

MINERAL POTENTIAL OF THE STATE OF ERITREA

YEARLY BROCHURE
OF ERITREAN
MINERAL SECTOR

2008

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Tesfai Ghebreselassie
Minister of Energy and Mines

Dear investors

in abundance.

I have the great honour and pleasure to bring for your consideration the investment opportunities that my country Eritrea offers in the minerals sector.

Artisanal gold mining in Eritrea can be traced back to ancient times: even today it is commonly practiced in western Eritrea. Modern mining however only started during the Italian rule in the late twenties of the last century, when the Italian colonisers developed more than twenty small gold mines. The development of the mining industry was interrupted at an early stage, at the end of 1940's. Since then, the political and security conditions necessary for the development of the industry did not prevail in Eritrea, until the country's independence in 1991.

Until now, several exploration companies have been successfully operating in Eritrea. The recent announcements made by these companies have demonstrated the extraordinary potential that Eritrea holds for major mineral discoveries.

This brochure aims to acquaint you with the general geology, known types and areas of mineralisation, and the investment opportunities and environment of Eritrea. Brief mention is also made of the aggressive exploration activities of several foreign companies, and some of their exciting achievements. There are plenty of occurrences that suggest the potential for the discovery of economic deposits of precious and base metals. A variety of industrial minerals and good quality construction materials are also available

The Government of the State of Eritrea is aware of the crucial role the private sector can play in the discovery and development of mineral resources. The mining law and policies of Eritrea provide an attractive legal and economic environment for investors: by setting out a number of incentives, including low royalties of two to five percent (with the option for their reduction, suspension or waiver) and a nominal half percent duty on imported capital goods. The holder of a mineral license is guaranteed the right to dispose of minerals without export tax, and to the repatriation of after-tax profits without restriction. The law also permits financial losses to be charged against gross income and to be carried forward. In addition, the Eritrean mining law provides simple procedures for the submission and processing of license applications.

I take this opportunity to extend a personal invitation to all investors to share in the pleasure and privilege of developing a cordial business partnership with us in mineral prospecting and development. The participation of international private investment in the minerals sector is more than welcome. The prospective geology, attractive investment conditions, political stability and the friendly and industrious people of Eritrea combine to create a rare investment opportunity.

A handwritten signature in black ink, which appears to read 'Tesfai Ghebreselassie'.

Tesfai Ghebreselassie
Minister of Energy and Mines

A highly prospective country

Eritrea joined the world community of independent states in May 1993 following a thirty year war for liberation which ended in May 1991. A UN supervised referendum held in April 1993 enabled the Eritrean people to state unequivocally to the world their strong choice for freedom and independence.

Aware of the significant and vital role the private sector has to play in the achievement of national development objectives, the Government of Eritrea has been committed to create a conducive atmosphere for the active participation of local and foreign private investors. However, since May 1998 the development of this young state has been severely curtailed by the border dispute with neighbouring Ethiopia. Despite this, the Eritrean people and Government are as resolute as ever in their commitment and endeavours to work together to rebuild their country's economy, and to secure social and economic progress.

Location, climate, geography and infrastructure

This young state is located in the north-eastern part of Africa with the Red Sea on its east coast, Sudan to the west and north, and Ethiopia and Djibouti to the south. Eritrea, with a land surface area of about 125,000 square kilometres, including hundreds of coral islands in the Red Sea, has a population of about three and a half million people. The country is home to nine ethnic groups, all with a strong sense of Eritrean national unity. Tigrinya and Tigre are the most widely spoken indigenous languages. English is commonly used in the business community, while Arabic and Italian are also frequently encountered.

The topography of Eritrea is exceptionally varied, from the 1,200 kilometre long coastal plain only a few metres above sea level, through the central highlands ranging up to 2,500 metres above sea level, to the low lying western and south western areas of the country. Rugged mountain chains run from the central plateau to the extreme north of the country. The climate in these different terrains correspondingly varies from arid, to semi-arid, to temperate. The mean



annual rainfall in the coastal areas is less than 300 mm per year, whilst in the highlands and the western lowlands rainfall ranges between 500 and 1,000 mm.

Eritrea's infrastructure is centered on a well developed communications network linking the capital city Asmara to the regions of the country, including the two main sea ports of Massawa and Assab, and to the neighbouring countries. Asmara and Massawa have international airports, which also serve internal flights. Inevitably, the ravages of war have left their mark on the infrastructure, and the reconstruction of the prime facilities has been a high priority. Telecommunication facilities have also been renovated and developed, and mobile phones are now a common site in the major towns.

The Department of Mines

The Ministry of Energy and Mines is the authorised Licensing Agency and is responsible for the administration, regulation and coordination of all types of mining operations in Eritrea. The Department of Mines within the Ministry encompasses, amongst other functions, the Geological Survey and the Mines Administration Division, and is also itself actively engaged in exploration and mapping activities.

Even though there are several maps produced on different scales from various sources, there have been only two geological maps, at a scale of 1:250,000, compiled until recently, when the Eritrean Geological Survey prepared a 1:1,000,000 scale map.

The Eritrean mining sector has shown rapid development over the past few years since the Ministry of Energy and Mines started issuing licenses in 1997. Since then, several exploration companies have been involved in assessing and exploring the mineral potential of the country. In the successive years additional licenses have been issued on the first-come-first-served principle. The Department of Mines has also been developing a national minerals database.

The Ministry has a responsibility to provide preliminary information to exploration companies interested in conducting detailed investigations in Eritrea, and to make a contribution towards enriching the

geological database of the country. As part of its routine works, the Department of Mines through the Mines Administration Division issues licenses to artisanal miners, and controls and supervises exploration and mining activities so that they are in line with the directives of the Ministry and are environmentally compliant. In addition, the Department of Mines, through its research wing – the Geological Survey – has been working, together with various foreign governmental aid agencies and international organizations, to carry out geological mapping and mineral exploration.

