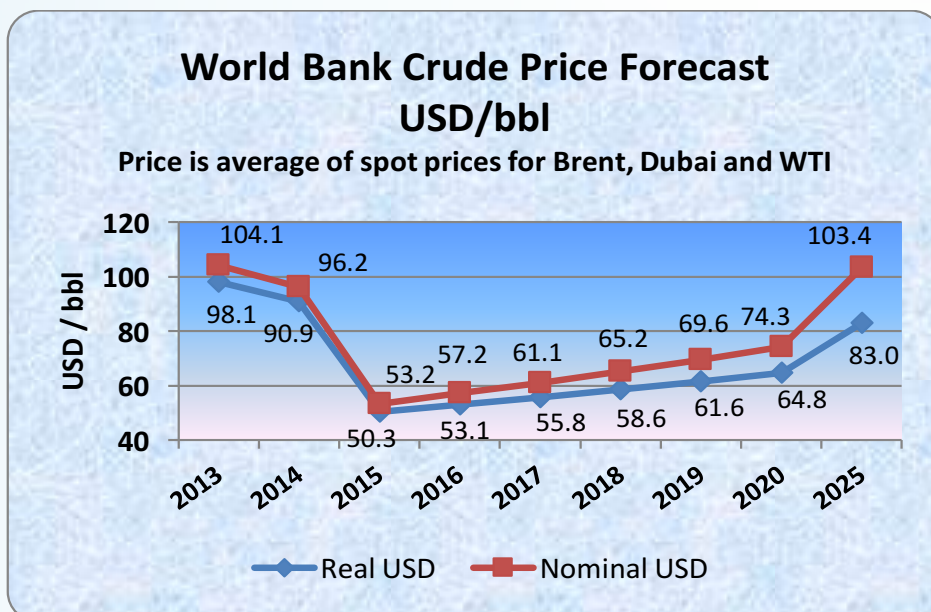
1. The United States has become the world's largest oil producer at 9.61 million barrels per day with the significant development of its shale oil capacity during the past several years. Though it does not export crude oil, the U.S. now imports much less, creating a lot of spare supply.
2. Saudi Arabia and its Gulf allies have elected not to reduce their production and thus their own market share to restore the price as they have done in the past. These countries could curb their production sharply, but the main benefits would accrue to countries with which they have a difficult political relationship such as Iran and Russia. Saudi Arabia could tolerate lower oil prices quite easily with \$900 billion in oil reserves and production costs of only \$5-6 per barrel.

3. Reduced global demand because of weak economic activity, increasing energy efficiencies, and a growing switch away from oil to other fuels.
4. The turmoil in Iraq and Libya—two big oil producers with nearly 4million barrels a day combined—has seemingly not affected their output as the markets appear to be more tolerant and accepting of geopolitical risk.

**EIA Forecast** – The EIA is projecting that the Brent crude oil price will average \$61 per barrel in 2015 and \$67 per barrel in 2016 reflecting an increase in forecast non-OPEC crude oil production growth in 2016. However, the EIA has cautioned that this price projection remains subject to the uncertainties surrounding the possible lifting of sanctions against Iran and other market events. WTI prices in both 2015 and 2016 are expected to average \$5/b less than Brent.

**Goldman Sachs Forecast** – Goldman Sachs has cut its price estimate for Brent for 2016-2018 to \$65 per barrel and is predicting that it will trade at \$55 per barrel in 2020. This is based on the assumption that long term oil prices could drop and remain lower as producers make more permanent efficiency and productivity improvements.

**World Bank Forecast** – In April 2015 The World Bank (WB) released its Commodity Forecast, which predicts that the world crude oil price will decrease from the average USD 96 per barrel in 2014 to USD 50 per barrel in 2015 increasing to an optimistic USD 103 per barrel by 2020 as shown in Graph 4 below



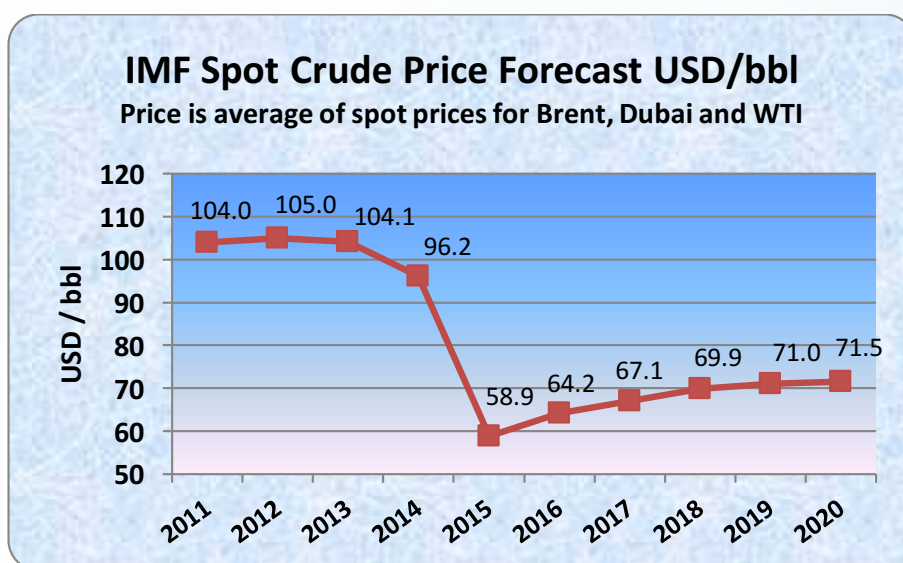
Graph 4: World Bank Price Forecast

**EIA Forecast** – The US Energy Information Agency (EIA), in its June 9, 2015 paper on the Short Term Energy Outlook (STEO), predicts a 2015 price for WTI of USD55.35/bbl and a Brent price of USD60.53 per barrel.

| EIA Report  | 2013   | 2014  | 2015  | 2016  |
|-------------|--------|-------|-------|-------|
| WTI Crude   | 97.98  | 93.17 | 55.35 | 62.04 |
| Brent Crude | 108.56 | 98.89 | 60.53 | 67.04 |

*Table 1: EIA Crude Price Forecast*

**IMF Forecast** – The International Monetary Fund (IMF), in its recent Commodity Price Forecast, predicts the spot average price for crude oil will drop to USD58.90 per bbl by 2015 recovering to USD 71.50 by 2020.



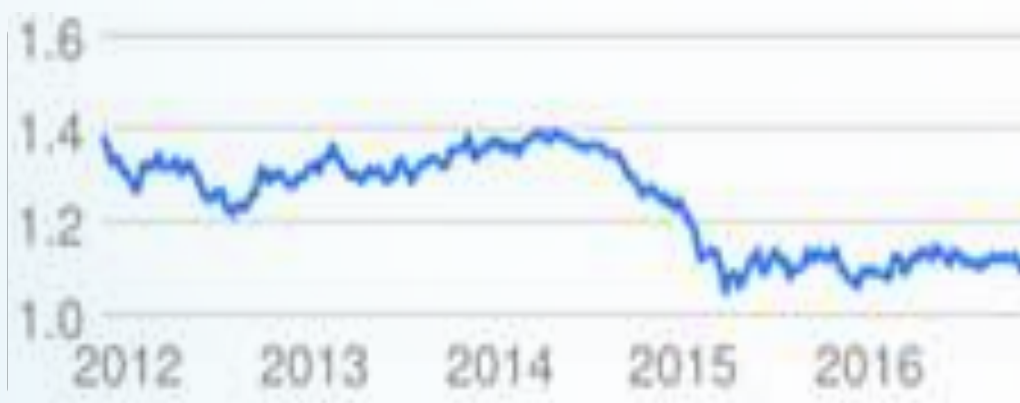
*Graph 5: IMF Spot Price Forecast*

It is clear that the prediction of future oil prices is a difficult and complex exercise which is subject to many different political, geographical, financial and operational variables. Nonetheless, the longer term price forecast by each of these reputable organizations suggest that crude oil prices are expected to remain in the low \$55-\$65 range in the near term and gradually rise towards the end of the decade.

Fundamental market changes are here to stay with lower demand, increasing energy efficiencies, alternative energy forms, and increased long term supply. South Sudan, which relies heavily on crude oil production, recognizes the need to maximize its current petroleum assets while at the same time find ways to diversify its energy supply / demand, develop a national energy program and adjust to the new reality.

## 1.4 Currency Exchange Rates

Global Exchange Rates – The United States dollar has continued to appreciate against many world currencies in 2014 and the first half of 2015. The USD – Euro exchange rate comparison from the beginning of June 2014 through to the end of May 2015 is shown in Graph 6 below. The Euro has lost nearly 20% to the USD during this twelve month marketing report period. Similarly, the Japanese Yen has lost 18% while the currency of South Sudan’s important trading partner lost more than 99%, the Chinese Yuan has held steady gaining about 1%. Weakening foreign exchange in many countries has lifted significantly the price of oil in local currencies which in some instances may serve to curtail demand.



*Graph 6: Euro to USD Exchange Rate*

Table 2 illustrates the impact of the US dollar appreciation on selected currencies:

| Symbol | Country   | Jun 1/15 | May 31/16 | % Change |
|--------|-----------|----------|-----------|----------|
| CNY    | China     | 0.16201  | 0.16327   | 1%       |
| JPY    | Japan     | 0.00982  | 0.00805   | -18%     |
| EUR    | Euro      | 1.3628   | 1.0957    | -20%     |
| CAD    | Canada    | 0.92149  | 0.80289   | -13%     |
| NOK    | Norway    | 0.16725  | 0.12865   | -23%     |
| AUD    | Australia | 0.93071  | 0.76367   | -18%     |

*Table 2: Selected Currency Exchange Rates*

A stronger dollar is one factor, along with a slower global economy, reduced global demand and political unrest that has contributed to the falling oil price. Oil is typically traded in U.S. dollars and when the dollar strengthens, oil prices in relative terms tend to fall. The recent drop in the Brent crude oil price from about \$115 per barrel to \$53 per barrel has coincided with the rise in the dollar and the sharp dollar increase in the second half of 2015 was blamed by some for the large sell off in the price of oil. Now that the dollar value has dropped, the dollar sell-off is being seen as a contributing factor to the increase in the oil price.

