NI 43-101 Technical Report,

A Geological Evaluation

of the Meli Property,

Tigray National Regional State,

Northern Ethiopia

Prepared for

Sun Peak Metals Corp.

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1.0 SUMMARY

The authors were commissioned by Sun Peak Metals Corp. to prepare this independent technical review of the geological data from the Meli property and to provide evaluations and recommendations in the context of NI43-101 guidelines.

Axum Metals Share Company (Axum) was formed as a jointly owned company, held by Sun Peak Metals Corp. and Ezana Mining Development PLC, to hold and explore the 100 square kilometer Meli property. Axum has undertaken two years of preliminary work in preparation for drill testing in 2020 on its Meli property, located approximately 570 km north of Ethiopia's capital city of Addis Ababa. Axum's recent work, plus a compilation of the results of historic exploration work by previous companies has indicated that significant VMS mineral occurrences are present and that there is very good potential to discover economic mineralization on the Property.

The Meli property is underlain by east to northeast trending belts of weakly metamorphosed Neoproterozoic rocks comprised mainly of mafic to felsic flows and pyroclastic rocks, as well as volcaniclastic and sedimentary rocks. This same belt of rocks hosts significant VMS mineral deposits in the Asmara area of Eritrea, 170 km north-northeast of the Property.

Gossanous oxidized sulphide zones up to 80 m or more in width and 600 m in length have been discovered within a 3.5 km-long area within metavolcanic rocks that trend easterly across the south-central part of the Property. Sulphidic zones commonly occur within intermediate-to-basic volcanic and volcaniclastic rocks at, or near, interfaces with felsic volcanic and volcaniclastic rocks. VMS-style polymetallic sulphide mineralization has been discovered by drilling beneath one of these gossanous oxide zones, with intercepts of over 17 meters in thickness.

Geochemical exploration work conducted in the area beginning in 2006 had indicated the presence of gold, silver, copper and zinc anomalies along linear belts of favourable volcanic host rocks that extend for up to 10 km in length. Prospecting and follow-up of stream sediment geochemical anomalies in 2006 located gold-enriched gossan zones in the south-central part of the Property that have been named the Eastern, Central and Western zones, which are dispersed over a length of about 3.5 km.

The most extensive mineralized gossan is the Eastern zone which consists of a lens of gold-bearing goethite-limonite material within strongly chlorite-sericite altered rocks. Percussion and diamond drilling of more than 95 holes from 2008 to 2012 focussed on defining a gold-rich zone within the oxide cap that extends to depths of 25 to 30 m. Surface channel samples and drill chip sample analyses (16 holes) from the Eastern Gossan zone were used by Ezana in 2009 to make a preliminary, non-compliant estimate, indicating that the mineralized oxide cap may contain about 4 tons (3600 kg) of gold with an average grade of 4.0 g/t Au using a 0.3 g/t Au cut-off (Ezana private company report).

Only a few of the holes in the Eastern Gossan were drilled to depths greater than approximately 50 meters. Where drilled deeper, the holes indicate that the sulphide zone dips about 55° to the south, continues at least 100 m down dip, and intersects VMS-style massive sulphide mineralization that contains gold and base metal mineralization. A number returned very significant intercepts, including 4.2% Cu, 0.7% Zn, 1.5 g/t Au, 37.1 g/t Ag over 17.4 m (hole RH-DH-01, 28.65-46.05 m) and 2.4% Cu, 1.0% Zn, 2.6 g/t Au, 37.8 g/t Ag over 15.1 m (hole RH-DH-49, 65.0-80.1 m). The sulphide zone in these two holes shows consistent strong copper mineralization with associated zinc mineralization, and zinc values appear to increase in grade downhole (0.2 to 2.3% Zn). Lead values coincide with zinc, but for the most part they are of lower tenor, returning less than 0.3% Pb. This zone is open to expansion at depth and along strike.

Geophysical surveys conducted across the Eastern Meli gossan zone in 2007 indicated that chargeability and density decreased to the west, but also showed that the same geophysical parameters increased or maintained their strength to the east, where they remain open. The geophysical response also suggests the presence of a possible sub-parallel zone approximately 250 m south.

In 2013 Ezana applied for, and was granted, a mining license by the Ethiopian Ministry of Mines. Ezana undertook mine planning and feasibility studies and followed-up in 2016 with construction of a small carbon-in-pulp extraction plant adjacent to the Eastern Meli gossan zone. Open cut extraction of the gossan cap commenced in 2017 and the mill has operated intermittently since that time. There are no public records of gold production from the Meli gossan zone; although a news article published on Jan 2, 2018 indicated that the plant was processing up to 3,000 grams of gold per day, with capacity of up to 4,500 grams per day (800 tonnes/day).

Ezana retains small mining and exploration license areas over the three Meli gossan zones, with the right to mine the oxide cap material and recover the gold content. The rights to the underlying sulphide mineralization are held by Axum, as are the mineral rights for the remainder of the Property. Axum plans up to 4000 m of drilling to test the sulphide zone beneath the Eastern Meli gossan in 2020.

In 2018 and 2019, Axum compiled & re-interpreted maps and data from historic work at Meli, and also conducted several geological field visits to evaluate the targets derived from the re-interpretations.

In 2018, Axum also conducted Aster satellite image analysis. That work highlighted areas of strong sericitic alteration which may be associated with mineralized areas. Some of these areas also coincided with sites of anomalous stream sediment geochemistry, and consequently these areas represent excellent exploration targets.

In February of 2018, a detailed ground gravity survey was conducted over the 3.5 km long gossanous trend at Meli. The strongest gravity anomaly lies over the Central gossan zone, but it also extends to the NNW for approximately 700 meters. Four holes have been drilled previously on the southeast margin of the gravity high, but the majority of the gravity anomaly remains to be drill tested. Another gravity high is located to the south of the Eastern Meli gossan zone. It is of moderate intensity and is interpreted to represent the thickest part of the southerly-dipping sulphide body that appears to be continuous with the surface gossan exposure. The projection of the anomaly puts it at about 175 m down dip, which is below the depth of previous drill intersections. A priority of the Company's 2020 plans is to drill test this down-dip potential.

In 2019 Sun Peak undertook a heliborne VTEM survey encompassing the entire Property area. In that survey, a strong conductor was identified that coincides with the eastern end of the Eastern gossan zone. It is also interpreted to reflect the presence of the massive sulphide mineralization that is known to at least locally underlie the gossan. In contrast, a strongly conductive belt in the southern and western parts of the Property is interpreted to reflect the presence of a graphitic phyllite unit. The orientation of this conductive belt appears to outline a large-scale fold with a hinge that lies northwest of the Western Meli zone.

Moderately to strongly conductive areas fall within the extensive geochemical trends in the northern and southern parts of the Property. These should be correlated with areas of anomalous stream sediment samples and followed up on the ground with geological reconnaissance and rock and soil sampling.

The airborne magnetic survey indicated target areas that display variable magnetic susceptibility, with highs that may be reflecting the content of magnetic minerals in the rock versus magnetic lows that could indicate host rock alteration that often results in destruction of magnetic minerals. The Eastern and Western gossan zones exhibit relatively low magnetic susceptibility, possibly due to larger, stronger alteration zones in these areas, whereas the Central zone is moderately to strongly magnetic, suggesting that it may be a separate mineralized horizon from that of the Eastern zone, containing more magnetic minerals such as banded iron formation (BIF).

To the north of the Meli gossans an east-west trending magnetic high lies within the middle of an anomalous geochemical trend. The strongest Au, Ag, Zn and Cu values are from the west end of the trend where magnetic susceptibility is highest, as well as being an area of high conductivity. This presents a very good exploration target.

Extensive bands of linear high and low magnetic susceptibility were indicated in the northern and southern parts of the Property that coincide with stream sediment geochemical anomalies. The geophysical data should be combined with Aster imagery targets and anomalous stream sediment sites to determine selected areas with mineral potential to be followed up by further ground-based exploration.

Axum has proposed a work program for 2020 for the Meli project totalling more than US$1.1 million. This includes 4,000 meters of diamond drilling to test the Eastern Meli massive sulfide zone and the western extensions, as well as gravity surveys, regional and close-spaced soil sampling grids, stream sediment sampling, prospecting and geological mapping. The authors are in agreement with the proposed exploration work and agree that the budgeted amounts of expenditures are warranted.

Considering the widespread occurrence of stream sediment geochemical anomalies with associated geophysical targets and a known VMS sulphide zone with gold-rich gossan outcrops, it can be concluded that the Meli project area is highly prospective for gold-rich copper-zinc massive sulphide mineralization.

2.0 INTRODUCTION AND TERMS OF REFERENCE

Sun Peak Metals Corp. (‘Sun Peak’ or ‘SPMC’ or the ‘Company’) through its agreement with Ezana Mining Development PLC (Ezana) has formed the jointly-owned Axum Metals Share Company (Axum) which holds the Meli Exploration License, and other concessions. Sun Peak can earn up to 70% shareholding of Axum. The Meli property (the ‘Property’) is the site of a gold-silver-copper-zinc exploration project which lies within a prolific mineral trend that spans northern Ethiopia and southern Eritrea. The geology and mineral occurrences on the Meli property have affinities to volcanogenic massive sulphide (VMS) mineralization occurring at the advanced Asmara deposits, located approximately 200 km to the northeast. At the request of Sun Peak Metals Corp., Charles J. Greig, P. Geo. and Jeffrey D. Rowe, P. Geo. carried out an independent review of the Property, located in the Tigray National Regional State of northern Ethiopia. One of the authors (Greig) conducted a property examination, and both reviewed available exploration results and prepared this independent technical report. This Report is written in accordance with the formatting requirements of National Instrument 43-101 and Form 43-101F1 (Standards of Disclosure for Mineral Properties) and is a comprehensive review of the exploration activities on the Property, with recommendations for future work.

2.1 Site Visit

The authors are qualified persons (“QP”) by virtue of experience, education and professional standing and QP certificates are provided at the end of this report. The authors are independent of Sun Peak, as defined by National Instrument 43-101 (“NI 43-101”).

One of the authors (Greig) visited the Meli property from March 9 to 19, 2018, conducting geological traverses and visiting various showings in the Meli gossan zones. The authors reviewed all aspects of the historical exploration work with Sun Peak personnel including results from exploration work, trench sampling, drill core, local lithological and structural features, sampling and shipping procedures, geophysical surveying method and results, and available project documentation. The Property is considered an advanced-stage exploration project due to the geological, geochemical and geophysical exploration work completed and the 7,414 m of percussion and diamond drilling. Results and photographs from the site visit are provided in this report.

Since the time of the author's (Greig) visit to the Property in 2018 the Company has undertaken airborne geophysical work. The authors have had access to all of the information from this work, which has been included in this report and, as well, the authors have offered interpretations for some of the results in Section 9.1 of this report. The authors are of the opinion that there has been no substantive change in the geological understanding of the type of mineral targets on the Property or the potential for mineral discovery on the Property since the time of Greig's inspection.

The purpose of this report is to provide a geological evaluation of the historic exploration data, to review the exploration work undertaken by the Company and to provide recommendations for further work, if justified.

2.2 Sources of Information

This report refers to past works undertaken by other qualified geologists and professional field personnel. Other non-project specific reports by qualified personnel have been referenced whenever possible. The information, conclusions, opinions and recommendations in this report are based upon:

- assumptions, conditions and qualifications as set forth in this report;
- data, reports and other information provided by Sun Peak and other third party sources;
- published reports from operating mines and advanced projects in the area, plus other published government reports and scientific papers.

While preparing this report, the authors reviewed all of the readily available exploration and technical reports pertaining to this property. This exploration information is generally of good quality, and there is no reason to believe that any of the information that has been used is inaccurate or misleading.

Information concerning the option of mineral tenures comprising the Property was provided by Sun Peak and has not been independently verified by the authors. A detailed list of references and sources of information is provided in Section 27 (References) of this report.

2.3 Abbreviations and Units of Measure

Metric units are used throughout in this report and currencies are in Canadian Dollars (C$) unless otherwise stated. Market gold or silver metal prices are reported in US$ per troy ounce. The calendar used in Ethiopian is similar to the Coptic calendar; however, the dates used in this report are based on the Gregorian calendar, which is more universally adopted. A list of abbreviations that may be used in this report is provided in Table 2-1 below.

Table 2-1 List of Abbreviations

Abbreviation	Description	Abbreviation	Description
AAS	Atomic Absorption Spectroscopy	m2	Square meter
Ag	Silver	Ma	Million years ago
asl	Above sea level	MoMP	Ministry of Mines and Petroleum
As	Arsenic	mm	Millimetre
Au	Gold	M oz	Million troy ounces
Az	Azimuth	M T	Million tonnes
Birr	Ethiopian currency	m.y.	Million years
b.y.	Billion years	N (Y)	Northing
C$ or $	Canadian dollar	oz/t or opt	Ounces per short ton
cm	Centimetre	oz	Troy ounce (31.1035 grams)
Cu	Copper	Pb	Lead
°C	Degree Celsius	ppb	Parts per billion
DDH	Diamond drill hole	ppm	Parts per million
E (X)	Easting	py	Pyrite
G	Billion	QA	Quality assurance
g	Gram	QC	Quality control
g/t, gpt	Grams per tonne	qz	Quartz
GPS	Global Positioning System	RC	Reverse-circulation (drill hole)
ha	Hectare	Sedar	System for Electronic Document Analysis and Retrieval
ICP	Inductively Coupled Plasma	SG	Specific gravity
JV	Joint venture	t or ton	Short ton (2000 pounds)
k	Thousand	T or tonne	Metric tonne (1000 kg)
kg	Kilogram	US$ or USD	United States dollar
km	Kilometer	VMS	Volcanogenic massive sulphide
km^2	Square kilometer	Zn	Zinc
M	Million	%	Percent
m	Meter		

The coordinate system used on most maps included in this report is Universal Transverse Mercator (“UTM”) WGS 84 datum in zone 37N. Some reports have used the Adindan datum, zone 37N, which is noted if applicable.

3.0 RELIANCE ON OTHER EXPERTS

The authors have relied on the opinion of Sun Peak’s legal counsel in regards to legal validity of the option agreement that grants Sun Peak a percentage ownership of the mineral titles that comprise the Shire property. Sun Peak retained Mehrteab Leul & Associates (MLA) in Addis Ababa, Ethiopia to provide a title opinion in respect of the Shire Property. MLA prepared a title opinion titled ‘Legal Opinion’ December 21, 2019 that outlines the nature and extend of Sun Peak’s interest in the Shire property. The Authors relied on the title opinion for Section 4 – Property Location and Description of this report.

The title opinion applies to Sections 4.2 and 4.3 and the summary of this report.

4.0 PROPERTY LOCATION AND DESCRIPTION

4.1 Property Location

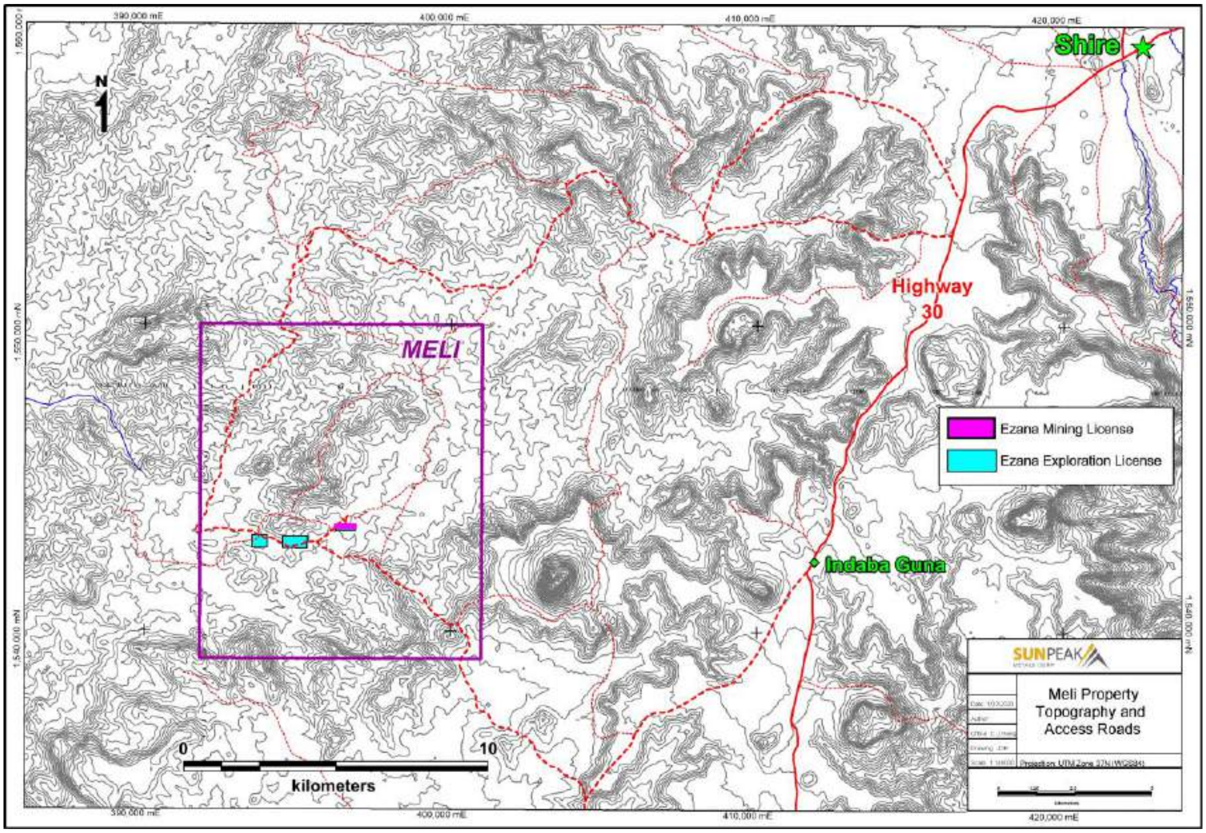
The Meli Project is located in the northwestern part of Tigray National Regional State in northern Ethiopia approximately 570 km (1,100 km ground distance) north of the capital city of Addis Ababa (estimated population 7,823,000 in 2019), and 24 km south-west from the town of Shire. Figures 4-1 and 4-2 show the location of the property. The Meli Project concessions are located within the Asgede-Tsimbila Woreda, centered approximately at latitude 13.9700° N and longitude 38.0408° E, or in the local UTM datum WGS84, zone 37N coordinates of 396,400 E, 1,544,620 N. Some of the larger communities within, or near the license area include Meli, Idaga Hibret and Indaba Guna. As well, several small villages are located within the concession.

Figure 4-1 Meli project location, northern Ethiopia

4.2 Property Description

The project is comprised of the Meli exploration license (Figure 4-2). The exploration license comprises a block measuring about 11 kilometers north-south by 9 kilometers east-west and covering a total area of approximately 100 square kilometers.

Figure 4-2 Location map, Meli project concession, northern Ethiopia



Axum Metals Share Company (Axum) is a jointly owned company, held by Sun Peak and Ezana Mining Development PLC (Ezana), which was formed to hold the Meli property (see Section 4.3). The Meli exploration license was granted to Axum by the Ministry of Mines and Petroleum (MoMP) of the Federal Democratic Republic of Ethiopia on December 3, 2019 for a 3 year term, which is renewable yearly for up to an additional 7 years, provided that the licensee proves the necessity to undertake exploration activity beyond the initial work program. Table 4-1 lists the geographic coordinates (degree, minute, seconds) and WGS 84 UTM Zone 37N of the corners of the Meli exploration license. The concession and exploration license application corners were established by geographic information system (GIS) coordinate points, and have not been surveyed or marked on the ground.