Highlights of 2007-2008

The years 2007 and 2008 were high times in the mineral sector. In the past two years the major highlights were:

- In 2007 Eritrean National Mining Corporation (ENAMCO) was established. This corporation was established with a major objective of exercising the Government's free and purchased equity in mining. It is an independent body from the Ministry of Energy and Mines and its establishment enables the Ministry to concentrate on regulating activities.
- Establishment of Bisha Mining Share Company. This share company was formed in 2007 between Nevsun (60%) and ENAMCO owns 40% of the total share.
- The first Mining Agreement between the Government and Bisha Mining Sh. Co. was signed in 2007. This is the first of its type and involved many processes including negotiation. Following the signing, a mining permit was issued to the share company.
- Another important event in 2007 was the transfer of exploration license from Sub-Sahara Resources to Sunridge Gold Corp. In the last few years Sub-Sahara and Sunridgegold were working as joint partners in the Asmara property that include three license areas (Debarwa, Medrizien and Adi Nefas). Upon the agreement between the two companies the transfer of the exploration rights of the Asmara property from Sub-Sahara to Sunridge was approved by the Government of Eritrea at the end of 2007.

- Two new exploration licenses were also issued to two companies. Eritrea-China mining and Exploration company was granted a license in the south western part of Eritrea around Augaro. While another Chinese company, Beijing Donia was granted exploration license at the central part of Eritrea located north of Sunridgegold's Asmara property.

- At the beginning of 2008 a mining permit (license) was issued to Bisha Mining Share Company that allowed the company to develop the Bisha deposit.

- In the last two years different exploration companies from various countries showed interest on the mineral potential of Eritrea. Consequently there were a number of visits to different parts of the country by experts from different countries, including South Africa, India, Pakistan, Japan, Australia and UK. All of the visits were escorted and guided by the Department of Mines staff. Evaluation of the applications on different prospects is underway and licenses will be granted soon.

- A proposal is being made and approved for the continuation of the geothermal study in Alid. According to the approved proposal the Geological Survey of Iceland and the Eritrean Geological Survey will, in collaboration, conduct exploration works at Alid which will lead to the recommendation of drilling in the prospect.

- The first draft Regional Geological Map of Eritrea, on 1:1,000,000 scale is finalized and is on the process of distribution. In addition other geological maps on 1:250,000 scale were also produced on specific areas.

which were promulgated in March 1995.

Key Policy issues upon which the Mining Law is based include:

- All mineral resources in Eritrea are public property. The State has a duty to ensure the conservation and sustainable development of these resources for the benefit of the people;
- The intention is to create a favourable atmosphere for foreign investment in the mining sector. Due recognition is made of the significant role that foreign investment and skills can play in the development of this sector and the capital intensive, long term, and risky nature of mining investments;
- The necessity for formulating regulations which ensure protection of the natural environment, together with sustainable development of the country's mineral resources, in accordance with sound principles of resource management and land use;

The Eritrean Mining Law is up-to-date, attractive and competitive, as it provides considerable benefits and incentives to investors. For example, the law provides for:

- The right to exploit any commercial discoveries made pursuant to a valid exploration license;
- The right to sell locally or export, free of all duties and taxes and without being required to obtain any other authorisation or permission from any other Government agency, all minerals produced pursuant to a mining license;
- A simple and fair taxation system which recognises the risky nature of mining investments, and hence allows:

- * Accelerated depreciation (straight line method over 4 years) of all capital and preproduction costs;
- * Write-offs of exploration expenditure incurred anywhere in the country;
- * The carrying forward of losses;
- * A generous reinvestment deduction (5% of gross income);
- * No dividend tax
- * A nominal rate of import duty (0,5%) on all inputs necessary for mining operations;

Mining law

The legal framework governing the conduct of all mining and related operations within the territory of Eritrea is embodied in a Mining Law comprising: Minerals Proclamation No 68/1995, Mining Income Tax Proclamation No. 69/1995 and Regulations on Mining Operations Legal Notice No. 19/1995, all of

- * Normal royalty rates as well as an option for the reduction, suspension or waiver of the royalty in appropriate circumstances;
- Equitable foreign exchange regulations permit newable;
- Exploration License, valid for an initial period of three years, but which may be renewed twice for additional terms of one year each, with an option for further renewals in appropriate circumstances;



ting;

- * Free and unrestricted repatriation of earnings;
- * Retention of a portion of foreign currency earnings abroad in external accounts;
- * Maintenance of foreign currency accounts in banks in Eritrea.
- A simple “one-stop” licensing system enabling all the formalities for all types of licenses for mining operations to be completed by a single Government agency - the Department of Mines with the Ministry of Energy and Mines.
- Mining License, valid for a period of 20 years with optional 10-year renewals.

and

All of these licenses are exclusive and grant their holders an automatic right to obtain an Exploration License from within a Prospecting License and a Mining License from an Exploration License, subject to the fulfillment of the obligations under the preceding license. Although the maximum area that a single license can cover is fixed at 100km² for a Prospecting License, 50 km² for an Exploration License and 10km² for a Mining License, simultaneous possession of multiple contiguous licenses is permitted.

The mineral licensing system

The Mining Law permits the following types of licenses:

- Prospecting License, valid for one year and nonre-

Applications for any of these licenses may be made by individuals or legal entities of any nationality. All applications are to be made on specified forms that can be obtained from the Department of Mines of the Ministry of Energy and Mines and must be accompanied by a nonrefundable processing (reg-

istration) fee of US\$1 per page of each application and the supporting documentation presented. Successful applicants are also subject to a payment of license fees and the first year's rental upon the issue of a license. The rate of these fees is governed by Regulation and is at present as follows:

License	License Fee (per license) US\$(approx.)	Annual rentals (per km ²) US\$(approx.)
Prospecting	80	8
Exploration	240	32
Mining	960	96



The Geology of Eritrea

The geological set up of Eritrea is made up of Precambrian basement rocks that are overlain unconformably by predominantly Mesozoic sedimentary rocks and Tertiary to Quaternary volcanic and sedimentary rocks.

Precambrian Basement Rocks

Basement rocks in Eritrea cover more than 60% of the surface of the country. The basement rocks of Eritrea are part of the Arabian Nubian Shield (ANS) which are exposed in north east Africa (Egypt, Sudan, Eritrea, and Ethiopia) and in Saudi Arabia, northern and northwestern parts of Yemen and part of the western Middle East.

The shield is believed to represent a mega suture between East and West Gondwana. Archean and Paleoproterozoic continental crust rocks make the older components of the shield and occupy a very small part of the basement rocks and the major part of the shield consists of Neoproterozoic (c. 870-670 Ma) continental-marginal and juvenile intraoceanic magmatic-arc rocks.

