



REPUBLIC OF SOUTH SUDAN



MOP PETROLEUM REPORT

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THE HON. MINISTER OF PETROLEUM

Honorable Puot Kang Chol is the Minister of Petroleum for the Government of the Republic of South Sudan (RTGoNU). He has guided the petroleum activities of the Ministry since March 2020.



It is with great pleasure that I present to you this tenth annual publication of petroleum report of the Ministry of Petroleum covering the government's fiscal year from June 2020 to May 2021. The report provides detailed activity and statistics on the government's marketing accomplishments and demonstrates my ministry's commitment to openness, transparency and accountability in all the work that we do.

The past years have been difficult for global crude oil markets and South Sudan has been impacted particularly hard with so much of our economic activity and government spending being dependent on crude oil production and sales. Crude production in the Unity State oil fields resumed in August 2018, the completion of full resumption is not yet achieved due to slow progress in opening all the wells. Block 5A (Tharjath) resumed in June 2021 and the production is expected to go up gradually till its full capacity.

Upper Nile State has remained low but steady. The Brent crude oil price, upon which our sales are based, has dropped sharply since June 2014 seriously impacting our crude oil revenue. Unfortunately, the Transitional Financial Arrangement (TFA) and other fees paid to Sudan do not change with the reduction in the crude price resulting in a disproportionately larger share of our earnings being allocated to this debt obligation. Nonetheless, during the fiscal year South Sudan oil sales totaled 15.48 million barrels with a realized sales value of US \$793.25 Million.

The Ministry of Petroleum has been working hard to find ways to minimize the impact of reduced production. The ministry recognizes that we must focus on controllable issues and our staff has worked closely with our contractors to develop realistic oil field work plans and budgets that are fair to all parties. We are working with our neighboring countries on crude oil export and fuel import issues. We remain committed to the development of refineries, fuel storage facilities and domestic pipelines.

We have improved our monitoring and reporting on production, transportation and shipping, marketing activities, crude oil entitlement and contractor audits. We have strengthened our environmental review efforts and worked more closely with local communities to address regional issues. We have implemented a new Management Systems regulation as well as a new system of administrative monetary penalties for environmental infractions. This will provide my ministry with stronger enforcement provisions for environmental violations backed by the full support of legislation and regulation.

South Sudan has tremendous potential for future petroleum and minerals exploration and development. My ministry and staff remain committed to unlocking this potential for the mutual benefit of all South Sudanese people. I take this opportunity to invite interested investors to this chance to invest in South Sudan Oil Sector.

Honorable Puot Kang Chol

Minister of Petroleum

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 Authority which is in charge of all the petroleum activities ranging from Marketing, Entitlement, Oil Accounting & Auditing, Supply and Investment, the Upstream Operations, Health, Safety, Environment and Petroleum Infrastructure. Other Directorates and Departments include: Planning, Training and Research, Finance and Administration and Legal Administration.

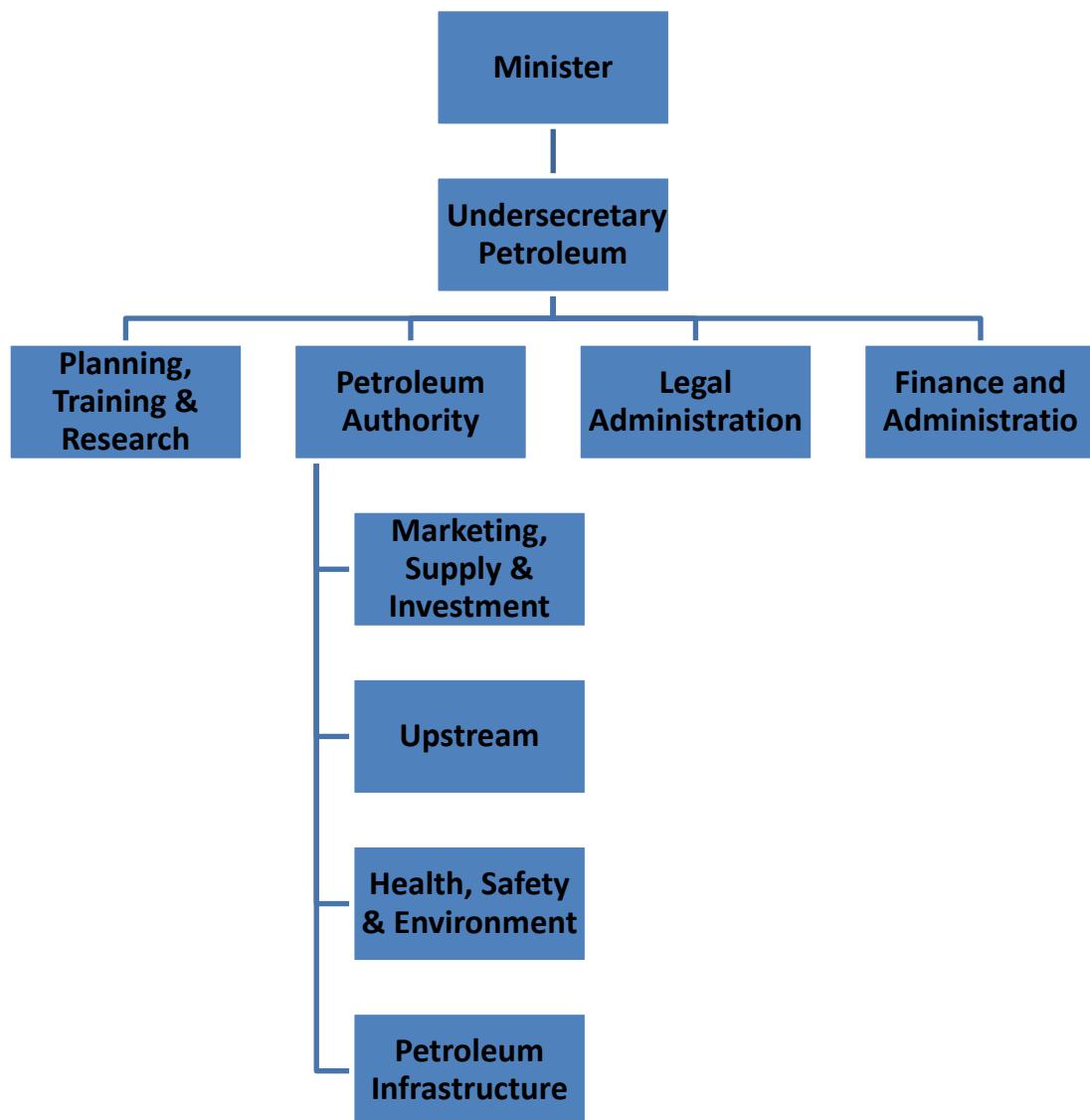


Figure 1: MoP Organizational Structure

Crude Oil Marketing Department Overview

In accordance with the MoP's obligation to manage the country's petroleum resources on behalf of the people and the government of the Republic of South Sudan, the Ministry has established a crude oil marketing Department in 2011 by then under the Petroleum Directorate's 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 designated 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-term 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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ABBREVIATIONS

MoP Petroleum Report

AOREM	Agreement on Oil Related and Economics Matters
BBL	Blue Barrel
BOE	barrels of oil equivalent
BOpd	Barrel of Oil per day
BSS	Bank of South Sudan
DM	developed markets
EIA	US Energy Information Administration
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
MOFP	Ministry of Finance and Planning
MoJ	Ministry of Justice
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
USD	United States Dollar
WTI	West Texas Intermediate
WB	World Bank

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1.1 World Crude Oil Demand

Global oil demand recovery from Covid-19 likely to be protracted. The worldwide pandemic and tumultuous economic downturn triggered an unprecedented collapse in global oil demand of 8.7 mb/d in 2020. Growth will rebound sharply in 2021, and is projected to rise by 13.1 mb/d to 2026. Growth in road transport fuel demand slows to less than 0.5% per year from 2023 onwards, following its recovery from Covid-19. Even so, other sectors such as petrochemicals will boost oil demand, meaning that additional policy measures and drastic behavior changes would be required for oil demand to peak.

The lingering impacts from the pandemic, coupled with a growing urgency to tackle the low-carbon energy transition, means that oil demand will likely never catch up with its pre-pandemic trajectory. World oil demand in 2026 will be only 4.4 mb/d above 2019 levels, with all of the increase coming from non-OECD countries. The strongest gains will come from the People's Republic of China ("China" hereafter), India and other Asian economies, which together account for more than 90% of the net increase. In the near term, oil demand in the OECD is set to rebound strongly. Prolonged and repeated lockdowns, stringent social distancing measures including widespread teleworking, and a near halt to international travel caused OECD demand to plunge by 5.6 mb/d in 2020. As a larger share of the population gets vaccinated, restrictions will ease, allowing demand to rebound.