Ezana holds a Mining License covering 0.0512 km² in the central part of the Meli concession that grants Ezana the right to mine the oxide portion of a small VMS deposit and recover gold from the oxide material at a beneficiation plant on-site. Neither Axum, nor Sun Peak hold any rights to the production from oxide material on this Mining License. In addition, Ezana has 3 small exploration licenses nearby, measuring 0.064 km², 0.32 km² and 0.20 km² (Figure 4-3). Ezana has two years from December 4, 2019 to convert the exploration licenses to mining licenses, otherwise they will be cancelled and the areas will become part of the Meli exploration license.

Figure 4-3 Ezana mining and exploration license areas within Meli concession

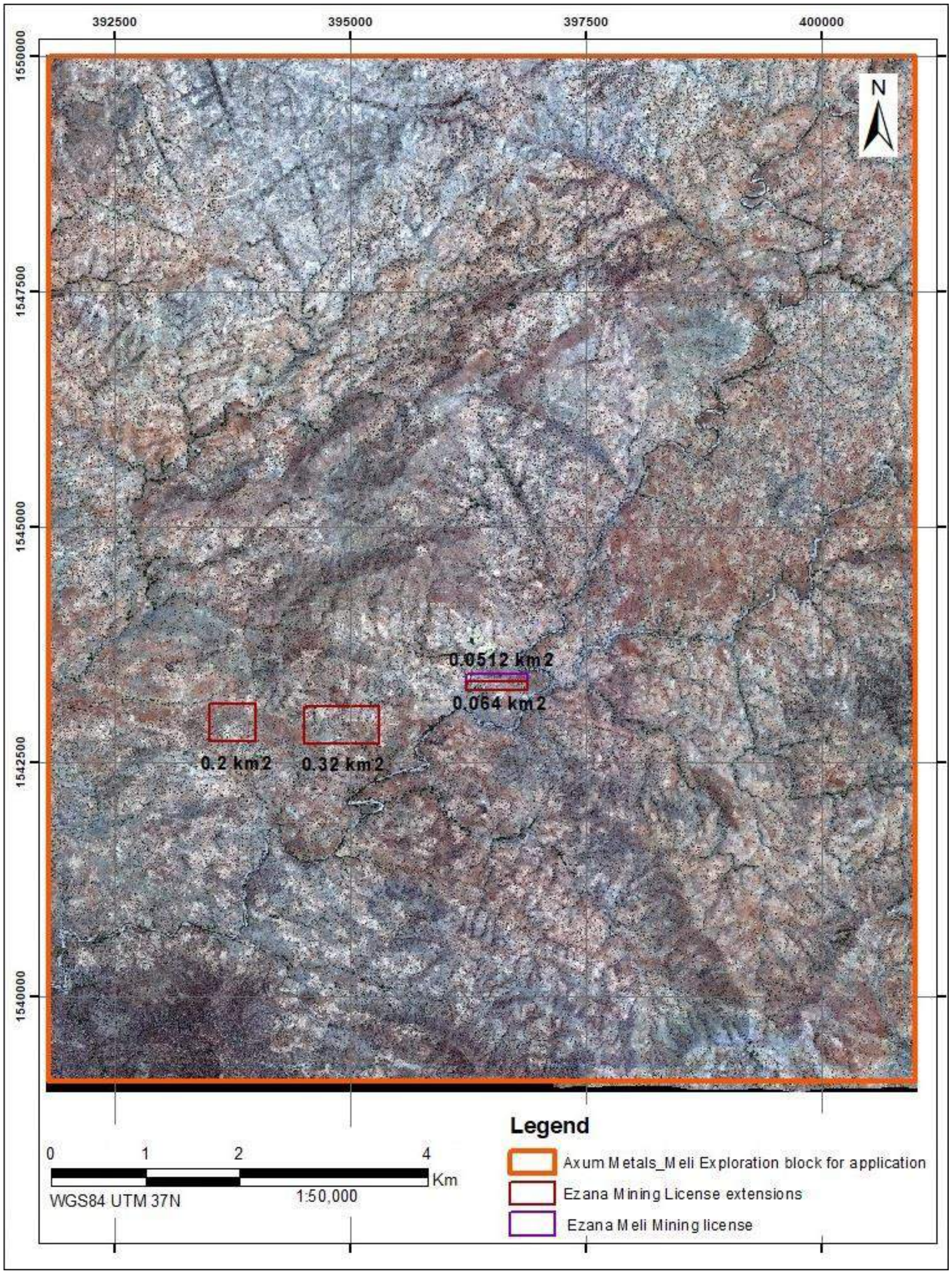


Table 4-1 Geographic coordinates of the Meli concession area corners (WGS84, Zone 37N)

Corner	UTM East	UTM North	Longitude	Latitude
1	391800	1539100	37° 59’ 54.4” E	13° 55’ 11.8” N
2	391800	1550000	37° 59’ 52.9” E	14° 01’ 06.5” N
3	401000	1539100	38° 05’ 01.0” E	13° 55’ 13.0” N
4	401000	1550000	38° 04’ 59.6” E	14° 01’ 07.7” N

4.3 Meli Concession Agreement

Sun Peak entered into an agreement with Ezana dated November 11, 2017 (amended on February 19, 2018, October 16, 2018, June 28, 2019 and August 12, 2019) (the “JV Agreement”), whereby a company named Axum Metals SC (“Axum”) was subsequently incorporated to hold Ezana’s Terer and Meli ELs, (the “JV Properties”). The Meli EL is the subject of this technical report. Sun Peak can earn up to 70% shareholding of Axum by satisfying the following conditions:

1) To acquire a 51% shareholding in Axum, Sun Peak must solely fund exploration expenditures on the JV Properties, totaling US$5,000,000 by December 3rd, 2023, with at least US$2,000,000 being incurred by June 3, 2021 (“Phase 1 earn-in”). Sun Peak has to date expended approximately US$1 million on the JV Properties. Upon satisfying the expenditures, Sun Peak will be issued 51% of the treasury capital of Axum.

2) Within 30 days of completing the Phase 1 earn-in Sun Peak may notify Ezana of its intent to proceed to exercise the Phase 2 earn-in. Phase 2 earn-in will allow Sun Peak to earn another 16.5% shareholding in Axum by expending a minimum of US$1,000,000 for each year from the date of the election to exercise Phase 2, through to the completion of a definitive feasibility study, and any other studies required to apply for a mining license.

3) Within 60 days of Axum being issued a mining license on any JV Property, Sun Peak will have the option to purchase 2.5% of Ezana’s shares in Axum for a purchase price of US$6,000,000, to be paid within 10 days of delivery of the notice to Ezana.

Table 4-2 Exploration License Details

Permit		Decree			Owner	Payments (USD)	
Name	km^2	Number	Renewal	Expiry	Holder	Annual Surface Tax	Three Year Expenditure
Meli	97.9	MOM/EL/00436/2019		3-Dec-22	Axum	$196	$2,114,225

4.4 Mineral Exploration Concessions in Ethiopia

In 1993, Ethiopia enacted the Mining Proclamation and the Mining Tax Proclamation, to provide for a legal regulatory framework to promote investment in mineral exploration and production in the country. This marked a major shift from the government monopolized mining sector that existed prior to 1993. The proclamations allow for business incentives that include security of tenure, the right to sell minerals, preferential duty and tax provisions on equipment and machinery, a 5-7% production royalty (precious metals revised in Proclamation 816/2013), a 35% income tax on taxable income, and a structuring to allow for repatriation of profits. In addition, the Ethiopian Government has the option to take a 5% participating stake in projects that move to the mining stage.

Ethiopian Exploration Licenses are granted by the Ministry of Mines of the Federal Democratic Republic of Ethiopia for a 3 year term, which is renewable yearly for an additional 2 years, and may be renewed yearly for up to 5 more years provided that the licensee proves the necessity to undertake exploration activity beyond the initial work program. To secure an exploration license the company is required to propose an annual exploration program and budget, which is submitted to the Ministry. If the work program is accepted then the expenditure stated in the proposal must be met to renew the license at the end of the three year period, or the subsequent annual renewal. Up to 2020, claims have been acquired through map (paper) staking, rather than online or physical staking.

After the initial 3 years if the exploration work is not completed as proposed, there is a requirement to drop 25% of the license area upon application for a 1 year renewal. In addition, there is an annual land rent charge of approximately $3 (60 Birr) per square kilometer. There is no set minimum exploration expenditure required but the Ministry must agree with and approve the proposed work program. Annual and bi-annual reports are to be submitted to the Ministry detailing operations, results, expenditures, local employment and other relevant information.

The government holds the surface rights on which the concessions are located and the areas granted by the exploration licenses are sufficient for any potential mining and milling operations, exploration activities, and all required project facilities.

4.5 Environmental Regulations of Exploration Licenses

The Exploration License stipulates the requirements for environmental protection and reclamation. Reclamation security can be required at the discretion of the MoMP for any type of exploration work that may cause disturbance or possible environmental damage to the land, to pay for the cost of reclamation in the case that a company defaults on its obligation to perform remediation. These include, but are not limited to, the following:

- construction of drill sites
- trenching
- construction of roads or trails

- use of wheeled or other mobile equipment
- fuel storage
- camp construction and operation

Currently the Company has not been required to post any security for the work that is proposed on the Exploration License.

Axum commissioned an environmental and social impact assessment report by DAT Environmental Auditing and Management Consulting of Bahir Dar in 2019. Among the list of recommendations, the report included the following:

- The project should mainly focus on social acceptance through avoiding any issues causing conflicts.
- Provide employment opportunity to the local community and particularly to the affected parties.
- Contribute to the infrastructure development such as potable water production and road construction, because the area lacks these vital socio-economic structures.
- It is also necessary for the regulators to regularly monitor and provide feedback for any impacts that are not mitigated by the project.
- The entire responsibility for any damage on environmental components will go to the proponent. Hence, the proponent needs to implement regular monitoring in order to address unforeseen impacts occurred in the course of implementation.
- Agricultural land, vegetation cover and water are very scarce in the area and the project should give due emphasis to the protection of these resources.

4.6 Environmental Liabilities and Other Risk Factors

To the best of the authors' knowledge, there are no environmental considerations or other significant environmental factors or risks that may affect access, title, or the right or ability to perform work on the Property.

5.0 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY LOCAL RESOURCES AND INFRASTRUCTURE

5.1 Accessibility

Addis Ababa is the political and economic capital of Ethiopia and has service to all locations world-wide by Ethiopian Airlines, including Toronto, Canada, four times a week. In addition, the neighbouring countries are accessible by regularly scheduled air services as well as via a network of roads. There is a daily flight with Ethiopian Airlines from Addis Ababa to Shire.

Access to the Meli property from Addis Ababa is via a good asphalt road 1,040 kilometers northerly, passing through Dessie, Mekele, and to Shire (previously called Inda Silassie), then, accessed by 22 km drive south from Shire on asphalt road to Indaba Guna, with an additional drive for about 25 km on gravel road to the mineral showings near Meli village via Idaga Hibret village (Figure 4-2).

A network of dirt roads provides vehicle access within the Meli concessions during the dry season. Portions of the property are not easily accessible during the wet seasons due to the inundation of the roads and a lack of bridges spanning seasonal water courses.

5.2 Climate and Vegetation

The project region is characterized by a temperate to hot climate and has both dry and wet seasons (Table 5-1). The rainy season extends from mid-June to mid-September with average rainfall of 800-1000 mm per annum. The town of Shire has mean daily temperatures ranges from a high of 32.5°C in March to a minimum of 13°C in January. Being approximately 700 m lower in elevation, the temperatures on the Meli license are typically warmer by a few degrees from those at Shire. Extremes of heat are tempered by elevated plateau present throughout much of Ethiopia.

Mineral exploration activities can be conducted year around, although extra caution must be exercised on the roads and while crossing streams in the wet season.

Table 5-1 Climate data for Shire, Tigray, Ethiopia (source Wikipedia).

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Year
Average high °C	28.0	29.8	30.3	31.8	31.1	29.5	23.6	23.4	26.7	28.3	28.7	27.5	**28.2**
Daily mean °C	19.2	20.7	21.5	23.3	23.1	21.9	18.1	18.2	19.7	20.1	19.4	18.6	**20.3**
Average low °C	10.5	11.6	12.7	14.9	15.1	14.4	12.7	13.0	12.8	11.9	10.2	9.7	**12.5**
Average precipitation mm	2	1	3	22	48	119	297	274	110	15	14	0	**905**

The area of interest is covered by scarce and scattered vegetation, mainly acacia and thorny bushes, with a few big trees growing along stream banks. The soil cover tends to be very thin, however, the only place of significant bedrock exposure is found in the large river valleys or on ridgetops. A few wild animals such as monkeys, hyena and foxes inhabit the area.

5.3 Physiography

The area covered by the Meli concessions is part of the northwestern lowlands of Ethiopia, which is moderately flat lying. The project area is within a northeast-trending plateau lying between mountain ridges to the northwest and southeast. The project area has an average altitude of 1200 meters asl, rising to about 1500 m on the nearby ridges.

Water is predominantly acquired through wells since tributary drainages on the upper plateau are mostly seasonal, drying up during the drier months. The streams in the concession area are intermittent, draining northwest and southeast off the ridges onto the plateau, where they join the Lekhote River that flows for most of the year, running southwesterly across the Property and continuing about 12 km to the Tekeze River.

5.4 Local Resources and Infrastructure

Ethiopia is a landlocked country, bordered by Djibouti, Eritrea, Kenya, Somalia, Sudan and South Sudan. Ethiopia is one of Africa's poorer nations, however economic reforms enacted by the constitution of 1994 continue to be optimized in an attempt to both privatize state businesses and attract further foreign investment. The Ethiopian economy is predominately raw commodity based, and is centered on agriculture, with coffee being the major export crop. Poor agricultural management and frequent droughts continue to hamper this sector of the economy.

There are recent signs that foreign investment in mining is on the rise in Ethiopia. In 2017, KEFI Minerals secured financing of $135M through Oryx Management to advance Ethiopia's fledgling gold mining sector with the development of the Tulu Kapi gold deposit in western Ethiopia. The Ethiopian Government will provide funding for building all project-related off-site infrastructures. The underdeveloped hydrocarbon and mineral wealth are now viewed as an opportunity for future economic development and a possible significant economic driver for the country.

Ethiopia is accessed and serviced via air, roadway, and one standard gauge rail system from Djibouti to Addis Ababa. At present port-related import and export is cycled through facilities at Djibouti, located 560 km to the southeast. Although numerous rivers drain Ethiopia's diverse topography, the only navigable waterway is the Baro River (a tributary of the Nile), located on the border with Sudan.

Roughly 50 civil airports exist in the country, including five in the Tigray Region (Axum, Dansha, Humera, Mekele, and Shire), along with two major military airports and a heliport, located 1 km south of Adi Da'iro (Figure 5.1). The main paved highway in the region runs east-west through Axum and Meli. A good paved highway also runs south from Shire and passes 10 km east of the Property.

Significant infrastructure in the area includes high voltage power lines installed along the roads between Shire and Adi Da'iro and between Adi Nebried and Shiraro. The Ethiopian

Power Corporate states that the lines within the country include 45, 66, 132 m 230 and 400 kV. A large water reservoir is located 2 km southeast of Adi Da'iro. The mobile cellphone network is accessible in parts of the exploration area and internet connections are available in Meli.

Shire is the nearest medium-size town to the Meli project and has a population estimated at approximately 60,000. Many parts of the town have modern amenities such as electricity, running water, sewage disposal, paved streets and modern building construction. New businesses, as well as improved schools and a hospital are some of the more recent upgrades to the community. A scheduled air service is operated during the year and a variety of commercial premises are located in the town. However, in the villages proximal to the project, a subsistence lifestyle is evident and only limited power and water is available for the inhabitants. Agriculture and livestock farming are the main livelihoods. Barley, wheat, maize, sorghum, teff and gesho are the main agricultural products. Gesho is grown primarily for fermenting barley beer (a local beer called suwa). Cows, sheep, goats, donkeys and chickens are common livestock in the area. Land preparation, particularly when cultivating teff, is labour intensive and is carried out by hand and oxen draught power. Motorized vehicles are rare in the villages.

The area is inhabited by Tigray people whose main spoken language is Tigrinia. Amharic language can also be used as means of communication. Orthodox Christianity is the main religion practised by the villagers.

The company currently has no permanent infrastructure in the Meli concessions area and exploration is carried out from a house and warehouse compounds hosted in Shire.

6.0 HISTORY

Parts of the project area have seen considerable historic work, including stream sediment, soil and rock chip sampling, geological mapping, geophysical surveys, trenching, reverse circulation and diamond drilling.

The earliest reconnaissance exploration in the Meli concession area was recorded by Ezana, beginning in about 2006 on their 800 km² Rahwa prospecting license. Ezana conducted stream sediment and rock chip sampling and geological mapping which led to the discovery of three precious metal rich gossans to the east of the village of Meli that lie within a zone that has an overall strike length of 3.5 km (Meli gossan zones)(Figure 6-5).

In 2007 Ezana converted its prospecting license to an exploration license and conducted detailed exploration on the Meli concession comprised of dense stream sediment and rock chip sampling. Broad trends of anomalous geochemistry were defined by stream sediment sample results, particularly by Zn and Ag values, with local coincident Au and Cu (Figures 6-1 to 6-4)

The anomalous areas appear to be aligned with the stratigraphy, and are perhaps associated with VMS-mineralized horizons. The known gossan zones in the south-central part of the Property fall along ESE anomalous trends and, in the northern third of the Property, a very extensive area of anomalous Zn and Ag extends for more than 12 km on a northeast trend (Figures 6-1 and 6-2). Ezana followed up some of the anomalies with local prospecting and rock chip sampling; however, the discovery of significant mineralization in the Meli gossans area diverted its exploration attention, leaving the majority of the extensive geochemical targets within the Property area under-explored.