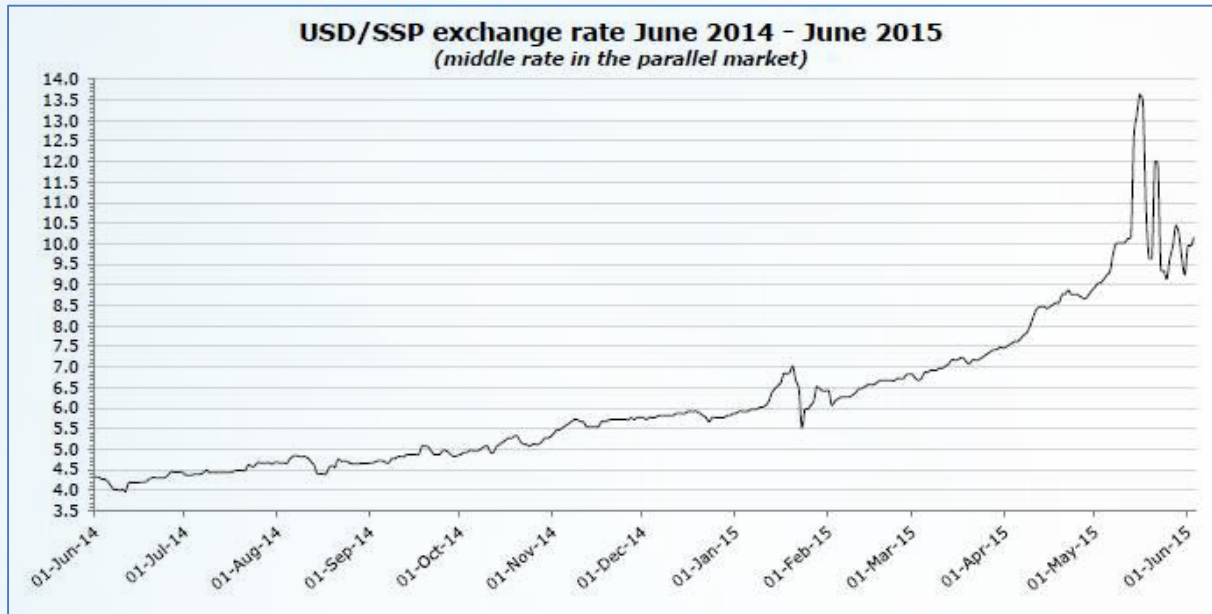
The diversity of oil price drivers makes it difficult to pin down the exact nature of the correlation between the dollar and oil prices but some key relationships have been noted:



- Oil prices generally move in the opposite direction to the dollar
- Oil prices and the dollar typically do not have a meaningful correlation over the long term due to other factors
- The short term dollar / oil price relationship tends to be closer
- The dollar’s relationship with oil appears to be closer when the dollar is rising, compared to when the dollar is falling

WTI appears to have a more significant correlation with the dollar than Brent when the dollar is rising and seem similar when the dollar is falling.

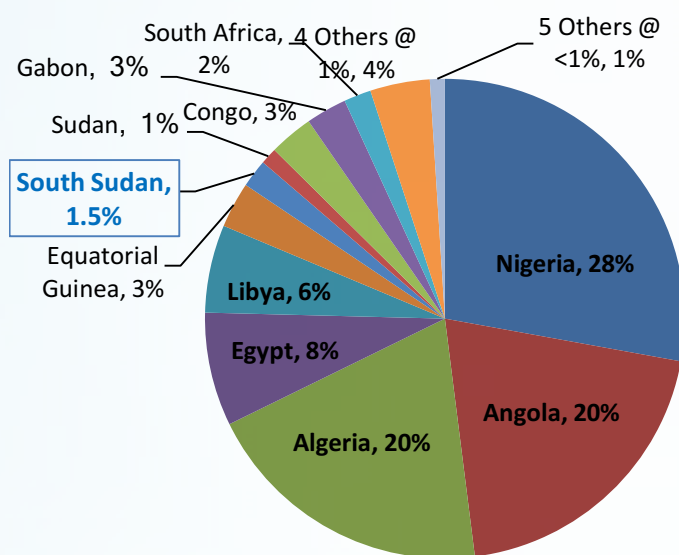
South Sudan Exchange Rate – Since the end of June 2014, the USD to South Sudanese Pound (SSP) parallel exchange rate has fluctuated between a low of 4.0 SSP/USD and a high at the end of May 2015 of about 10 SSP/USD. The rate peaked at more than 13.5 SSP/USD in early May 2015 as shown in Graph 7. All South Sudan oil sales are denominated in USD which offers some protection from the currency variation; however domestic payments could be impacted by the exchange rate differences as USD is converted to SSP.



*Graph 7: USD / SSP Parallel Exchange Rate*

### 1.5 South Sudan and Africa Region

Africa– According the U.S. Energy Information Agency total 2015 African crude oil production was estimated at about 8.7MMbbl/d. The five largest producers – Nigeria, Angola, Algeria, Egypt and Libya accounted for more than 80% of African production. Of the 20 oil producing countries in Africa listed by the EIA, South Sudan ranks ninth in total crude oil output averaging 130,000 thousand barrels per day throughout 2015 to 2016.



*Chart 1: Africa Crude Oil Production Share – 2015*



Overall production in Africa has declined 6% during the past year and combined with the sharp and possibly prolonged reduction in oil prices, it has required many countries to cut their budgets and reduce spending. The African Petroleum Producers Association, led by Angola and Algeria, is starting an initiative to seek collaboration between members of OPEC and other oil producers to reduce output and stabilize prices.

South Sudan – Since the restart of production in April 2013, South Sudan has had average production of 178Mbbbl/d. Production peaked at 247Mbbbl/d in early December 2013 and has averaged 130Mbbbl/d during the past fiscal year. Sales are made under a confidential bid tender program and prices received have been competitive and transparent and based on international market conditions. Demand has been very good for South Sudanese Dar Blend crude oil, particularly in Asian markets such as China and Japan as their refineries are capable of handling the highly acidic Dar Blend crude oil.

According to South Sudan's annual review of oil reserves, the country has about 1.1 billion Standard Tank barrels of developed and undeveloped recoverable reserves as of January 1, 2015. The majority of reserves are located in the oil-rich Muglad and Melut basins, which extend into both countries.

Oil field exploration and development work in South Sudan has been hampered since early 2014 due to the security situation in the regions. The recent push by government forces to drive out rebel factions has been unsuccessful, particularly in Unity State but successful in the Upper Nile area. Much work remains to be done in South Sudan to confirm additional oil reserves, to improve recovery factors and enhance production from the existing oil fields and to offer new areas for exploration to international investors. With the recent improvements in regional security, the Ministry of Petroleum looks forward to working closely with our producing partners in 2015-2016 to increase production for the mutual benefit of all.

# **PART 2 – PETROLEUM UPSTREAM FRAMEWORK AND ANALYSIS**

## **April 2013 to May 31, 2014**

### **2.1 Republic of South Sudan – Petroleum Legislation and Regulations**

#### **2.1.1. 2012 Petroleum Act Overview**

- The Act has 21 chapters and 100 sections covering upstream – ownership of petroleum is vested in the people and managed by the Republic of South Sudan for their benefit;
- The Ministry of Petroleum is responsible for the management of the petroleum sector;
- Emphasis is on maximum recovery within a framework:
  - providing for “prudent operations”,
  - using best international practices,
  - ensuring safety, security and protection of the environment, and
  - requiring transparency, accountability and ethical behavior, on the part of licensees/contractors and Government;
- The EPSA contractual regime continues with certain key provisions of these agreements made part of the legislation;
- A licensing regime for reconnaissance activities, installers and operators of transportation systems (including pipelines) is provided for based on an open and transparent bidding process.

#### **Highlights & Current Status**

- Safety and environment put primary responsibility on the contractor;
- The Act endorses the concept of “local content”, using South Sudanese, if competent and available, to fill skilled and unskilled positions;
- The Act affirms Ministry of Petroleum responsibility for administration, implementation and enforcement;
- The Act provides for broad regulatory powers to legislative regime;
- The Act has been enacted and has been in force since July 2012.

### **2.1.2. Petroleum Revenue Management Act**

The Petroleum Revenue Management Act (PRMA) establishes a formalized structure for the distribution of petroleum revenues to:

- immediate budgetary needs;
- savings including revenue stabilization and future generations, and;
- Direct transfers to petroleum producing states and affected communities.

It establishes a high standard for reporting requirements for both the Government and oil companies, with the overarching principle of transparent and accountability management.

The Act was approved by South Sudan's two houses of parliament and was signed into law by the President of the Republic of South Sudan on November 10, 2013.

### **2.1.3. Petroleum Regulations**

- The Health, Safety and Environment Systems regulation was signed into law by the Minister of Petroleum on March 31, 2015. The regulations provide for:
  - o Contractors to develop, implement, maintain, comply and ensure compliance with an adequate and effective management system
  - o Must follow a "Plan – Do – Check – Act" framework
  - o Must fit into the over-all management system framework
  - o Must follow the Environmental and Social Impact Assessment (ESIA) for the area involved
  - o Must be site specific for important stages in the life-cycle of petroleum activities

The regulation will better enable and support the ministry's HSE group to monitor and assess the contractors HSE performance against a defined management system and when combined with the administrative penalties program that is currently being developed, give the government extremely effective tools for compliance and enforcement.

- Amendments to the Petroleum Act 2012 have been drafted to enable a regulatory regime for charging and collecting administrative penalties and are under review by stakeholders; the draft regulation putting the regime into effect is also being prepared simultaneously with the draft statutory provisions.
- Four Petroleum Regulations are in various stages of development:
  - occupational health and safety,
  - records & reporting,
  - drilling & production
  - graticulation and licensing.

## 2.2 Exploration & Production Sharing Agreements (EPSA) Overview

The map in Figure 3 outlines the areas of current petroleum activities in the Republic of South Sudan.

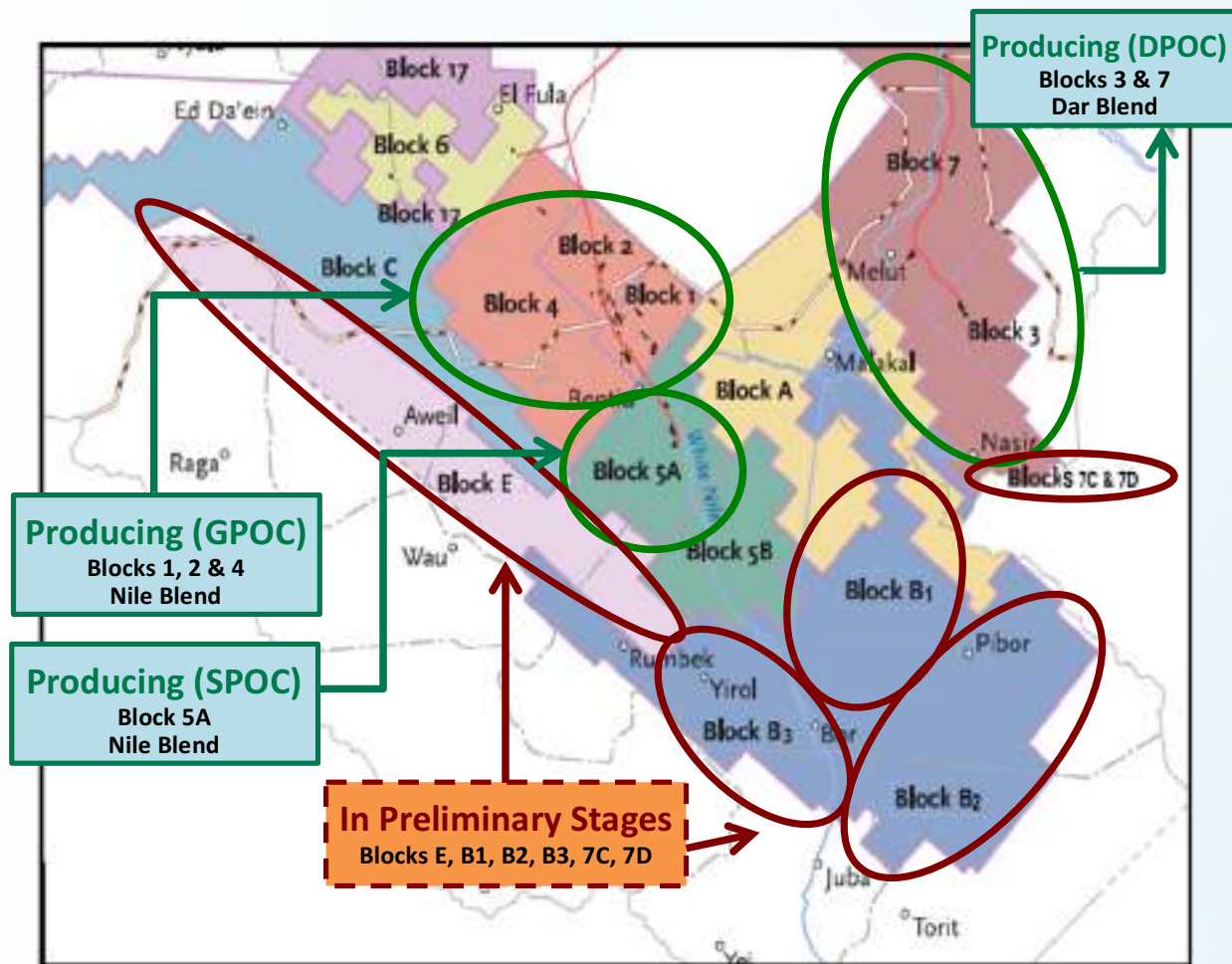


Figure 3: South Sudan Petroleum Blocks

The Republic of South Sudan has entered into or is negotiating six agreements with foreign investors for the exploitation of the country’s petroleum reserves. Crude oil production is being realized under three agreements and the remaining three are still in various stages of the complex negotiation phase. These production and potential exploration areas include:

### Blocks 1a and 1b – Greater Pioneer Operating Company (GPOC) – Unity State

Blocks 1a and 1b are located in Unity State and the Nile Blend crude oil is produced from some 283 wells. Final oil processing is done at the Heglig facilities in Sudan prior to flowing into the larger Nile Blend export stream via

the GNPOC pipeline to the marine terminal in Port Sudan and onwards to international markets. The producing wells are located in several different oil fields with varying qualities which are blended to average 34 API, 0.06% Sulfur. Highlights of the Blocks 1a and 1b EPSA are shown below:

| <b>Greater Pioneer Operating Company (GPOC)</b> |                            |            |
|---|----------------------------|------------|
| <i>Development Blocks 1b and 2b</i>             |                            |            |
| Operating Costs                                 | Recovered in year incurred |            |
| Capital Costs                                   | Recovered over four years  |            |
| Cost Oil Maximum                                | 40%                        |            |
| Excess Cost Oil                                 | RSS 100%                   |            |
| Profit Oil                                      | 60%                        |            |
| Profit Oil Sharing                              | RSS                        | Contractor |
| < 25,000 bbls / day                             | 61.5%                      | 38.5%      |
| > 25,000 bbls / day; < 50,000 bbls / day        | 71.0%                      | 29.0%      |
| > 50,000 bbls / day                             | 80.0%                      | 20.0%      |
| <i>Exploration Blocks 1a, 2a and 4</i>          |                            |            |
| Operating Costs                                 | Recovered in year incurred |            |
| Capital Costs                                   | Recovered over four years  |            |
| Cost Oil Maximum                                | 45%                        |            |
| Excess Cost Oil                                 | RSS 100%                   |            |
| Profit Oil                                      | 55%                        |            |
| Profit Oil Sharing                              | RSS                        | Contractor |
| < 25,000 bbls / day                             | 60%                        | 40%        |
| > 25,000 bbls / day; < 50,000 bbls / day        | 70%                        | 30%        |
| > 50,000 bbls / day                             | 80%                        | 20%        |

**Table 3: GPOC EPSA Fiscal Terms**

Block 5A – SUDD Petroleum Operating Company (SPOC) – Unity State

Block 5A is located in Unity State and has some 55 producing oil wells. Crude oil designated as Nile Blend flows to the Heglig facilities in Sudan for final processing prior to export through the GNPOC pipeline. Due to the heavier crude oil characteristics, Block 5A production is typically restricted to about 10% of the total GNPOC throughput in order to not significantly degrade the total oil volumes. Highlights of the Block 5A EPSA are shown below:

| <b>SUDD Petroleum Operating Company Limited (SPOC)</b> |                            |            |
|--|----------------------------|------------|
| <i>Block 5A</i>  |                            |            |
| Operating Expenses                                     | Recovered in year incurred |            |
| Exploration Expenses                                   | 20% per financial year     |            |
| Development Expenses                                   | 20% per financial year     |            |
| Cost Oil Maximum                                       | 40%                        |            |
| Excess Cost Oil  | Shared as per Profit Oil   |            |
| Profit Oil   | 60%                        |            |
| Profit Oil Sharing                                     | RSS                        | Contractor |
| < 25,000 bbls / day                                    | 71.5%                      | 28.5%      |
| > 25,000 bbls / day; < 50,000 bbls / day               | 72.5%                      | 27.5%      |
| > 50,000 bbls / day; < 100,000 bbls/day                | 76.25%                     | 23.75%     |
| > 100,000 bbls / day                                   | 81.25%                     | 18.75%     |

**Table 4: SPOC EPSA Fiscal Terms**

## Blocks 3 & 7 – Dar Petroleum Operating Company (DPOC) – Upper Nile State

Blocks 3 & 7 are located in Upper Nile State and have some 618 oil wells producing the heavier and acidic Dar Blend crude. The crude oil is initially processed at the DPOC field processing facilities in Palouge prior to passing to the Al Jabalain central processing facilities across the border in Sudan for final processing and water removal. The oil then enters the Petrodar pipeline for transport to the Port Sudan marine terminal and onward to the international markets. The producing wells are located in several different oil fields with varying qualities which are blended to average 26 API, 0.1% Sulfur. Highlights of the Blocks 3 & 7 EPSA are shown below:

| <b>Dar Petroleum Operating Company (DPOC)</b> |                            |            |
|---|----------------------------|------------|
| <b>Development Block 3D</b>                   |                            |            |
| Operating Expenses                            | Recovered in year incurred |            |
| Exploration Expenditures                      | 25% per financial year     |            |
| Development Expenditures                      | 25% per financial year     |            |
| Cost Oil Maximum                              | 50%                        |            |
| Excess Cost Oil                               | Shared as per Profit Oil   |            |
| Profit Oil                                    | 50%                        |            |
| Profit Oil Sharing                            | RSS                        | Contractor |
| < 10,000 bbls / day                           | 64%                        | 36%        |
| > 10,000 bbls / day; < 15,000 bbls / day      | 67%                        | 33%        |
| > 15,000 bbls / day; < 20,000 bbls / day      | 77%                        | 23%        |
| > 20,000 bbls / day                           | 80%                        | 20%        |
| <b>Exploration Blocks 3E</b>                  |                            |            |
| Operating Expenses                            | Recovered in year incurred |            |
| Exploration Expenditures                      | 25% per financial year     |            |
| Development Expenditures                      | 25% per financial year     |            |
| Cost Oil Maximum                              | 45%                        |            |
| Excess Cost Oil                               | Shared as per Profit Oil   |            |
| Profit Oil                                    | 55%                        |            |
| Profit Oil Sharing                            | RSS                        | Contractor |
| < 25,000 bbls / day                           | 70%                        | 30%        |
| > 25,000 bbls / day; < 50,000 bbls / day      | 73%                        | 27%        |
| > 50,000 bbls / day; < 75,000 bbls / day      | 75%                        | 25%        |
| > 75,000 bbls / day                           | 80%                        | 20%        |
| <b>Exploration Blocks 7E</b>                  |                            |            |
| Operating Expenses                            | Recovered in year incurred |            |
| Exploration Expenditures                      | 25% per financial year     |            |
| Development Expenditures                      | 25% per financial year     |            |
| Cost Oil Maximum                              | 45%                        |            |
| Excess Cost Oil                               | Shared as per Profit Oil   |            |
| Profit Oil                                    | 55%                        |            |
| Profit Oil Sharing                            | RSS                        | Contractor |
| < 25,000 bbls / day                           | 70%                        | 30%        |
| > 25,000 bbls / day; < 50,000 bbls / day      | 72%                        | 28%        |
| > 50,000 bbls / day; < 75,000 bbls / day      | 74%                        | 26%        |
| > 75,000 bbls / day                           | 80%                        | 20%        |

**Table 5: DPOC EPSA Fiscal Terms**

## Block B1– Total

There is no production from this block – re-negotiation for signing the Exploration and Production Sharing Agreement (EPSA) with the partners is still in progress.

## Block B2 – Total

There is also no production from this block – re-negotiation for signing the EPSA with the partners is in progress.

## Block B3

This Block will be tendered as per the Petroleum Act 2012 for potential operators to compete in order to win ownership and exploitation.

## Block E

There is also no production from this block – negotiations for signing EPSA with the partners are continuing.

## 2.3 Crude Oil Reserves and Analysis

A recent comprehensive reserve assessment has not yet been independently completed by the Government. The MoP Upstream department has been working hard in consultations with the Joint Operating Companies (JOCs) to improve the accuracy of the reserve estimate. Data available from the JOCs shows total reserves of 1,083.71 million Standard Tank Barrels (MMSTB) as at January 1, 2015.

| Field               | Petroleum Initially in Place (PIIP) (MMSTB) | Recovery Factor (RF) % | Estimated Ultimate Recovery (EUR) (MMSTB) | Cumulative Production (MMSTB) | Reserves (MMSTB) |               | Total Reserves (MMSTB) |
|---------------------|---|------------------------|---|-------------------------------|------------------|---------------|------------------------|
|                     |   |                        |   |                               | Developed        | Undeveloped   |                        |
| DPOC Blocks 3 & 7   | 5,405.86                                    | 23.00                  | 1,259.75                                  | 546.92                        | 543.30           | 169.52        | 712.83                 |
| GPOC Blocks 1, 2, 4 | 2,557.50                                    | 33.20                  | 849.80                                    | 657.00                        | 132.40           | 60.40         | 192.80                 |
| SPOC Block 5A       | 2,655.13                                    | 8.32                   | 221.04                                    | 42.97                         | 79.13            | 98.95         | 178.08                 |
| <b>Totals</b>       | <b>10,618.49</b>                            | <b>21.50</b>           | <b>2,283.84</b>                           | <b>1,246.89</b>               | <b>754.83</b>    | <b>328.87</b> | <b>1,083.71</b>        |

*Table 6: South Sudan Crude Oil Reserves*



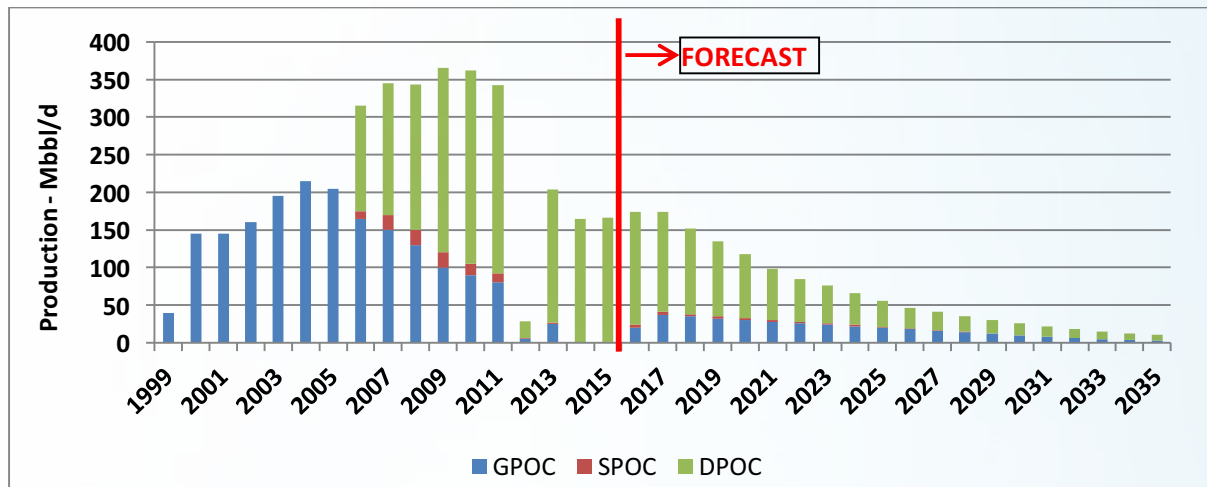
The net change in reserves for the year 2015 for each of the producing areas is shown in the following Table 7. The net change reflects a reduction for the production for the year offset by any reserve additions or adjustments for the period.