The pathway to recovery will be uneven, reflecting different impacts of the energy transition across regions, sectors, and oil products. World gasoline demand might never return to its 2019 level, while diesel demand growth will slow markedly. Efficiency improvements, the transition to electric vehicles and

changes in consumer habits will offset part of the impact of strong economic growth and the demand dynamism from developing countries.

Aviation, the sector the most affected by the pandemic, will continue to struggle. Jet fuel consumption will only return to 2019 levels by 2024 as travel restrictions, changing travel habits, and the relatively slow progress of vaccinations in low-income economies cap its recovery. The proliferation of online meetings and conferences, along with cost cuttings by companies, are likely to permanently dent business travel.

By contrast, the petrochemical industry that accounts for the majority of ethane, LPG and naphtha demand suffered relatively little from the Covid-19 crisis and will continue to post healthy growth. Together, these products will be responsible for 70% of the growth in oil product demand through 2026 compared with the 2019 level.



Globally, after a recovery period lasting until 2023, actions taken to implement the energy transition will slow demand growth. Strong demand growth in developing economies, however, will more than offset a contraction in high-income ones.

1.2 World Crude Oil Supply

With the increase of the world's oil production capacity is expected to slow in the medium term in the wake of the Covid-induced demand shock and a shift towards clean energy.

And still global capacity is projected to increase 5 mb/d by 2026 versus 2020. OPEC crude capacity is now set to rise by a relatively small 1 mb/d, with Iraq and the UAE providing the largest gains. Non-OPEC countries taking part in OPEC+ are not expected to add overall net new capacity. Those not part of the group are slated to raise output by 4 mb/d, with the United States and Brazil combined accounting for 75% of the increase.

The US shale sector has been hit especially hard as the financial crisis triggered company bankruptcies and production shut-ins. Major oil companies are also scaling back conventional, more expensive oil projects as they shift strategy to include plans for the energy transition. The companies' pivot to a lower-carbon operating environment may also be hastened by governments directing economic stimulus packages to climate-friendly investments.

These initiatives and lower spending may start to have an impact at the tail-end of the forecast and will be more pronounced in the second half of the decade. The resulting lower global capacity growth, together with resurgent post-Covid demand, will slowly contract the global supply cushion over the outlook period. In tandem with projected higher oil demand, total oil production by 2026 is set to rise by 10.2 mb/d from a six-year low of 94 mb/d in 2020. Producers from the Middle East are expected to provide half the increase, largely from existing shut-in capacity. That marks a dramatic change from the past few years when the United States dominated world supply growth. At the start of the forecast, as OPEC+ unwinds record output cuts of 2020 and ramps up towards pre-Covid levels, there will be ample supply available to maintain a reasonable spare cushion. But if the shift to clean energy does not speed up, demand for oil supply by IEA.

However, Saudi Arabia, Iraq, the UAE, and Kuwait, with their surplus capacity and relatively low-cost reserves, may have to pump at or near record highs to help keep the world oil market in balance. Led by Saudi Arabia, the four Gulf countries would contribute 46% of the increase in supply from 2020 to 2026. The Gulf producers, along with Russia, form the backbone of the OPEC plus group of nations that account for more than half the world's oil production.

Total oil output from the 23 OPEC and other countries would rise by over 6 mb/d from 2020 to 2026 to reach 54 mb/d, while non-OPEC and more would contribute 4

mb/d to 50 mb/d. Outside of OPEC+, production prospects are subdued. The slump in oil prices in 2020 and the uncertain recovery in demand have seen the sanctioning of new projects fall to the lowest level in recent history. The slowdown in US production growth clears the way for OPEC+ to fill much of the supply gap as it taps into its spare capacity. It could also encourage Saudi Arabia and other key Middle East producers to boost investments and accelerate expansion plans. The producer group is set to recover market share it forfeited in its bid to rebalance supplies when demand plummeted in the wake of the pandemic in 2020.

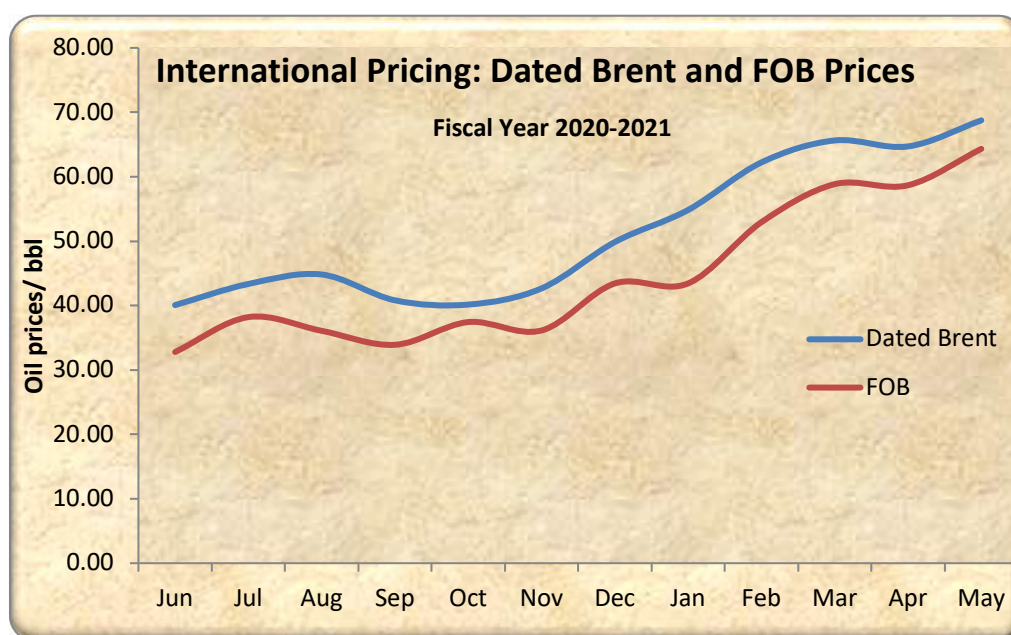
South Sudan crude oil output represents a small fraction of total daily global production. Typical buyers of the country's crude oil are also investors in South Sudan's petroleum sector and it is therefore likely that all crude oil produced in the future will be able to be marketed irrespective of total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

1.3 Crude Oil Price Outlook

The Dated Brent crude oil price upon which all South Sudan sales are based has been steady at an average of 70 USD per barrel.

A remarkable strength in the shale industry will trigger a rapid transformation of global oil markets, according to the EIA's annual crude oil price outlook. They expect US crude oil exports overtake Russia and get closer to Saudi Arabia, contributing to greater diversity of crude oil supply.

The US Shale is altering the future of oil refiners. Barrels of shale oil are generally lighter than the average crude slate. It means they require a less complicated refining process.



Graph 1: Brent vs. FOB Price

EIA Forecast – EIA forecasts Brent prices will average \$65/b in 2020 and \$68/b in 2021. In the first half of 2020, EIA expects global oil prices to be affected by both the downward price pressures of relatively weak oil market balances and by the upward price pressures of geopolitical risk. This forecast assumes that Brent crude oil prices will decline in early 2020, falling from a January average of \$67/b to an average of \$62/b in May 2020, as risk premiums slowly fade. EIA does not forecast supply disruptions, and any physical supply disruptions would likely cause prices to be higher than this forecast. Beginning in mid-2020 and into 2021, EIA expects that tightening market fundamentals will be the main driver of upward price pressures, with forecast Brent prices increasing to \$69/b at the end of 2021 and averaging \$68/b for the year