In Eritrea, the basement rocks are not well studied despite their high mineral potential. There are only two geological maps (1:250,000) prepared in the last decade. That which covers the western part of the country (Geology of Gash River Area) and that which covers the southern part of the country (Geology of Mai Dima/Kohain Area). Compilation of geologic maps at 1:250,000 scale has recently been completed for four map sheets. Other study, based largely on satellite image interpretation aided by limited ground controls, suggest that the rocks can be subdivided into four tectonic blocks or segments, separated by tectonic boundaries. Three of these blocks, the western, central and eastern segments, underlie northern and central Eritrea, whilst the fourth, the Danakil segment, occurs in the south-eastern part of the country.

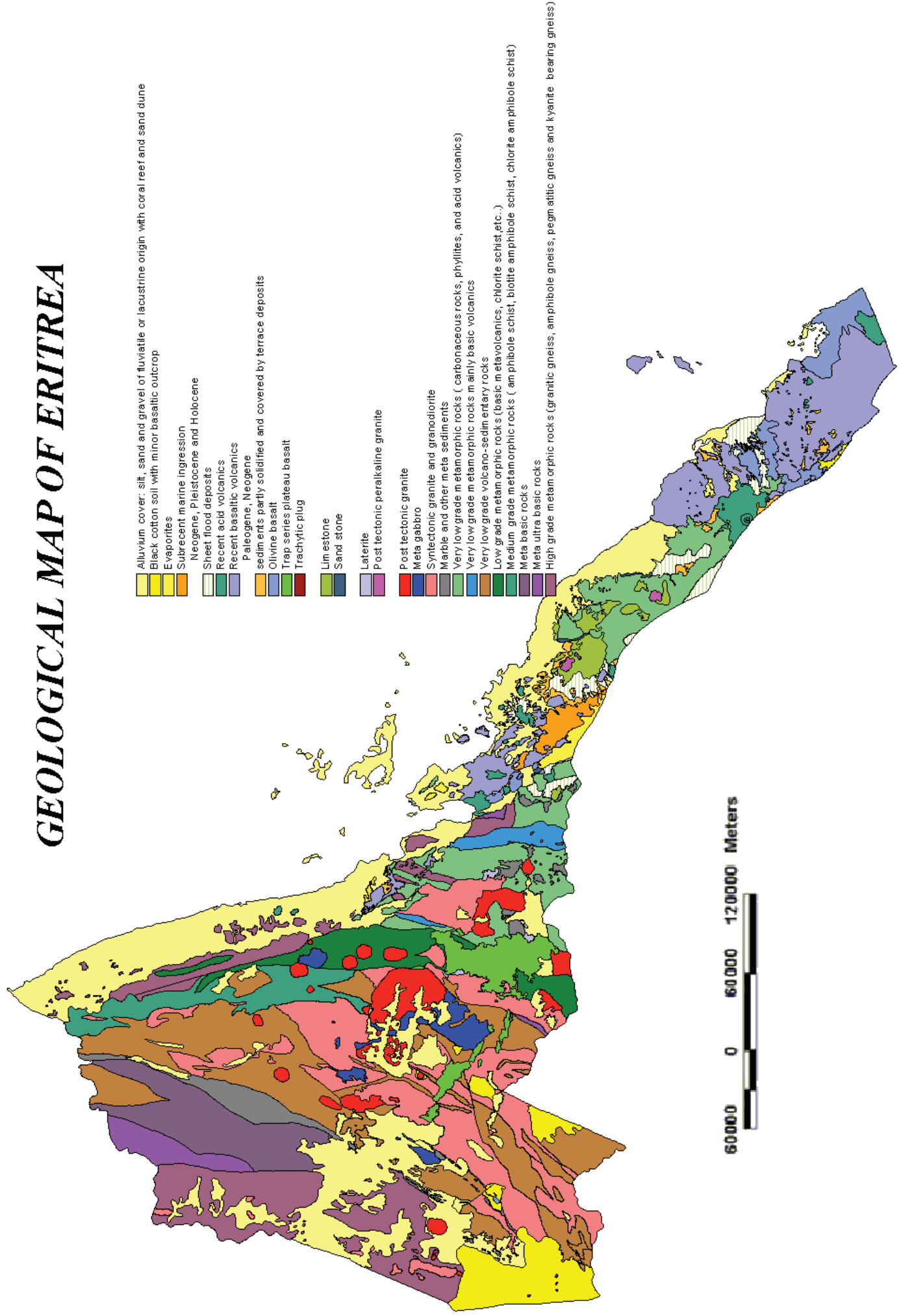
The western segment, the Barka Terrain - is exposed in the northwestern part of the country and underlies the Barka lowlands. It is made up of amphibolite, amphibolite-facies pelitic schists containing kyanite and staurolite, quartzites and marble.

The central segment, referred to as the Hagar Terrain, extends from the Barka River up to the Adobha Abi valley in the east, and comprises several large elliptical bodies of various tectonic units that are dominantly composed of oceanic and accretionary wedge materials. Occasionally, layered sequences of chloritic schists are seen, inter-layered with epidotic and chloritic metabasalts, occasional thin and discontinuous marbles, and manganese and ferruginous cherts. The Hagar Terrain displays an east verging thrust contact with the adjacent segment to the east. The Hagar Terrain is known to be prospective for chromite, platinum group elements, nickel, gold and copper mineralization.

The eastern segment- the Nakfa Terrain - is bounded by the Adobha Abi valley in the west and by the Red Sea escarpment to the east. It is made up of calc-alkaline volcanic and volcanoclastic rocks conformably overlain by a metasedimentary sequence of chlorite schists, grits and polymict conglomerates with occasional pelitic sericite schists and carbonates. The metavolcanic rocks are intruded by variably deformed plutonic to hypabyssal calc-alkaline bodies. The sequence is cut in places by post-kinematic granites and gabbros and is also transected by several narrow shear zones sub-parallel to the regional strike. The Nakfa Terrain is considered to represent a relict island arc assemblage. Several VMS (Volcanogenic Massive Sulphide) base metal occurrences and gold showings are associated with this tectonic unit.