| Crude Type       | Contractor | Block  | 2015 Reserves (MMbbl) | 2014 Reserves (MMbbl) | Net Change    |
|------------------|------------|--------|-----------------------|-----------------------|---------------|
| Nile Blend       | GPOC       | 1a, 1b | 192.8                 | 192.8                 | 0             |
| Nile Blend       | SPOC       | 5A     | 178.08                | 178.08                | 0             |
| <b>Sub Total</b> |            |        | <b>370.88</b>         | <b>370.88</b>         | <b>0</b>      |
| Dar Blend        | DPOC       | 3, 7   | 712.83                | 769.3                 | -56.47        |
| <b>Total</b>     |            |        | <b>1,083.71</b>       | <b>1,140.18</b>       | <b>-57.54</b> |

Table 7: Net Change in RSS Crude Oil Reserves

## 2.4 Production Forecast and Recovery Factors

The graph below shows the average actual daily production to date and the projected decline rates for all three producing blocks through to 2035 without further reinvestment or new investments to replace reserves.



Graph 8: Historical Production & Production Forecast

Future investments to optimize oil field operations, implement improved / enhanced oil recovery schemes and initiate new exploration has the potential to significantly increase the levels of production and extend the life of the fields.

## Production Forecast

- Production is predicted to continue at reduced levels of 166-130 thousand bbl/d for the remainder of 2015 with no further production from the Unity State Nile Blend oil fields expected until 2017.
- Production declines are expected over the next 5 years without further reserve replacement or production enhancements. This is a normal production reserves decline pattern without additional investment.
- The current shut down of Unity State oil wells will not change the production profile as oil wells can probably restart without loss of accessible production. Only the timing of production is affected.
- Most future production derives from the Dar Blend fields in Upper Nile.
- The production profile takes into account only the estimated production from the fields currently in production.
- Possible new discoveries and increased recovery rates from IOR / EOR projects may give higher future production.
- Additional participation in the fields, including new foreign investment and new technology, can materially improve the overall production forecast curve, as new investment will focus on production growth

### 2.5 September 2012 Cooperation Agreements – South Sudan and Sudan

On September 27, 2012 the Government of South Sudan and the Government of Sudan entered into a number of agreements to cooperate across a range of areas of common interest and committed themselves to implementing these agreements including “The Agreement on Oil and Related Economic Matters”. Collectively these agreements are known as the 2012 Cooperation Agreements.

***Oil Agreement Highlights*** – The principle highlights of The Agreement Concerning Oil and Related Economic Matters are:

- South Sudan would have access rights to the GNPOC (Nile Blend) and Petrodar (Dar Blend) processing and transportation facilities located on the territory of Sudan;
- South Sudan would provide their proportionate share of pipeline fill which would be redelivered to South Sudan at the expiry of the agreement;
- Agreement on financial arrangements (United States Dollars per barrel) are:

| United States Dollars              | GNPOC (Nile Blend) | Petrodar (Dar Blend) |
|------------------------------------|--------------------|----------------------|
| Processing Fee                     | 1.60               | 1.60                 |
| Transportation Fee                 | 8.40               | 6.50                 |
| Transit Fee                        | 1.00               | 1.00                 |
| <b>Fee Sub Total</b>               | <b>11.00</b>       | <b>9.10</b>          |
| Transitional Financial Arrangement | 15.00              | 15.00                |
| <b>Total Fees</b>                  | <b>26.00</b>       | <b>24.10</b>         |

*Table 8: Summary of Financial Arrangement with Sudan*

- All payments will be based on the net barrels lifted at the Port Sudan marine terminal;
- The maximum cumulative amount of the Transitional Financial Arrangement is USD 3.028 billion;
- The agreement will remain in force for a period of three years and six months as of the date of the first oil lifting at the marine terminal and a bill of lading issued (Start June 2013; Expires December 2016). But this agreement is been extended for the following reasons:
  1. The oil prices are decrease or down internationally (Globally).
  2. Production decline in the oil field.

Therefore, the two countries leaders have to amend the agreement to reflect the changes of global oil price and production decline, to extend agreed period in 2012 agreement.

# PART 3 – TRANSPARENCY

## Now and For the Future

### 3.1 International Best Practices

On July 9, 2011 the Ministry of Petroleum, Republic of South Sudan assumed full and complete responsibility for petroleum operations on its territory. Petroleum operations are managed on behalf of the people of South Sudan and the responsibilities and obligations of the MoP are enshrined in the Transitional Constitution and guided by the Petroleum Act 2012.

The MoP is dedicated to forming an institutional structure and establishing business relationships in an open and transparent manner. Transparency in Marketing is the cornerstone to growing a new international customer base mandated to conform to the highest ethical standards, as well as to ensure oil revenue cash flows are conducted through proper channels. Examples of Transparency in our Marketing Team practices:

| Activity                            | Benefit                             |
|-------------------------------------|-------------------------------------|
| • Formal Sales Contracts            | Detailed and Comprehensive          |
| • Limited Direct Negotiations       | Only on Short Notice Avails         |
| • Tender Approach to Selling        | Allows for Open Bidding             |
| • Guidelines for Awarding Cargoes   | All Bidders Follow Same Rules       |
| • Marketing Team Membership         | Interdisciplinary Across Ministries |
| • Floating International Pricing    | Established Industry Benchmark      |
| • Customer Prescreening Application | Serves a Background Check           |
| • Bids Reviewed by All Members      | Sign off by Each Member             |
| • All Revenues Directly to Finance  | MoFEP Approved Accounts             |
| • Documented Meeting Minutes        | Recaps All Issues Discussed         |
| • Ministerial Approval of Awards    | Documented Official Approval        |

## 3.2 Pre-established Award Criteria

Clearly established criteria to evaluate competing bids for RSS monthly crude oil sales has been developed and implemented by the Marketing Team. While price is the single most important factor, there are a number of important additional factors considered as well to safeguard RSS interests, as shown below:

### Republic of South Sudan - Ministry of Petroleum

#### Bid Evaluation Criteria

**Pre-Approval**

Marketing Team pre-agree list of companies allowed to participate in tender

**Transparency**

All Bids received within the Tender timeline are tabled for review by Team

**Conformity**

Bids received that do not conform to Tender conditions may be eliminated

**Commitment**

Intention is to commit all cargoes offered in Tender if acceptable conditions

**Selling Priority**

Awards should be announced in date order to avoid distressed sale later

**Price**

Pricing is a major (not only) factor in awarding cargoes to winning Bidders

**Security**

Financial security is a major (not only) factor in cargo awards

**Diversification**

Spreading exposure to multiple Bidders is a factor in awards

**Target Buyers**

Recognition of large end user factored in if relationship adds value to RSS

**Negotiation**

Follow up direct negotiation should be limited to clarifying bid submissions

**Payment**

Early payment options considered to meet government operational needs

### **3.3 Other Transparency Initiatives**

In addition to the marketing activities listed above related to the direct selling of crude oil, MoP is continuing to emphasize transparency in all of its business practices. For example, this is the fifth annual edition of the marketing report which provides comprehensive information to stakeholders, interested parties and the public on the crude oil marketing activities of the Ministry.

The Petroleum Revenue Management Act is strongly supported by the MoP and provides further guidance on crude oil revenue management as well as additional transparency under new reporting obligations. The implementation of the Extractive Industries Transparency Initiative (EITI) has also been strongly supported by the Ministry and, although progress to date has been limited due to the capacity constraints of the Ministry as well as the need to address other urgent priorities, the MoP and the government of South Sudan continue to remain committed to its effective implementation.

The Ministry has also initiated the practice of providing periodic press releases which outline recent sales and production volumes, crude oil revenues, tariff and assistance fee payments to Sudan as well as other relevant marketing data. The Ministry is continuing to work to improve its website to enable much more information about Ministry activities to be disseminated to the public.

# PART 4 – MARKETING PERFORMANCE

June 2015–May 2016

## 4.1 The Marketing Team

A pre-selected interdisciplinary group representing the Ministry of Petroleum, Ministry of Finance and Economic Planning, Ministry Of Justice, and the Central Bank of South Sudan meet on a monthly basis to review crude marketing issues, consider sales strategy, address customer issues, and make the award recommendations for oil sales contracts. Members of the marketing team are:

**Eng. Mohamed Lino Benjamin,  
Chairman**

Undersecretary MoP

**Eng. Awow Daniel**

Director General of Petroleum  
Authority

**Mr. Angok Daniel**

Legal Advisor, MoP

**Mr. Jackson Wilson Bona**

Ministry of Finance & EP Member

**Mr. Chol Deng Majok**

Ag/Director for Marketing

**Mr. Loi Majak Mapuor**

Ministry of Finance and Economic Planning  
– Member

**Mr. Simon Kiman Lado**

Ministry of Finance and Economic Planning  
- Member

**Mr. Moses Makur Deng**

Bank of South Sudan - Member

**Mr. Peter Malual Mading**

Central Bank of South Sudan - Member

**Mr. Gieth Abraham Dauson**

Minister's Office, MoP– Member

**Mr. Barnaba Tito**

MoP Member

**Mr. Manase Machar Bol**

MoP Member

**Mr. Gatkeek Tung**

Legal Advisor, MoP

**Mrs. Akur Ajo Magot**

Legal Advisor, MoP

**Mr. Akuei Ajou Akuei**

MoP Member

**Mrs. Nyawut Loth Adija**

MoP Member

**Mr. Tiberious Ohide**

MoP Member

**Mr. Khidir Ajak Deing**

MoP Member

This membership list will be expected to change from time to time and develop as reassignments within the various institutions will occur and additional experienced marketers from the Republic of Sudan are identified and recruited to strengthen the crude oil marketing function.

## 4.2 Marketing and Transportation

Crude marketing began in mid-July, 2011, immediately following our country's independence, and successfully continued through mid-January, 2012. Production was shut down from January 2012 up to April 2013 in response to the confiscation of several RSS crude oil cargoes by Sudan as well as transportation and tariff disputes with the GoS. In April 2013 production was restarted through mutual agreement between South Sudan and Sudan and supported by the signing of the September 2012 Cooperation Agreements.

