

# SECTOR PROFILE



## Mining





### Minerals



Sierra Leone's primary mineral resources are diamonds, Rutile, bauxite, gold and iron ore. Mining, particularly of diamonds, gold, Rutile and bauxite, has a proven track record of viability in Sierra Leone. General geology suggests that reserves exceed what is known and being explored. Other known mineral deposits include iron ore, platinum, chromites, lignite and base metals (copper, nickel, molybdenum, lead and zinc).

### Leading Growth Driver

The mining sector is set to undergo a rapid expansion in light of production increases from expansions of existing and the opening of new operations. Real GDP growth for 2012 was initially projected to increase by over 50 percent on account of growth in the mining sector; this estimate was subsequently reviewed due to delays in commencement of exports, particularly in the iron ore sector.

## Sector Composition

The mineral sector in Sierra Leone is made up of three sub-sectors; the large-scale production of non-precious minerals such as Rutile, Bauxite and more recently iron ore; large scale production of precious minerals, particularly diamonds; and artisanal and small-scale production of precious minerals, mainly diamonds, and to a much lesser extent, gold. The industry comprises a combination of a few large operations, more numerous small to medium-sized companies and a very large number of artisanal mines. As of April 2012, about one hundred and thirty four (134) companies had been granted licenses in various categories of trading, exploration and mining.

## Unique Selling Points

### 1. Proven Mineral Deposits

- The prospects for the continued expansion of the mining sector are favourable, as:
  - ▶ There are proven and sufficient reserves of existing precious and non-precious minerals to allow increased investments and production for the foreseeable future.
- More mining areas are becoming available, as:
  - ▶ The initial rush for exploration which started in 2002 continues to expire; and the relinquishments are freeing up areas for new investments.

### 2. Transparent and Modern Regulatory Regime

- The sector has undergone major legal, regulatory and policy reforms.
- The Mines and Minerals Act of 2009 presents a relatively transparent framework in:
  - ▶ The issuance of mining related licenses,
  - ▶ The fiscal regime;
  - ▶ A universally applied tax code, among other regulations
  - ▶ The establishment of a Mining Cadastre Office (MCO), which in turn created an online Repository that provides data on the licensing and mineral concession management
  - ▶ The establishment and setting up of the National Minerals Agency

### 3. Labour

- The sector is among the leading formal employers in the economy; and is benefitting from competitive wages, compared to other economies

Licensing: Areas and Periods

<b>Rutile, Ilmenite</b>	One of the longest standing large mining operations is Sierra Rutile Limited, which accounted for about 33 percent of the world's Rutile output and was the largest private employer in Sierra Leone before it was forced to shut down in 1995; the company started operations, expanding its mining activities into new areas of deposits.
<b>Diamonds</b>	Another post-conflict entrant in the mining sector is Koidu Holdings which, after the end of the civil war, started mining diamonds on a comparatively large scale from kimberlitic deposits in the Koidu area and other high deposit areas.
<b>Iron Ore</b>	Since 2008, a number of large scale entries have been made in the iron ore and gold mining operations, key among which are African Minerals, an AIM-listed company with a JORC Compliant magnetite resource base of about 5.1 Billion Metric Tonnes and London Mining Company, another AIM-listed company with proven resource base of over 2 Billion Metric Tonnes and a medium term targeted production of 16MTPA
<b>Gold</b>	Cluff Gold is an AIM-listed company in the UK, which is about to commence commercial operations of what would be the single largest commercial gold mining operations in the country. Recent results have already identified a large resource base and a scoping study confirmed that an open-pit mine could produce between 140,000 to 200,000 ounces of gold annually.
<b>Bauxite</b>	Vimteco is listed on the London Stock Exchange and operator of the only bauxite mine in Sierra Leone with resource base of approximately 31 Million Metric Tonnes



## Licensing: Areas and Periods

Category	Nature	Elements
Exploration	Reconnaissance	Typically issued to provide potential investors an opportunity to identify specific areas for more intensive exploration. Normally non-exclusive and valid for 1 year with maximum renewal period of 1 year. It is issued to cover a maximum area of 10,000km <sup>2</sup>
	Full Exploration	This license grants exclusivity over license area. It is valid for 4 years with an initial renewal option of 3 years and further renewal of another 2 years, bringing total maximum exploration period of 9 years. Licenses are issued for a maximum area 250km <sup>2</sup> and licensees are encouraged to relinquish down to 125km <sup>2</sup>
Mining	Small Scale	Licenses are issued for land areas of up to 100 Hectare and for an initial period of 3 years, with a renewal option for another 3 years.
	Large Scale	Licenses are issued for land areas of up to 250km <sup>2</sup> and for an initial period of 25 years, with a renewal option for another 15 years, subject to terms and conditions and the general fiscal conditions as specified in the Mines and Mineral Act.