The southern segment - The Danakil Terrain - is composed of metamorphic rocks which may be grouped into three formations:-
 (1) migmatitic hornblende biotite gneisses;
 (2) a phyllitic formation consisting of schists, conglomeratic phyllites, crystalline limestones, and graphitic schists; and
 (3) post-tectonic granitoids.

GEOLOGICAL MAP OF ERITREA



Recently compiled geologic map of the whole country at 1:1,000,000 scale has divided the Precambrian basement rocks into 7 domains, 5 groups and 3 formations. It is rather a more detailed presentation of the rocks units of the country.

Mesozoic Sediments

The lower Mesozoic sediments are represented by the Merbet (Adigrat) Sandstone which outcrops in the southern part of the country and in the Danakil area, and is commonly intercalated with siltstones and haematitic layers. It lies unconformably over thin layers of conglomeratic sandstones which, in places, appear to have the characteristics of a glacial deposit. Overlying the sandstone is the Jurassic Adailo (Antalo) Limestone. This unit is exposed over a large area in the Danakil and is made up of limestones that are compact, partly shelly, fossiliferous and layered. Alternations of quartzitic layers are present in the lower part, whilst towards the upper part the sequence becomes mainly gypsiferous to dolomitic. The Upper Sandstone forms pockets of sandstones that have been preserved from erosion. Commonly this sandstone is medium to coarse grained, light coloured, and dominantly quartzitic but partly conglomeratic.

Tertiary Volcanics and Sediments

The Tertiary volcanics can be divided into three units:

- (1) the plateau-forming Tertiary basalts that are predominantly olivine basalts with intercalations of intermediate lavas and tuffs;
- (2) the lower Afar stratified basalts composed of basaltic lava flows and tuffs that are usually found intercalated with sediments of the Danakil Formation; and
- (3) the Afar Basalts composed of recent lava flows and volcanic cones, with minor acid to intermediate volcanics, mainly trachytes, rhyolites and ignimbrites. The Tertiary basalts are currently actively exploited for aggregates.

The Tertiary Sediments

The Tertiary sediments lie along the Rift escarpment and in central Afar. Three sedimentary formations have been identified: the Danakil, Dogali and Desset Formations. The Danakil and Dogali Formations are of late Tertiary age and are composed mainly of limestones intercalated with conglomeratic sandstones and siltstones. They are overlain by calcareous sands with coral reefs, partly consisting of pebbles of volcanic origin, and gravels with sand, silt and clay horizons. The Desset Formation comprises sandstones, clays and fine beds of anhydrite and halite unconformably overlying the Dogali formation in the northern part of the coast, while the Red Series containing coarse clastic fresh water sediments occupies the southern part of the coast.

Quaternary Sediments

A thick evaporitic formation of bedded halite, gypsum, anhydrite, potassium and magnesium salts, with shell material fills the basin in the Danakil Depression. Deposits of sheetflood terraces, silt, sand and gravel are present in some locations occasionally covered by windblown sands. Basaltic flows and related spatter cones represent Quaternary volcanic activity in the Danakil region.

Mineral potential of Eritrea

Eritrea has a long mining history that stretches back to Biblical times. Gold production in Eritrea was recorded in the times of the Pharaohs of the Fourth Dynasty, and later gold mining during the Portuguese occupation in the seventeenth century is also well recorded. Further evidence of the work of ancient miners is found in several places in the country, indicating that mining operations were active in Eritrea long before colonial times.

Modern mining, however, began at the beginning of the 20th century following the Italian colonization of the country. Following the Second World War, mining and related operations continued through-

out the country, although intermittently. In the early seventies this resulted in the development of the short-lived modern mine at Debarwa, before the independence struggle forced its closure.

Recent re-evaluation of the available records on these early operations strongly indicates that these operations were generally unsystematic and poorly documented. The technology and exploration methods employed at the time, as well as the understanding of styles of mineralization have now been superseded. It can be expected that more up-to-date technology and exploration methods will lead to the identification of previously unsuspected styles of mineralization, and it is also possible that known deposits previously regarded as uneconomic may prove to be economically viable with today's technology.

Eritrea has now emerged as a demonstrated potential to host significant VMS deposits after the discovery of Bisha, Harena, and Hambok Massive sulphide deposits in the western lowlands and koken in the northwestern lowland. Zara shear-hosted gold and the recent findings in Harab Suit and Seroa prospects. Moreover, more findings such as the Embaderho deposit, in the VMS belt of Asmara/Debarwa area, which includes Debarwa, Adi Nefas and Ketina and many other small prospects has made the country to be known in such type of mineralization.

Presence of a great potential for shear hosted gold deposits is also demonstrated from the recent, shear hosted gold discovery in Zara. Here, an exploration work was conducted over a small area, situated along a major shear zone that runs across the country. Eritrea is not well explored although there are many prospective grounds waiting to be discovered.

It has a geological setting that is favourable for both precious metals and base metal mineralization, as well as for industrial minerals. The range of identified potential deposits covers gold and other precious metals, polymetallic and several base metals hosted in both massive sulphide types and quartz vein and quartz stockwork type of deposits. There is an indication of the occurrences Ni and chromite

showings associated to the ultrabasic rocks in the far north of the country. Occurrences of potash and sulphur evaporates in the Danakil depression, and a variety of construction materials, including marble, granite and others in several parts of the country is well known.

Gold

Recent exploration activities have shown that gold occurrences is very widespread in many part of the country and that the country has great potential in gold. In addition to the previously known areas of primary gold occurrence in the central highland (which includes the Hamasien gold field), those of Shillalo (in southwestern lowlands) area, and those of southern Eritrea, exploration activity in the last decade has shown the presence of economic gold deposits in the western lowlands and also in the northern part of the country. Among these are gold along with basemetals in Bisha, and gold showings in Haykota area, southeast of Tesseney areas and in northern Eritrea(Zara).

The average head grades in most of the historic vein gold mines that were active during the Italian colonial time up to the late 1950s, were reported to be as high as 25 - 45 g/t, with reasonably good recoveries.