Figure 6-1 Meli concession area stream sediment Zn geochemistry (source: Ezana private report)

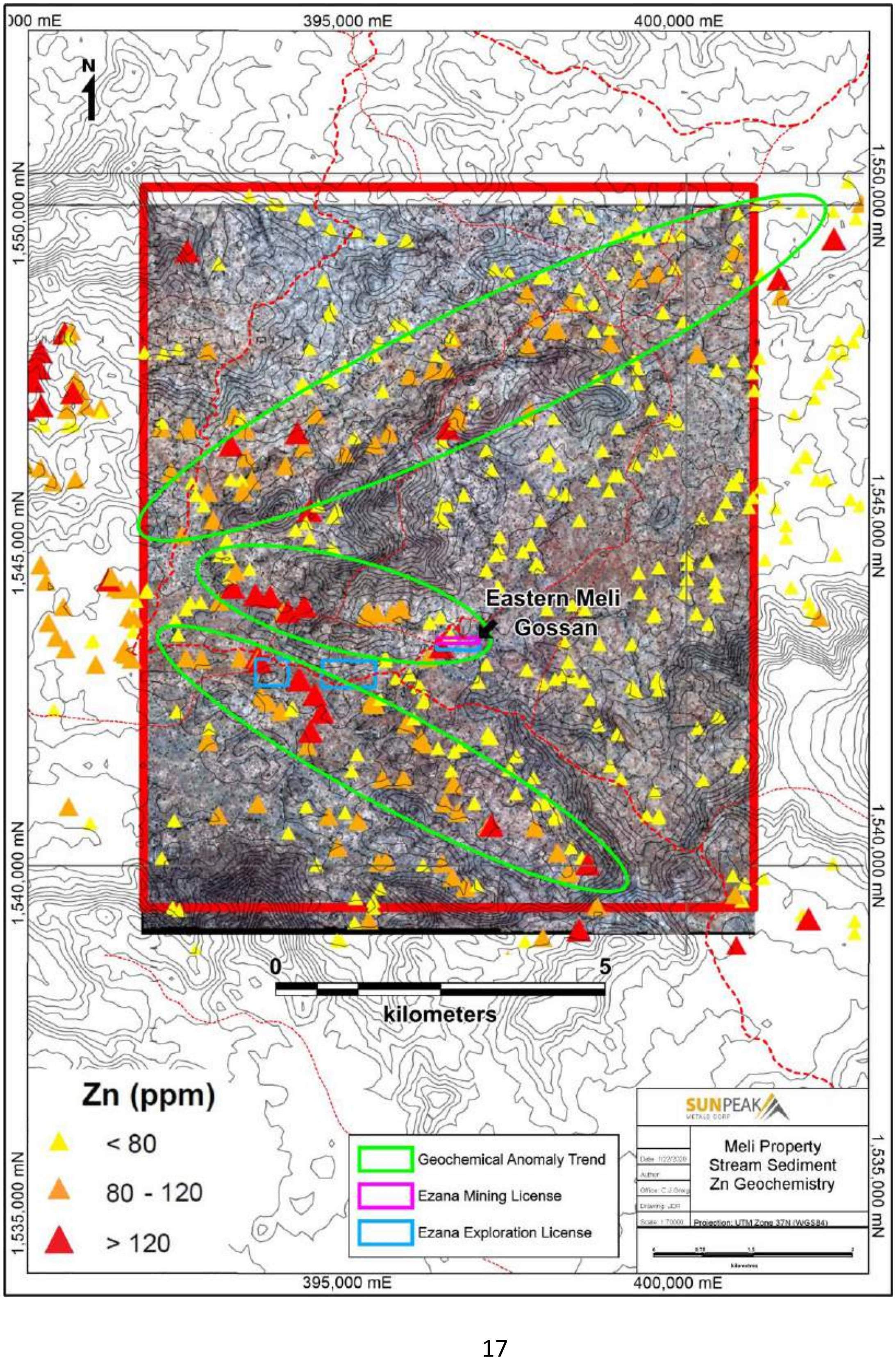


Figure 6-2 Meli concession area stream sediment Ag geochemistry (source: Ezana private report)

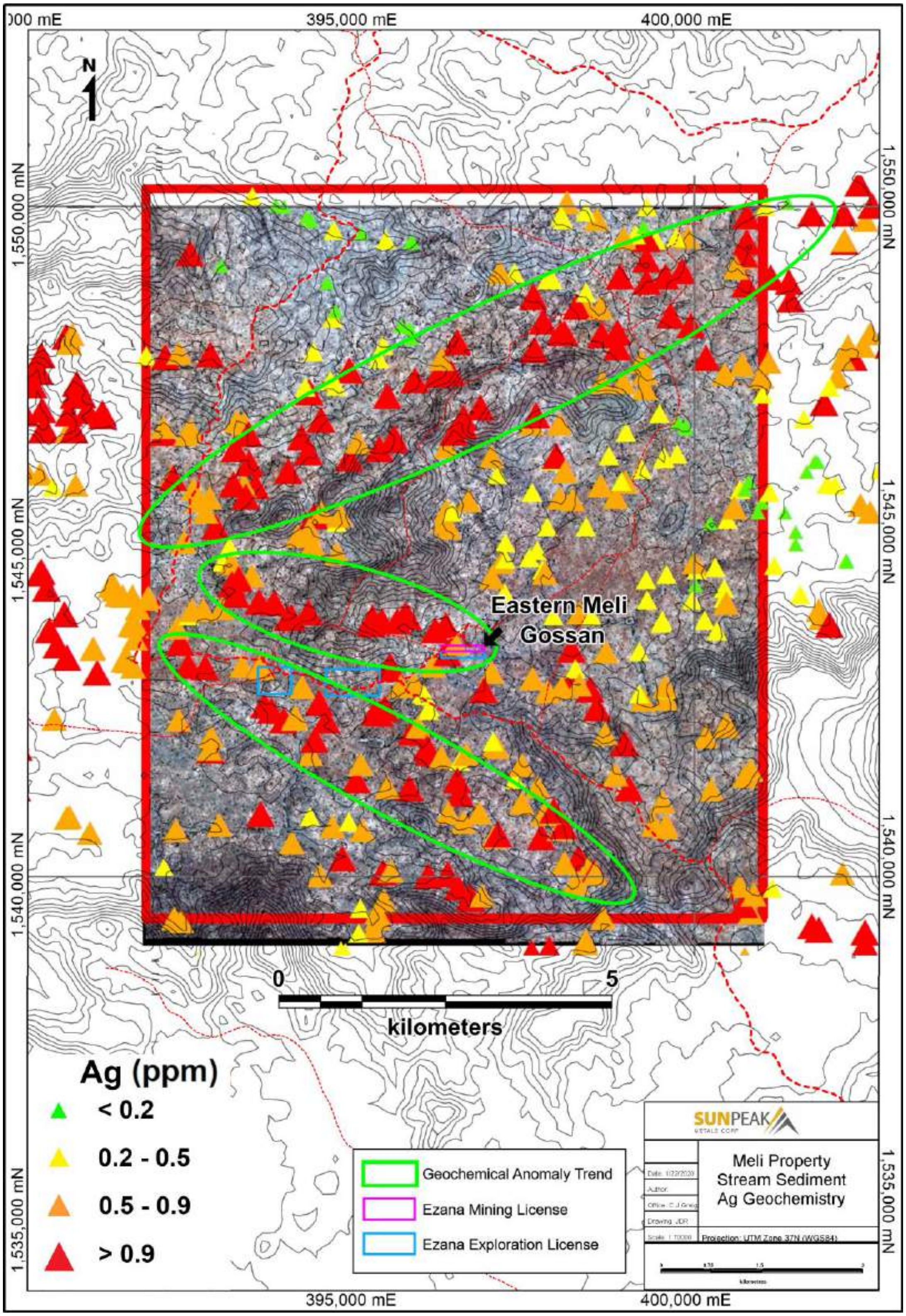


Figure 6-3 Meli concession area stream sediment Cu geochemistry (source: Ezana private report)

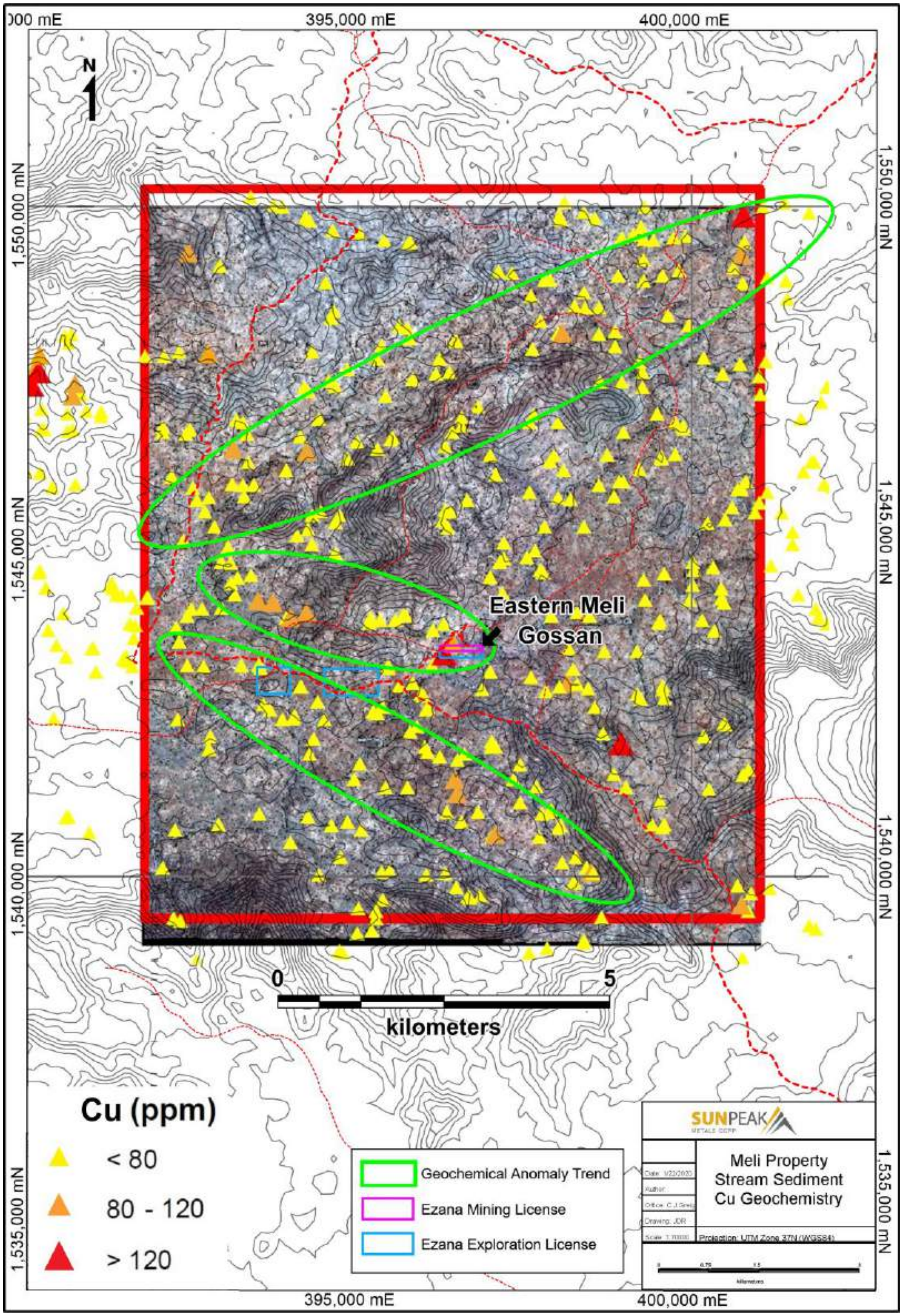


Figure 6-4 Meli concession area stream sediment Au geochemistry (source: Ezana private report)

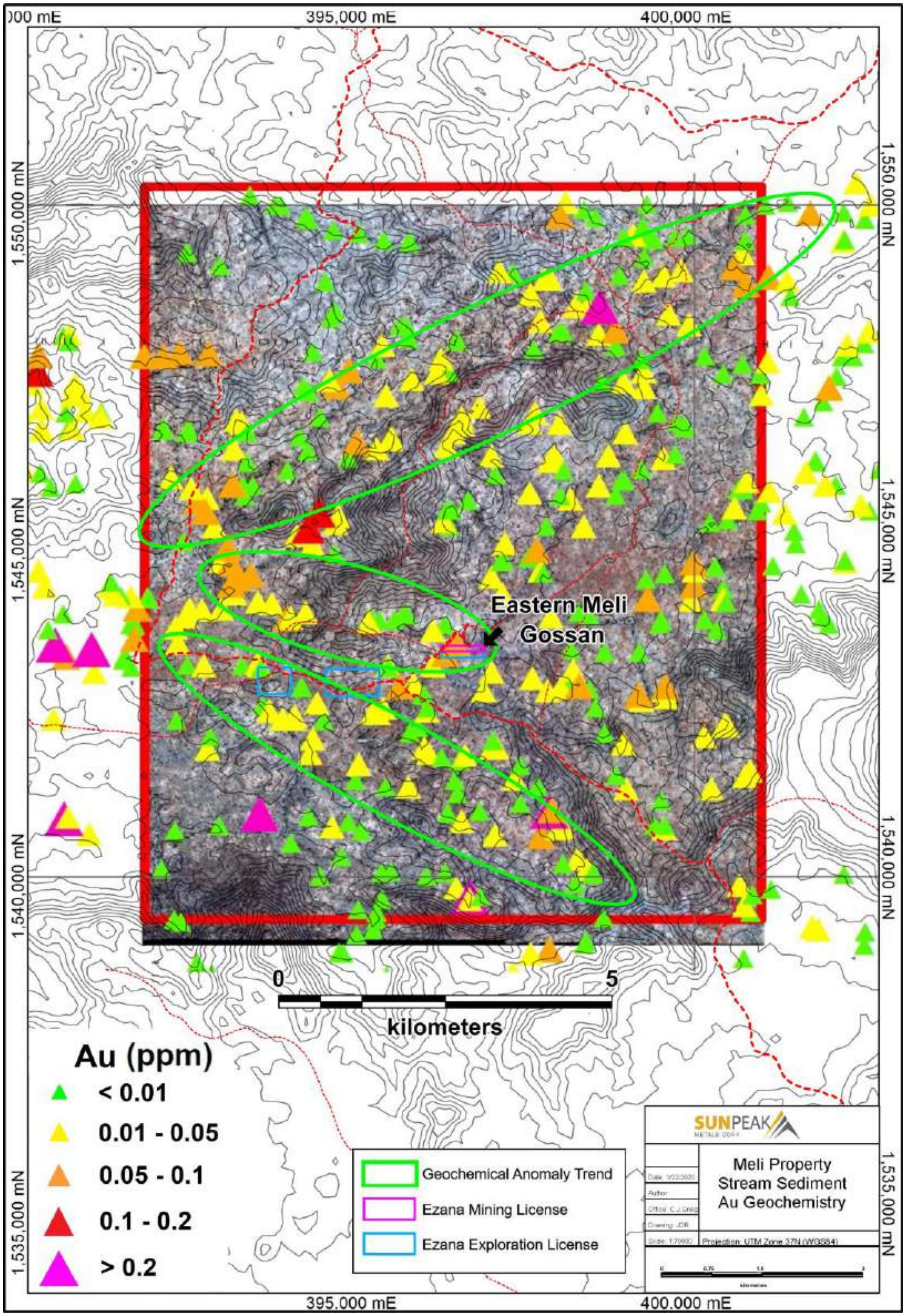
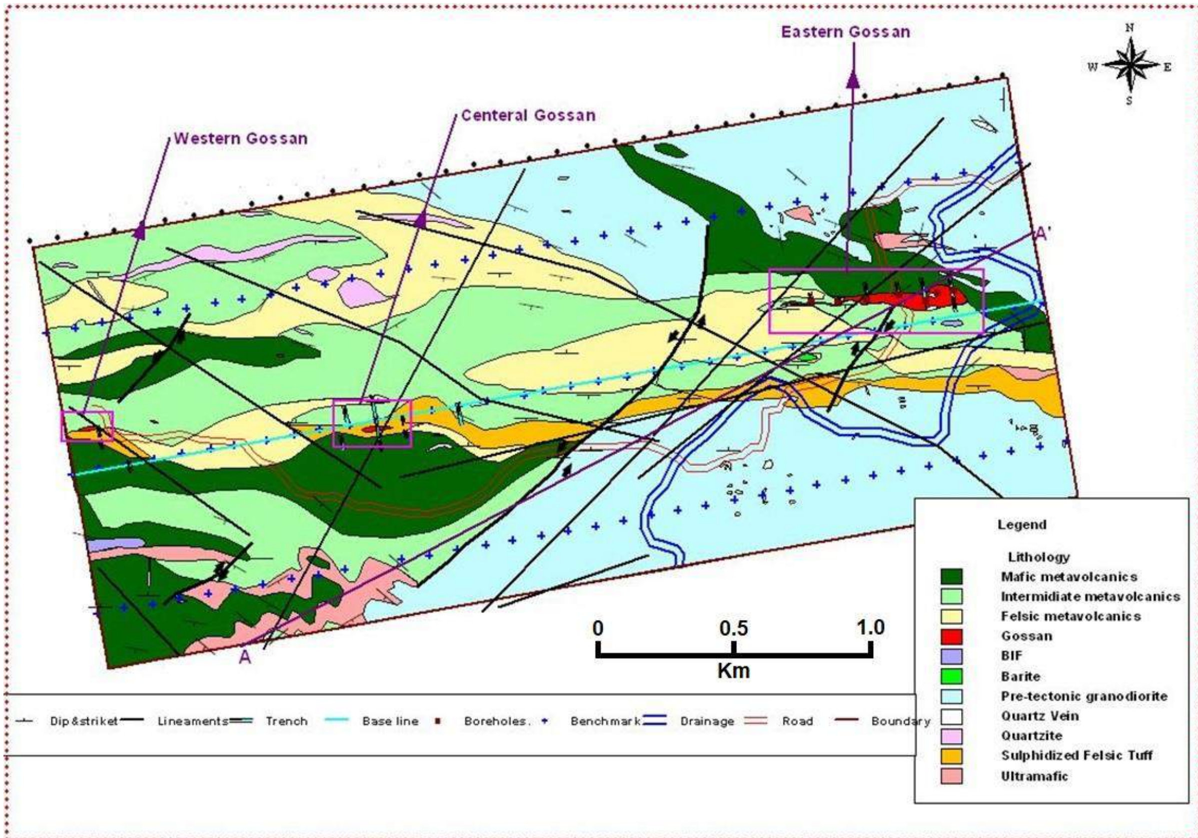
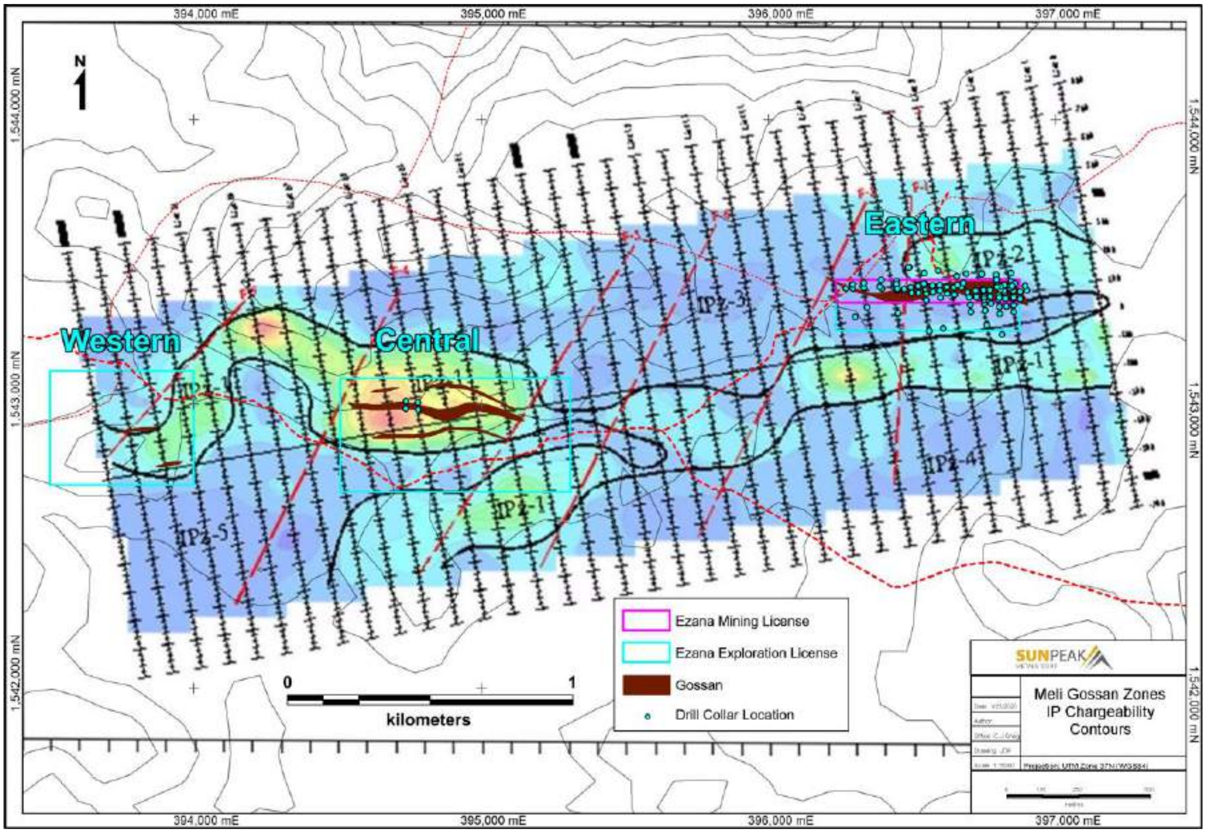


Figure 6-5 Geology of Meli Eastern, Central and Western Gossan zones



In 2007 Ezana had Lul Earth Sciences of Addis Ababa undertake integrated detailed geophysical surveys that including magnetic, gravity and Induced Polarization (IP)/resistivity surveys over a 1.5 X 3.5 Km area that encompassed the three gold-bearing Meli gossan zones. The 35 NNW-trending survey lines were each 1,500 m in length and spaced 100 m apart. Figures 6-6 and 6-7 show the location of the survey grid with IP chargeability and Bouguer gravity contours. Figure 6-8 is a map showing priority target areas that were chosen by Lul Earth Sciences based on a combination of all the geophysical results from the various methods utilized. The figures also show the locations of drill holes that were subsequently drilled over a period of several years following the surveys.