Source: Ministry of Mines and Mineral Resources

## Licensing: Process and Requirements

- The license application process has been simplified and requirements clarified. The evaluation process is very transparent and results of an application evaluation are communicated to the applicant within very short periods of time.





Type of License	Key Requirements
<b>Exploration License</b>	<ul style="list-style-type: none"> <li>• Applications made through MCO</li> <li>• Company must be a registered limited company</li> <li>• Technical work programme should be included</li> <li>• Expenditure commitment details</li> <li>• Demonstration of financial &amp; technical capacity</li> </ul>
<b>Mining License</b>	<ul style="list-style-type: none"> <li>• Feasibility study, based on proven exploration</li> <li>• Detailed mine operational plan</li> <li>• Environmental Impact Assessment &amp; management plan</li> <li>• Financial surety for environmental obligations</li> <li>• Community Development Agreement</li> <li>• Surface Rent Agreement</li> </ul>

## The Fiscal Regime

- The fiscal regime in the mining sector has been improved and made more transparent in terms of royalties on extraction and sale of mineral resources. The rates apply to the value of market prices, which in turn depend on clear regulations on the methods to be used for determining such prices.

Category of Minerals	Relevant Rate (%)	Remarks
Precious Stones	6.5	<ul style="list-style-type: none"> <li>• Valuation based on the market price at time of sale</li> <li>• Clear regulations on market based valuation of minerals</li> </ul>
Precious Metals	5.0	
Other Minerals	3.0	

## The Tax Code

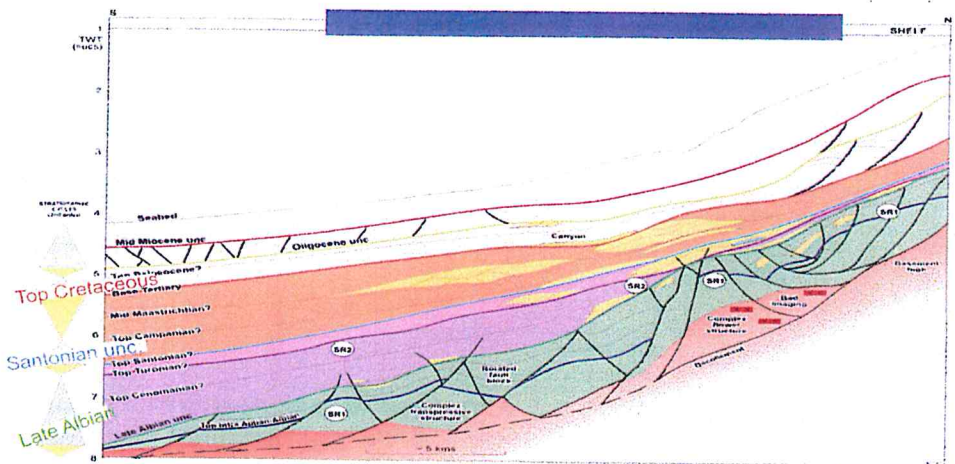
The tax code is designed and implemented to ensure level playing field for small and large players in the sector. The following is a summary of applicable taxes and treatment allowances of certain items for tax purposes

Item Description	Applicable Treatment
Corporate Tax Rate	35% tax rate on corporate profits
Cost Amortisation (Exploration and Development)	4 year profiled depreciation at 40%, 20%, 20%, 20% respectively, starting in the year the cost was incurred
Thin Capitalisation	Where the debt equity ratio exceeds 3:1, interest on loans granted by affiliated parties shall not apply
Limits on HQ Expenses	1.5% of sales
Special Tax Incentives	Losses can be carried forward from one year to the next up to 10yrs from the commencement of commercial production