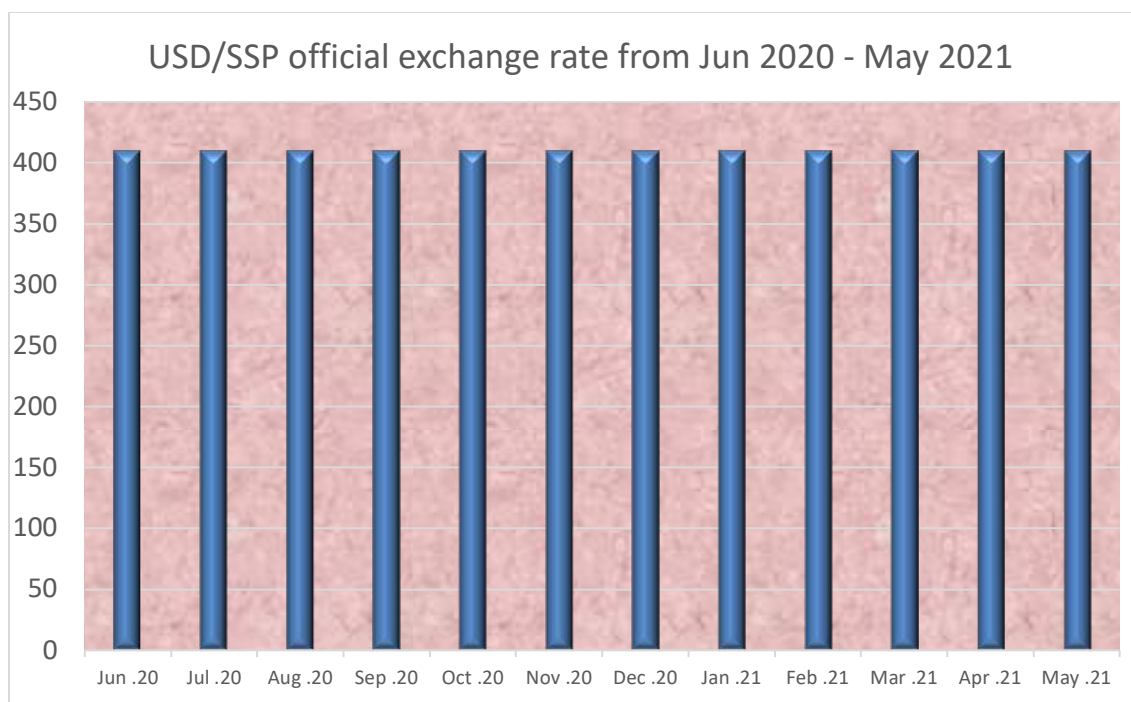
Goldman Sachs Forecast – Goldman said it now expected Brent crude to average \$63 per barrel in 2020, with West Texas Intermediate seen at \$58.50 per barrel. The so-called long-term anchor price for Brent was set at \$55 per barrel, with WTI pegged at \$50 per barrel. It is clear that the prediction of future oil prices is a difficult and complex exercise which is subject to many different political, geographical, financial and operational variables.

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

South Sudan Exchange Rate – Since the end of June 2020, the USD to South Sudanese Pound (SSP) official exchange rate is at 409.00 SSP/USD throughout the end of May 2021 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 2: USD / SSP Official Exchange Rate

1.5 Africa and the South Sudan Region

Africa– According the U.S. Energy Information Agency total 2020 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 2020 to 2021.

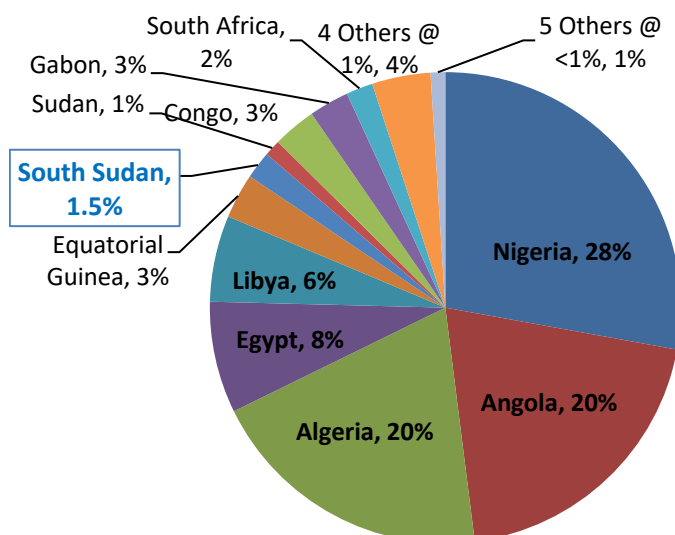


Chart 1: Africa Crude Oil Production Share – 2020

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 Block 5A in the middle of 2021, South Sudan has had average production of 160Mbbbl/d. Production peaked at 247Mbbbl/d in early December 2013 and has averaged 170Mbbbl/d during this fiscal year. Sales are made under a confidential bid tender program and prices received have been competitive and transparent and based on international market best practices. Demand has been very good for South Sudanese Dar and Nile Blends crude oil, particularly in Asian markets such as China, Singapore, United Arab Emirates, Netherlands, India, Italy, Malta and Japan as their refineries are capable of handling the highly acidic and sweet & lighter crude oil.

According to South Sudan’s annual review of oil reserves, the country has about 825 (MMSTB) million Standard Tank barrels of developed and undeveloped recoverable reserves as of January 1, 2021. The majority of reserves are located in the oil-rich Muglad and Melut basins, which extend into both countries (Sudan & South Sudan).

Oil field exploration and development work in South Sudan has been hampered since early 2014 due to the security situation in the regions. With the current revitalized peace agreement, the government represented by the ministry of petroleum is working with the various investors to accelerate the exploration activities. 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. With the recent improvements in regional security, the Ministry of Petroleum looks forward to working closely with our producing partners in 2020-2021 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 and Gas 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 (TA) Transitional Agreement 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:
 - Contractors to develop, implement, maintain, comply and ensure compliance with an adequate and effective management system
 - Must follow a “Plan – Do – Check – Act” framework
 - Must fit into the over-all management system framework
 - Must follow the Environmental and Social Impact Assessment (ESIA) for the area involved
 - 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:
 - A- Occupational health and safety,
 - B- Records & reporting,
 - C- Drilling & production, and
 - D- 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.

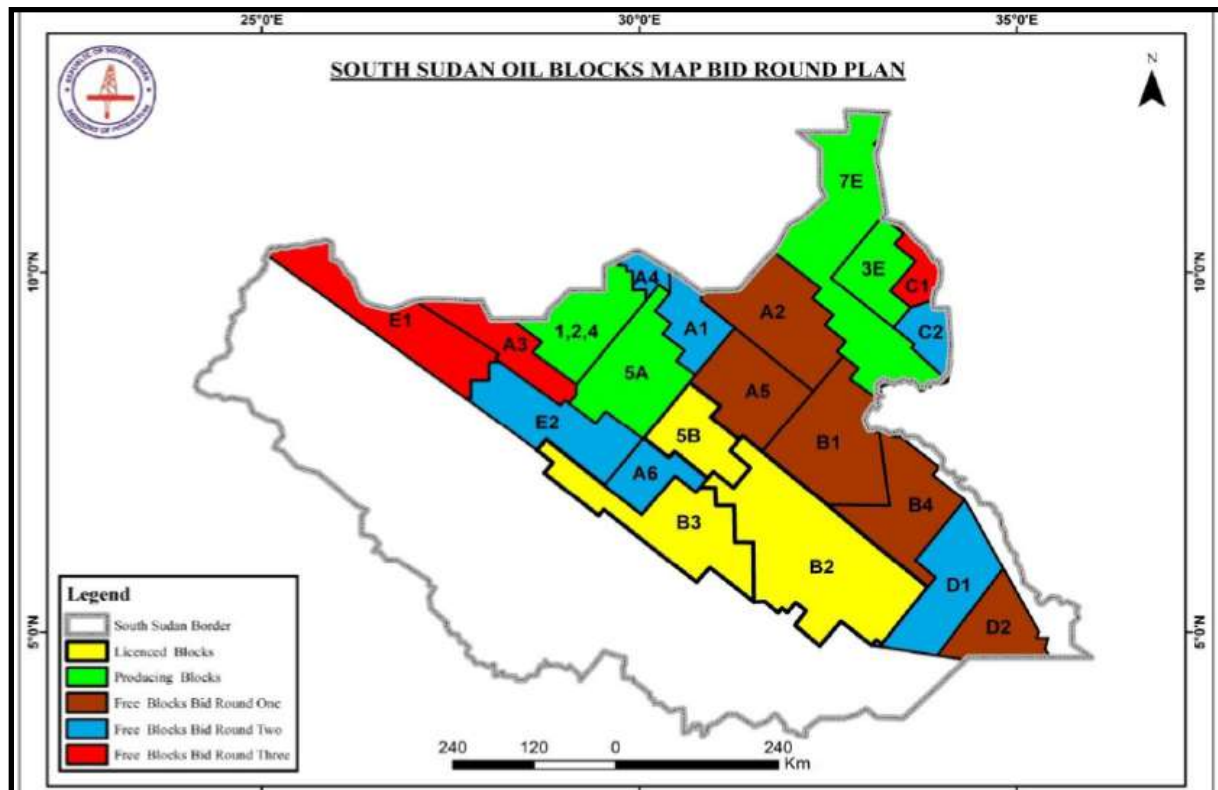


Figure 2: South Sudan Petroleum Blocks

The Republic of South Sudan has entered into or is negotiating six agreements with foreign investors for the exploration 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 former Unity State where 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:

Greater Pioneer Operating Company (GPOC)		
<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 1: GPOC EPSA Fiscal Terms

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

Block 5A is located in former 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:

SUDD Petroleum Operating Company Limited (SPOC)		
<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 2: SPOC EPSA Fiscal Terms

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

Blocks 3 & 7 are located in former 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:

<i>Dar Petroleum Operating Company (DPOC)</i>		
<i>Development Block 3D</i>		
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%
<i>Exploration Blocks 3E</i>		
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%
<i>Exploration Blocks 7E</i>		
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 3: DPOC EPSA Fiscal Terms

Block A1, A2, A3, A4, A5, A6 are Open

There is no production from these blocks – The blocks still remain open for any interested investors.