The following table summarizes the crude oil marketing activity in South Sudan for the reporting period of June 1, 2015 to May 31, 2016

| June 1, 2015 - May 31, 2016              | Cargoes   | Volume (MMbbl)    | USD                   | SSP                     | Percent    |
|--|-----------|-------------------|-----------------------|-------------------------|------------|
| Total Crude Oil Sales                    | 37        | 19,429,852        | 697,347,124.48        | 83,681,654,937.6        | 100%       |
| Less:                                    |           |                   |                       |                         |            |
| Payable to Sudan                         |           |                   | 46,101,214.72         | 5,532,145,764           | 7%         |
| Trafigura Loans                          |           |                   | 83,298,494.54         | 9,995,819,340           | 12%        |
| Others                                   |           |                   | 35,524,857.00         | 4,262,982,840           | 5%         |
| Nile Petroleum Sales                     | 11        | 2,035,564         | 73,910,894.00         | 8,869,307,280           | 11%        |
| <b>Net Republic of South Sudan Sales</b> | <b>26</b> | <b>17,394,288</b> | <b>458,511,664.22</b> | <b>55,021,399,713.6</b> | <b>65%</b> |

*Table 9: Summary of RSS Crude Oil Marketing Activity*

A total of 19.4 MMbbl of crude oil valued at USD 697.3 million (83.6 billion SSP) was sold during the current reporting period at an overall average net price, including Nilepet sales, of USD 36.31 per barrel. During the previous reporting period of June 2014 and May 2015 South Sudan sold 34.7 MMbbl of crude oil at an average price of USD 68.77 per barrel for total revenue of USD 2,386 million. Therefore, production declined from 34.7 MMBBLS in 2014-2015 fiscal year to 19.4MMBBLS in 2015-2016 drastically as there is a sharp fall in crude oil prices in the international market.

Net crude oil revenues received into the Republic of South Sudan, Ministry of Finance and Economic Planning bank accounts for the reporting period were USD 458.5 million (55.02 billion SSP) from the sale of 17 MMbbl of crude oil at an average net price of USD 26.36 The final sales value is net of the transitional

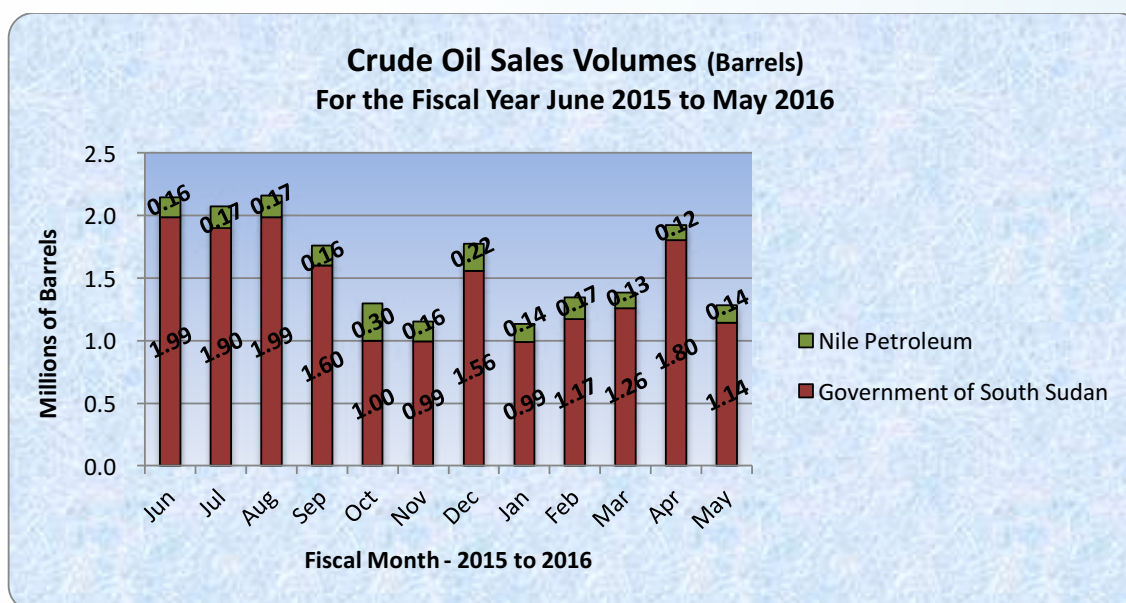


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The following table summarizes the crude oil marketing activity in South Sudan for the reporting period of June 1, 2015 to May 31, 2016

| Sales Volumes by Month – RSS Share (MMbbl) |             |             |             |             |             |             |             |             |             |             |             |             |              |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
|  | 2015        |             |             |             |             |             | 2016        |             |             |             |             |             |              |
|  | Jun         | Jul         | Aug         | Sep         | Oct         | Nov         | Dec         | Jan         | Feb         | Mar         | Apr         | May         | Total        |
| <b>RSS Gross Sales</b>                     | <b>2.15</b> | <b>2.07</b> | <b>2.16</b> | <b>1.76</b> | <b>1.30</b> | <b>1.15</b> | <b>1.78</b> | <b>1.34</b> | <b>1.34</b> | <b>1.39</b> | <b>1.92</b> | <b>1.29</b> | <b>19.43</b> |
| Nilepet Sales                              | 0.2         | 0.2         | 0.2         | 0.2         | 0.3         | 0.2         | 0.2         | 0.1         | 0.2         | 0.1         | 0.1         | 0.1         | <b>2.1</b>   |
| <b>RSS Net Sales</b>                       | <b>1.99</b> | <b>1.90</b> | <b>1.99</b> | <b>1.60</b> | <b>1.00</b> | <b>0.99</b> | <b>1.60</b> | <b>0.99</b> | <b>1.17</b> | <b>1.30</b> | <b>1.80</b> | <b>1.14</b> | <b>17.40</b> |



*Table 10: Crude Oil Sales Volumes by Month – RSS Share*

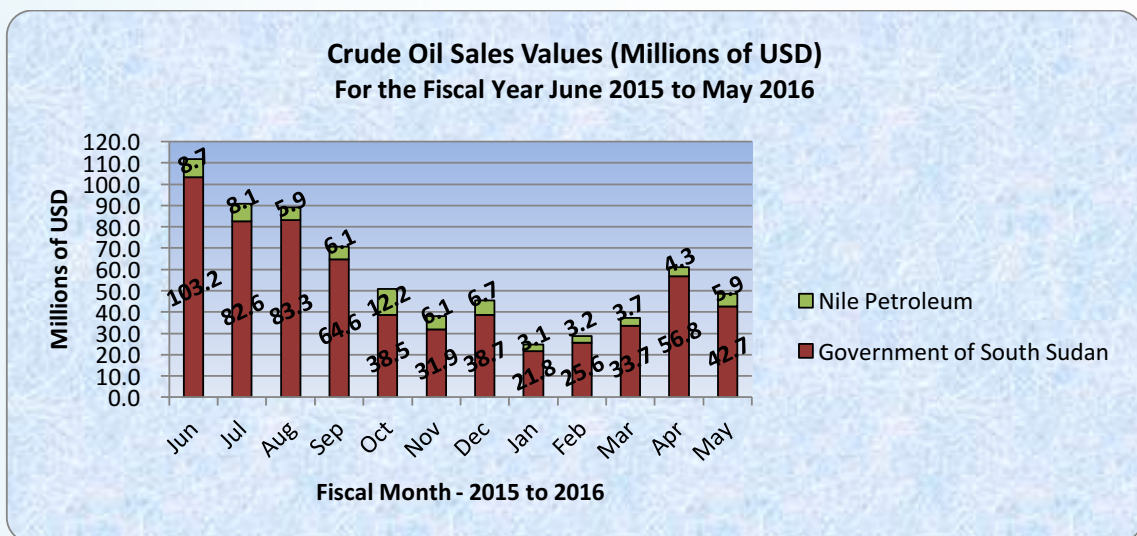
*NOTE: The sales activity is uneven month over month. The reason is that the sales month is adjusted to reflect the actual loading date e.g. a cargo contracted for December 2015 entitlement was loaded on the first day of January 2016 and is considered a January cargo for purposes of this table since January pricing will be used.*

The allocation of monthly gross crude oil USD revenues received for the reporting period of June 2015 to May 2016 is shown in Table 11.

| Crude Oil Revenues by Month – RSS Share (MMUSD) |       |      |      |      |      |      |      |      |      |      |      |      |       |
|---|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
|   | 2015  |      |      |      |      |      | 2016 |      |      |      |      |      |       |
|   | Jun   | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Jan  | Feb  | Mar  | Apr  | May  | Total |
| RSS Gross Sales                                 | 111.9 | 90.7 | 89.1 | 70.7 | 50.7 | 38.0 | 45.4 | 24.9 | 28.8 | 37.4 | 61.1 | 48.7 | 697.3 |
| Payable to Sudan                                |       |      |      |      |      |      |      |      |      |      |      |      | 46.1  |
| Loan Repayments                                 |       |      |      |      |      |      |      |      |      |      |      |      | 83.2  |
| Nilepet Sales                                   | 8.7   | 8.1  | 3.9  | 6.1  | 12.2 | 6.1  | 6.7  | 3.1  | 3.2  | 3.7  | 4.3  | 5.9  | 73.9  |
| RSS Net Sales                                   | 103.2 | 82.6 | 83.3 | 64.6 | 38.5 | 31.9 | 38.7 | 21.8 | 25.6 | 33.7 | 56.8 | 42.7 | 494.1 |

Table 11: Crude Oil Revenues by Month – RSS Share

Table 11. Graphical illustration of Crude oil sales values ( in millions USD) for the fiscal year June 2015 to May 2016 showing Nilepet and RSS Crude oil revenues.



The MoP Marketing group has assumed full responsibility for the marketing of the country’s crude oil during the past four years since South Sudan independence and has gained valuable experience during this time. The group continued to receive some administrative and reporting guidance from our Petroleum Advisors, particularly in the area of management reporting. The multi-disciplinary Marketing Team consisting of members from MoP, MoFEP, BOSS, and MOJ meet monthly to review issues and evaluate and recommend the winning bidders and it provides important guidance and oversight to the crude oil marketing function.

### 4.3 South Sudan Crude Oil Entitlement

The Exploration and Production Sharing Agreements (EPSAs) that are in place in South Sudan provide for the sharing of production on a proven equitable basis. The production sharing terms of our agreements are consistent with well-established arrangements in place in many other countries worldwide.

Production sharing is classified into two components:

1. Cost oil – Shared only by the equity owners in the oil fields
2. Profit oil – shared by the equity owners and the government of South Sudan

Production sharing is primarily based on three inputs:

1. Price
2. Production Volume
3. Operating and Capital Expenditures

**Price** – The oil price is a critical input as it determines the volume of oil that will be allocated to cost oil and thus the level of cost recovery that the contractor will realize. Oil volumes must be monetized in order to calculate the proportion of crude oil production that can be allocated to cost oil. When oil prices fall as they have during the past twelve months, more physical oil is allocated to cost oil to recover the same amount of expenditures.

**Production Volumes** – The volume of production is the cornerstone of production sharing. Higher volumes mean that there is more oil to share between the contractor and the government.