Source: Ministry of Mines and Mineral Resources

## Oil and Gas Sector Overview

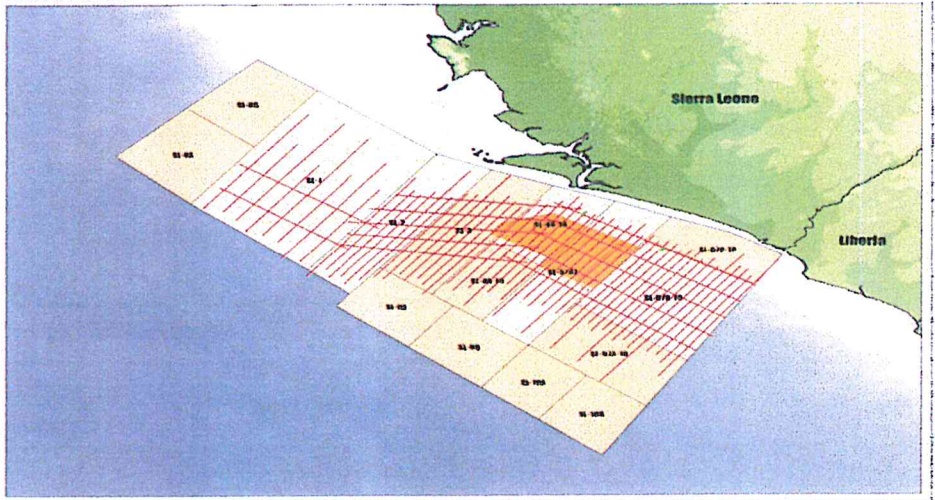
Sierra Leone has historically gone through 3 phases of oil exploration; the first two stages involved drilling by Mobil in 1982 and by Amoco in 1985, to depths of approximately 3000 meters. These exploratory wells, located close to the border with Liberia, are on the continental shelf, considerably shoreward of the deepwater basin complex. Oil shows were encountered in both exploration drillings, but these wells were plugged and abandoned.



Source: Petroleum Directorate



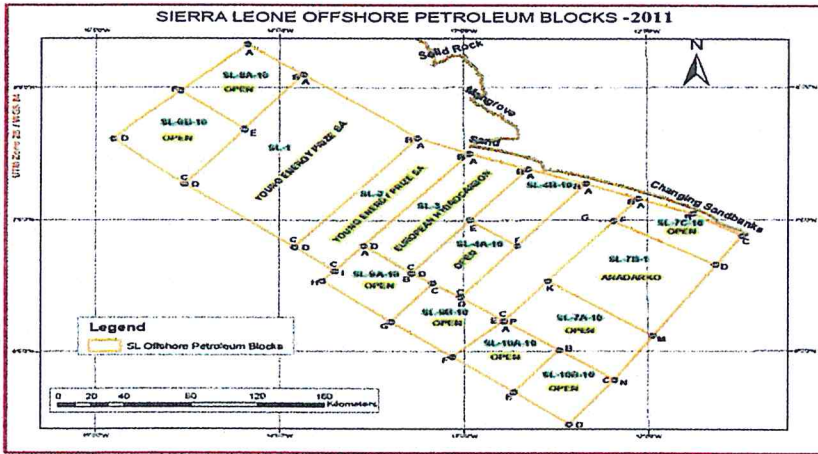
Oil and gas exploration activities started again in 2003 in Sierra Leone, when TGS NOPEC was engaged by the Government of Sierra Leone. TGS-NOPEC Geophysical Company acquired approximately 5,800 sq km of 2-D seismic data in 2000 and 2001 and 3,200 sq.km of 3D data in subsequent years. The data set consists of a total of 170 lines extending from the continental shelf to water depths of 2500 m to 4000 m, recording high quality, 10-second migrated seismic data. The southwest-northeast dip lines have an average spacing of 7 km and lengths of 50 km to 140 km. Five composite, northwest-southeast strike lines are each approximately 850 km long. Approximately 5,800 line-km of the seismic data were acquired in the offshore area of Sierra Leone.



