

## Ethiopia - Mining Sector and Business Prospects

### Introduction

Ethiopia, with a population of roughly 95 million, is the second most populous country in sub-Saharan Africa, and one of the fastest growing economies in the world. Ethiopia has registered impressive economic growth for several years, ranging between 8 percent and 12 percent. The World Bank and IMF forecast a growth of 8.1 percent in 2015/16 and an average of 7.5 percent over the next three years.

The Government of Ethiopia (GoE) follows a series of integrated five-year development plans, called Growth and Transformation Plans (GTP) to guide the state-led industrial development. GTP II, covering 2016–2020, sets the overall target to achieve an average growth of 11% in the next five years and lays the ground to attain lower-middle income status by 2025. To realize these goals, the GoE continues to invest heavily in large-scale social, infrastructural and energy projects.

Geological surveys proved that Ethiopia has abundant mineral resources of: i) metals and precious metals; ii) coal; and iii) industrial minerals. The mining sector remains one of the priority sectors in GTP II, with main strategic directions of attracting sizable foreign direct investment (FDI) for exploration and extraction of minerals, increase (tenfold) foreign exchange earnings of the sector and focus on production of mineral inputs for the manufacturing sector that promote import substitution. Mining operations within the country are expected to be an important economic catalyst for the Government's export-orientated development strategy. Recognizing the need to promote market-oriented modern mineral production, processing and marketing, the Ministry of Mines established Mineral Market and Value Chain Development Directorate in 2014 bestowed with diverse responsibilities. The goal is to bring the minerals sector to a level of larger than 10 percent GDP contribution within 10 years.

This brief paper is prepared to provide information on the current state of the Ethiopian Mining Sector and assess the investment and business potentials of sector. The writer used primary source- a discussion with Mr. Sisay Ayalew, Mineral Licensing and Administration, Ministry of Mines of Ethiopia and secondary sources. The paper is organized in three sections. The first section provides information on current state of Ethiopian mining sector. Second Section provides brief facts on some of the major

minerals under production and exploration in Ethiopia and finally, section three presents the foreseen potential in the sector.

### **I. Current State of Ethiopian Mining Sector**

Ethiopia's geological formation showed extensive mineral resources with wide-ranging potentials for continuing development. Minerals found in Ethiopia includes gold, platinum, niobium, tantalum, nickel, cooper, chrome, manganese, limestone, sandstone, gypsum, clay, lignite, opal, oil shale, laterite iron ore, bentonite, clay, perlite, diatomite, potash, halite, and oil & gas.

The mining and quarrying sector is highly underdeveloped and its contribution to the GDP is limited to 5.6 percent in 2014/15. Gold is the major exportable commodity, earning US\$300-500 million per year in foreign currency to the Ethiopian economy. As of January 2016 there were about 170 licensed companies engaged in exploration and development of gold where 51 percent of the licenses issued to foreign firms while 21 percent are joint ventures. Many foreign and some local companies have been granted reconnaissance, exploration and mining licenses for gold and base metals, cement and ceramic raw materials, potash, diatomite, other industrial and construction minerals. Generally, an exploration license is issued for ten years; initial three years followed by a yearly renewal for seven years.

The Ethiopian Geological Survey has completed extensive geological mapping coverage of the country, up to 80 percent, gravity survey 95 percent, hydro-geological mapping 62 percent, and engineering geology 21 percent coverage of the country's landscape.

In general, the government is working to improve policy, legal and regulatory frameworks of the sector, improving the working systems and expanding the geo-sciences mapping coverage of the country both in quality and accessibility.

The extractive industry forum, held in Addis Ababa in October 2014, confirmed improved investment climate and general legal framework in the past few years which encouraged investors. Ethiopia provides attractive incentives such as a low corporate tax, accelerated depreciation, loss carry forward, duty-free import of equipment and material. Comparing Ethiopia's fiscal incentives to investors in the mineral sector with that of other African Countries, Ethiopia is found to be favorable. Royalty rates in Ethiopia are similar to that of

African counterparts while corporate tax rates and equity participation are lower - even in some circumstances, significantly lower- than its comparators. For instance, required State ownership in Ethiopia is only 5% while Angola requires 10% ownership, Zambia increase interest from 20% to 35% Zimbabwe 51% ownership by indigenous Zimbabweans (not necessarily the state) Namibia plans for 100% of mining projects to be awarded to state owned companies going forward DRC Proposed revision of mining code to increase shareholding of the state in a mining company to 35% (from existing 5%). The Ethiopian Mining Proclamation states that All investments incurred in exploration and development are costs deductible. The government requests 5% free equity shares with every licensed mining company operating in the country, as well as 35% income tax and 8% royalties.