Block B1– Open

There is no production from this block – The block still remains open for any interested investors.

Block B2 – Nile-Orange

Exploration and Production Sharing Agreement (EPSA) was signed between the Government of the Republic of South Sudan, represented by the Ministry of Petroleum on the one hand and Strategic Fuel Fund (SFF) of South Africa and Nilepet on the other hand in May 2019

Block B3 – Oranto

Exploration and Production Sharing Agreement (EPSA) was signed between the Government of the Republic of South Sudan, represented by the Ministry of Petroleum on the one hand and Oranto Company Ltd and Nilepet on the other hand in July 2018.

Block C1, C2 – are open

There is no production from these blocks – The blocks still remain open for any interested investors.

Block D1, D2 – are open

There is no production from these blocks – The blocks still remain open for any interested investors.

Block E1 and E2 - Open

There is no production from this block – The block still remains open for any interested investors.

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 825 million Standard Tank Barrels (MMSTB) as at January 1, 2021.

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	5,757	24	1,314	842	387	86	473
GPOC Blocks 1, 2, 4	2,526.98	34	868.98	696	88.19	85.81	174
SPOC Block 5A	2,655	8	221	43	79.13	98.95	178
Total	10,938.98	22	2,403.98	1,581	572.08	2,69.76	825

Table 4: South Sudan Crude Oil Reserves

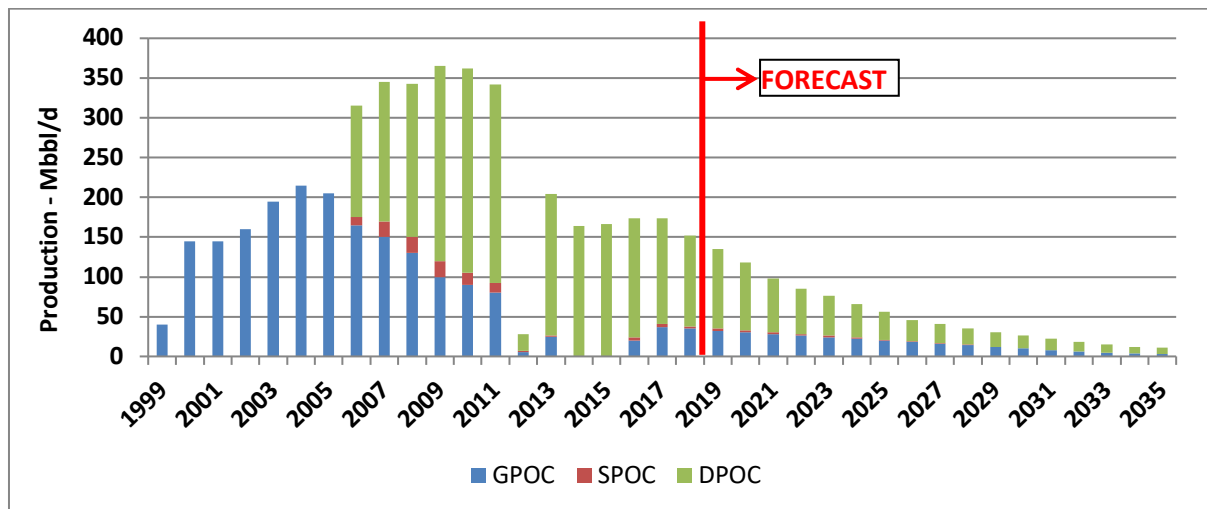
The net change in reserves for the year 2021 for each of the producing areas is shown in the following Table 7. The net change reflects a reduction for the production for the year offset by any reserve additions or adjustments for the period.

Crude Type	Contractor	Block	2020 Reserves (MMbbl)	2021 Reserves (MMbbl)	Net Change
Nile Blend	GPOC	1a, 1b	191.76	174	-17.76
Nile Blend	SPOC	5A	178	178	0
Sub Total			369.76	352	-17.76
Dar Blend	DPOC	3, 7	500	473	-27
Total			869.76	825	-44.76

Table 5: 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 3: 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 increasing levels from 120-170 thousand Bopd from the middle of 2021 with the resumption of production from Block 5A oil field in Unity State.
- 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.
- Most future production derives from the Dar and Nile Blends fields in Upper Nile State and Unity State respectively.
- The production profile takes into account only the estimated production from the fields currently active 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 the Republic of South Sudan and the Government of the Republic of the 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 (AOREM)**”. Collectively these agreements are known as the **2012 Cooperation Agreements**.

Oil Agreement Highlights – The main highlights of The Agreement Concerning Oil and Related Economic Matters are: -

- South Sudan would have access rights to the PETCO (Nile Blend) and BAPCO, (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	GPOC (Nile Blend)	DPOC (Dar Blend)
Processing Fee	1.60	1.60
Transportation Fee	8.40	6.50
Transit Fee	1.00	1.00
Fee Sub Total	11.00	9.10
Transitional Financial Arrangement	15.00	15.00
Total Fees	26.00	24.10

Table 6: 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 being extended for the following reasons:
 - The need of South Sudan to continue exporting its crude oil through Sudan’s pipelines to export terminals.
 - Settle the balance of the TFA
 - Due to the payment of the TFA, low oil prices might deprive South Sudan from any revenues from oil and hence the extension provided for scaling the payment according the oil prices
- AOREM was again extend in December 2019 to be effective from January 1st 2020 to end of March 2022.

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:

<u>Activity</u>	<u>Benefit</u>
• 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
<u>Pre-Approval</u> Marketing Team pre-agree list of companies allowed to participate in tender
<u>Transparency</u> All Bids received within the Tender timeline are tabled for review by Team
<u>Conformity</u> Bids received that do not conform to Tender conditions may be eliminated
<u>Commitment</u> Intention is to commit all cargoes offered in Tender if acceptable conditions
<u>Selling Priority</u> Awards should be announced in date order to avoid distressed sale later
<u>Price</u> Pricing is a major (not only) factor in awarding cargoes to winning Bidders
<u>Security</u> Financial security is a major (not only) factor in cargo awards
<u>Diversification</u> Spreading exposure to multiple Bidders is a factor in awards
<u>Target Buyers</u> Recognition of large end user factored in if relationship adds value to RSS
<u>Negotiation</u> Follow up direct negotiation should be limited to clarifying bid submissions
<u>Payment</u> 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 Petroleum. 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

April 2018–May 2019

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:

Hon Awow Daniel Chuang, Chairman, Undersecretary MoP	Mr. Abui Alfred Minister's Office, MoP– Member
Hon. John Deng Wal MoFP, Member	Mr. Gatluak Michael Diew MoP, Member
Dr. William Anyak Deng Director General of Petroleum Authority	Mr. Barnaba Tito MoP Member
Mr. Arkangelo Okwang Oler MoP Member	Mr. Manase Machar Bol MoP Member
Mr. Angok Daniel Legal Advisor, MoP	Mr. Clement Taban Janga MoP, Member
Mr. Simon Chol Martin MoP member	
Mrs. Labanya Margaret Mathaya MoP, Member	
Mr. Jackson Wilson Bona Ministry of Finance & EP Member	Mr. Salah Farajalla Gumat Legal Advisor, MoP
Mr. Chol Deng Majok MoP member	Mr. Akuei Ajou Akuei MoP Member
Mr. Joseph Maker Chenggan Ministry of Finance and Economic Planning – Member	Ms. Nyawut LothAdija MoP Member
Mr. Simon Kiman Lado Ministry of Finance and Economic Planning - Member	Mr. TiberiousOhide MoPMember
Mr. Moses Makur Deng Bank of South Sudan - Member	Mr. Khidir Ajak Deing MoP Member
Mr. Peter Malual Mading Central Bank of South Sudan - 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