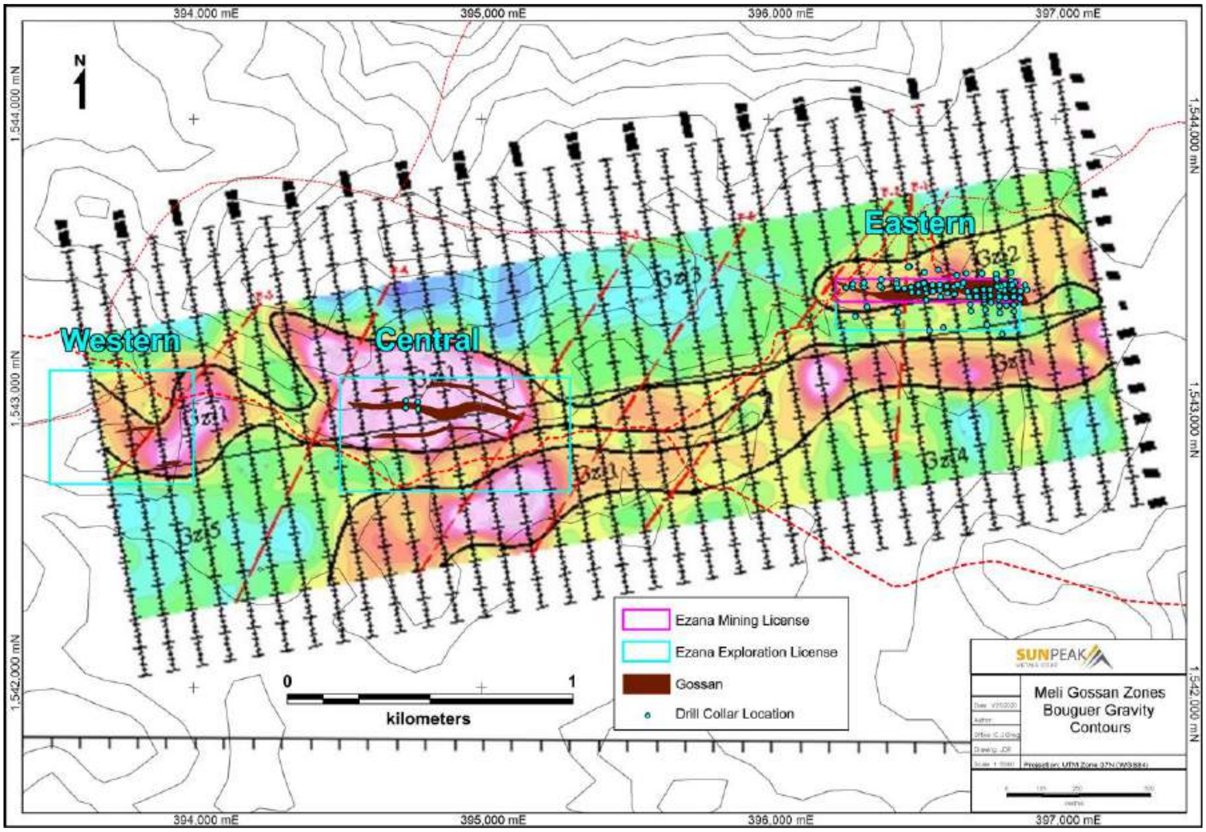
Figure 6-6 IP Chargeability contours in the area of Meli gossan zones (warmer colours represent higher chargeability) (source: Lul Earth Sciences, 2007)



Interpretation of the IP results by Lul (2007) indicated that the top 20 to 40 m on all sections generally exhibits sub-horizontal low resistivity and low chargeability characteristics which suggest that moderately deep and intense weathering has affected the area.

The IP chargeability exhibits relatively high, continuous, mostly elongated and sometimes spatially broad zones. These zones mainly coincide with mafic metavolcanic/volcanoclastic rock units which appear to host the observed gossanous and/or sulphidic rocks, and it is considered very likely that the zones correspond with rocks carrying fairly uniform and relatively abundant sulphides, which are by nature highly chargeable. The wider nature of the IP responses to the west is interpreted to reflect the widening of the sulphide-bearing rock units at depth.

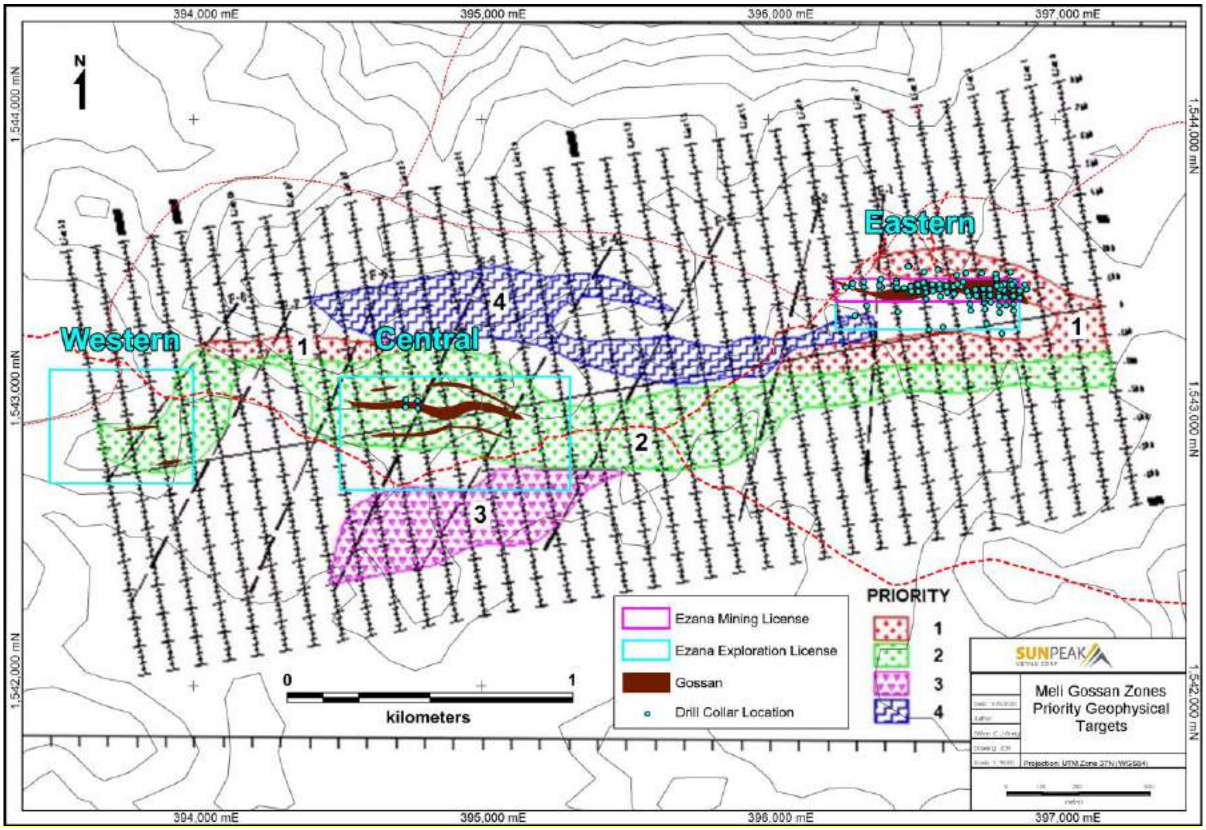
Figure 6-7 Gravity contours in the area of Meli gossan zones (warmer colours represent higher density) (source: Lul Earth Sciences, 2007)



Lul's (2007) interpretation of the gravity results (Figure 6-7) shows generally high, continuous, mainly elongate and sometimes wide responses. The gravity highs coincide mainly with the mafic metavolcanic/volcanoclastic rock units that host the observed gossanous and or sulphidic rocks, as well as with the elevated IP responses. Given that the highs most probably correspond with rock units with uniformly and relatively high density characteristics, the broadening of the responses most probably indicates that the higher-density rock units thicken at depth.

Lul (2007) also depicted the magnetic results to show relatively narrow, continuous and elongate magnetic highs which again coincide largely with the mafic metavolcanic/volcanoclastic rock units that host the gossanous and sulphidic rocks. In the western part of the grid this zone becomes relatively broader, where it correlates in part with siliceous rocks that are visibly rich in iron. The zones in that area most probably correspond to rock units with uniformly high metallic mineral content—they may be altered felsic metavolcanics rocks.

Figure 6-8 Priority geophysical targets in the area of Meli gossan zones (source: Lul Earth Sciences, 2007)



Lul's (2007) ultimate objective of the integrated geophysical survey was to delineate all possible mineralized zones that exist in the Meli gossan area, down to considerable depths. Each technique reflects different physical parameters of rocks, and therefore the results both complement and supplement one another, with the result that zones with unique combinations of physical characteristics can be delineated. Accordingly, the final results of all the applied methods were super-imposed, resulting in the delineation of four principle zones of interest (Figure 6-8). Lul's (2007) descriptions of the observed characteristics of the four zones, slightly modified, follow:

Priority 1: this category is of highest priority in terms of possible sulphide related poly-metallic mineralization. It is generally characterized by high magnetic, high gravity, high IP and low Resistivity responses. There are two such targets identified:

1. the eastern target seems to split into two elongate zones, which may indicate either a bifurcation or tight folding of the anomalous zone at this point. This zone is also open to the east.
2. the western target seems to be a single elongate zone that pinches out in both directions.

Priority 2: the second category in terms of priority targets for possible mineralization is generally characterized by intermediate magnetic highs, high gravity, high IP and low resistivity responses. This target stretches the length of the Meli survey area, is relatively wide, and is open in both directions.

Priority 3: the third category in terms of priority targets for possible mineralization is generally characterized by high gravity, high IP and high resistivity responses. This zone occurs in the southern part of the grid, is relatively broad and of short strike length; it is possibly underlain by mafic metavolcanic rocks.

Priority 4: the fourth category in terms of priority targets for possible mineralization is generally characterized by magnetic highs, gravity lows, low IP and low resistivity responses. This zone is relatively narrow and elongate, and lies in the northern part of the grid.

As can be seen on Figure 6-8, drilling to date has been concentrated almost exclusively on the Eastern gossan zone, along the northern limb of the Priority 1 geophysical target, with no drill testing of the southern limb. In the Central gossan zone, 1500 m to the west, four holes have been drilled, but there has been no drilling of the Priority 1 target located to the northwest of the Central zone.

Ezana began drilling targets in the Meli gossan area in 2008, when they drilled 7 shallow vertical holes, totalling 269 m, with a water well percussion drill on the Eastern Meli gossan, with an intent to test the down dip continuity of mineralization. In 2009, a reverse circulation (RC) drill was contracted to complete 9 boreholes on the Eastern gossan; they had an aggregate depth of 429m. These holes were oriented at an azimuth of 350^0 and inclined at -55^0. Table 6-1 shows the averaged grades of sampled rock chip intervals from the holes. Percussion holes have prefix RVH and RC holes have prefix RHRC. Some of the holes returned some very significant gold grades, such as 16.76 g/t Au over 20 m in hole RVH-04 and 39.51 g/t Au over 12 m in hole RVH-07. While these grades are no doubt significant, they may be artificially enhanced by contamination from collapse of the hole walls above the bit during drilling, as well as by loss of some of the fine material which was reported to be wind-blown when cuttings reached surface. Rock chip samples from the holes were analysed at a laboratory by fire assay/ atomic absorption methods for Au, Ag, Cu, Pb, Zn, Co, Ni, Mn and Fe.

The 2008 holes were primarily drilled to test the gold-enriched oxide zone, which was found to extend to about 30 m depth, but some holes also encountered sulphide minerals near or below that depth. For example, in RHRC-01A, massive sulphide was encountered between 25 and 30m. In RHRC-08, massive sulphide was encountered between 31 and 42m and between 47 and 54m and the hole bottomed in massive sulphide due to drilling problems. Samples from this hole returned gold values ranging from 0.2 to 3 g/t Au, with one 1 m sample returning a high of 11.4 g/t Au; copper averaged 0.5% over 33 m and zinc averaged 0.67% over 22 m.

Table 6-1. Assay intervals for percussion and RC drill holes in Eastern Meli gossan (source : Ezana private company report)

Hole ID	Depth (m)	Au(g/t)/m	Ag (g/t)/m	Cu (%)/m	Zn (%)/m
RVH-01	31	**5.48/28m**	4.11/27m	0.14/7m	0.02/7m
RVH-02	94	3.15/8m	4.05/19m, 8.2/16m	0.19/10m, 0.19/11m	0.15/10m
RVH-03	40			0.27/19m	0.027/20m
RVH-04	40	**16.76/20m**	3.7/20m	0.1/19m	0.03/5m
RVH-05	22		2.8/10m	0.3/4m,0.15/1m, 0.17/1m	0.06/18m
RVH-06	22	0.6/5m	3/2m	0.12/1m	0.03/16m
RVH-07	24	**39.5/12m, 16.3/2m**	23.4/12m, 18/2m	0.14/4m	
RHRC-01	50	3.92/18m	8.1/30m incl. 11.3/18m	0.2/35m	0.1/5m
RHRC-01A	33	3.42//18m	15.6/21m incl. 42.2/6m	0.15/4m, 0.16/8m, 0.9/5m incl. **1.89/2m**	
RHRC-02	50	**9.89/28m**	19.9/27m	0.16/13m	0.06/18m
RHRC-03	35	**7.1/11m**	5.1/28m	0.2/6m	0.12/5m
RHRC-04	30	1.17/2m	3/9m	0.33/10m	0.04/10m
RHRC-05	45	6.5/7m, 4.8/3m, 0.54/3m	2.5/8m	0.12/4m, 0.14/5m, 0.15/2m	0.03/6m
RHRC-06	62	1.56/2m	3/3m	0.22/12m, 0.17/7m	0.03/25m
RHRC-07	28	0.61/1m	5.8/1m	0.17/1m	0.03/5m
RHRC-08	54	0.43/26m	12.8/15m, incl. 18/9m, 13.5/8m incl. 18/5m	0.22/12m, **0.5/33m** incl. 1.3/1m, 1.97/3m, 2/1m	**0.67/22m**, incl. 1.2/4m, 1.9/1m

Note: true mineralized thicknesses for vertical (RVH) holes are approximately 60% and for -55° (RHRC) holes approximately 95% of the reported drilled lengths.

Ezana also undertook continuous chip sampling in trenches cut across the gossan zone. The chip samples, which averaged 4 kg, were collected in 1 m sample intervals from trench walls 10 cm above the trench floor, mainly to avoid contamination. In 2009, the channel samples, along with analyses from the 16 Eastern gossan zone drill holes, were used by Ezana to make a preliminary, non-compliant resource estimate suggesting that the mineralized oxide cap may contain as much as 4 tons (3600 kg) of gold with an average grade of 4.0 g/t Au, calculated using a 0.3 g/t Au cut-off (Ezana private company report).

This same Ezana internal report stated that the Eastern Meli gossan was the largest and most auriferous of the three known mineralized gossans, with an average width of 20m and an overall strike length of 600m. The Western and Central Meli gossans were reported to be relatively patchy and narrow and to show weak gold content. The report also stated that the multi-disciplinary geophysical surveys described above were undertaken in the gossanous areas and that they defined four anomalous zones. The report, however, gave no details or data and no recommendations for follow-up of the zones.

In December, 2008, Andrew Philips from ACA Howe International assessed the Meli property and made recommendations for further exploration. Philips recommended additional trenching, along with test-pitting, drilling and geophysical exploration, with the aim of outlining prospective mineralized targets that might warrant rigorous drill testing.

Following from these recommendations, in the period between 2009 and 2012, Ezana drilled more than 80 diamond drill holes in the Eastern Meli gossan. The objective of most of this testing, however, was to test the potential of the oxide cap, and so only a few of the holes were drilled into the deeper parts of the underlying sulphide-bearing zone. In addition, while all of the holes were assayed for Au, only 29 were assayed for the base metals (Cu, Zn, Pb) and for Ag. Of the holes drilled into the sulphide zone, a number returned very significant intercepts, including 4.2% Cu, 0.7% Zn, 1.5 g/t Au, 37.1 g/t Ag over 17.4 m (hole RH-DH-01, 28.65-46.05 m) and 2.4% Cu, 1.0% Zn, 2.6 g/t Au, 37.8 g/t Ag over 15.1 m (hole RH-DH-49, 65.0-80.1 m) (Figure 6-9). True thicknesses of the mineralized intervals are approximately 90-95% of the drilled lengths. An example of the grades encountered across the width of one of the significant mineralized intercepts is shown in Table 6-2. It tabulates all the assays for the VMS-style mineralization in hole RH-DH-01, and it shows that the sulphide zone yields consistent strong copper and zinc grades throughout, and that zinc appears to increase in grade downhole. It also shows that lead values coincide with those of zinc, but are of lower tenor, returning less than 0.3% Pb, on average. In terms of geometry, the few holes that were drilled to depth indicate that the sulphide zone dips about 55° to the south and that it appears to be continuous down dip for at least 100 m, where it remains open to depth, as well as along strike.