**Operating and Capital Expenditures** – The contractor is entitled to recover 100% of all eligible expenditures incurred on the producing property. Cost recovery is restricted to a maximum amount of the monetized crude oil in any month. For Dar Blend crude the cost recovery maximum is 45%-50% of the crude produced depending upon the license area of delivery. If the actual

monetized cost oil is less than the maximum allowed, the surplus allowance is allocated to and shared as profit oil in which the government of South Sudan will share. If the cost oil is greater than the maximum allowed, the excess costs are carried forward to be recovered in future periods. Crude oil for sales purposes is shared between the government and contractor in cargo lots of either 600 thousand or 1 million barrels; therefore actual monthly allocations for sales may differ from the calculated entitlement share resulting in an over or under lift position for the party which will be adjusted in the following period. Selected entitlement data for the reporting period, as reported by the contractor, is shown in the following table and is unaudited.

|                             | 15-Jun  | 15-Jul  | 15-Aug  | 15-Sep  | 15-Oct  | 15-Nov  | 15-Dec  | 16-Jan  | 16-Feb  | 16-Mar  | 16-Apr  | 16-May  |
|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>FOB Price</b>            | \$54.34 | \$47.59 | \$37.19 | \$41.11 | \$38.52 | \$32.06 | \$24.24 | \$21.59 | \$20.37 | \$23.45 | \$30.00 | \$34.38 |
| <b>Production (MMbbls)</b>  | 4.34    | 4.46    | 4.45    | 4.15    | 4.45    | 4.31    | 4.42    | 4.50    | 3.82    | 3.72    | 3.60    | 3.72    |
| <b>Expenditures (MM\$)</b>  |         |         |         |         |         |         |         |         |         |         |         |         |
| Operating                   | 150.7   | 73.09   | 81.95   | 6.7     | 50      | 50      | 50      | 35      | 46.85   | 46.57   | 46.57   | 46.57   |
| Capital                     | -11.9   | 14.01   | 38.96   | 26.56   | 14.01   | 14.01   | 14.01   | 6.14    | 6.82    | 7.78    | 7.78    | 7.78    |
| Total                       | 139.8   | 87.1    | 120.91  | 33.26   | 64.01   | 64.01   | 64.01   | 41.14   | 53.67   | 54.35   | 54.35   | 54.35   |
| <b>Entitlement (MMbbls)</b> |         |         |         |         |         |         |         |         |         |         |         |         |
| RSS Profit Oil              | 1.78    | 1.83    | 1.83    | 1.7     | 1.82    | 1.76    | 1.81    | 1.84    | 1.55    | 1.50    | 1.45    | 1.50    |
| Nilepet profit Oil          | 0.158   | 0.05    | 0.05    | 0.05    | 0.05    | 0.05    | 0.05    | 0.05    | 0.04    | 0.04    | 0.04    | 0.04    |
| Nilepet cost Oil            | 0.048   | 0.16    | 0.16    | 0.15    | 0.16    | 0.16    | 0.16    | 0.16    | 0.14    | 0.13    | 0.13    | 0.13    |
| Government Total            | 1.99    | 2.04    | 2.04    | 1.9     | 2.03    | 1.97    | 2.02    | 2.05    | 1.73    | 1.67    | 1.62    | 1.67    |
| Contractor Oil              | 2.35    | 2.42    | 2.41    | 2.25    | 2.42    | 2.34    | 2.4     | 2.45    | 2.09    | 2.05    | 1.98    | 2.05    |
| Total All Oil               | 4.34    | 4.46    | 4.45    | 4.15    | 4.45    | 4.31    | 4.42    | 4.50    | 3.82    | 3.72    | 3.60    | 3.72    |
| <b>Entitlement (%)</b>      |         |         |         |         |         |         |         |         |         |         |         |         |
| RSS Profit Oil              | 41.01%  | 41.03%  | 41.12%  | 40.96%  | 40.90%  | 40.84%  | 40.95%  | 40.89%  | 40.58%  | 40.32%  | 40.28%  | 40.32%  |
| Nilepet profit Oil          | 3.64%   | 1.12%   | 1.12%   | 1.20%   | 1.12%   | 1.16%   | 1.13%   | 1.11%   | 1.05%   | 1.08%   | 1.11%   | 1.08%   |
| Nilepet cost Oil            | 1.11%   | 3.59%   | 3.60%   | 3.61%   | 3.60%   | 3.71%   | 3.62%   | 3.56%   | 3.66%   | 3.49%   | 3.61%   | 3.49%   |
| Government Total            | 45.80%  | 45.74%  | 45.84%  | 45.78%  | 45.62%  | 45.71%  | 45.70%  | 45.56%  | 45.29%  | 44.89%  | 45.00%  | 44.89%  |
| Contractor Oil              | 54.20%  | 54.26%  | 54.16%  | 54.22%  | 54.38%  | 54.29%  | 54.30%  | 54.44%  | 54.71%  | 55.11%  | 55.00%  | 55.11%  |
| Total All Oil               | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

*Table 12: Republic of South Sudan Crude Oil Entitlement*

During the period of June 1, 2015 to May 31, 2016 South Sudan’s crude oil entitlement has ranged from 45.80% to 44.89%. Current entitlement is about 45%. As noted above, when the oil price drops, more oil is allocated to cost oil in which the government does not share, and less oil is allocated to profit oil in which the government does share. Nile Petroleum is an equity owner in the producing fields and shares in both cost oil and profit oil.

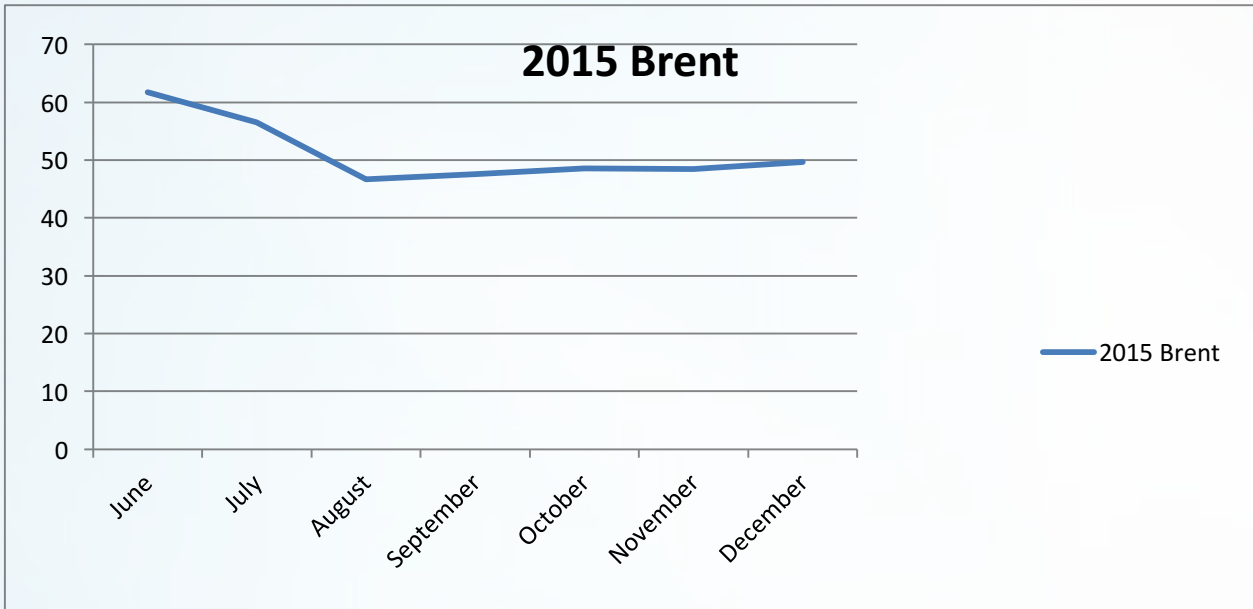
#### 4.4 Market Prices Achieved

Brent crude oil prices, upon which all of the South Sudan Dar Blend oil sales are currently based, ranged from a high of \$54.34 in June 2015 to a low of \$20.37 in February 2016 before recovering from the low prices. The weighted average price for Dar Blend sales for the twelve month reporting period, excluding Nilepet sales, is \$34.41. Despite the high price volatility during the reporting period, the marketing group was able to achieve favorable discount rates through the bid / tender process and therefore obtain competitive prices for South Sudan crude oil. Nile Blend oil sales are based on the Indonesian Crude Price (ICP) Minas. Due to the shut down in the Unity oil fields, no sales of this type of oil were realized during the reporting period.

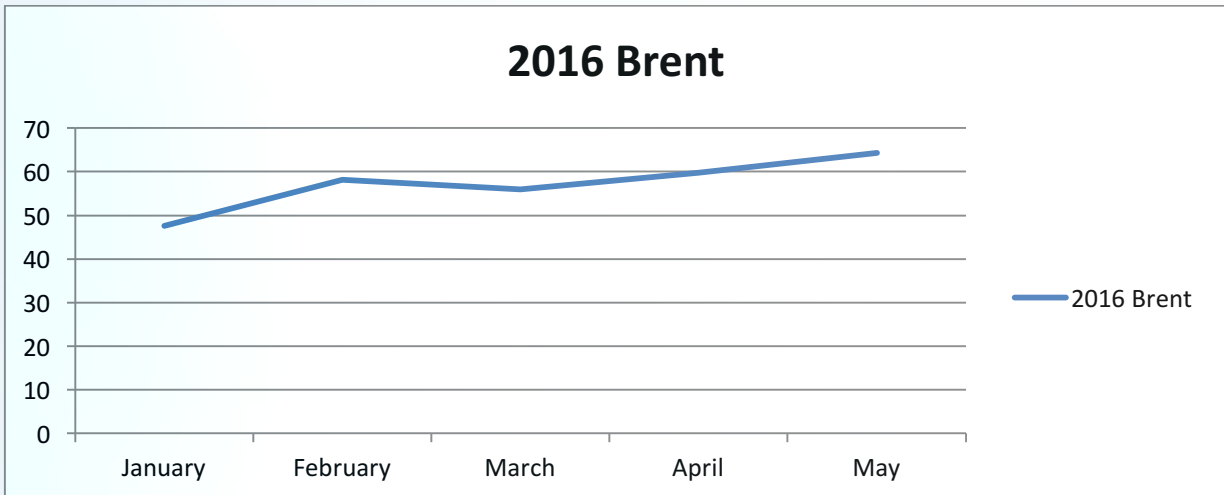
The table and graph below illustrates the average monthly official international reference prices for Dated Brent that was incorporated into our Dar Blend contract price formulas.

| International Pricing Formula Used in RSS Crude Contracts |       |       |       |       |       |         |       |
|---|-------|-------|-------|-------|-------|---------|-------|
| 2015  | Jun   | Jul   | Aug   | Sep   | Oct   | Nov     | Dec   |
| Dated Brent (Dar)   | 61.69 | 56.54 | 46.64 | 47.61 | 48.56 | 48.44   | 49.66 |
| ICP Minas (Nile)  | 0     | 0     | 0     | 0     | 0     | 0       | 0     |
| 2016  | Jan   | Feb   | Mar   | Apr   | May   | Average |       |
| Dated Brent (Dar)   | 30.69 | 32.48 | 38.49 | 41.48 | 46.88 | 45.46   |       |
| ICP Minas (Nile)  | 0     | 0     | 0     | 0     | 0     | 0       |       |

*Table 13: Dated Brent and ICP Minas Actual Crude Pricing*



*Graph 13 2015 : International Pricing – Brent.*



*Graph 13 2016 : International Pricing – Brent.*

#### 4.5 Sales Price Differentials

The marketing group was able to maintain favorable sales price differentials or discount rates through its bid / tender process and therefore obtain competitive prices in spite of the very difficult period of falling prices for benchmark crudes such as Brent. The realized weighted average price discount for all Dar Blend crude oil sold by the MoP marketing team, excluding Nilepet, was -\$14.76 for the twelve month reporting period. This compares favorably with the -\$9.09 discount achieved in the previous 2014-2015 reporting period when the marketing climate was more positive.