Eritrea's gold mineralization is usually hosted in quartz veins and stockworks, and in particular in shear zones associated with felsic volcanic rocks, dioritic intrusions and in various schists that are frequently sub-parallel to the strike of the pronounced cleavage of the host rocks. Occurrences of gold within exhalative VMS deposits, and in the weathered and supergene zones overlying them, are becoming more evident with recent additional discoveries of gold in Debarwa and Adi Nefas (in the central highlands), and at Bisha and Harena (in the western lowlands).

Base Metal Deposits

NNW to NNE-trending belt of gossans, exhalative cherts and Altered felsic rocks that are indicators

of massive sulphide mineralization are recoded in many parts of Eritrea. The ores of these massive sulphide deposits are predominantly chalcocite, pyrite with minor amounts of sphalerite, chalcopyrite and bornite. A major belt of massive sulphide deposit with gold and base metal mineralization passes through Asmara and includes Debarwa, Adi Nefas, Embaderho and many other localities roughly within a 50 km wide belt over a strike length of 250 km, extending for more than 50 km north of Asmara and upto the Eritrean border to the south.

A belt that includes the Bisha VMS and Harena VMS in the Western Low lands has already shown the presence of world class deposit and is also under exploration for more deposits. There are belt of VMS indications farther north of Kerkebet, Hara-buit and possibly surrounding areas. There is a belt of copper mineralization in Raba-Semait area, sulphide-rich gossanous rock in Mt Tullului (Bedeho) in Sahel, northern Eritrea and in Mt Seccar and Sheib areas in the Easter Low Lands.

At Bisha, a world class deposit of precious and base metal VMS deposit has been found. Recent exploration work in Adi Nefas VMS shows 9.0 metres grading 11.91 g/t Au, 285 g/t Ag, 3.18% Cu and 11.05% Zn and in another test drill NG-043-D – 5.25 metres grading 10.81 g/t Au, 239.8 g/t Ag, 6.77 % Cu and 6.77% Zn has been obtained. Reserve estimation made recently has shown that minable zinc, copper and associated gold is present in Adi Nefas.

Embaderho is now emerging as a large 51 Mtone base metals, Cu-Zn deposit with some associated gold. Resource estimation is still going on, however at this stage it is confirmed that is big base metal deposit.

This all shows that the country is not well explored and that it has excellent potential for the discovery of major base metal deposits.

Industrial Minerals

Potash, sylvite and gypsum-bearing evaporates oc-

cur at Colluli, south of Bada. Substantial deposit of the latter are found at Desset area, north-west of Massawa. Large deposits of common salt also occur at several places along the Red Sea coast.

Considerable quantities of high quality silica are found at Merbet, which has been exploited for glass manufacture. In addition, deposits of silica sand with feldspar occur at various wadis of Eritrea. High purity feldspars occur in pegmatites at Lahazen, 35 kms south of Massawa. Sub economic deposits of mica, which was once exported by the Italians, are found south east of Lahazien. Large deposits of kaolin occur in the lateritic horizon in parts of Teraimni, at Adi Koteio close to Adi Kwala, Adi Keih, Zeghib, Adi Hawusha, Adi Ahderom and west and south-west areas of Himbirti.

Extensive deposits of the raw materials for cement manufacture are found at Adailo, close to Tio with all the constituents including limestone, marl, clay and gypsum occurring close together.

Barite occurrences have been identified around the Heneb, Meter and Gharsa wadis to the north west of Mersa Gulbub. Barite veins also occur associated with faults in the sediments of the Dogali and Desset Formations. Other barite deposits of economic significance, with reported grades of 95-97% are known to exist at Debarwa and Ketina. Gypsum deposits are also found in the Desset plains.

Construction Materials

Large deposits of marble occur as belts running north-northeast including in the Gogne area extending from Gogne to Goranda, and in the Adobha area. Other significant marble deposits occur at Afhimbol, Amberbeb, and Mt Kuruku (in the upper valley of Barka). The Kertse-Komte and Debri black and gray marble deposits occur south of Decamhare and have been exploited for a long time. Recrystallised limestone deposits with variegated colours occur at Dichinema area, in the southwest of Eritrea.

Granites of various colours and textures are exposed over large areas. Granites of dimension stone qualities, and which are currently being exploited, occur

at Geleb (pink granite), and in the Arato, Korbaria, and Tukul areas (grey granite). The Mai mine granite and Elabered granite are also suitable candidates for dimension stone.

A narrow outcrop of coral limestone extends along the coast from the headland of Ras Kassar to the coastline of Tio. Immense deposits of limestone occur in the Adailo-Atosh area south west of Tio. A narrow outcrop of coral limestone extends northwards parallel to the coast from Massawa up to the headland of Ras Kassar.

Geothermal activity, evidenced by fumaroles and hot springs with extensive alteration of the ground, are abundant in the Alid geothermal field. Studies carried out so far in this area indicate that the presence of a possible sub-surface high temperature reservoir. The geothermal manifestations at Nebro and Dubbi are also promising, but further study will be required to estimate the reservoir temperature.