The drilled part of the Eastern gossan zone at Meli has been traced along strike to shallow depths for approximately 600 m, and while there is a section of up to tens of meters thickness within the eastern 200 meters, the zone appears to tail out to the west to thicknesses of a few meters or less. In 2007, geophysical surveys run across the zone suggested that chargeability and density decreased to the west, but the surveys also suggested that these parameters were strong toward the east, where they remain open. The surveys also suggested the presence of a sub-parallel zone approximately 250 m to the south.

To the west, at the Central Meli gossan that lies approximately 1500 meters west of the Eastern Meli gossan, four diamond drill holes were cored to depths of between 35 and 110 meters. The drilled area lies within an area of strong chargeability and high density, but to the best knowledge of the authors, it is not known what the drill holes intersected, and no further drilling appears to have been undertaken in the Central zone.

Figure 6-9 Eastern Meli gossan zone drill section looking east (source: Ezana private company report)

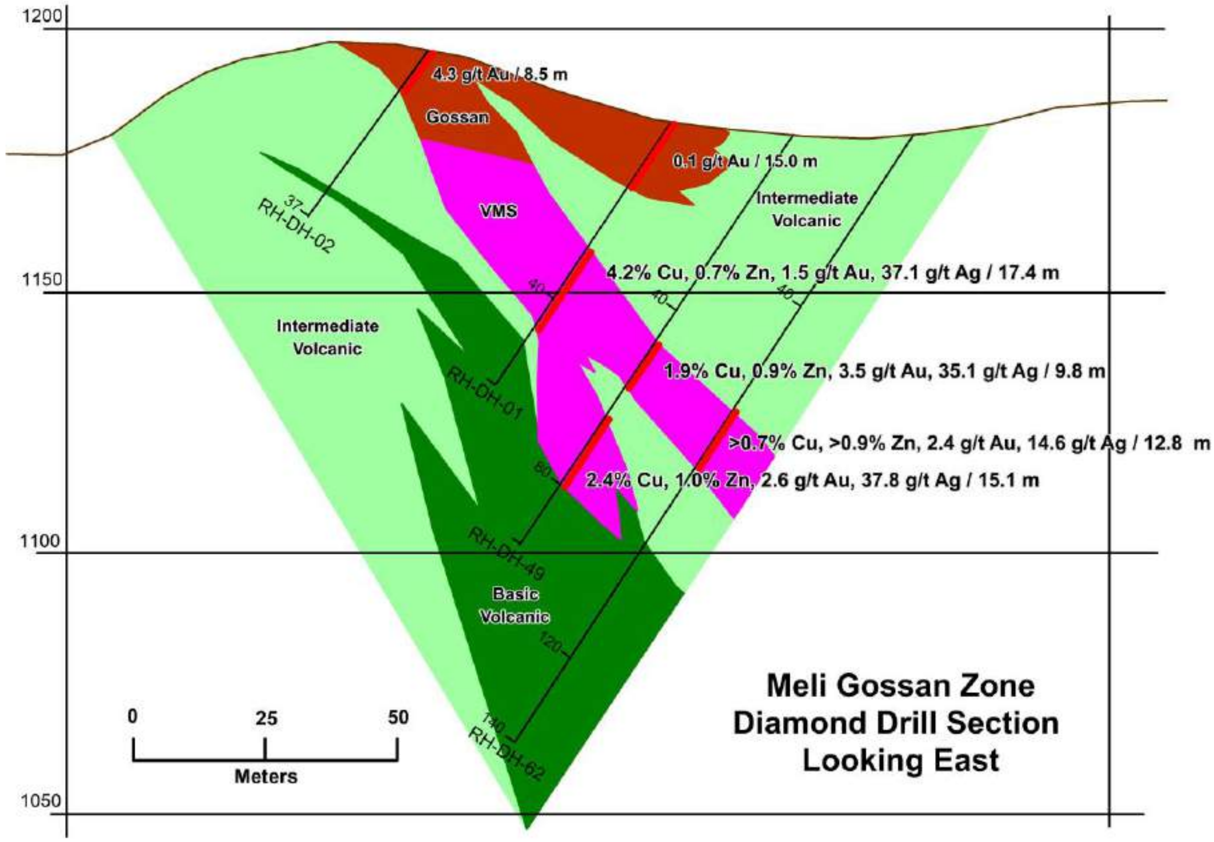


Table 6-2 Eastern Meli gossan, selected drill intercept, diamond drill hole RH-DH-01 (source : Ezana private company report)

Hole ID	Depth From (m)	Depth To (m)	Length	Lithology	Au_ppm	Ag_ppm	Cu_ppm	Zn_ppm	Pb_ppm
RH-DH-01	28.65	29.80	1.15	VMS	1.27	**43.20**	**56220**	7630	680
RH-DH-01	29.80	30.80	1.00	VMS	1.21	33.20	**39400**	2005	141
RH-DH-01	30.80	31.80	1.00	VMS	**1.78**	**40.00**	**34640**	1520	340
RH-DH-01	31.80	32.80	1.00	VMS	1.41	**36.70**	**44200**	3514	280
RH-DH-01	32.80	33.80	1.00	VMS	**3.35**	**38.90**	**44160**	2411	360
RH-DH-01	33.80	34.80	1.00	VMS	**1.63**	**44.10**	**76320**	7160	1440
RH-DH-01	34.80	35.80	1.00	VMS	**2.41**	**49.50**	**59860**	7850	3860
RH-DH-01	35.80	36.80	1.00	VMS	0.86	23.80	**35100**	2176	1440
RH-DH-01	36.80	37.80	1.00	VMS	1.09	**38.60**	**37960**	3295	540
RH-DH-01	37.80	38.80	1.00	VMS	1.47	**42.40**	**25240**	4205	260
RH-DH-01	38.80	39.80	1.00	VMS	**2.41**	22.70	**32960**	5750	3386
RH-DH-01	39.80	40.80	1.00	VMS	0.24	**47.50**	**32400**	5130	1440
RH-DH-01	40.80	41.80	1.00	VMS	1.42	32.00	**27900**	**20060**	2765
RH-DH-01	41.80	42.80	1.00	VMS	0.33	31.80	**64860**	7030	1180
RH-DH-01	42.80	43.80	1.00	VMS	**1.82**	**42.50**	**37700**	**11960**	2900
RH-DH-01	43.80	44.80	1.00	VMS	**2.55**	**40.50**	**30200**	**23100**	2343
RH-DH-01	44.80	46.05	1.25	VMS	0.72	25.20	**34960**	5090	480
Average: 28.65 m to 46.05 m = 1.5 g/t Au, 37.1 g/t Ag, 4.2% Cu, 0.7% Zn over 17.4 m									

In 2013 Ezana applied for, and was granted, a mining license by the Ethiopian Ministry of Mines. Ezana undertook mine planning and feasibility studies, and followed-up in 2016 with construction of a small carbon-in-pulp extraction plant adjacent to the Eastern Meli gossan zone. Open cut extraction of the gossan cap commenced in 2017 and the mill has operated intermittently since that time. There are no public records of gold production from the Meli gossan zone; although a news article published locally on Jan 2, 2018 indicated that the plant was processing up to 3,000 grams of gold per day, with capacity of up to 4,500 grams per day (800 tonnes/day). The article also stated that the plant has provided more than 200 temporary and permanent jobs.
(https://www.ezega.com/News/NewsDetails/6163/Ethiopia-s-Newest-Gold-Plant-Begins-Production - Jan 2, 2018)

Photo 6-1 Eastern Meli gossan open cut mine, mill complex and camp

In 2017 Ezana signed a joint venture agreement with Sun Peak Metals Corporation, Canada, to form Axum Metals Share Company (Axum). Axum undertook compilation and re-interpretation of all the previous exploration data and initiated construction of an ArcGIS/MapInfo GIS spatial database.

From the compiled and re-interpreted maps in the GIS database, as well as from geological field visits, the work by Axum suggested that at least two types of mineral deposits might occur in the Meli concession area, as follows:

1) VMS-style mineralization defined by oxide gossans underlain by sulphidic zones, and

2) Orogenic gold vein mineralization hosted by shear zones and outlined by altered host rocks and geochemical anomalies.

In 2019 Axum applied for, and was granted, the Meli exploration license, which surrounds the area of Ezana's small mining license area and Ezana's two small exploration licenses covering the Central and Western gossan zones.

Previous work on the Meli concession has focussed on surface sampling and drilling of exposed gossanous oxide zones that have long been the focus in the region. In contrast, the authors and the Axum joint venture team strongly believe that more than 80% of the Meli area remains under-explored for its potential to host economic mineralization, and that much of that potential exists in shallowly covered and as yet untested zones. The Axum team has already identified primary targets for further exploration and the results of that exploration between 2019 and the present day are described in Section 9.0 below.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

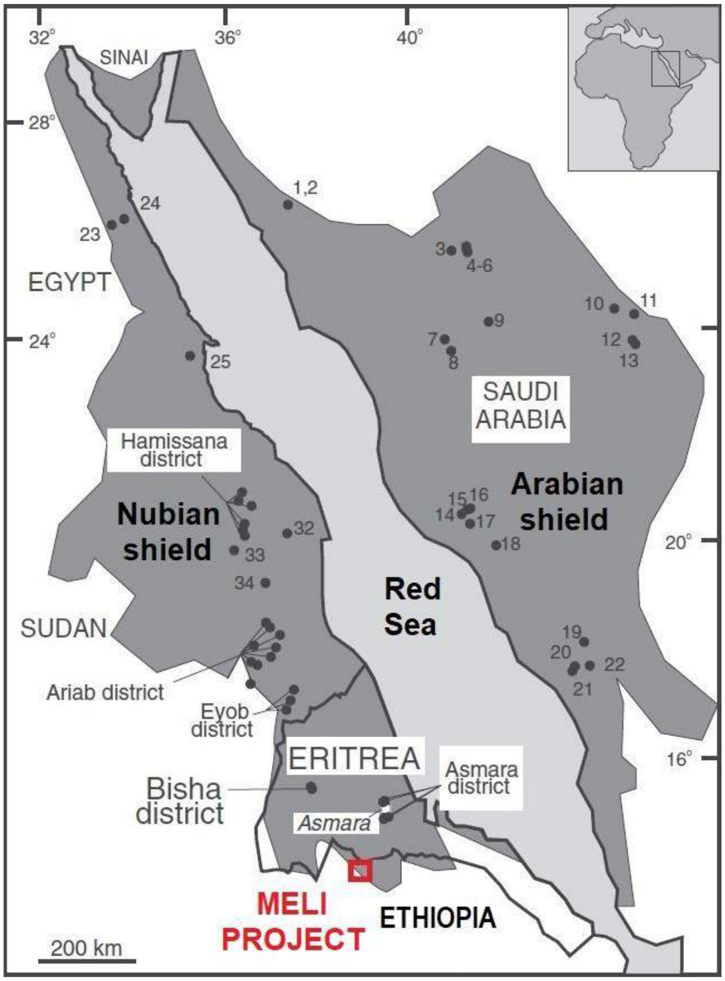
7.1 Regional Geology

The Neoproterozoic Arabian-Nubian Shield (ANS) represents a composite granitoid-greenstone belt terrane that straddles the Red Sea and covers much of Eritrea and the northern part of Ethiopia, as well as parts of Egypt, Sudan and the western part of Saudi Arabia (Figure 7-1). About 25% of Ethiopia is underlain by the western, or Nubian, portion of the ANS. The ANS is geologically similar to other granitoid-greenstone shield terranes such as those found in Canada and Australia, which contain significant VMS and gold deposits (Barrie, 2004). More than 60 VMS deposits are known within the ANS as illustrated by the dots on Figure 7-1 (Barrie, 2007). The most significant with respect to the Meli project are the nearby deposits of the Asmara and Bisha districts in Eritrea.

The ANS is recognized as a mixture of distinct Precambrian tectono-stratigraphic terranes believed to have converged and amalgamated between 870 Ma and 650 Ma in a manner similar to accreted magmatic arc terranes. This amalgamation, deformation, metamorphism and uplift culminated in the Nabitah orogeny which was accompanied by intrusion of late- to post-tectonic granitoids, and partially covered by overlap assemblages deposited in rift basins. The ANS subsequently separated into two with the rifting and opening of the Red Sea which began around 26Ma. During this period the ANS was locally covered by subaerial flood basalts.

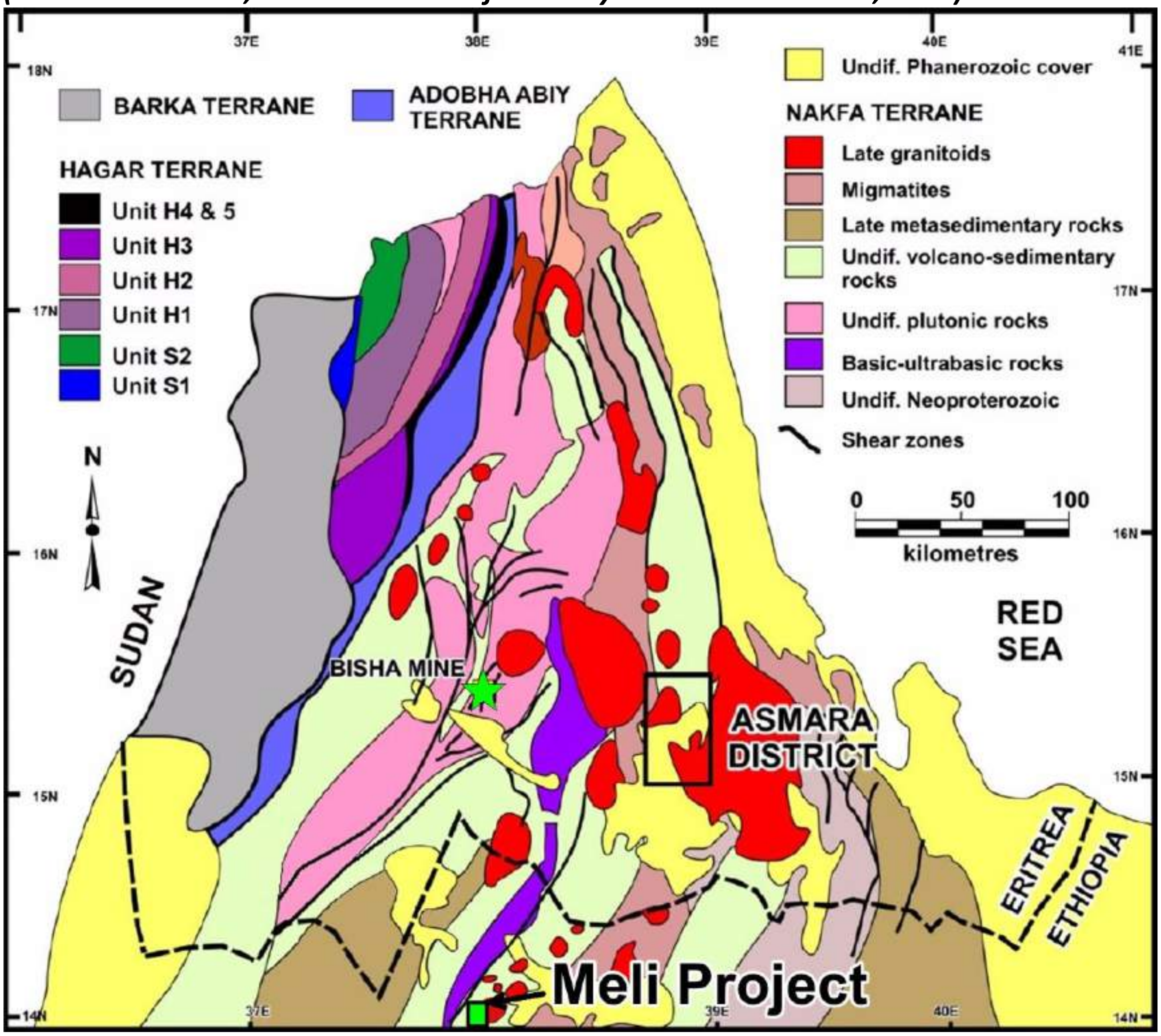
Figure 7-1 Arabian-Nubian shield & VMS deposits (Source: Barrie et al., 2007)

(Dots represent locations of more than 60 VMS deposits within the shield)



Four tectono-stratigraphic terranes are identified in the ANS in Eritrea (Figure 7-2) (Barrie et al., 2007). The westernmost Barka terrane comprises predominantly metasedimentary rocks of amphibolite to granulite facies. The Hagar terrane is made up of basaltic and siliciclastic rocks including minor mafic-ultramafic blocks; while the narrow Adobha Abiy terrane comprises highly deformed and metamorphosed sedimentary and carbonate rocks. The Nakfa terrane underlies much of the central part of Eritrea and is made up of mixed volcanic and metasedimentary (siliciclastic and carbonate) rocks. The Nakfa terrane also contains the Asmara greenstone belt VMS deposits and the Bisha VMS deposit. The Nakfa terrane extends southerly into the northern part of Ethiopia and comprises the area covered by the Meli property (Figure 7-2). Meli is underlain by the same units of volcanic and volcano-sedimentary rocks as the Asmara VMS district, located about 160 km to the northeast. The convergence and amalgamation of the four regional belts of oceanic and island arc rocks resulted in deformation, metamorphism, uplift, and a late- to post-tectonic granitoid intrusive event.