The following table summarizes the crude oil marketing activity in South Sudan for the reporting period of June 1, 2020 to May 31, 2021

June 1, 2020 - May 31, 2021	Cargoes	Volume (MMbbl)	USD	SSP	Percent
Total Crude Oil Sales	26	15,477,873	793,252,660.11	324,440,337,984.99	100%
Net Republic of South Sudan Sales	26	15,477,873	793,252,660.11	324,440,337,984.99	100%

Table 7: Summary of RSS Crude Oil Marketing Activity

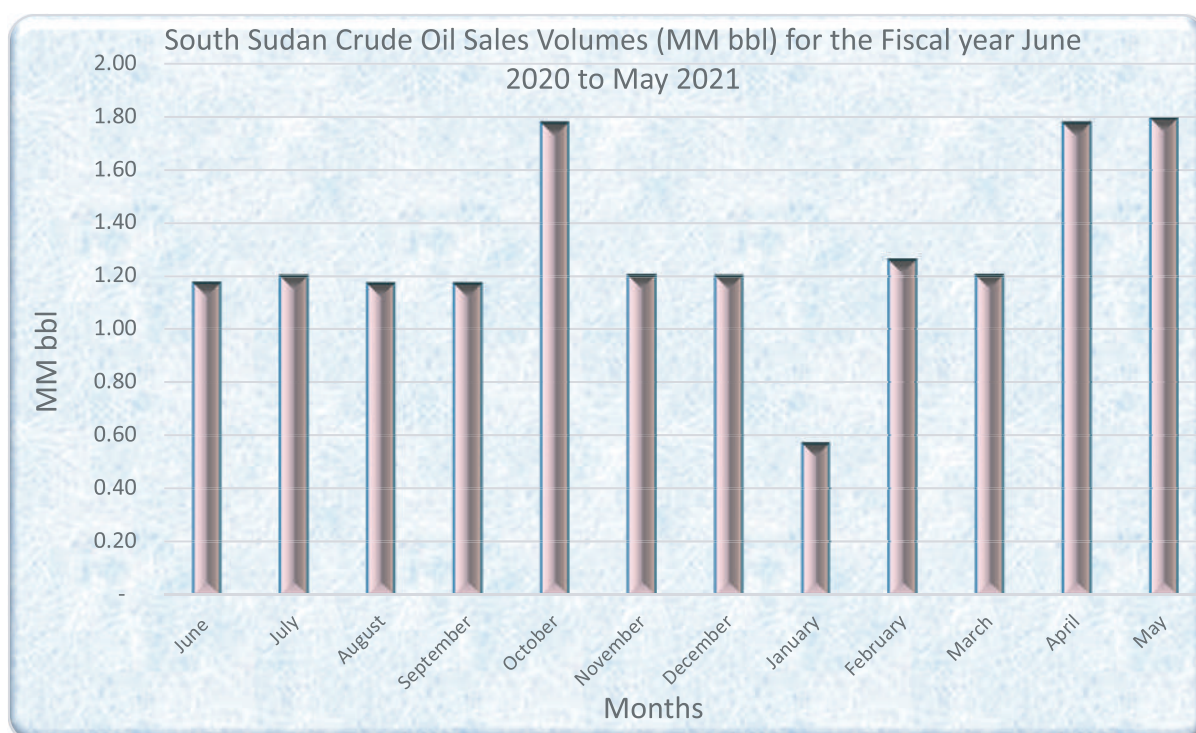
A total of 15.48 MMbbl of crude oil valued at USD 793.25 million (324.44 billion SSP) was sold during the current reporting period at an overall average net price, of USD 51.25 per barrel. During the previous reporting period of June 2019 and May 2020 South Sudan sold 16.28 MMbbl of crude oil at an average price of USD 53.81 per barrel for total revenue of USD 876.05 million. Therefore, production dropped from 16.28 MMBBLS in 2019-2020 fiscal year to 15.48 MMBBLS in 2020-2021.

Net crude oil revenues received into the Republic of South Sudan, Ministry of Finance and Planning bank accounts for the reporting period were USD 793.25 billion (324.44 billion SSP) from the sale of 15.48 MMbbl of crude oil at an average net price of USD 53.81. All payments for oil loaded under the RSS name onto our customer ships up to the end of May 2021 have or will have been collected by the early June 2021. According to our standard international sales contract, payment is made by the buyer 30 days after the crude oil cargo has been loaded on board the vessel.

The entitlement sales volumes by month that were allocated to the RSS for the reporting period of June 2020 to May 2021 are shown in the first line of table (8) below and total 15.48 MMbbl. Republic of South Sudan net sales. This net volume includes both Nile and Dar Blends.

Sales Volumes by Month – RSS Share (MMbbl)													
2020							2021						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
RSS Net Sales	1.17	1.20	1.17	1.17	1.77	1.20	1.20	0.57	1.26	1.20	1.77	1.79	15.48

Table 8: Crude Oil Sales Volumes by Month – RSS Share



Graph 4: 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 2020 entitlement was loaded on the first day of January 2021 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 2020 to May 2021 is shown in Table 10.

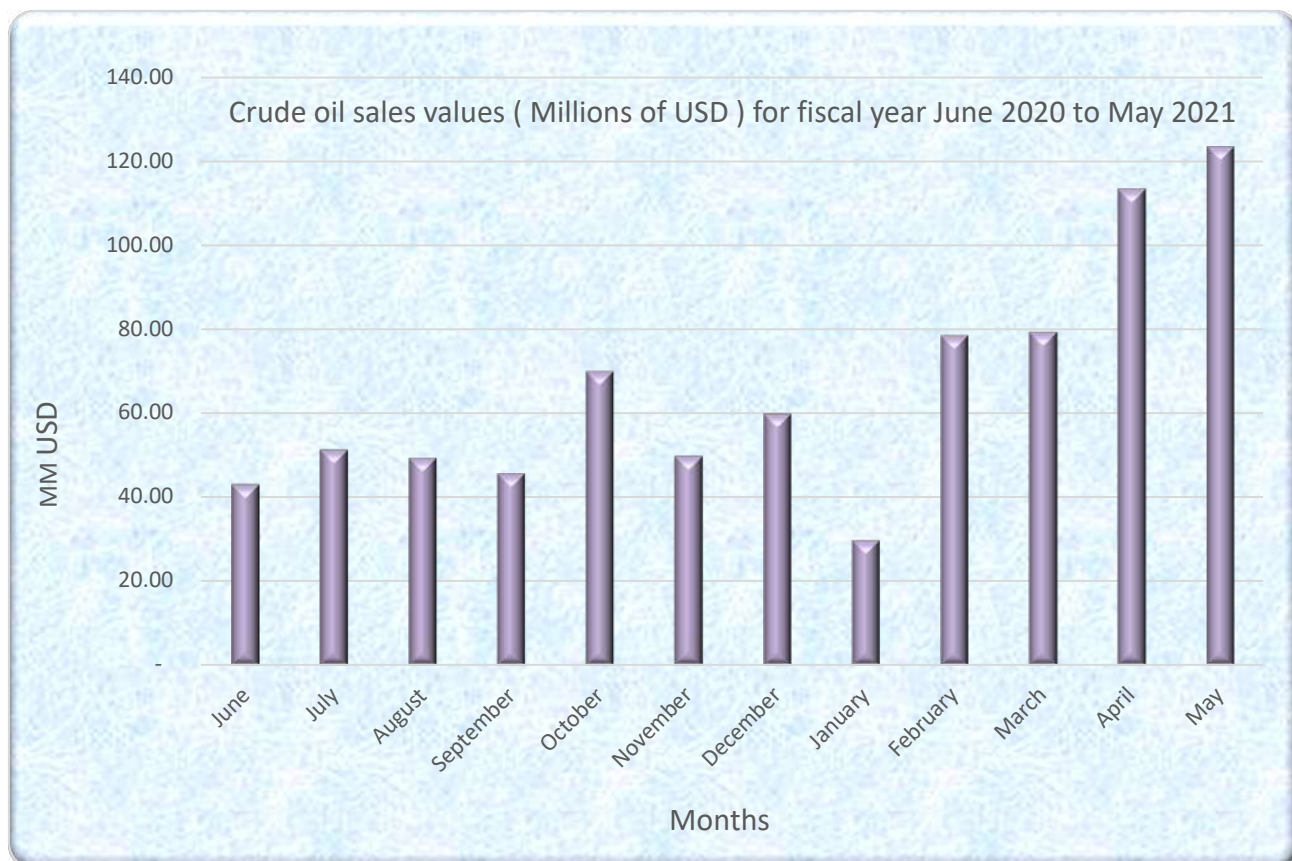
Crude Oil Revenues by Month – RSS Share (MMUSD)													
	2020						2021						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
RSS Net Sales	\$43.00	\$51.38	\$49.28	\$45.73	\$70.00	\$49.81	\$59.85	\$29.86	\$78.40	\$79.30	\$113.23	\$123.42	\$ 793.25