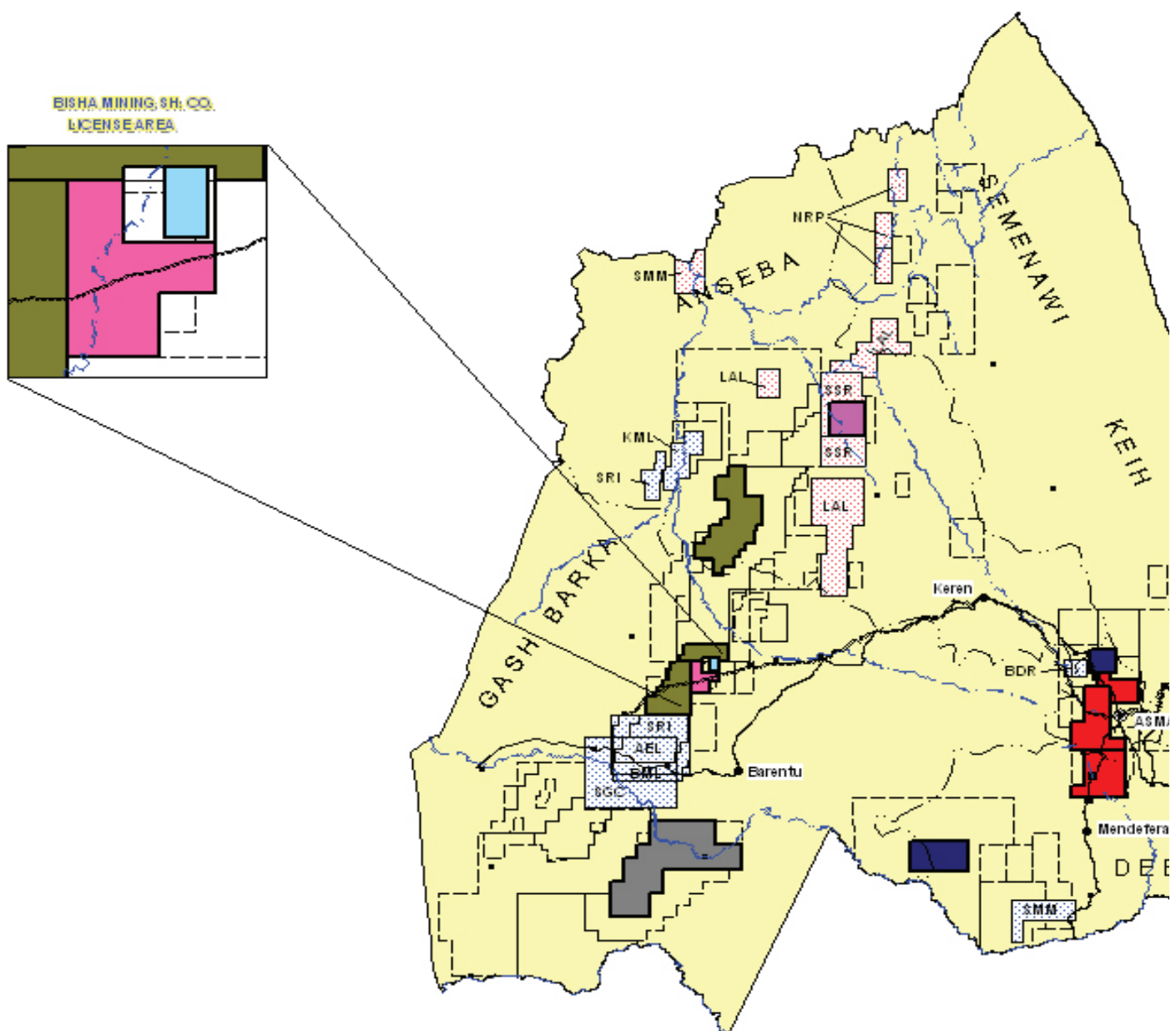
Geothermal Potential

The possibility of the economic exploitation of the geothermal potential for power generation occurs in the rift area, associated with volcanic activity.



Alid, Nebro, and Dubi are the main target locations where geothermal activity is known to be intensive. Lower temperature activity also occurs at Mai Wuui, 30 kms west of Massawa.