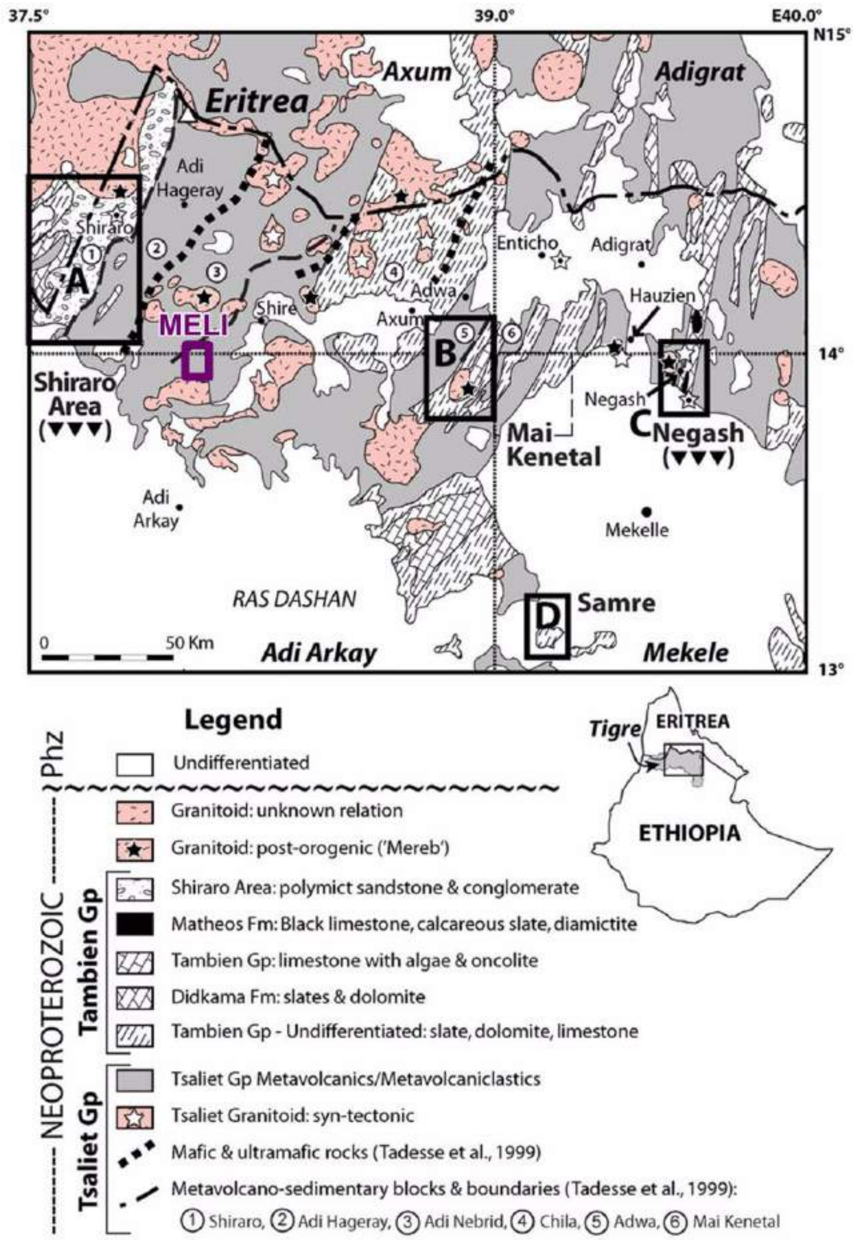
Figure 7-2 Meli Project geological setting with relation to Asmara district and Bisha mine (Source: Archibald, 2014: Redrawn after Drury and De Souza-Filho, 1998)



7.2 Local Geology

The project area is found in the southern part of the Nakfa Terrane which has been further subdivided into a number of tectonically and stratigraphically distinct blocks within one of which, the Adi Nebrid block, the majority of mineral occurrences are located. It consists of a northeasterly striking, steeply dipping, low grade sequence of basic to intermediate flows, pyroclastics, minor rhyolite and various epiclastic sediments of Neoproterozoic age. A number of granitoid intrusive complexes cut the layered rocks and have locally deformed the enclosing layered rocks. This block cuts through the area of the Meli property which is primarily underlain by Tsaliet Group metavolcanic and metavolcaniclastic rocks (Figure 7-3).

Figure 7-3 Geology of the Meli region (source: Miller et al., 2011)



The diversity of lithologies within the Adi Nebrid block is a function of the collapsed back-arc basin geological setting of the area. This setting is postulated due to the presence of cycles of mafic and felsic volcanic and volcanoclastic rocks, syn-volcanic intrusions, and the occurrence of deep and shallow water sediments (Archibald et al., 2014). The area underwent significant deformation during destruction of the back-arc basin resulting in the development of isoclinal and recumbent folds as well as thrusts and shear faults. A period of crustal thickening followed, resulting in the emplacement of late orogenic granitic bodies.

Tadesse (1997) conducted geological studies over the area covered by the Axum map sheet directly to the north of the Meli concession. He suggested that the shear zones between the blocks bear evidence of early pervasive shortening, which was progressively followed by late sinistral strike slip movements. Such structural sequences are also common in the accreted terranes of Arabian-Nubian Shield (ANS) and are consistent with field mapping, indicating that the area has a characteristic of an intra-oceanic island arc tectonic setting.

7.3 Property Geology

The following section has been summarized from a private company report by Ezana Mining Development (Geological Report of Meli Area, September, 2009) which describes the dominant lithologies present in the Meli concession area. The major rock groups can be correlated in the text with Figure 7-4. The geological mapping was focussed on the area of known mineralization at the Meli gossans (Figure 7-5), however, the general geological observations can be applied to the Property as a whole.

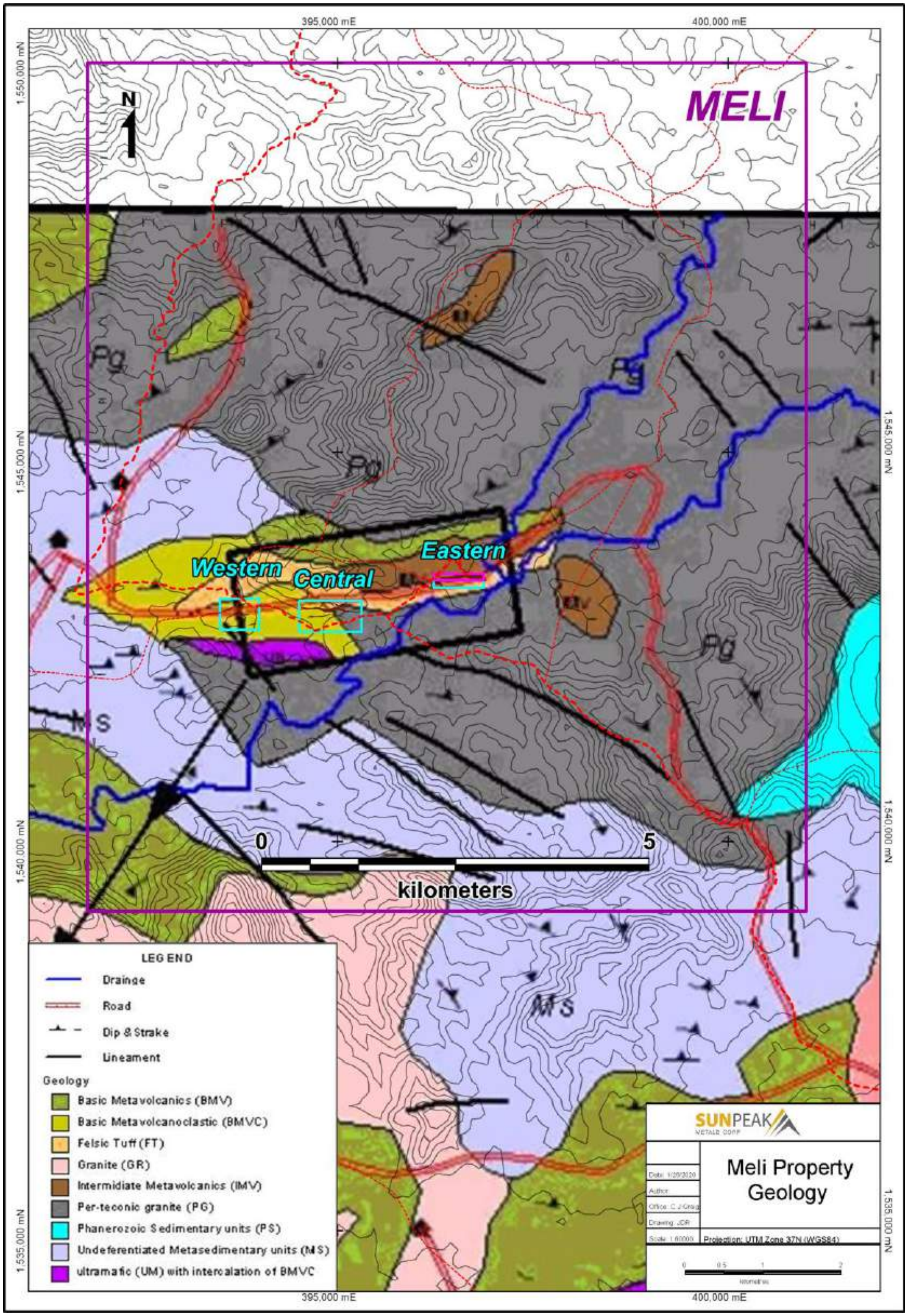
The area is underlain by mafic to felsic metavolcanic rocks, quartzite, ultramafic rocks and foliated granitoids. Regional mapping has identified that there is a repetition in the volcanic stratigraphy from felsic to mafic dominant. Detailed mapping at prospective localities has identified that the packages are a complex sequence of inter-layered extrusive and local intrusive rocks that, on occasion, include minor chert horizons. The extrusive rocks can include tuffaceous and volcaniclastic sequences. VMS prospects occur more commonly within felsic or intermediate rocks, typically near their contact with mafic rocks, including at the Eastern Meli gossan VMS prospect in the south-central part of the Property. Regionally, at VMS prospects, banded iron formation (BIF) and chert horizons have also been found, and jasperoid alteration is common. Detailed descriptions of the lithologies, structures, metamorphism, alteration assemblages and mineralized zones in the study area are presented below.

7.3.1 Stratigraphy

Mafic Metavolcanic Rocks

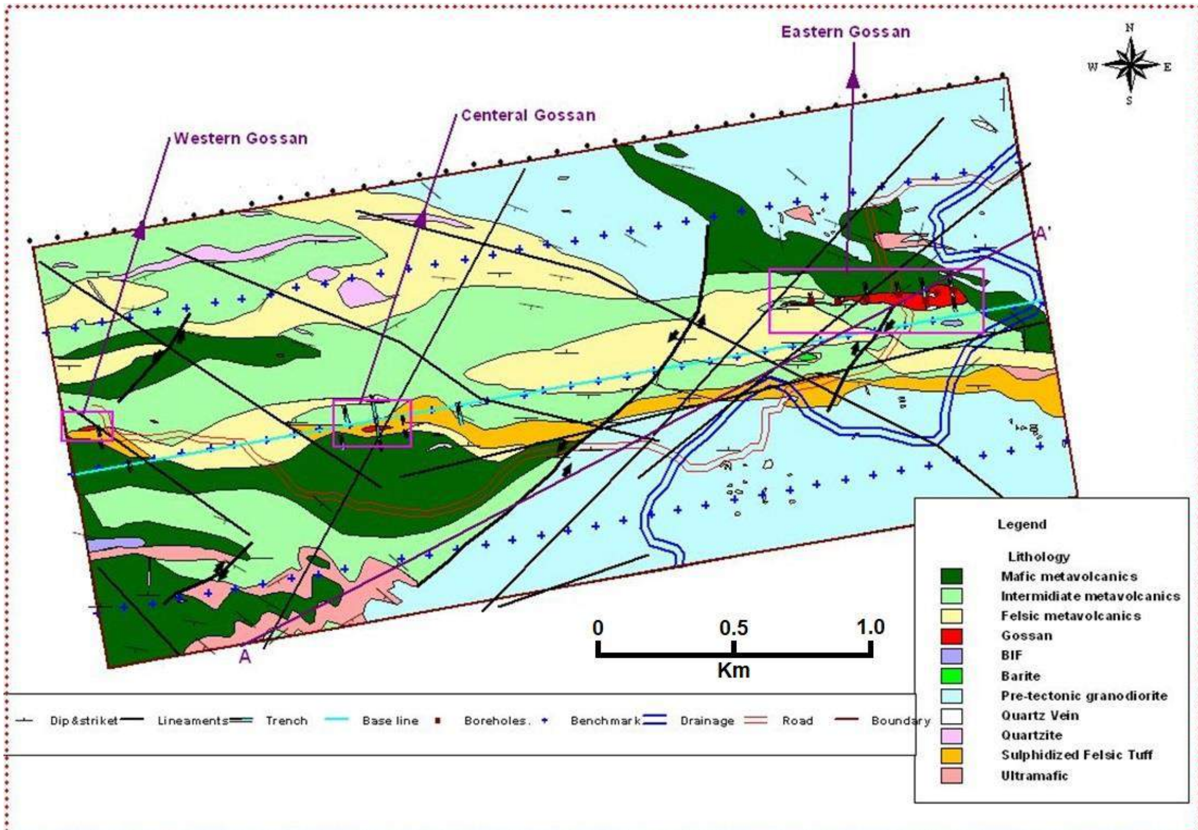
This unit (BMV, BMVC) is exposed as attenuated, dispersed blocks and roof pendants within foliated, possibly syn-tectonic granodiorite bodies and is locally found in contact with felsic and intermediate metavolcanic rocks, such as in the Meli gossan area. The common foliation within the rocks strikes E-W and dips moderately to steeply to the south. The mafic metavolcanic rocks include flows, agglomerate and volcaniclastic rocks. The flows are metamorphosed and now largely represented by chlorite-feldspar schist, which appear as lenses within mafic tuff, and in which randomly oriented needle-like tremolite-actinolite crystals can be observed in places. Sulphidation has been observed along narrow highly strained silicified zones within these rocks.

Figure 7-4 Meli property geology



The tuffaceous (fragmental) rocks range from light to dark green and are basaltic in composition. They are commonly comprised of silicified and epidotized rock fragments within a matrix of chlorite, amphibole, feldspar and epidote. The size of the fragments varies from a few millimeters to about 10 centimeters in long dimension. The fragments have elliptical to sub-rounded shapes and show alignment due to flattening and local stretching into the common foliation. Epidotized fragments appear as clots and stringers and locally the rocks host concordant veins and veinlets of quartz that typically display chloritic selvages.

Figure 7-5 Geology of the Meli gossans area (source: Ezana private company report, 2009)



Intermediate Metavolcanic Rocks

Exposures of this unit (IMV) are relatively small and scattered within the area mapped. They are most commonly identified in the Meli gossan area, where they are in contact with felsic and mafic tuff. The rock is grayish green in colour and the fine to medium grained rocks range from massive to well foliated, with the massive variety occurring as blocky outcrops. The rocks are composed largely of quartz and chlorite as a groundmass to coarser grained mafic minerals; local lenticular to radiated actinolite grains were noted. The intermediate metavolcaniclastic rocks are typified by lithic to quartz-rich clasts, and in places, concordant veins and veinlets of quartz with chlorite-rich selvages were noted. Foliation in the Meli gossan area swings from an E-W strike on the west to one which strikes to the SE on the east; dips are generally steep (approximately 70^o) and to the S and SW. Relict primary sedimentary structures are represented by bedding and are locally still preserved in the rock, suggesting deposition in a subaqueous environment.

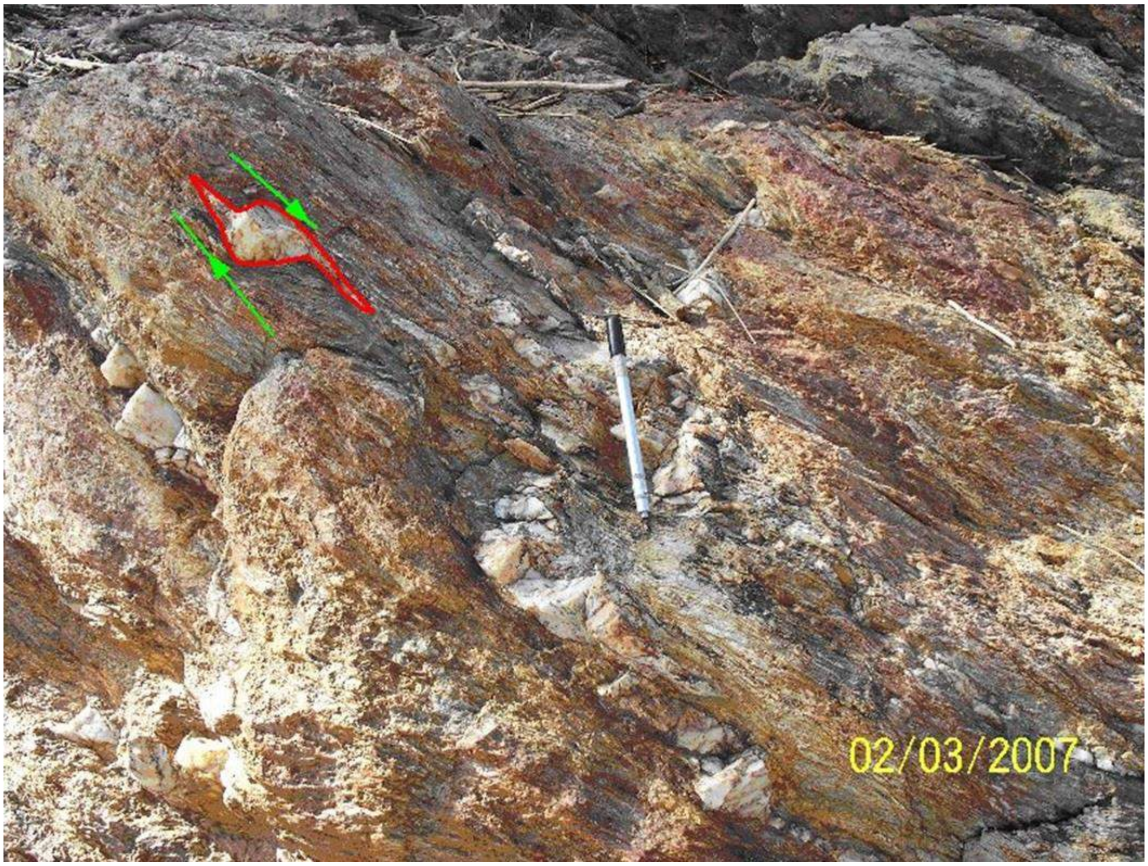
Felsic Metavolcanic Rocks

This unit (FT) is a felsic crystal tuff or flow that occurs mainly as a long narrow belt adjacent to basic and intermediate metavolcanic units in the central part of the study area. The Central and Western Meli gossans are closely associated with this rock type, with the most conspicuous feature being it's unevenly and variably distributed grains of quartz "eyes", which vary from fine to medium and even locally coarse grained and constitute about 10% of the rock. The quartz eyes occur in a fine grained matrix of quartz, feldspar and sericite. They are sub rounded and elliptical in shape, are glassy, and are white to bluish in colour. The rocks typically weather an orange-brown colour, and are buff, white or pale grey on fresh surfaces (Photo 7-1). In places, particularly close to the gossans, the felsic tuff is more chloritic and the rock may take on a green hue. The typically strongly foliated parts may locally display a crenulation cleavage and commonly display variegated colours, ranging from reddish brown, to white-grey and locally, dark brown. Toward the gossan, the content and size of the quartz eyes appears to decrease, possibly due to intense shearing and comminution of individual crystals. Kaolinization of these rocks may locally be prominent, and the felsic rocks are also commonly cut by abundant quartz veins. As is the case for the intermediate metavolcanics rocks, foliation in the Meli gossans area swings from an E-W strike on the west to one which strikes to the SE on the east, and dips are generally steep (approximately 70°) and to the S and SW. Petrographic examination of a sample of felsic tuff revealed the following modal abundance: quartz (65%), calcite (15%), chlorite (10%) and pyrite (10%). The rocks show well developed schistosity outlined by fine grained quartz, calcite and chlorite in anastomosing bands which wrap around the euhedral to subhedral quartz phenocryts, which show wavy extinction, likely resulting from deformation.

Quartzite

Outcrops of this resistant rock type are found in the Meli gossans area, where they extend discontinuously along east-west trends and underlie the low hills in the area (Figure 7-5). The rocks occur in association with magnetite-rich BIF and they contain pyrite and iron oxides. They display variegated colours such as white, light to deep purple, yellow, and light to dark grey. In the Eastern gossan zone the quartzites are found in association with felsic tuff and intermediate metavolcanics as concordant to locally brecciated, 1-2 meter thick bands which pinch and swell (meso-scale boudinage) on the outcrop-scale. The quartzite layers appear to be syn-depositional, and their association with magnetite-rich BIF suggests that they may be exhalative in origin.