| Realized Weighted Average Price Differential |           |           |           |          |          |           |           |
|--|-----------|-----------|-----------|----------|----------|-----------|-----------|
| 2015   | Jun       | Jul       | Aug       | Sep      | Oct      | Nov       | Dec       |
| Dar Blend                                    | (\$10.74) | (\$13.69) | (\$5.18)  | (\$7.53) | (\$9.38) | (\$11.33) | (\$12.65) |
| Nile Blend                                   | No Sales  | No Sales  | No Sales  | No Sales | No Sales | No Sales  | No Sales  |
| 2016   | Jan       | Feb       | Mar       | Apr      | May      | Average   |           |
| Dar Blend                                    | (\$8.74)  | (\$11.07) | (\$11.51) | (\$9.71) | (\$9.06) | (\$10.05) |           |
| Nile Blend                                   | No Sales  | No Sales  | No Sales  | No Sales | No Sales | No Sales  |           |

*Table 14: RSS Realized Weighted Average Price Differential*

## 4.6 Global Customer Base

The MoP Marketing Team continued to work at maintaining the customer base for our crude oil to ensure competitive bidding and maximize prices. 39 customers, up from 33 one year ago and including both end users and oil traders, were allowed to bid on our crudes following screening, with seven companies winning one or more cargoes over the marketing period as shown in Table 15.

| RSS Customers and Cargoes Loaded |          |          |          |          |          |                            |           |
|----------------------------------|----------|----------|----------|----------|----------|----------------------------|-----------|
| 2015                             | Jun      | Jul      | Aug      | Sep      | Oct      | Nov                        | Dec       |
| Chinaoil                         |          | 1        |          |          |          |                            |           |
| Glencore                         |          |          | 1        |          |          |                            |           |
| Sudan                            |          |          | 1        |          |          |                            |           |
| Trafigura                        |          |          |          |          |          | 1                          |           |
| Unipet                           | 2        | 1        |          | 2        | 1        |                            | 1         |
| <b>Totals</b>                    | <b>2</b> | <b>2</b> | <b>2</b> | <b>2</b> | <b>1</b> | <b>1</b>                   | <b>1</b>  |
| 2016                             | Jan      | Feb      | Mar      | Apr      | May      | Total (Jun 2015- May 2016) |           |
| Chinaoil                         |          |          |          | 1        |          |                            | 2         |
| Glencore                         |          | 1        |          |          |          |                            | 2         |
| Sudan                            |          |          |          |          |          |                            | 1         |
| Addax                            |          | 1        |          |          | 1        |                            | 2         |
| Trafigura                        | 1        |          | 1        | 2        | 1        |                            | 6         |
| Unipet                           |          |          | 1        |          |          |                            | 8         |
| <b>Totals</b>                    | <b>1</b> | <b>2</b> | <b>2</b> | <b>3</b> | <b>2</b> |                            | <b>21</b> |

*Table 15: RSS Crude Oil Customers and Cargoes Loaded*

## 4.7 Customer Invitations

The following list of customers has been pre-approved by the Marketing Team to be considered as potential buyers of RSS crude oil and can be included in the monthly cargo tender. It should be noted that with the assistance of the Bank of South Sudan a financial assessment of the required level of financial security has been established for each company, which appears on the right side column.

|     | <u>Invitation List</u>                | <u>Activity</u> | <u>Type</u>    | <u>Security</u> |
|-----|---------------------------------------|-----------------|----------------|-----------------|
| 1.  | Addax Energy                          | No Activity     | Trader         | SBLC            |
| 2.  | AsconTimpet                           | No Activity     | Trader         | SBLC            |
| 3.  | Augusta Energy                        | No Activity     | Trader         | SBLC            |
| 4.  | Chi'an Wei Ltd                        | No Activity     | Trader         | SBLC            |
| 5.  | China Oil                             | Award Winner    | Refiner        | PU + CL         |
| 6.  | CNOOC                                 | No Activity     | Refiner        | Open            |
| 7.  | Concord Energy                        | No Activity     | Trader         | SBLC            |
| 8.  | Glencore                              | Award Winner    | Trader         | SBLC            |
| 9.  | Gunvor                                | No Activity     | Trader         | SBLC            |
| 10. | Investsouth (Triton Global Petroleum) | Bidder          | Trader         | SBLC            |
| 11. | Investsouth Co. Ltd                   | Bidder          | Trader         | SBLC            |
| 12. | Kepu                                  | No Activity     | Trader         | SBLC            |
| 13. | Kernel Oil (Suisse Ltd)               | Bidder          | Trader         | SBLC            |
| 14. | LENKOR                                | No Activity     | Trader         | SBLC            |
| 15. | LOTCO                                 | No Activity     | Trader         | SBLC            |
| 16. | Mena Energy                           | No Activity     | Trader         | SBLC            |
| 17. | Mercuria                              | No Activity     | Trader         | SBLC            |
| 18. | Mitsubishi                            | No Activity     | Refiner        | SBLC            |
| 19. | Money Maker Management                | Bidder          | Trader         | SBLC            |
| 20. | Nabta General Trading                 | Bidder          | Trader         | SBLC            |
| 21. | Nasdec General                        | No Activity     | Trader         | SBLC            |
| 22. | Petronas                              | No Activity     | Refiner/Equity | SBLC            |
| 23. | Petro Diamond*                        | Award Winner    | Trader         | SBLC            |
| 24. | Royal Energy                          | No Activity     | Trader         | SBLC            |
| 25. | Safadi Group                          | No Activity     | Trader         | SBLC            |
| 26. | Sahara Energy                         | No Activity     | Trader         | SBLC            |
| 27. | Serha Oil                             | No Activity     | Trader         | SBLC            |
| 28. | Shell                                 | No Activity     | Refiner        | Open            |



|     |                    |              |                  |      |
|-----|--------------------|--------------|------------------|------|
| 29. | SK Energy          | No Activity  | Refiner          | SBLC |
| 30. | SOCCAR             | No Activity  | Refiner/Trader   | SBLC |
| 31. | Southex            | No Activity  | Trader           | SBLC |
| 32. | Total              | No Activity  | Refiner          | Open |
| 33. | Toyota Tsusho      | No Activity  | Refiner/Manufact | Open |
| 34. | Trafigura          | Award Winner | Trader           | SBLC |
| 35. | Tri Ocean          | No Activity  | Trader/Equity    | SBLC |
| 36. | Trinity Energy     | No Activity  | Trader           | SBLC |
| 37. | Unipecc            | Award Winner | Refiner          | PU   |
| 38. | Vitol              | Award Winner | Refiner/Trader   | SBLC |
| 39. | Zenhua oil Co. Ltd | No Activity  | Trader           | SBLC |

Table 16: No-Activity Customer List

## 4.8 Marketing Report Card

The MoP marketing effort for the period of June 2015 to May 2016 continued to be robust given the extremely difficult global crude oil environment. With supply out-stripping demand and the dramatic fall in prices during the period, the marketing group has clearly demonstrated the capability of the Ministry of Petroleum staff and the Marketing Team to successfully sell the country’s entitlement share of crude oil at the best prices possible. The Ministry of Petroleum will continue to work hard to monetize our crude oil into the international marketplace at attractive price formulas, contract terms, and in a professional and transparent manner.

The Ministry will also continue to ensure that controls are in place to provide assurance that all oil revenues are documented and that all payments made by buyers are fully accounted for.

MoP will continue to develop its marketing expertise and add new talent to its work force to address current challenges, help identify marketing opportunities and improve prices. The identification of new buyers and new markets, and the analysis of market behavior and crude oil prices are just some of the areas that will be subject to future development.

## 4.9 Transitional Financial Arrangement and Tariff Payments to Sudan

**RSS Payment Obligations to Sudan** – For the reporting period of June 2015 to May 2016, the Republic of Sudan has paid or is obligated to make the following payments to Sudan under the terms of The Agreement Concerning Oil and Related Economic Matters:

| Description                              | Per bbl       | Quantity / Value   |
|--|---------------|--------------------|
| Net Quantity Shipped (Barrels)           |               | 34,700,235         |
| Transitional Financial Arrangement (USD) | \$15.00       | 520,503,525        |
| Less: Invoice Adjustment                 |               | (5,400)            |
| <b>Net TFA Obligation</b>                |               | <b>520,498,125</b> |
| Fees                                     |               |                    |
| Processing                               | \$1.60        | 55,520,376         |
| Transportation                           | \$6.50        | 225,551,528        |
| Transit                                  | \$1.00        | 34,700,235         |
| <b>Total Fees</b>                        | <b>\$9.10</b> | <b>315,772,139</b> |
| Less: Invoice Adjustment                 |               | (3,276)            |
| <b>Net Fees Obligation</b>               |               | <b>315,768,863</b> |
| <b>Total Payment Obligations (USD)</b>   |               | <b>836,266,988</b> |

*Table 17: Payments to Sudan*

As of the end of May 2016 the remaining balance on the Transitional Financial Arrangement obligation to Sudan is USD 2.02 billion.

The severe decline in oil prices in the latter half of 2014 has resulted in significantly reduced revenues and has put pressure on South Sudan's budget execution. This has caused delays in paying transport related fees and the transitional financial arrangement to Sudan and has resulted in an agreement to settle the outstanding obligation in a series of transfers in kind. The agreement to this arrangement has not yet been finalized and the pricing mechanism is under discussion regarding how the netback price should be calculated.

The valuation for settlement is to be based on the average FOB prices realized for South Sudan cargo sales at Port Sudan. The only netback deduction being made to this price for purposes of this presentation is for processing at Al Jabalain since South Sudan is obligated to provide clean oil to Sudan. No deductions are made for transit, transport or transitional financial arrangement since these fees are not payable if the oil is not shipped through Port Sudan as per the terms of the 2012 Cooperation Agreement on Oil.

Payments made to date to Sudan under this arrangement are calculated by the MoP as follows:

|                                     | Mar/16        | Apr/16        | May/16        | Total         |
|-------------------------------------|---------------|---------------|---------------|---------------|
| Average Monthly FOB Price           | \$23.45       | \$30.00       | \$34.38       |               |
| Less: Processing Fee at Al Jabalain | \$1.60        | \$1.60        | \$1.60        |               |
| Net Price for Valuation             | \$20.95       | \$28.40       | \$32.78       |               |
|                                     |               |               |               |               |
| Net Barrels Transferred to Sudan    | 671,524.8     | 594,585.3     | 861,712       | 2,127,822     |
|                                     |               |               |               |               |
| Value for Settlement                | 14,068,444.56 | 16,886,222.52 | 28,246,919.36 | 59,201,586.44 |

*Table 18: Payment in Kind to Sudan*

#### 4.10 Outstanding Issues

##### *Data in Khartoum*

A significant amount of oil field data which is owned by South Sudan after independence remains in storage in Khartoum. The RSS is responsible for the data and is currently constructing its own storage facility. The data has been fully inventoried and is ready for relocation to South Sudan. The data is important to the RSS to support the design and implementation of effective IOR/EOR programs, assist with the development of a new reserve assessment and to support new exploration promotion programs.

##### *Financial Audits of Contractors*

An initial assessment of the Contractors' audit status has been completed by the firm Ernst and Young and a report has been issued to the Ministry. The financial and operational records for the periods subject to audit are located in Khartoum and the Contractors have offered to host the audits in that location. Final detailed audit work is being undertaken by Ernst and Young and audit reports will be issued to the ministry after which further action may be required by the MoP.