CONCESSION AND APPLICATION



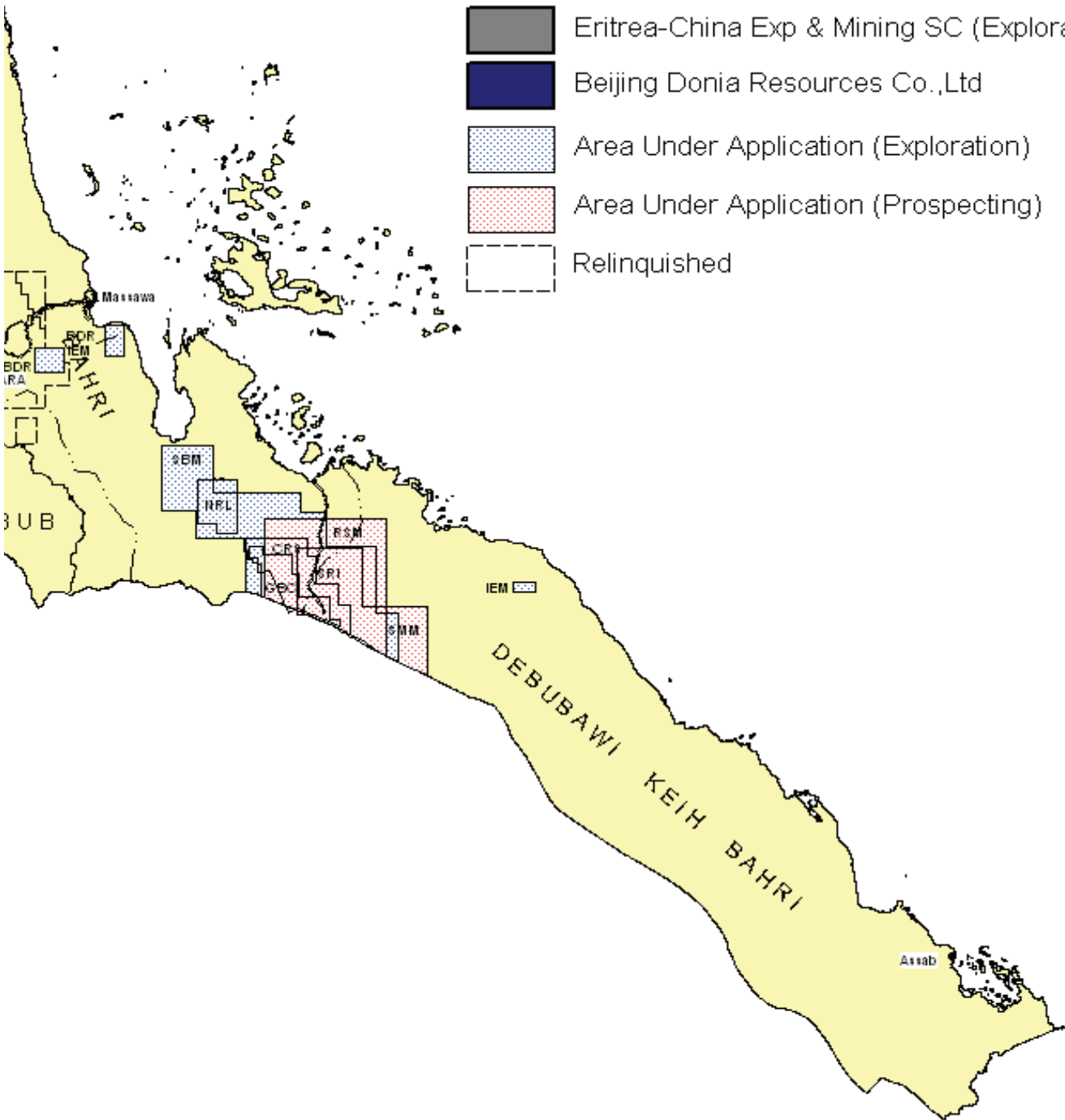
APPLICATION LEGEND

- NRL - Nevsun Resources Ltd. (Alid - Geothermal+Epithermal Au)
- RSM - Red Sea Minerals Limited (Danakil - Potash)
- CRS - Crescent Resources (Danakil - Potash)
- SBM - South Boulder Mines Ltd. (Danakil - Potash)
- GBC - G and B Central African Resources (Danakil - Potash)
- SMM - Spice Metals & Minerals LLC (Ketina - VMS+Au; Shamighe - Cr-Ni; Danakil - Potash)
- SRI - Sanu Resources Inc. (Haykota-Gogne, Kamti - VMS; Danakil - Potash)
- BDR - Beijing Donia Resources Co.,Ltd (Agameta, Ghedem, Teareshi - Iron)
- NRP - Nubian Resource PLC/ Gippsland Ltd. (Adobha - VMS)
- LAL - London Africa Ltd.(Tebabh, Baat, Mt Adeleriai - VMS)
- KML - Keren Mining Ltd. (Harab Suit - VMS+Gold)
- BML - Barentu Minerals Ltd. (Haykota-Gogne - VMS)
- SGC - Sunridge Gold Corp. (Haykota-Gogne - VMS)
- AEL - Andiamo Exploration Ltd. (Haykota-Gogne - VMS)
- SSR - Sub Sahara Resources (Zara - Gold)
- IEM - India Icicle Exp & Mining Ltd (Ghedem - Iron<mining?>; Adaylo - Limestone<cement>)

MAP OF ERITREA

POLYGON LEGEND

- Bisha Mining SC (Mining)
- Bisha Mining SC (Exploration)
- Sunridge Gold Corporation (Exploration)
- Sanu Resources (Exploration)
- Dragon Mining NL /Sub-Sahara (Exploration)
- Eritrea-China Exp & Mining SC (Exploration)
- Beijing Donia Resources Co.,Ltd
- Area Under Application (Exploration)
- Area Under Application (Prospecting)
- Relinquished

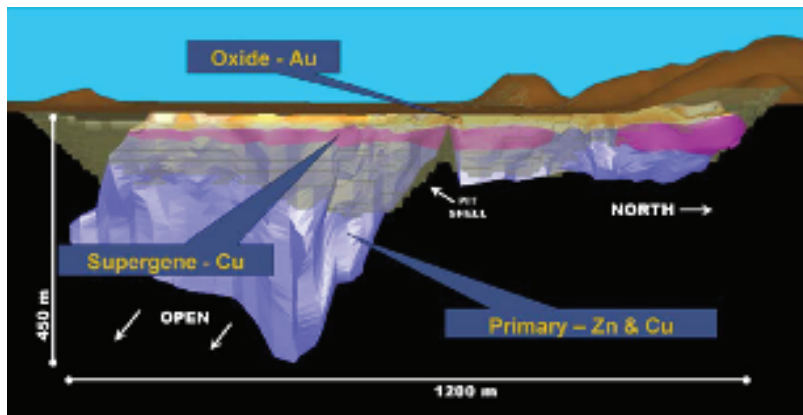


CURRENT LICENSES STATUS

Currently there are six companies who are active in Eritrea. These companies are Bisha Mining Sh. Co., Sub-Sahara Resources (Eritrea), SunridgeGold (Eritrea), Sanu Resources, Eritrea-China Sh. Co. and Beijing Donia. The spatial distribution of their properties include Central, Western, South western and Northern Eritrea.

Bisha Mining Share Company

Following the issue of Mining agreement, Bisha Mining Share Company has started civil works construction in Bisha. With all permitting requirements long in place and much of the detailed design work completed the project is well advanced. Construction of housing and infrastructure for around 450 people has already started. Heavy earthmoving for the main process plant will begin shortly. Much of the machinery and equipment for the Project has already been procured, including the main grinding mills. Mining will commence mid-2009 and the Process plant will be delivering gold in the first quarter



Bisha VMS Cross Section

of 2010 after a capital expenditure of around US\$ 250 million.

Production will be:

- | | |
|--------------------------|-------------------------------|
| • Gold (Years 1&2) | 400+ thousand ounces per year |
| • Copper (Years 3 to 5) | 78,000 tonnes |
| • Copper (Years 6 to 11) | 120,000 tonnes |

- Copper (Years 6 to 11) 20,000 tonnes

Sunridgegold Corp (Eritrea)

Sunridgegold Corp (Eritrea) is currently working on its Asmara properties that consists of three licenses that surround the capital city of Asmara namely Debarwa, Adi Nefas and Medrizien. Extensive exploration program including ground geophysics, geological mapping, geochemical surveys and drilling are underway on all the properties.

Environmental baseline studies have already been started a Scoping study on the large newly discovered copper-zinc-gold Emba Derho VMS deposit in underway which is expected to be completed in October 2008. As part of this study in July 2008 a scoping study workshop was given to government officials and experts from different ministries. Prior to this, public consultations were conducted to various villages and this is still ongoing.

Sub-Sahara Resources (Eritrea)

Sub-Sahara has been actively exploring in Eritrea for the past eight years. The initial properties that Sub Sahara secured contained the volcanogenic massive sulphide (VMS) prospects surrounding the capital city of Asmara. The Debarwa Cu/Zn/Au/Ag deposit was successfully advanced to a 'Scoping Study' for mining before the entire land package was sold to joint venture partner Sunridge Gold Corp in 2007. During 2007, Sub Sahara accelerated exploration activities on its Zara Gold Project (in the north-west of the country) and was rewarded with definition of a +1moz gold

deposit (Koka) grading 6.31g/t, in early 2008. The Koka Gold Deposit is now in development for mining through a Pre-Feasibility Study.