Photo 7-1 Foliated sulphidic felsic tuff cut by quartz veins (boudinaged quartz suggests dextral movement along the foliation)



Metasedimentary Rocks

An undifferentiated metasedimentary unit (MS) extends southeasterly across the southern part of the Property. In that area the unit is primarily fine grained, occurring as fissile strongly foliated phyllitic rocks with locally apparent bedding. The phyllitic rocks are comprised mainly of quartz and muscovite, with local graphite, and are gray, black or pale red in colour. The phyllitic rocks are commonly cut by aplitic dikes and quartz veins.

Ultramafic Intrusive Rocks

This unit (UM) is exposed in the southern part of the Meli gossans area. The rocks are comprised of variable amounts of talc, pyroxene, serpentine and chlorite. They typically display well developed schistosity that is outlined primarily by the talc and chlorite components. Minor pods of serpentinite and pyroxenite are included, and morphologically, the rocks form narrow chains of small bodies which occupy both tops and saddles of topographic relief. The talc schist is light grey to cream coloured and is locally coated by black manganese oxides, while the talc-chlorite schist is light to dark green in colour. The talc-bearing rock frequently contains coarse pyrite cubes and less commonly contains magnetite. Regionally, the ultramafic rock occurs in association with metavolcanic and metasedimentary rocks that have been interpreted to be part of a thrust nappe and have been interpreted to represent the southwestern continuation of the Meda Kemtse Ultramafic Melange of the Adi-Nebried Block.

Granitoid Rocks

The granitoid unit (Pg) that has been mapped in the north part of the Property has not been described in the Ezana report. It is believed to be a continuation of an extensive granitoid unit mapped by Tadesse (1997) in the Axum map sheet to the north. The granitoid rocks contain pendants, screens, or “mega-xenoliths” of metavolcanic rocks. Recent mapping by Tigray Resources (Archibald et al., 2014) has shown the area of Tadesse’s granitoid to be underlain mainly by mafic and felsic metavolcanic rocks that contain abundant bodies of quartz eye porphyritic felsic rocks. These are typically aligned parallel to stratigraphy and may in fact be volcanic flows—the suggestion is that there may be greater exploration potential within these mapped bodies than previously realized.

Granodiorite that is exposed to the southeast of the Property encompasses xenoliths and roof pendants of metavolcanic rocks. The granodiorite is variably foliated and its contact with the adjacent belt of metavolcanics rocks appears to be structural. The rocks are grayish in colour and contain medium grained eyes of quartz contained in a matrix of quartz, feldspar, sericite, chlorite and minor amphibole. A number of concordant to discordant veins and veinlets of quartz, along with a variety of dykes may be observed in this unit.

7.3.2 Structural Geology

Ezana (2009) reported that lithologies and associated gossans of the study area show multiple phases of deformation. Moderately to well-developed foliations (S1), variably described as phyllitic and schistose, are the most prominent and recognizable structural element in the area. The foliation is best displayed in the fine grained felsic, intermediate and mafic metavolcanics rocks and is less well-developed in the granitoid rocks. The general strike of the fabric in the Meli gossans area is E-W with slight deviation to WNW-ESE, while dips range from moderate to steep (45^o to 70^o) to the south. In other parts of the region, including the northern part of the Property, the foliation has a relatively consistent NE strike. Suggestions have been made previously that this may indicate that the Meli gossans area lies in the hinge of broad regional-scale fold.

Local variations in the orientation of the foliation in the Meli gossans area have been interpreted by Ezana (2009) to represent antiforms and synforms, with axial planes following the general E-W trends of the foliation. These interpreted folds are suggested to be isoclinal and to have tight rounded hinge zones that have been transposed by later structures. The Eastern Meli gossan has been interpreted by Ezana (2009) to lie within the hinge zone of a fold and the Central and Western gossans are interpreted to lie on the attenuated and sheared limb of the same fold.

Kinematic indicators were suggested by Ezana (2009) to support a structural regime of regional thrust tectonics, with an up-dip sense of tectonic transport to the north, with associated planar fabrics tightly folded. Thrusting was also interpreted to be manifest as elongated epidotized fragments, by the presence of mineral lineations, by attenuated quartz veins, and by stacked and possibly repeated sheets of mafic and felsic tuff.

A later phase of deformation was interpreted by Ezana (2009) to have produced broad upright folds characterized by undulating axial surfaces generally striking NE-SW, and dipping very steeply to the SE. Ezana (2009) interpreted these folds to have transposed the S1 fabric and earlier tight (F1) folds and thrust planes.

A final phase of deformation was interpreted by Ezana (2009) to be manifest in shear zones, such as that which was noted at the contact between the metavolcanic rocks and the granitoid body interpreted to have been emplaced during tectonism. There Ezana (2009) noted a schistose to phyllonitic fabric striking to the NE (050^{o}) and dipping steeply to the SE. Asymmetric (rotated) ptygmatic folds of quartz veins were interpreted to suggest a dextral sense of displacement on the shear zone (Ezana 2009). Such strike-slip structures, and others striking to the NW-SE and NNE-SSW, and with both dextral and sinistral apparent displacements, were interpreted by Ezana (2009) to form conjugate sets that may have displaced earlier structures. Similarly, relatively late semi-ductile to brittle deformation may also be manifest in the region as sulphidized zones associated with quartz veins and veinlets, and as brecciated to boudinaged quartz veins, such as at the Eastern Meli gossan.

7.3.3 Alteration

Previous researchers have reported that the Precambrian rocks of the ANS have been metamorphosed to lower greenschist facies. Tadesse (1997) outlined regional and contact metamorphic belts in the metavolcanic and metasedimentary rocks of the Axum Sheet to the north. In the Meli area, the mafic and intermediate metavolcanic rocks contain calcite-actinolite-epidote-chlorite-quartz assemblages, while the felsic metavolcanic rocks commonly contain sericite and quartz. The metamorphic mineral assemblages, and principally the micaceous minerals, have governed the planar fabric of the rocks, which are represented by slaty, phyllitic and schistose textures.

Various types of hydrothermal alteration assemblages have been recognized in the area, with sericitization, chloritization and silicification being the most common, especially in close proximity to VMS- or orogenic gold-style mineralization. Kaolinization and epidotization appear to be less extensive or more weakly developed. A classic alteration pipe in VMS deposits has a sericite-chlorite-quartz-pyrite rich margin and a quartz-chlorite-sulphide rich core (Galley et al., 1999), and this may be the assemblage that is locally present in the Meli gossans area.

Sulphidic zones generally contain both sericitic and chloritic alteration, with one or the other being more dominant, and perhaps most influenced by host rock composition. Sericitic alteration is pervasive in the strongly deformed and commonly sulphidized felsic metavolcanics rocks and is noted along the contact of the Central and Western Meli gossans. Kaolinization is intimately associated with sericitization and is localized in the central part of the sericite zone, suggesting that it might represent a progressive alteration product of sericite. In bore-holes and trenches at the Eastern Meli gossan, the felsic metavolcanic rocks consist largely of chlorite and disseminated sulphides. This assemblage is typical of footwall chlorite alteration in VMS deposits. Elsewhere in the more felsic lithologies, the presence of cherty layers within quartz-feldspar-sericite schist has been interpreted to represent silicified zones or primary siliceous exhalative layers (Ezana 2009).

Weak epidotization has also been observed at some outcrops of the mafic metavolcanic rocks, particularly as an alteration product in the common fragments in agglomerate (coarse fragmental rocks). Adjacent to the Eastern Meli gossan epidote alteration can be intense and may even occur as massive zones.

In addition to the silicate alteration assemblages described above, a variety of oxide minerals may be associated with the weathered sulphide bodies that outcrop in the Meli area. These include iron oxides (goethite, hematite, jarosite, specularite), hydroxides (limonite), manganese oxide (pyrolusite) and hydrated copper carbonates (malachite and azurite).

7.4 Mineralization

Mineralization on the Meli property is primarily observed as surficial iron oxide minerals (goethite, limonite) hosting gold and minor base metals. Beneath the better developed and more massive gossans, in a number of the deeper diamond drill holes, precious and base metals-rich VMS-style massive and semi-massive sulphide mineralization has been intersected. The surficial gossan material is generally deep brown to red in colour, locally varying to yellow (Photo 7-2). Vuggy and boxwork textures are locally created by leaching of sulphide minerals, and disseminated, layered or laminated, wavy and grooved hydrated silica (chert/jasper) has also been noted within the gossan. Milky, glassy, iron-stained and brecciated veins and veinlets of quartz also occur, and are commonly concordant with the gossans. Ghosts of weathered sulphide minerals may also be observed as disseminations and fine stringers in the typically strongly foliated, sericitized and kaolinized felsic metavolcanic rocks which commonly occur adjacent to the gossans. Borehole drilling and geophysical surveys have defined the zones of strong oxidation beneath the gossans as occurring to an average depth of 30 meters in the Eastern gossan and, at a depth of possibly up to 75 meters in the Central and Western gossans.

The sizes and character of the Meli gossans vary considerably. The better-known Eastern gossan zone extends for approximately 650 meters along strike, is 80 meters across in its eastern part, and approximately 1 meter wide near its western end (Figure 7-5). The trend of the mineralization is concordant with the E-W trends in the host rocks; the gossan and underlying sulphide mineralization dip steeply to the south.

The Central gossan has a strike length of approximately 100 meters and the surface width varies from 1 meter to 5 meters. The trend varies from E-W to NE along strike and the mineralized zone appears to dip steeply to the south. Layering, quartz and primary or secondary sulphide minerals are not observed in the Central gossan. The results of sampling from the Central gossan were not available to the authors.

The Western gossan has a strike length of approximately 100 meters and the surface width varies from 1 meter to 6 meters. The trend varies from E-W to NE along strike and like the other mineralized zones, the Western gossan zone appears to dip steeply to the south. Brecciated quartz and banded white chert with concretion-like zones of yellowish and deep brown hydrated silica/jasper are found within the gossan, but as with the Central gossan, primary or secondary sulphide minerals and bedding are not apparent. Results of sampling from the Central gossan were similarly not available to the authors.

Photo 7-2 Gold-enriched oxide gossan at Eastern Meli gossan zone

Malachite and azurite occur very rarely in the surface gossans, which suggests that most of the original *in situ* copper (and zinc) has been leached out of surficial oxide zones. The copper and zinc may have been re-deposited within supergene zones at depth, and since it forms significant grade concentrations in the nearby Eritrean VMS deposits, potential supergene zones represent attractive and little-tested targets in the Meli region.

The presence of gold in gossan material at the Eastern Meli gossan zone has long been known, with the majority of drilled gold-bearing mineralized intercepts on the Property coming from there. In addition, mining has been ongoing at the Eastern Meli gossan since 2017 (see Section 6.0). Drilling of the gossan has yielded some excellent intercepts in the gossanous material, such as in percussion drill hole RVH-07, which returned 39.51 g/t Au over 12 m. Most of the holes at the zone were drilled only in the oxide cap, however a number of the few deeper holes have intersected massive sulphide mineralization, returning very encouraging values such as 4.2% Cu, 0.7% Zn, 1.5 g/t Au, and 37.1 g/t Ag over 17.4 m (hole RH-DH-01, 28.65-46.05 m).

Drill logs for these holes were not available to the authors, but a study by Samuel et al. (2015) of the Meli VMS mineralization in drill core and in thin section has provided descriptions, which have been summarized as follows. Petrographic work by Samuel et al. (2015) of core samples identified a sulphide mineral assemblage that includes pyrite, chalcopyrite, sphalerite and galena in varying proportions. Pyrite is the most abundant sulfide. It has well developed fractures that are filled by other sulfides, particularly chalcopyrite and galena. Chalcopyrite, sphalerite and gangue minerals are also intergrown with pyrite crystals and are also locally found present as inclusions within pyrite. Chalcopyrite was the only copper mineral observed, and bornite, covellite and chalcocite, which may reasonably be expected in a supergene enriched zone, were not found in the samples examined by Samuel et al. (2015). Sphalerite was locally found to have been replaced by chalcopyrite and by later pyrite. Galena occurs as a minor phase, and is found as inclusions in pyrite and chalcopyrite as well as in the fractures within early pyrite. Samuel et al. (2015) determined that the base metal values were similar to those in the primary massive sulfide mineralization at the Bisha VMS deposit in Eritrea, and they classified the mineralization as Cu-Zn (+Au)-rich. Samuel et al. (2015) also determined that the major oxide values from the rocks hosting the sulphides indicated that the volcanic rocks varied considerably, but overall suggested that the volcanism was bimodal, and comparable to that of the metavolcanics rocks of the Adi Nebrid Block that host Eritrean VMS deposits in the region to the north, which has been interpreted to have been deposited in an island arc setting.

Samuel et al. (2015) further observed that the base metal sulfide mineralization was somewhat recrystallized, fine to medium grained, massive and lensoidal in nature, and that two or three lenses were present in the area drilled. To date, with very limited drilling, only a single lens has yielded intersections suggestive of truly significant thicknesses and, so far, that lens appears to be approximately 20 m thick and to occur over a minimum strike length of 200 m. This larger body appears to lie along stratigraphic contacts, between either mafic metavolcanic rocks (MMV) and intermediate metavolcanic (IMV) or metavolcaniclastic (IMVC) rocks, or between flows of IMV and IMVC. It is clear that the sulphide body follows the trend of the host rocks, that the contact is quite sharp, and that alteration is quite conspicuous in the host rocks close to the contact. In contrast to the Eastern Meli gossan, gossanous surface exposures and the few drill intersections described from the Central and

Western zones suggest that those zones are relatively thin and discontinuous, at least close to surface.

While exploration below the shallow oxidized zones at Meli has been limited, the sulphide zones therein are expected to resemble those at the nearby Terakimti VMS deposit, located approximately 45 km to the north-northeast. At Terakimti, the sulphide mineralization has been more completely tested, and it bears characteristics common to VMS-style mineralization worldwide. Such characteristics are described in more detail below, in Section 8.1 of this report. Sulphide bodies at Terakimti fit many of these characteristics and are described by Archibald et al. (2014) as being comprised largely of massive to sub-massive fine-grained pyrite that has been overprinted by interstitial and fracture-related chalcopyrite and low-Fe sphalerite, along with rare galena. Gold and silver occur along with the pyrite, or in banded sulphide layers and in local high-grade stringer zones (Archibald et al., 2014). Exhalative siliceous iron formation appears to occur at the periphery of the mineralized zone.

From what is known of the sulphide mineralization encountered to date on the Meli project, it also has similarities in style to VMS-type mineralization. The tenor of base and precious metals mineralization is similar, as are the mineralogy, the bimodal host rocks, and the alteration assemblages. In addition, the weathering of the sulphide horizons, as well as the related mineralogical and metal zonations are similar to those of the Asmara area deposits in Eritrea, which are located approximately 170 km to the northeast. One of the authors (Greig) mapped those deposits between 2006 and 2008, and while the intent of this report is not to suggest that the Meli gossan zones will yield similar resources, the geological setting is similar, as are other characteristics, and the potential for significant VMS-style mineralization is clearly evident. The VMS deposits at Asmara have been described as bi-modal mafic type, hosted by metavolcanic and metasedimentary rocks, and while barite is a commonly associated mineral that has not yet been described at Meli, the Asmara deposits have a hematite/goethite gossan cap at surface that ranges in vertical thickness to a similar depth as at Meli (i.e., up to 50 m), and that can extend up to 1500 m in strike length (Sunridge Gold technical reports). At the Asmara area deposits, a supergene zone ranging up to 30 m in thickness carries chalcocite, covellite, digenite, bornite and tennantite, while the hypogene primary mineralization below the supergene zone most commonly consists of pyrite, chalcopyrite, ± galena.

Orogenic gold veins represent another potential target at Meli. They have been discovered in nearby areas and are commonly hosted by the same metavolcanic rock units as those found on the Property. To date, no significant gold-bearing veins have been located at Meli, although concordant quartz veins and veinlets occur within the metavolcanics rocks, the gossans and in the granodioritic rocks. Sheared, boudinaged and locally brecciated veins and veinlets are also found locally within the sulphidized felsic tuff adjacent to gossans. The veins commonly exhibit a glassy texture and a milky colour and locally contain oxidized remnants of sulphide minerals. And while little systematic sampling of the veins has occurred to date, anomalous gold concentrations have been returned from some of the veins.

8.0 DEPOSIT TYPES

Two deposit types are currently under exploration at the Meli property; volcanogenic massive sulphide (VMS) and orogenic lode-gold mineralization.

8.1 Volcanogenic Massive Sulphide Deposits

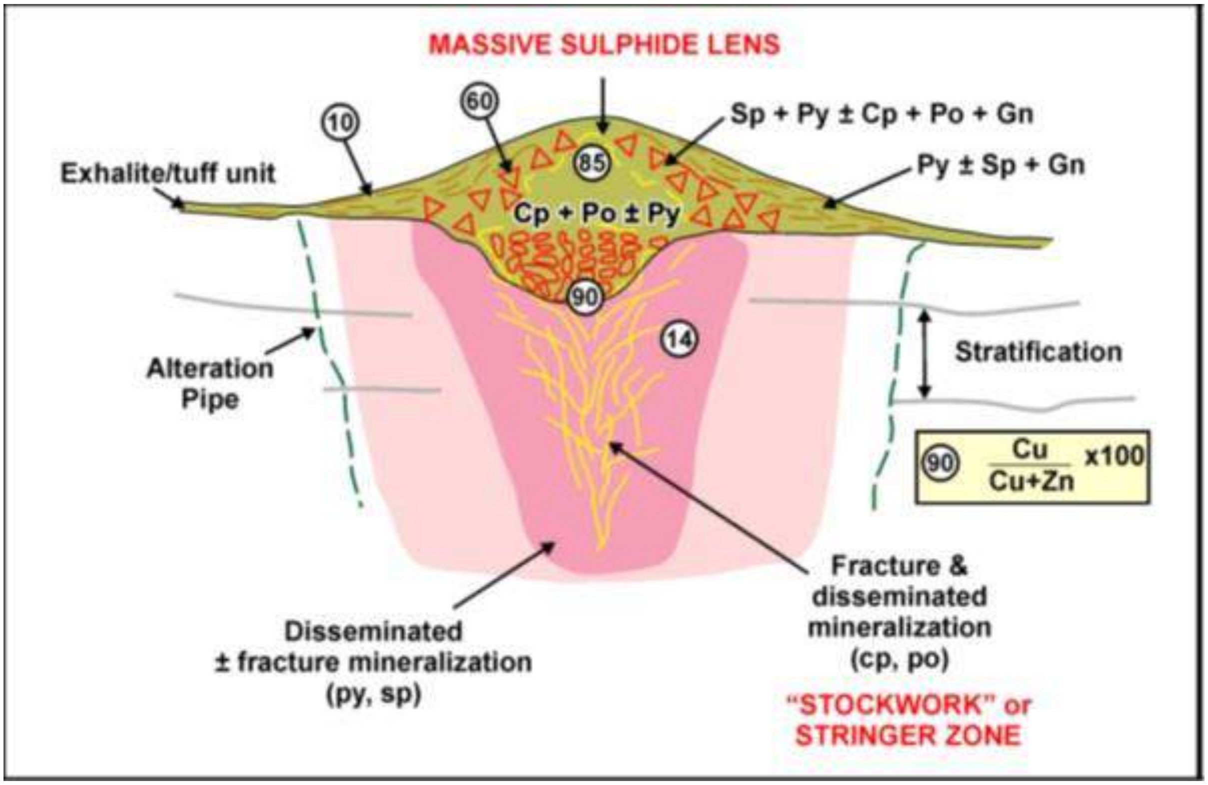
VMS deposits are predominantly stratabound accumulations of sulphide minerals that precipitate from hydrothermal fluids on or below the seafloor in a wide range of ancient and modern geological settings. In modern oceans they are synonymous with sulphurous plumes called black smokers.