# PART 5 – FUTURE ACTIVITIES

## May 2016 and Beyond

### 5.1 Re-Start Unity State Oil Production

The restart of production operations in Unity State remains dependent on the security situation. The main oil processing facilities are secured but the oil fields cover a large geographic area and the risk remains high in outlying areas where many of the oil wells are located. Once security is stabilized the contractor can return to the area to assess damage and determine what remediation work needs to be done and the materials, supplies and manpower that will be required. Only after an assessment is completed can a time line for the return to production be reasonably determined.

### 5.2 Improved / Enhanced Oil Recovery Opportunities

The oil production rates in the South Sudan oil fields are rapidly declining with increasing water cut. One of the options being considered by the Ministry of Petroleum and the Contractors is the implementation of Improved Oil Recovery (IOR) / Enhanced Oil Recovery (EOR) schemes. IOR / EOR projects have the potential to arrest the decline, significantly increase the amount of recoverable oil from the reservoir and prolong the life of the field.

There are various methods and technologies available for IOR / EOR projects that are being considered such as thermal, polymer flooding and gas injection, but they generally require significant investment and have a fairly long payout period. As a result, it may be necessary in some instances for the government to renegotiate license extensions on existing producing oil fields in order to ensure that the additional investments will be beneficial to the government and economically fair to the contractors.

### 5.3 Infrastructure Options

#### 5.3.1 Refinery Projects

The refineries proposed would work to refine crude oil from different oil fields in the RSS, and produce mainly diesel,

kerosene, naphtha and residue (Heavy Fuel Oil). The locations of those facilities were dictated by the fact that there is a need to reduce the burden of transportation to the consumption centers. In addition to the proximity of those locations to the oil fields it also supports the provision of quick solutions to the immediate fuel needs for different production activities such as transportation, agriculture and power generation.

### ***Thiangrial Refinery in Upper Nile State***

- Design capacity is 20,000 BPD to be constructed in two modular phases, phase one 10,000BPD and another phase after two years of 10,000BPD.
- Main petroleum fractions/products: Diesel, kerosene, naphtha and HFO (Heavy Fuel Oil).
- Financer: Frontiers Resource Group, USA; Contractor Ventech Engineering, USA.
- Status: Construction work has been stopped due to the political crises in South Sudan.

### ***Bentiu Refinery, Unity State***

- Design capacity: 7,000 BPD modular construction.
- Operational Capacity: 5000 BPD
- Additional expansion to the facility would be 25,000 BPD including complex facilities to cater for cracking the long residue in order to increase the yield of light products.
- Financer: Safinat Limited of Russia; Constructed by Safinat
- Status: The refinery construction was completed in January 2014 and pre-commissioned before it was stopped because of the crises in South Sudan.
- It should resume once the security situation is cleared.

### ***Akon Refinery, Warrap State***

- The initial proposed capacity: 50,000 BPD but it is likely to be reduced.
- Financier: yet to be identified.

- Status: This year, 2016, some progress may be witnessed regarding this project.

### ***Pagak Refinery, Upper Nile State***

- Proposed capacity: 50,000 BPD.
- Financier: Black Rhino, USA.
- Status: Feasibility study is being finalized by Foster Wheeler; project has been put on hold.

## **5.3.2 Fuel Depot Projects**

A number of fuel depots were proposed to be constructed in different locations in the country since 2012, but none of these have found its way to execution due to lack of funding. Now, with a new approach being adopted by the MoP, Nilepet is assuming responsibility for funding the fuel storage terminals, and it is expected that progress will be realized in the near future.

## **5.3.3 Pipeline Projects**

- The first phase of the feasibility study for an alternative export pipeline was completed and presented to the RSS Cabinet in November, 2013.
- Two export pipeline routes have been studied and compared, in order to facilitate a decision as to which should be the best solution that serves the interests of the Republic of South Sudan; however due to the crisis, a decision has not yet been made. It is expected to be finalized soon.
- The inland alternative evacuation pipeline from the Tharjathoil fields – Unity state to Paloch – Upper Nile State has been started. The conceptual design is completed and we expect to proceed with the project subject to security considerations.

## **5.4 Products Supply**

The Republic of South Sudan primarily consumes distillates in the form of diesel for truck fuel. Products are currently imported via Kenya. The supply of products for domestic consumption is being handled by Nilepet along with other private companies.

The Ministry of Petroleum, South Sudan and the Government of Kenya have an agreement in place regarding the allocation of ullage. The MoP also provides the formal approval for companies to pick up and transport product from Kenya. Nilepet is responsible for product distribution within South Sudan.

Downstream depots and import routes are illustrated below.

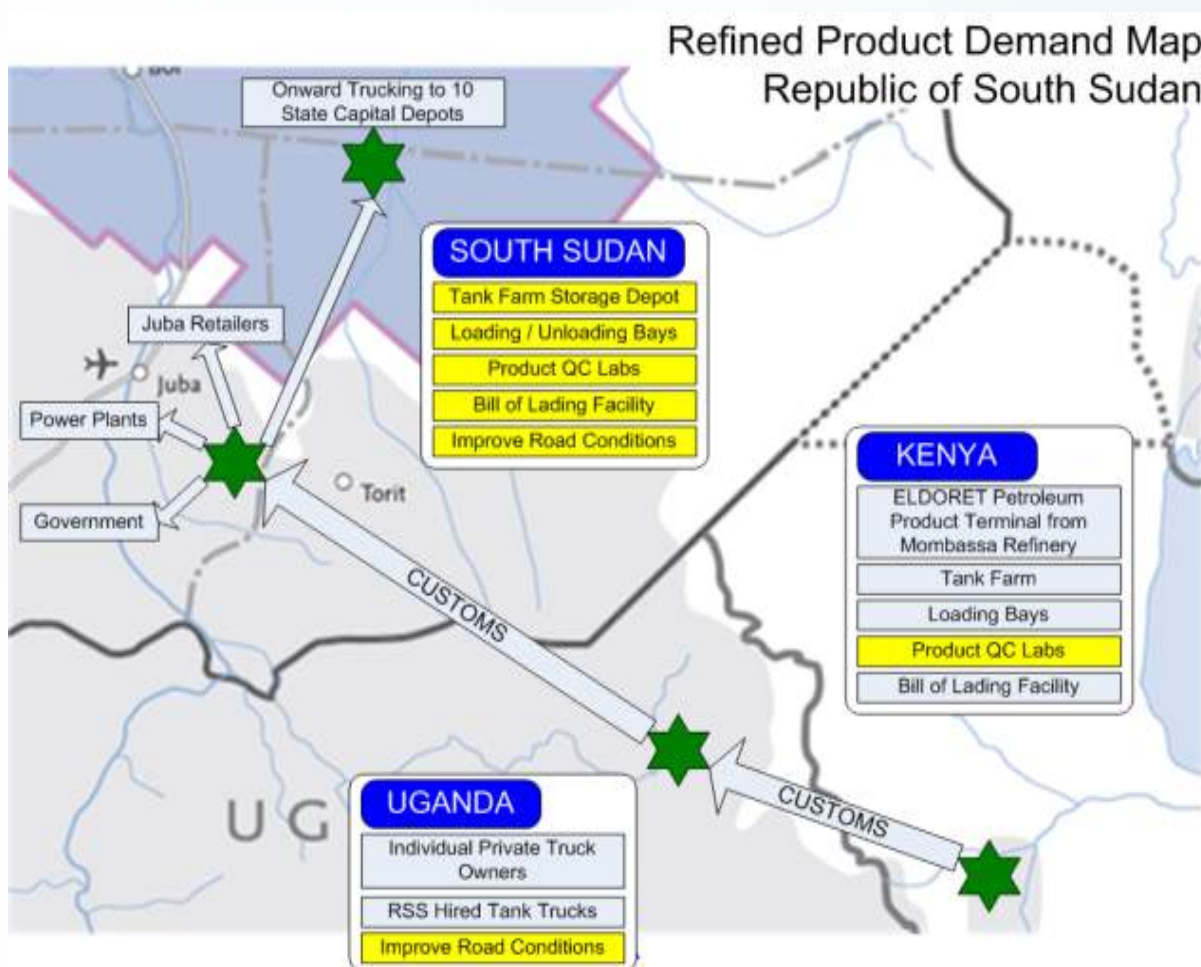


Figure 4: RSS Refined Product Demand Map

## 5.5 Challenges and Opportunities Ahead

The Ministry of Petroleum Marketing Group has both challenges and opportunities ahead. We have highlighted in this report many of the successes and achievements since the restart of production in South Sudan in April 2013. As we celebrate the fifth anniversary of our country’s independence, we have clearly proven our ability to market our crude oil in a transparent manner and at attractive international prices.

Marketing staff are located at the main MoP office in Juba and at the marine terminal in Port Sudan to oversee the tanker loadings of the government cargoes. With the guidance of the marketing team these staff members have assumed complete responsibility for the marketing of our country's crude oil.

The number of workstations and the amount of quality office space for employees has increased. Training has been improved through the offerings of the contractors and the crude oil buyers and advisor support is now generally limited to administrative oversight. The strengthened capacity of our staff, even as we continue to experience deficiencies in manpower and financial resources, is notable. The MoP website needs to be activated and improved to house public marketing information and contacts.

The MoP continues to work through many of the internal organizational challenges to improve the performance of the staff. Some of our initiatives include:

- Continuous improvement in education and training for our MoP staff;
- Clearly defined roles & responsibilities for all levels within MoP;
- Developing an internet database platform for all employees to utilize daily;
- Improving internal and external communication of marketing information;
- Developing a seamless working relationship with other ministries.

Work has begun, but more hard work is needed to build upon our past experiences...but the marketing road ahead remains bright.....!



# Closing Remarks

“This Marketing Report is the fourth issue by the Ministry of Petroleum, Republic of South Sudan. It provides an overview of world oil markets and fundamentals, price forecasts, oilfield reserves, and the MoP marketing performance. It offers an outline of our infrastructure plans such as refineries and storage depots and provides insight into our efforts to ensure transparency in all that we do.

The young people in our marketing group have demonstrated their understanding of the fundamentals of crude oil marketing and their enthusiasm for their work. But we cannot stop here. Crude oil marketing must continue to develop with buyer and market diversification and a better understanding of global economics and pricing analysis. These activities will be enhanced once MoP establishes on-line communications with the global oil markets and with the main world crude oil pricing center Platt's, London. The communication delay is the result of the current instability in the oil sector since the shutdown, which has not allowed either subscriptions arrangements to Platt's to be completed or the installation of effective internet connections.

Our Health, Safety and Environment department has trained internally and abroad in 2014 – 2015 at a cost of USD 77 thousand, highlighting the MoP's strong commitment to our people and our environment and enhancing our ability to monitor and enforce regulation in the petroleum sector.

Our goal with this and subsequent editions of the MoP Marketing Report is to provide you with comprehensive information which clearly explains the monetization of our country's crude oil. Our emphasis is on transparency and full compliance with our legislative requirements for information disclosure. Our efforts will not end with this report – we will continue to look at ways to improve our marketing operations and add value. It is our hope that as we move forward we will more fully capture the new developments occurring within the Ministry on the path of reaching the goal of energy independence, sustainability and a greater prosperity for our people.”

--- Sincerely,  
**Mohamed Benjamin Lino,**  
Undersecretary MoP