Work to date at the Zara Project includes over 17,000m of diamond drilling, independent resource estimates by Coffey consultation firm, metallurgical drilling and test-work, structural studies with fol-

low-up drilling, petrographic studies, aquifer development, an environmental baseline study, ground based chargeability and resistivity geophysical surveys, regional geochemical sampling programmes and high resolution digital terrain modelling.

Sanu Resources

Sanu conducted 518 m diamond drilling and geophysical survey on its newly discovered massive sulfide gossan trend in the Koken area of its Kerkebet River exploration license. This area is 85km north Sanu's Hambok discovery and appears to be an entirely new district. The multiple gossan occurrences crop out over a strike length of 4.5km with the individual gossan zones up to 11m wide in outcrop and up to 400m long. Zones of massive barite mineralization up to 5m wide as well as disseminated barite in gossan occur toward the northern end of the trend. Preliminary rock chip analyses of more than 80 gossan outcrop samples from the trend returned very strongly anomalous values in the majority of samples in gold, copper, zinc, lead and barium with peak assay values of 20.1, 8.9, 4.7 g/t for gold, copper 0.36%, zinc 0.3% and lead 0.47%. It has drilled 9 holes and the results are pending.

On its Mogoraib exploration license Sanu has intersected massive sulfide style mineralization on its Aderat prospect 5km north of its Hambok deposit. The 1070m of diamond core drilled at Aderat to date are part of a larger drill program to test the "Hambok trend", a significant geophysical feature defined by anomalous gravity and EM, and geology.

Eritrea-China Sh. Co.

This company is one of the two companies recently granted exploration license. It has started its exploration works at Augaro.

Beijing Donia

Beijing Donia Co. has also started exploration works at Defere, located north of Asmara.

Future investment opportunities

The future of Eritrea's mining industry appears bright. The prospective geology of the area together with an attractive and competitive investment regime makes Eritrea one of the most attractive and rewarding mining investment opportunities.

Results of the exploration activities conducted in the last ten years have proved the high mineral potential of the country, and that investing in Eritrea is rewarding. Although all areas of exploration are prospective, the following are believed to be more prospective for investment.

Gold Prospects in South-Western and Western Eritrea

The south-western part of Eritrea is one of the most prospective gold regions in the country. It contains hundreds of small historic mines and operations that were active during the Italian occupation including the Augaro mines which was reportedly the most productive mine in Eritrea. There are also areas where artisanal gold mining is currently being undertaken by the local people. Most of these mineral showings and historical mines and old workings are associated with rocks of: the Augaro-Antore belt and Bisha VMS and Hykota-Fanco belts.

Deposits in the Augaro-Antore Belt

The Augaro-Antore belt is situated in the southeastern part of Western Lowlands of Eritrea. It stretches from the border in the south to the Barka River to the north where its extension is masked by intrusions. Localities known for gold in the lower Augaro-Antore belt include Augaro, Damishoba, Dase, Tokombia, Ranyo and Doboro. The Augaro mine appears to have been developed on a series of quartz veins and stringers, some showing sulphide mineralisation and formed in a low-pressure region associated with a regional shear zone. The mineralised system is known to extend for a distance of 2,900 metres, of which only about 350

metres was mined. The main quartz vein, about 240 metres long, and having an average width of 10 metres, ends in a stockwork of stringers. The main en-echelon system extends over a strike length of 300 metres with widths of 20 – 30 metres. The recovered gold grade is reported to have been 30 – 40 grams per tonne and production during the periods 1933 – 1941 and 1955 – 1956 is recorded at 874 kg, although it is widely believed that the actual production was greatly in excess of this estimate. The mine was closed in 1941 due to war and all its mining equipment was removed. It was re-opened briefly in 1955 to re-treat the tailings. Other interesting localities in this belt that reached production include Damishoba, Dase, and Ranyo. Doboro, Tokombia and others were still at the development stage, involving pitting and underground exploration, when the Italian occupation ended in 1941. In the southern part of the belt operations at Antore and Damanoshila, and in the eastern zone of the Berbere River, all were at various stages of development before the Second World War. In the northern part of the belt, at Suzena, prospecting started in 1932, and mining was carried out from 1937 – 40. Drift on three levels were developed, but work was abandoned on the fourth level due to water problems.

Gold has also been discovered by the local artisanal miners at a number of places in recent times. These are indications of the high gold potential of the area.

Deposits in the Bisha VMS Belt

Based on regional works and satellite image interpretation, the Bisha VMS and associated volcanosedimentary belt is estimated to have a maximum width of about 30 kms and extends for more than 100 kms to the south, while its northern extension is not clear. This belt is believed to be highly prospective and may continue for a substantial distance to the north as well as to the south. In addition, records of past exploration in this area indicate that quartz veins with varying gold contents have been reported from some locations including Okere (Okreb). Some of these were prospected and exploited before mining stopped due to WWII.

Gold & Base Metal Prospects in Southern Eritrea

There are indications of the continuity of the Asmara/Debarwa VMS belt for long distance to the south. Outcrops are known of gossanous rocks, exhalatives and rock assemblages (felsic and mafic) such as those of the Debarwa area, in the Ketina area. There are also many places where local people are conducting artisanal mining. The area west of Ketina could represent another belt of mineralization, as there are areas of recently discovered artisanal workings south of Monsura area, that are its northern extension.

Gold & Base Metal mineralisation in Northern Eritrea.

There are indications of gold and basemetal mineralization in several parts of northern Eritrea. Old workings and prospects, of Italina time are found in Seroa and Arruba in Harab Suit. There is a Cu-mineralization along a belt that passes through Raba and Semait areas where old workings are found. Gossanous rocks running for hundreds of metres occur in Halibet area in farther north.

Recent exploration activities and the work of artisanal miners in Zara and other areas to the north is indicating the presence of auriferous quartz veins and stock works in many areas in this part of the country.

In conclusion, it can be said that mineralization in most part of the country is not well studied. It may be far more complex and extensive than is apparent. The level of technology and understanding of mineralization styles that prevailed during the Italian occupation was low, and most of the historic mines and old mining operations in Eritrea were interrupted because of the Second World War. The investment climate that existed at the time of the struggle for independence that followed was also not conducive to the development of these operations. It is therefore, no doubt that this part of the region deserves comprehensive exploration.

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