Source: Petroleum Directorate

## Oil Block Awards and Exploration Activities

The first round of oil block awards was in 2003/2004, when 6 Petroleum Blocks. A number of companies carried out additional exploratory activities. The consortium comprising Anardarko, Repsol and Tullow Oil acquired 3D seismic data and progressed to drill 2 wells up to 18,000ft in 9,500ft of water between 2005 and 2010. One of the wells, the Venus B-1 provided 45 net feet of hydrocarbon pay, therein proving a working petroleum system. The group also encountered 135 net feet of hydrocarbon pay in the Mercury well, which is currently being appraised. Three more groups, Lukoil, Talisman and African Petroleum have acquired 3D seismic data, which are being interpreted and evaluated. Until 2012, the main actors in the petroleum sector were: (i) Anardaro/Repsol/Tullow Oil; (ii) Talisman/Prontina; (iii) Lukoil/Oranto; (iv) Young Energy Prize; and (v) African Petroleum



Source: Petroleum Directorate

In August 2012 a new round of Oil Block Tender was completed, which saw the award of 9 more Petroleum Blocks to a range of companies. This process involved a total of 59 applications, and the results of the process are summarised as follows.

Block No.	No. of Applications	Groups Awarded
SL 4A-10	16	African Petroleum; KOSMOS Energy
SL 7A-10	12	Elinilto Ltd; Signet Petroelum; Miexco
SL 7C-10	4	Maters Energy
SL 8A-10	13	Chevron Sahara; Noble Energy; ODYE
SL 8B-10	10	Chevron Sahara; Noble Energy; ODYE
SL9A-10	2	GNBH Exploration
SL 9B-10	1	GNBH Exploration
SL 10B-10	1	Varada Petroleum and Hydrocarbons
SL 10A-10	0	

Source: Petroleum Directorate

### General Fiscal Regime of the Petroleum Industry

- The Fiscal Regime of the oil and gas sector comprises three key instruments; (i) Royalty; (ii) Income Tax; and (iii) Petroleum Resource Rent Tax (PRRT). These, together with other complementing provisions, form the overall fiscal regime for Sierra Leone's hydrocarbon industry. The following are specific rules that apply:

<b>Type of Agreement</b>	Hybrid Royalty-Tax Agreement	
<b>Corporate Income Tax</b>	30%	
<b>Exploration Period</b>	Seven (7) years consisting an initial exploration period of 3 years with two (2) extension periods contingent on fulfillment of Work and Financial Obligations of each of the two (2) renewal periods	
<b>Work Programme</b>	Negotiable, based on minimum expenditure	
<b>Relinquishment</b>	Licensee cannot retain more than 50% of licensed area after the initial exploration period and no more than 25% after the first extension period	
<b>Royalties (Oil)</b>	Water depths up to 200 metres	10.0%
	Water depths over 200 metres	8.0%
<b>Royalties (Gas)</b>	Water depths up to 200 metres	5.0%
	Water depths over 200 metres	3.0%
<b>Surface Rental</b>	Initial Exploration Period	US \$40 per sq. Km. per Annum
	1 <sup>st</sup> Extension Period	US \$60 per sq. km. per annum
	2 <sup>nd</sup> Extension Period	US \$85 per sq. km. per annum
	Development and Production	US \$110 per sq. km. per annum

Source: Petroleum Directorate

### Downstream Investment Opportunities

The country now has proven oil and gas deposits and production activities are imminent. In addition to exploration, development and production of crude oil, Sierra Leone also offers opportunities for downstream investments in the sector. With GDP growth rates averaging between 6% and 7% in recent years, this growth is fuelled by economic activities that depend on petroleum products. Diesel and petrol are the country's largest imports; and imports of these products have grown at approximately 20% annually over last 5 years. The regional West African demand should be able to support a refinery with capacity >200,000 barrels per day with additional export opportunities to supply US & European markets.



## Oil and Gas Port Infrastructure

- The presence of vast undeveloped lands close to sheltered deep-waters and natural harbours in various points along the coast, create opportunities for oil and gas port infrastructure and services for imminent production activities



## Oil Refinery

- The Government is seeking strategic private sector partnership for rehabilitation and expansion of the Sierra Leone Petroleum Refining Company (SLPRC) assets. The company, originally created in 1970 as a JV between the GoSL and major international oil companies, was forced to close down ten years ago. The investments should improve on the operating infra structure, to include a specialised jetty and the installation of modern and more efficient machinery and equipment. Government's preference is for a strategic partner with extensive experience in operations and management.
- The Government is currently promoting Joint Venture partnership for redevelopment and operation of the Oil Refinery in Freetown. This process solicits investment proposals, and is expected to lead to the selection of a competent financial and technical partner for realizing the project.

## Marketing and Distribution

- The expansion in the production capacity of crude and refined oil creates even wider opportunities for marketing and distribution of the products both locally and international markets.



## NOTES



## NOTES



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