Table 9: Crude Oil Revenues by Month – RSS Share

Table 10: Net Sales Volumes and Revenues

Month/Date	Buyers	Crude Type	Price FOB	Invoice Qty (BBL)	Invoice Amount (USD)	Payment	Remarks
26-28 June	Trinity Energy	N	35.72	570,090	20,363,614.80	Advance pay	Requested by MoFP
29-30 June.	Nasdec	D	37.63	601,429	22,631,773.27	Advance pay	Requested by MoFP
27-29 Jul	BB.Energy	N	42.43	570,205	24,193,798.15	Advance pay	Requested by MoFP
30-31 Jul.	Trinity Energy	D	43.18	629,546	27,183,796.28	Refined products	Requested by MoFP
27-29 Aug.	Saras Spa	N	43.22	570,605	24,661,548.10	Advance pay	Requested by MoFP
30-31 Aug	Trinity Energy	D	41.008	600,388	24,620,711.10	Afrixiem bank loan	Requested by MoFP
29-30 Sep	Sahara Energy	D	40.06	600,658	24,062,359.48	Advance pay	Requested by MoFP
04-06 Oct.	BB.Energy	N	38.01	570,022	21,666,536.22	Advance pay	Requested by MoFP
08-09 Oct	Euro American	D	38.80	600,392	23,295,209.60	Advance pay	Requested by MoFP
25-26 Oct	BB.Energy	N	37.65	570,670	21,485,725.50	Advance pay	Requested by MoFP
30-31 Oct	Euro American	D	41.91	601,706	25,217,498.46	Advance pay	Requested by MoFP
25-27 Nov.	Trinity Energy	N	39.92	570,620	22,779,150.40	Advance pay	Requested by MoFP
29-30 Nov	Nasdec	D	42.92	629,744	27,028,612.48	Advance pay	Requested by MoFP
27-29 Dec	Trinity Energy	N	48.63	570,509	27,743,852.67	Afrixiem bank loan	Requested by MoFP
30-31 Dec	Trinity Energy	D	51.01	629,488	32,110,182.88	Advance pay	Requested by MoFP
25-27 Jan.	BB.Energy	N	52.37	570,196	29,861,164.52	Advance pay	Requested by MoFP
08-09 Feb	Trinity Energy	D	62.22	629,811	39,188,100.04	Afrixiem bank loan	Requested by MoFP
27-28 Feb.	BB.Energy	D	62.34	629,077	39,216,660.18	Advance pay	Requested by MoFP
17-19 Mar	BB.Energy	N	63.53	570,727	36,258,286.13	Advance pay	Requested by MoFP
30-31 Mar.	Nasdec	D	68.30	630,162	43,040,064.60	Advance pay	Requested by MoFP
08 -09 April.	BB.Energy	D	64.25	600,692	38,594,461.00	Peace implementation	Requested by MoFP
14-15 April	BB.Energy	D	65.40	600,782	39,291,142.80	Advance pay	Requested by MoFP
17-19 April	Euro American	N	61.95	570,482	35,341,359.90	QNB Loan pay	Requested by MoFP
08-09 May	Euro American	D	66.70	618,516	41,255,017.20	Advance pay	Requested by MoFP
17-19 May	BB.Energy	N	66.85	570,595	38,144,275.75	Afrixiem bank loan	Requested by MoFP
30-31 May.	Trinity Energy	D	73.27	600,761	44,017,758.47	Advance pay	Requested by MoFP

Graphical illustration of Crude oil sales values (in millions USD) for the fiscal year June 2020 to May 2021 showing RSS Crude oil revenues.



Graph 5: Crude Oil Sales Values by Month – RSS Share

The MoP Marketing group has assumed full responsibility for the marketing of the country's crude oil during the past ten years since South Sudan independence and has gained valuable experience at 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, MoFP, BSS, 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.

Dar Blend												
Descriptions	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
FOB Price	\$37.63	\$43.18	\$43.22	\$40.06	\$38.80	\$41.91	\$48.63	\$52.37	\$62.22	\$63.53	\$65.40	\$73.27
Production (MMbbls)	3.28	3.47	3.45	3.20	3.53	3.65	3.71	3.53	3.13	3.30	2.97	3.14
Expenditures (MMS)												
Operating	37.87	36.59	40.38	52.60	34.23	33.88	22.44	40.59	27.94	25.8	44.28	48.53
Capital	5.84	6.47	0.43	-4.78	0.38	4.5	25.96	0.31	3.32	7.17	16.11	5.67
Total	43.71	43.06	40.81	47.82	34.61	38.38	48.40	40.90	31.26	32.97	60.39	54.20
Entitlement (MMbbls)												
RSS Profit Oil	1.32	1.39	1.38	1.29	1.49	1.55	1.61	1.81	1.76	1.96	1.46	1.59
Nilepet Cost Oil	0.12	0.12	0.12	0.11	0.12	0.12	0.12	0.08	0.06	0.05	0.08	0.08
Nilepet Profit Oil	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.04	0.05
Government Total	1.48	1.55	1.54	1.44	1.65	1.71	1.78	1.94	1.87	2.07	1.58	1.72
Contractor Oil	1.77	1.89	1.88	1.73	1.84	1.92	1.93	1.59	1.26	1.23	1.39	1.42
Total All Oil	3.25	3.44	3.42	3.17	3.49	3.63	3.71	3.53	3.13	3.30	2.97	3.14
Entitlement (%)												
RSS Profit Oil	40.62%	40.41%	40.35%	40.69%	42.69%	42.70%	43.40%	51.27%	56.23%	59.39%	49.16%	50.64%
Nilepet Cost Oil	3.69%	3.49%	3.51%	3.47%	3.44%	3.31%	3.23%	2.27%	1.92%	1.52%	2.69%	2.55%
Nilepet Profit Oil	1.23%	1.16%	1.17%	1.26%	1.15%	1.10%	1.35%	1.42%	1.60%	1.82%	1.35%	1.59%
Government Total	45.54%	45.06%	45.03%	45.43%	47.28%	47.11%	47.98%	54.96%	59.74%	62.73%	53.20%	54.78%
Contractor Oil	54.46%	54.94%	54.97%	54.57%	52.72%	52.89%	52.02%	45.04%	40.26%	37.27%	46.80%	45.22%
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 11: Republic of South Sudan Crude Oil Entitlement

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.

During the period of June 1, 2020 to May 31, 2021 South Sudan's crude oil entitlement has ranged from 45.54% to 54.78 %. Current entitlement is about 55.0%. The reason for the increased in the government's entitlement percentage is the rise in global oil price. As noted

above, when the oil price increases, least oil is allocated to cost oil in which the government does not share, and more 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.

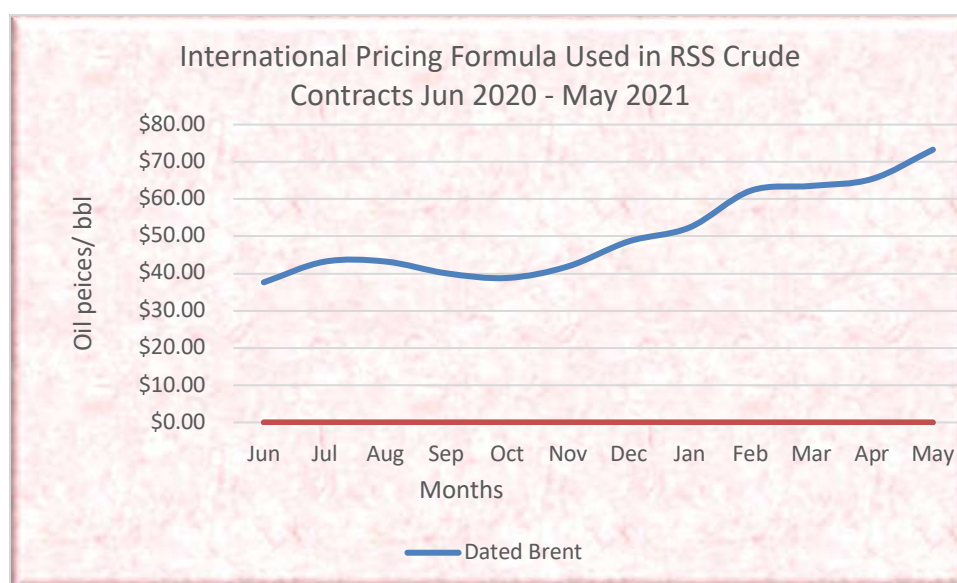
4.4 Market Prices Achieved

Brent crude oil prices, upon which all of the South Sudan Dar and Nile Blends oil sales are currently based, ranged from a low of \$37.63 in June 2020 to a high of \$73.27 in May 2021 before settling in the \$62-73 range. The weighted average price for Dar and Nile Blends sales for the twelve-month reporting period, is \$50.85. Despite the high price volatility during the reporting period, the marketing group was able to achieve favorable premium/discount rates through the bid / tender process, therefore, obtaining competitive prices for South Sudan crude oil.