## **II. Brief Facts and Current State of Main Minerals in Ethiopia:**

### **1) Gold**

The country has extensive artisanal mining of placer gold from alluvial deposits for centuries while significant large scale mining is almost absent. Artisanal miners, which are estimated to be close to 1 million in number, produce and export up to 9 tons of gold per year.

Currently, there is only one large scale gold mining company, Midroc Legedembi Gold Mine (a subsidiary of Midroc Group), which is privatized from government ownership in 1997 operates an open pit mining in Ethiopia. Midroc Gold produces 3.5 -4 tons per annum and exported in Dore form. Midroc Gold is also licensed with two gold exploration projects located near the mine (Adola-Legadembi Exploration License - ALEL), and in another area some 600km northwest of the capital Addis Ababa (Metekel Exploration License - MEL). The company is to enter into extraction phase in Metekel in the near future.

New large-scale gold and silver mining and processing companies such as KEFI Minerals, have been granted licenses for exploration, development and production plant. KEFI acquired concession in the western region of Ethiopia in April 2015 and planned to install gold processing plant with a capacity of 1.5-1.7 million tons of gold ore and produce up to 115,000 ounces (3,565kg) of gold per year. Additional four companies have been engaged in primary gold exploration and at least two of them are expected to start production in

the coming 3-4 years. The Ethiopian government is also engage with more FDIs in gold exploration and extraction, such as mining giant Newmont Mining Corporation that have shown interest in gold exploration and extraction projects in the Tigray Regional State.

## **2) Tantalum**

The U.S. Geological Survey, in its January 2016 updated Minerals Yearbook, showed that Ethiopia's role in the world's production of tantalum has increased and the country's share of global tantalum production amounted to about 1% in 2013. In 2014/2015 small scale tantalum mining operation dominated and Ethiopia's export revenue from raw tantalite has been limited to US\$9.6 million only.

Significant deposit of tantalum and niobium is found in southern Ethiopia. Elenilto Minerals & Mining plc of the United Kingdom held concession of the Kenticha tantalum mine with resources of more than 17,000 metric tons of world class ore reserve. The Ethiopian Geological Survey investigation also showed that in addition to tantalite, the Kenticha deposit has niobium, lithium, beryllium bearing minerals in addition to high quality ceramic grade quartz-feldspar and other industrial minerals. Elenilto is planned to produce 600 metric tons per year of columbite-tantalite starting in the fourth quarter of 2015 and tantalum metal powder starting in 2017.

## **3) Gemstones**

Gemstones, including amethyst, aquamarine, emerald, garnet, opal, peridot, sapphire, and tourmaline occur in many parts of Ethiopia, mainly in Amhara and Oromia Regions. In 2013, gemstone exports were 25,078 kg and Opal accounted for 98% of gemstone exports by value. Almost all gemstone mines is dominated by artisanal, low-tech mining system. Miners collect and sell rough gem to local market. Currently, nearly all gemstones are exported as rough. The challenges are mainly lack of knowledge in sorting and grading, shortage of finance, absence of continuous supply of rough material as well as very few numbers of established lapidary shops.

## **4) Oil and Gas Exploration and Development Activities**

A number of international and few local companies are currently undertaking petroleum exploration in various parts of Ethiopia. Oil companies actively involved in the petroleum exploration and development undertakings are: Africa Oil Ethiopia B.V. (Subsidiary of Africa Oil Corp.), Calvalley Petroleum Inc., Epsilon Energy Ltd., Falcon Petroleum Ltd., Southwest Energy, Tullow Oil, Pexco Exploration (east Africa) N.V. and GPB Global Resource. Many of the companies have been engaged in acquiring geophysical data, including airborne gravity and magnetic, and some have done 2D seismic surveys covering large area, and have accomplished geological studies.