The table and graph below illustrate the average monthly official international reference prices for Dated Brent that were incorporated into our Dar Blend and Nile Blend contract price formulas, this reflects the sharp increases in global oil prices during the reporting period along with the calculated averages.

International Pricing Formula Used in RSS Crude Contracts							
2020	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dated Brent	\$37.63	\$43.18	\$43.22	\$40.06	\$38.80	\$41.91	\$48.63
2021	Jan	Feb	Mar	Apr	May		Average
Dated Brent	\$52.37	\$62.22	\$63.53	\$65.40	\$73.27		\$50.85

Table 12: Dated Brent Actual Crude Pricing



Graph 6: International Pricing – Brent

4.5 Sales Price Differentials

The marketing group was able to maintain favorable sales price differentials or premium 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 and Nile Blends crude oil sold by the MoP marketing team, was -\$6.81 for the twelve-month reporting period. This compares favorably with the -\$9.22 discount achieved in the previous 2019-2020 reporting period when the marketing climate was more positive.

Realized Weighted Average Price Differential							
2020	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dar & Nile Blends	(\$7.29)	(\$5.14)	(\$8.75)	(\$6.91)	(\$2.72)	(\$6.53)	(\$6.42)
2021	Jan	Feb	Mar	Apr	May	Average	
Dar & Nile Blends	(\$11.40)	(\$9.28)	(\$6.79)	(\$6.03)	(\$4.43)	(\$6.81)	

Table 13: RSS Realized Weighted Average Price Differential

4.6 Global Customers Base

The MoP Marketing Team continued to work at maintaining the customer base for our crude oil to ensure competitive bidding and maximize prices. 64 customers, up from 59 one year ago and including both end users and oil traders, were allowed to bid on our crudes following screening, with six companies winning one or more cargoes over the marketing period as shown in Table 15.

RSS Customers and Cargoes Loaded (Excluding Nilepet)							
2020	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NASDEC	1					1	
Trinity	1	1	1			1	2
Sahara Energy				1			
BB Energy		1		1	1		
SARAS SPA			1				
Euro American					2		
Totals	2	2	2	2	3	2	2
2021	Jan	Feb	Mar	Apr	May		(June 2020-May 2021)
Trinity		1			1		
Euro American				1	1		
NASDEC			1				
BB Energy	1	1	1	2	1		
Totals	1	2	2	3	3		26

Table 14: 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 Central 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.

Invitation List		Activity	Type	Security
1.	Addax Energy	Active	Trader	SBLC
2.	AsconTimpet	No Activity	Trader	SBLC
3.	Augusta Energy	No Activity	Trader	SBLC
4.	Chiang Wei Ltd	Active	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	Bidder	Trader	SBLC
9.	Gunvor	No Activity	Trader	SBLC
10.	Investsouth (Triton Global Petroleum)	Bidder	Trader	SBLC
11.	Kepu	No Activity	Trader	SBLC
12.	Kernel Oil (Suisse Ltd)	Bidder	Trader	SBLC
13.	LENKOR	No Activity	Trader	SBLC
14.	LOTCO	No Activity	Trader	SBLC
15.	Mena Energy	No Activity	Trader	SBLC
16.	Mercuria	No Activity	Trader	SBLC
17.	Mitsubishi	No Activity	Refiner	SBLC
18.	Money Maker Management	Bidder	Trader	SBLC
19.	Nabta General Trading	Bidder	Trader	SBLC
20.	Nasdec General	No Activity	Trader	SBLC
21.	Petronas	Active	Refiner/Equity	SBLC
22.	Petro Diamond*	No Activity	Trader	SBLC
23.	Royal Energy	No Activity	Trader	SBLC
24.	Safadi Group	No Activity	Trader	SBLC
25.	Sahara Energy	Active	Trader	SBLC
26.	Serha Oil	No Activity	Trader	SBLC
27.	Shell	No Activity	Refiner	Open
28.	SK Energy	No Activity	Refiner	SBLC
29.	SOCCAR	No Activity	Refiner/Trader	SBLC

30.	Southex	No Activity	Trader	SBLC
31.	Total	No Activity	Refiner	Open
32.	Toyota Tsusho	No Activity	Refiner/Manufact	Open
33.	Trafigura	Bidder	Trader	SBLC
34.	Tri Ocean	No Activity	Trader/Equity	SBLC
35.	Trinity Energy	Active	Trader	SBLC
36.	Unipet	Award Winner	Refiner	PU
37.	Vitol	Award Winner	Refiner/Trader	SBLC
38.	Zenhua oil Co. Ltd	No Activity	Trader	SBLC
39.	NIMEX Petroleum DMCC	No Activity	Trader	SBLC
40.	Hyde Energy Ltd	No Activity	Trader	SBLC
41.	Euronova Energies SA	No Activity	Trader	SBLC
42.	Kernel Oil Suisse SA	No Activity	Trader	SBLC
43.	Ocean Front	No Activity	Trader	SBLC
44.	Gulf Petroleum	Active	Trader	SBLC
45.	Petraco Oil Company	Active	Trader	SBLC
46.	Adaxco	Active	Trader	SBLC
47.	Strong Petrochemical Ltd.	Active	Trader	SBLC
48.	Litasco	Active	Trader	SBLC
49.	Cathay Petroleum Int. Ltd	Active	Trader	SBLC
50.	Zenrock Commodities Trading Pte Ltd.	Active	Trader	SBLC
51.	Nimr Int. LLC	Active	Trader	SBLC
52.	CTP Oil Trading LLC	Active	Trader	SBLC
53.	Petro Holland Ltd.	Active	Trader	SBLC
54.	ZACOSIA Petrochemical Trading LLC	Active	Trader	SBLC
55.	TALEVERAS Petroleum Trading BV.	No Activity	Trader	SBLC
56.	Continental Energy	Active	Trader	SBLC
57.	China Well Petroleum Energy	Active	Trader	SBLC
58.	MAB Oil Limited	Active	Trader	SBLC

59.	Coral Energy PTE LTD	Active	Trader	SBLC
60.	Al Braik Investment LLC	Active	Trader	SBLC
61.	Silver Back commodities & Traders LLC	Active	Trader	SBLC
62.	Pacific African Petroleum LLC	Active	Trader	SBLC
63.	United Investment Global AG	Active	Trader	SBLC
64.	TIS Petroleum Asia PTE LTD	Active	Trader	SBLC

Table 15: Pre-approved Customer List

4.8 Marketing Report Card

The MoP marketing effort for the period of June 2020 to May 2021 continued to be stronger given the extremely difficult global crude oil environment. With supply out-stripping demand and the increase in prices during the period of reporting, the marketing group has clearly shown the capability of the Ministry of Petroleum staff and the Marketing Team to successfully sell the country's entitlement shares 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 subjected to future development.

4.9 Transitional Financial Arrangement (TFA) and Tariff Payments to Sudan

RSS Payment Obligations to Sudan – For the reporting period of June 2020 to May 2021, the Republic of South Sudan has paid or is obligated to make the following payments to Republic of Sudan under the terms of The Agreement Concerning Oil and Related Economic Matters:

Description	Charges Per (bbl)	Quantity/bbl	Value /USD
Net Quantity Shipped (Barrels @ MT)		15,477,873	\$232,168,095.00
Net Quantity Shipped (Barrels @ Inland)		9,268,612	\$139,029,180.00
Transitional Financial Arrangement	\$15.00		
Jun2020- May 2021 Net TFA paid USD			\$371,197,275.00

Table 16: TFA Obligation paid to Sudan

Description	Charges Per (bbl)	Quantity/bbl	Value /USD
Total fees (USD)	\$9.10		
Dar Blend net quantity (MT& Inland)		18,471,764	
Fees			
Processing	\$1.60		\$29,554,822.40
Transportation	\$6.50		\$120,066,466.00
Transit	\$1.00		\$18,471,764.00
Jun 2020- May 2021 Net Fees paid USD			\$168,093,052.40

Table 17: Dar Blend Fees paid to Sudan

Description	Charges Per (bbl)	Quantity/bbl	Value/USD
Total fees (USD)	\$11.00		
Nile Blend net quantity		6,274,721	
Fees			
Processing	\$1.60		\$10,039,553.60
Transportation	\$8.40		\$52,707,656.40
Transit	\$1.00		\$6,274,721.00
Jun 2020- May 2021 Net Fees paid USD			\$69,021,931.00

Table 18: Nile Blend fees paid to Sudan

As of the middle of 2021 the remaining balance on the Transitional Financial Arrangement obligation to Sudan is around USD 147 Million.

The increase in oil prices at the end of 2020 has resulted in significantly increased revenues and has relieved pressure on South Sudan's budget execution. This has enabled the Republic of South Sudan 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 in land lifting. The agreement to this arrangement has been finalized and the pricing mechanism is the netback price calculations.

4.10. Outstanding Issue

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 some have been relocated 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

Financial audit of all the operating companies is ongoing and the years 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018 have been completed. The remaining years has been awarded to audit contractors and is expected to finish within three months. After that the audit will be year by year.

PART 5 – FUTURE ACTIVITIES

May 2021 and beyond

5.1 Status of Block 1, 4 and 5A Production

The production in Unity State resumed in 2018, and is currently running at the average production of 48,000 bbl/d. Efforts are being exerted to increase production from this block by adding more wells that have not been put into production since resumption. Block 5A has also started in mid-2021 and is gradually being ramped up to reach 16,000 bbl/d by mid-2022. Although the capacity of the production in this block may reach 40,000 bbl/d, the maximum it can reach is only 16,000 bbl/d because of the capping imposed by Sudan.

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

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 fuel crises across South Sudan (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 former 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 is operational.

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, 2020-2021, no progress was 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.

5.3.1 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 except Wau depot. 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.

5.3.2 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 Tharjath oil fields – former Unity state to Paloch – former Upper Nile State has been started. The conceptual design is completed and we expect to proceed with the project.

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 and Sudan. The supply of products for domestic consumption is being handled by Nilepet along with other private companies. The Ministry of Petroleum, Republic of 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.

Downstream depots and import routes are illustrated below.

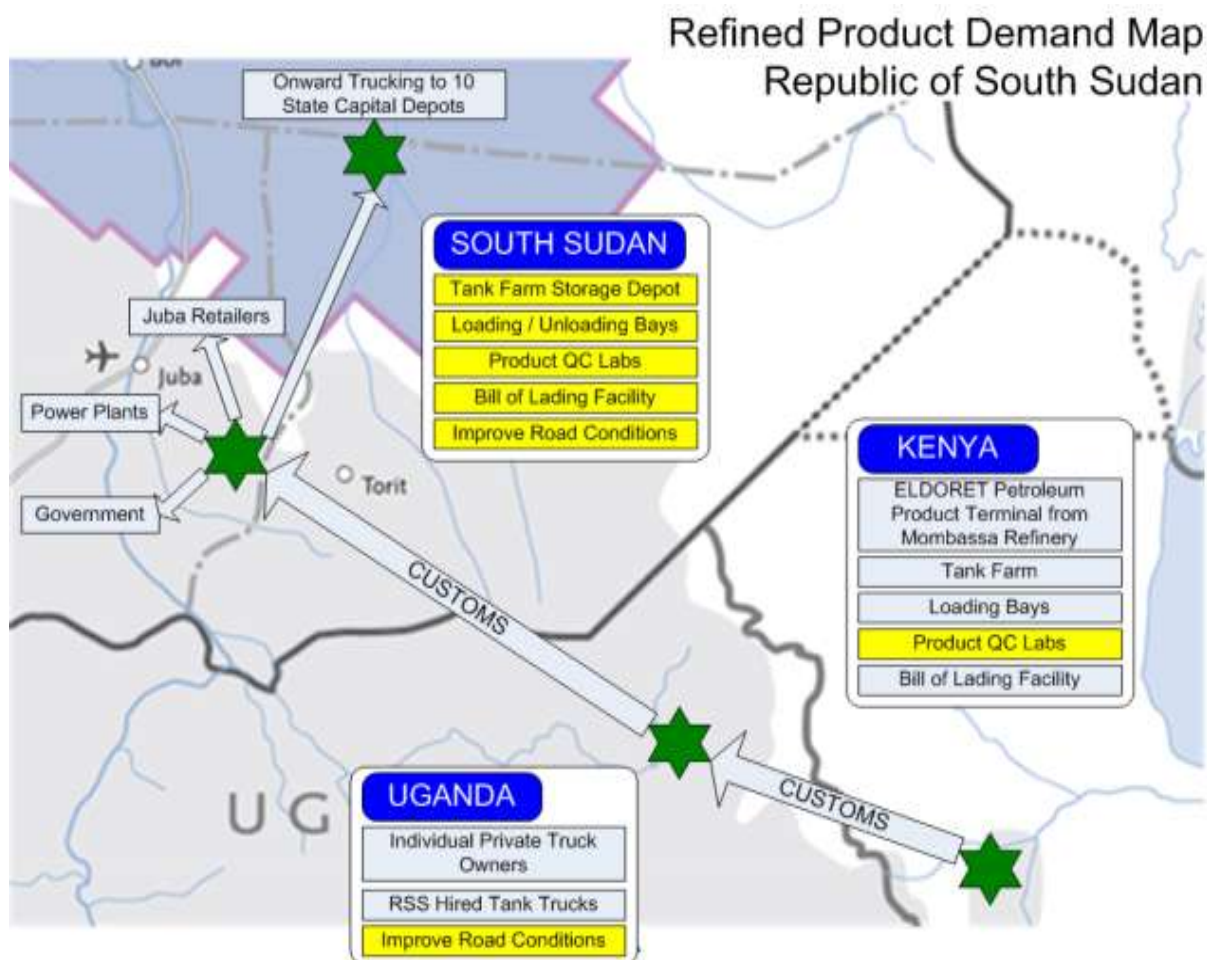


Figure 3: RSS Refined Product Demand Map

5.5 Challenges and Opportunities Ahead

The Ministry of Petroleum has both challenges and opportunities. We have highlighted in this report many of the successes and achievements since the restart of production in South Sudan. As we celebrate the tenth 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 size and quality of office space for employees has improved. Training has been enhanced through the chances provided by the contractors and the crude oil buyers. The strengthened capacity of our staff, even as we continue to experience deficiencies in manpower and financial resources, is notable.

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

- Continuous improvement in education and training for our MoP staff to boost their knowledge and skills;
- Clearly defined roles & responsibilities for all levels within MoP;
- Developing an internet database platform for all employees to utilize daily activities;
- Improving internal and external communication of marketing information;
- Developing a seamless working relationship with other ministries.
- Of the challenges the ministry is facing its needs to subscribe to the platt's wire services to ensure up to date prices for crude oil are captured.

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



CLOSING REMARKS

This Petroleum Report is the ninth publication issued by the Ministry of Petroleum, Republic of South Sudan. It provides an overview of world crude oil markets and fundamentals, price forecasts, oil 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 secure energy supply and to ensure transparency.



The MoP marketing team have proven their understanding of the fundamentals of crude oil marketing and their enthusiasm for their work. This an evolving business that requires continuous development and innovation. These activities will be enhanced once MoP establishes on-line communications with the global oil markets and with the major world crude oil pricing center Platt's, London which we are looking forward to have membership with them.

Our Health, Safety and Environment department has internally and externally a good number of staff and this is highlighting the MoP strong commitment to our people and our environment and enhancing our ability to monitor and enforce regulation in the oil sector. For the first time we are holding environmental audit and this will let us know clearly to what extent is our environment affected and what measures must be taken to correct what went wrong.

Our Exploration and Production department is seriously engaged in promoting new blocks ready for those investors willing to take them. In this regards the first Licensing Round was launched in May this year for five open blocks and the process is still ongoing. The process is expected to be concluded in mid of 2022 by selecting the winners and negotiating an agreement for exploration and production.

Our goal with this and subsequent editions of the MoP Petroleum 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, and a greater prosperity for our people.

Sincerely,

Eng. Awow Daniel Chuang
Undersecretary, MoP



REPUBLIC OF SOUTH SUDAN



PREPARED AND PUBLISHED BY
The Ministry of Petroleum, Republic of South Sudan