Calub and Hilala gas-condensate fields in the Ogaden Basin have an estimated reserve of 4.7 Trillion Cubic Feet. POLY-GCL a joint venture between state-owned China POLY Group Corporation and privately owned Hong Kong-based Golden Concord Group, is set up to develop oil and gas in the Ogaden Basin and POLY-GCL signed an agreement with the Ethiopia in late 2013. The project involves developing the fields and building a pipeline from landlocked Ethiopia to the coast of neighboring Djibouti, where it will build liquid natural gas plant and export terminal. It also has additional eight exploration blocks in the region.

Oil and gas exploration has been going on for the past many years and considerable number of companies have entered Ethiopia at different times and pulled out. Proven natural gas reserves in the Somali Regional State in Calub and Hilala localities identified. Several companies took over the concessions but abandoned the project because of various reasons including security and lack of required financing and technology

Recently, Chinese company GCL-Poly Petroleum Investments took over the gas fields in 2013. Currently, the GCL-Poly is drilling exploration and appraisal wells where the company acquired satisfactory result. In April 2016, the Government has announced that GCL-Poly will fund the pipeline that will transport the Ethiopia gas to Djibouti for a total cost of more than \$4 billion, of which \$3 billion will be invested in the Djibouti section. The project comprises placing a 700km pipeline from Ethiopia to Djibouti, a liquefaction plant and an export terminal in Djibouti.

## **5) Potash**

The potash reserve in the Danakil, Dallol Depression of the Afar region is believed to be significant. There are three companies working on potash exploration projects, these are Israel chemical Ltd. (took over from Allana –Canada), Yara International and CERCAM.

These companies have finalized exploration works and have undertaken feasibility studies. Currently, the companies are in negotiation with the Ministry of Mines and for development licenses and they are expected to enter full capacity production by 2019 and have an estimated combined production of 5.35 million ton within the life of extraction.

### **III. Prospects and Business Potentials**

Based on the Strategic Assessment of the Ethiopian Mining Sector of the Ministry of Mines and the World Bank of July, 2014, three scenarios have been developed to present the potentials:

Strong commitment of the government to enhance the enabling environment - accordingly, the government is providing the required assistance for companies engaged in mineral exploration and development projects. For instance, the government is to develop a 130 km electricity transmission line and build lowland roads to improve operationalization of the Dallol area potash project and bringing wider benefits to a remote part of Ethiopia.

The Ministry of Mines showed its commitment to increase the sector's contribution to Ethiopian economic growth and envisioned to generate close to US\$2.4 billion per year from export by the year 2027. Swedish Geological AB assessment confirmed that within the coming 15-20 years the Ethiopian mining sector can generate a critical mass, especially from gold, potash, tantalum and copper. In addition to gold, potash and tantalum, the government provides due attention to exploration and extraction of iron ore and coal as major priority minerals, which can contribute to the country's transformation to manufacturing dominated economy with significant import substitution objectives.

The government is working with traditional miners to boost their production capacity and assist them to access credit so as to acquire simple modern technologies that can be used in exploration, cutting, shaping and sorting/grading products. In addition, creating modern value - value addition, with improved quality and quantity and enhanced supply chains are the main priorities the Ethiopian government.

**The following are perceived to have good potentials for U.S. Business:**

- 1) Investment in mining requires significant capital; the discussion with Ministry of Mines shows good opportunities for American firms to create equity partnership so as to develop already identified projects. It is perceived that direct investment and/or joint ventures in the exploration and extraction of gold, potash, tantalum and copper are to have great potentials. The government has also revised its policy that allowed investors and companies to engage in placer (alluvial) gold production which was previously reserved only for artisanal miners. Placer gold production requires minimal capital and time required to develop.
  
- 2) Creating modern value - value addition, with improved quality and quantity and enhanced supply chain are the main priorities the Ethiopian government. There is found to be high business potential in value addition of gold, opal and other minerals extracted in Ethiopia. U.S. businesses can engage either by investing directly in value addition – establishment of plant that can refine and process minerals or through the supply of simple machineries for exploration, cutting, shaping and sorting/grading products.
  
- 3) In order to expand the quality and number of the geological mapping coverage of mineral resources in Ethiopia, the Ethiopian Geological Survey needs up to date its technology and tools which involve satellite imagery and photography. US businesses can engage in provision/supply of advanced tools together with all necessary supplies and trainings.

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