VMS ore deposits formed in close temporal association with submarine volcanism and are formed by hydrothermal circulation and exhalation of sulphides onto the sea floor. They occur within environments dominated by volcanic or volcanic derived sedimentary rocks, and the deposits are coeval and coincident with the formation of the host rocks. As a class, they represent major sources of copper, zinc, lead, gold and silver in a high grade, low tonnage ratio.

The Arabian-Nubian shield hosts more than 60 VMS deposits (Figure 7-1). The Meli project area covers lithologic units similar to those that host the precious and base metal VMS deposits located nearby at Debarwa and Emba Derho in the Asmara district, 170 km to the north-northeast (Sunridge Gold Corporation) and the Bisha district, 180 km to the north-northwest (Nevsun Resources Ltd). All three deposits are located in the Nakfa Terrane. The Bisha deposit is currently in production and as of Dec, 2016 had Proven plus Probable mineral reserves of 9.6 million tonnes at 1.1% Cu, 6.2% Zn and 0.7 g/t gold (Bisha Mining website). The Emba Derho deposit has Proven plus Probable mineral reserves totalling 50 million tonnes with primary sulphide grades of 0.7% Cu, 1.6% Zn and 0.3 g/t Au, as well as a significant percentage of supergene mineralization averaging 1.0% Cu, 0.4% Zn and 0.3 g/t Au (Asmara Project Feasibility Study, 2013).

The VMS mineralization in the Asmara district has been variably described as Kuroko-type (Chewaka and DeWit, 1981) and as bi-modal mafic type (Hannington, 2009), with mineralization hosted within volcanic and metasedimentary rocks deposited in a back arc basin. Generally VMS deposits contain footwall mineralization consisting of quartz-chalcopyrite stringers (stockwork), overlain by primary bedded (stratiform) sulphides composed of pyrite, chalcopyrite, ± sphalerite, ± galena, ± barite, ± tetrahedrite/tennanite. In some deposits the stratiform massive sulphide lenses makes up the entire economic deposit, whereas in other deposits large quantities of ore are also mined from the stockwork zone. The stratiform sulphides are typical overlain, or grade laterally into, an iron-rich silica facies that is usually manifested as a banded iron formation (BIF). The stockwork zone beneath these deposits is the conduit through which the hydrothermal fluids rise and consists of vein sulphide mineralization. Hydrothermal alteration forms a pipe around the stockwork zone and grades from an inner chloritized zone to an outer sericitic zone. A schematic model of active VMS formation, alteration and mineralization is presented in Figure 8-1.

Figure 8-1: Schematic model for active VMS mineralization showing principal alteration and mineralization types (source: Gibson et al., 2007)



Notes: Idealized VMS deposit showing a stratabound lens of massive sulphide overlying a discordant stringer sulphide zone within an envelope of altered rock (alteration pipe). Base metal zonation indicated by numbers in circles with the highest numbers being Cu-rich and the lower numbers more Zn-rich (Py = pyrite, Cp = chalcopyrite, Po = pyrrhotite, Sp = sphalerite, and Gn = galena. Source: Gibson et al. (2007)

Surficial weathering of VMS mineralization results in the primary sulphides forming secondary, supergene minerals such as chalcocite, covellite, digenite, and bornite. The surface manifestation of a weathered VMS system can range from sulphide minerals partially replaced by oxides, to the total leaching of metals with the exception of silica and iron to produce a hematite-goethite gossan. Gold is an inert metal and may become concentrated in the oxide cap that commonly overlies a VMS sulphide body. VMS deposits usually consist of several mineralized lenses that can attain thicknesses up to 50 m and strike lengths up to 1500 m (Galley, 2004).

Exploration for VMS mineralization generally consists of the following techniques: geological mapping to identify prospective volcanic and volcaniclastic rocks, which typically show intense hydrothermal alteration close to the mineralized center; geochemical surveys to identify elements (Cu, Zn, Pb, Au, Ag, etc) indicative of mineralization; geophysical surveys to identify contrasts in magnetic, electrical conductance, and gravity measurements; trenching and drilling to identify, then delineate mineralization.

Gibson et al. (2007) have listed some of the parameters for targeting VMS mineralization:

1) Deposits commonly occur in clusters that define VMS districts. VMS districts occur within large volcanic edifices, calderas and crustal structures.
2) Some of the largest deposits (> 50 MT) may be associated with a major long-lived crustal structure, or with thick successions of volcaniclastic rocks, or occur in more stable rifted continental margin settings. The large deposits tend to be associated with widespread, low temperature alteration systems, felsic volcaniclastics and thin, but laterally extensive Fe and Fe-Mn formations.
3) Deposits associated with mafic dominated terranes tend to be Cu and Cu-Zn endowed. Continental margin or successor rifted arc-hosted deposits with felsic volcaniclastic-sedimentary host rocks have a higher Pb-Zn endowment.
4) Strongly metamorphosed deposits commonly found in Archean or Proterozoic terranes tend to have coarser grained sulphides and consequently metal recovery is commonly better than for the finely crystalline sulphides in some less metamorphosed districts. Recrystallization can also mechanically “purify” deposits of metals such as Hg, As and Sb.

8.2 Orogenic Gold Deposits

Orogenic gold deposits dominantly form in metamorphic rocks in the mid- to shallow crust (5–15 km depth) in compressional settings that facilitate transfer of hot gold-bearing fluids from deeper levels. The term “orogenic” is used because these deposits likely form in accretionary and collisional orogens (Groves et al., 1998).

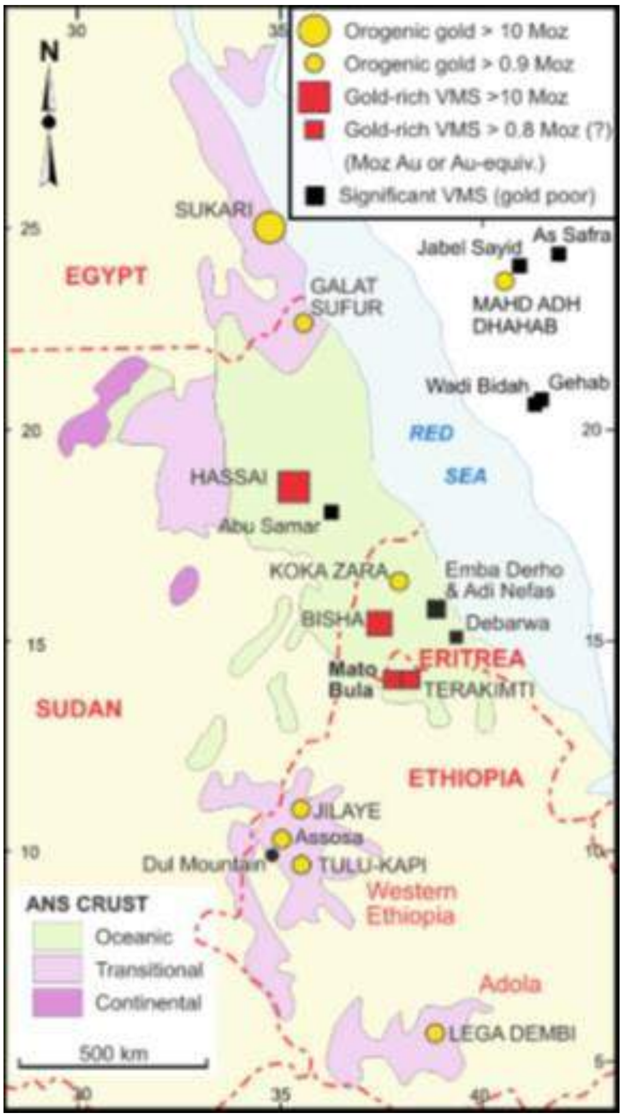
A predominance of lode gold deposits are sourced from metamorphic rocks because it is believed that most derive the gold by dehydration of mafic rocks during metamorphism. Deep-seated hydrothermal fluids containing the gold were then transported up faults, whereupon the fluids underwent rapid decrease in temperature and pressure causing precipitation of the gold, along with quartz gangue, in fractures.

The Arabian-Nubian Shield is a significant gold producing area with numerous orogenic gold deposits, many of which have supported small artisanal workings and a few that have achieved commercial production (Figure 8-2)

The prolonged tectono-magmatic evolution of the Arabian-Nubian Shield involved continental collision, the formation and accretion of island-arcs, extension, orogenic collapse and voluminous magmatic activities. High strain NNE to NNW trending brittle–

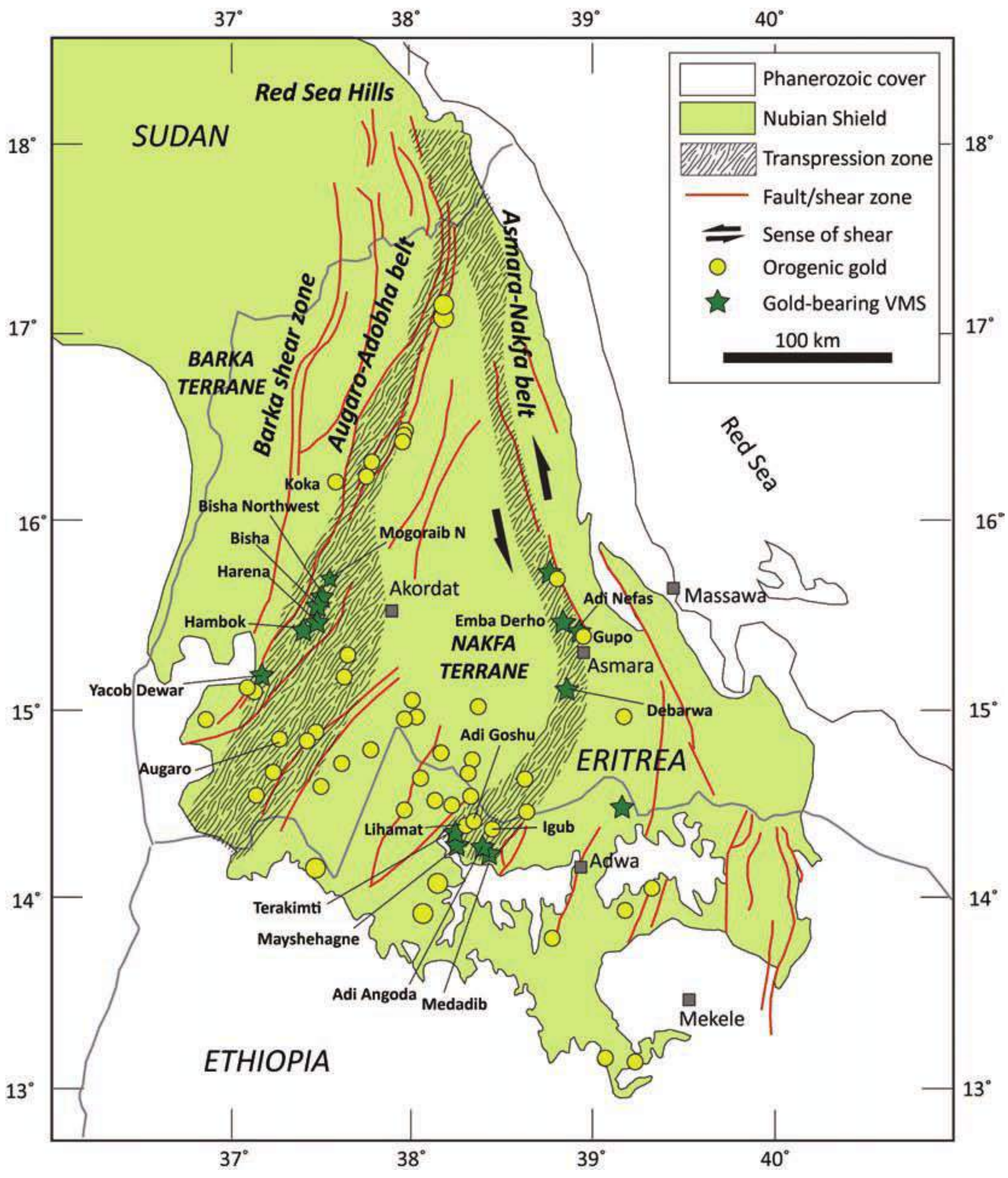
ductile shear zones conformable with major fabrics of ANS terranes are dominant in the shield. It is suggested that some of these shear zones that contain dismembered ophiolitic suites represent the major suture zones between terranes (Stern et al., 2004). However, others are strike-slip faults and belts of shearing and folding that have modified older sutures. Studies have shown that the later types of shear zones are known to host numerous VMS-type polymetallic and orogenic gold deposits and occurrences.

Figure 8-2: Gold-rich VMS and orogenic gold deposits of the Arabian-Nubian shield (source: Horan et al., 2018 Da Tambuk, East Africa Metals)



Within the Nakfa terrane in Eritrea and northern Ethiopia the Augaro-Adobha Belt (AAB) and the Asmara-Nakfa Belt (ANB) (Figure 8-3) are the two main transpressional strike-slip shear zones, along which many important mineral deposits occur. Both the world class Bisha VMS and Koka orogenic gold deposits are located in the AAB metallogenic belt. Semibrittle shear zones developed synchronously along axial planes of isoclinal folds are also common structures in the greenschist metamorphic rocks. Syn- to late-tectonic granitoid magmatic rocks intrude along the ductile shear zones as elliptical rigid bodies. These magmatic rocks are dominated by granite, granodiorite, and diorite, accompanied by finer-grained intrusions and quartz porphyry. The ANB zone changes direction to the south of Asmara, trending toward the Meli project area 170 km to the south-southwest where similar Neoproterozoic rocks are exposed with potential for occurrences of orogenic gold, such as at Igub and Lihamat, as well as VMS-style mineralization.

Figure 8-3 Ethiopia-Eritrea major transpressional belts and gold deposits (source: Johnson et al., 2017)



The host rocks for orogenic gold deposits in the shield range from graphitic mica schist and ultramafic rocks (Lega Dembi, Ethiopia), to granitic stocks (Sukhaybarat East, Saudi Arabia), and along granite contact zones (El Sid and Umm Rus, Egypt). Other host rocks from the area include metamorphosed mafic lavas, volcaniclastic tuff, phyllites and deformed granodiorites. All of the mineralization is epigenetic, and is present in a variety of forms, such as quartz-rich veins, pods, veinlets, stringers, stockworks, and breccias. Vein mineralogy is dominated by quartz, carbonate (calcite, dolomite and siderite), pyrite, arsenopyrite and pyrrhotite, and wallrock alteration is typically comprised of sericite, chlorite, and carbonate.

Many gold vein occurrences are noted in the district near the Meli project, where widespread artisanal workings have produced gold on a small scale. Gold is associated with shear hosted quartz veining and often occurs in association with sulphides within the quartz. The lode dimensions and orientation are varied across the terrane although most are oriented approximately N-S, parallel to the main trend of the orogeny. Individual veins range from a few centimeters up to 3 m in thickness and may occur within sheeted zones that can be 10’s of meters wide and up to hundreds of meters long. Typically the ore minerals are pyrite, arsenopyrite and pyrrhotite.

In Saudi Arabia, grades average 2.5 g/t Au at the Sukhaybarat East deposit and 3-4 g/t Au for veins in the Al Wajh district. Some small southern Saudi Arabian vein systems are much higher grade such as Ad Duwayah at 11 g/t Au and Bi’r Tawilah at 14 g/t Au. Parts of the vein system at the Zalm mine grade near 100 g/t Au, although grades typically average between 2.5 and 12.5 g/t.

The Koka mine, which began production in 2016 in northwest Eritrea, is an example of the type of target being sought at the Meli project. At Koka a 20 to 30 m wide by 600 m long zone of shear-hosted quartz stockwork veining is found within microgranite. Based on 137 drill holes a NI43-101 compliant probable reserve of 4.6 million tonnes averaging 5.1 g/t Au has been outlined, containing 760,000 oz of gold (Zara Mining company website). The bulk of the resource is shallower than 150m depth and is currently being mined by open pit.

Exploration for orogenic lode mineralization generally consists of the following techniques: geological mapping to identify prospective host rocks, structural features (faults and shear zones), alteration, and the presence of sulphide or oxide minerals; rock or soil geochemical surveys to identify pathfinder elements such as Cu, Zn, Pb, Ag, As, Sb and W that are often associated with gold; geophysical surveys to identify concealed faults zones; and drilling to identify, and then delineate gold mineralization.

9.0 EXPLORATION

Gibson et al. (2007) discussed the various geophysical and geochemical exploration techniques that have been employed successfully in discovering VMS deposits.

1) Combined airborne electromagnetic and magnetic surveys and borehole TDEM surveys have been the primary tools in discovery of many VMS deposits.
2) Ground gravity surveys have been successful for first detecting, then delineating the shape and size of undiscovered orebodies.
3) Airborne gravity surveys are becoming more common for both a mapping and direct detection tool.
4) Other nontraditional geophysical techniques such as magnetotellurics and Titan 34 IP-MT surveys have shown early promise as deep search techniques.
5) Rock geochemistry has traditionally been used to define, map and vector within VMS alteration zones, to differentiate volcanic rock types, and to develop a chemo-stratigraphy that aids stratigraphic correlation and tracing of favorable ore-hosting units.
6) Lithogeochemical samples from outcrop are collected systematically in order to provide a database for effective geochemical targeting. On a broader scale, lithogeochemical sampling is directed at recognizing extensional arc and back arc environments and regional alteration.
7) Soil (or vegetation) samples are collected to define targets in areas of overburden cover. A suite of elements are analyzed that include the target elements as well as pathfinder elements that may be associated with mineralization or alteration zones.

Similar techniques can be useful in exploration for orogenic gold deposits; however they typically have less extensive alteration haloes than VMS deposits and due to sparser sulphide mineral content do not always produce strong geophysical contrasts with their host rocks. On the other hand, the shear zones that host the vein systems commonly do produce strong or well-defined magnetic and electromagnetic anomalies.

Many of the exploration techniques listed above have been implemented on parts of the Meli property by the Company and by predecessor companies that previously explored the ground. Sun Peak has obtained results of previous work wherever possible and compiled the results in their exploration database. Sun Peak has undertaken exploration work at Meli since 2018, which is presented in summary fashion below.

The Sun Peak Metals team (now with Axum) has previously applied the use of modern advanced exploration techniques successfully at both Bisha and the Asmara Project, located nearby in Eritrea. At Bisha the initial holes were drilled underneath the outcropping gossan but a 450 meter step-out targeting a blind geophysical anomaly was very successful, intersecting more than 160 meters thickness of VMS mineralization and demonstrated the economic potential of the Bisha Cu-Zn-Au-Ag deposit.

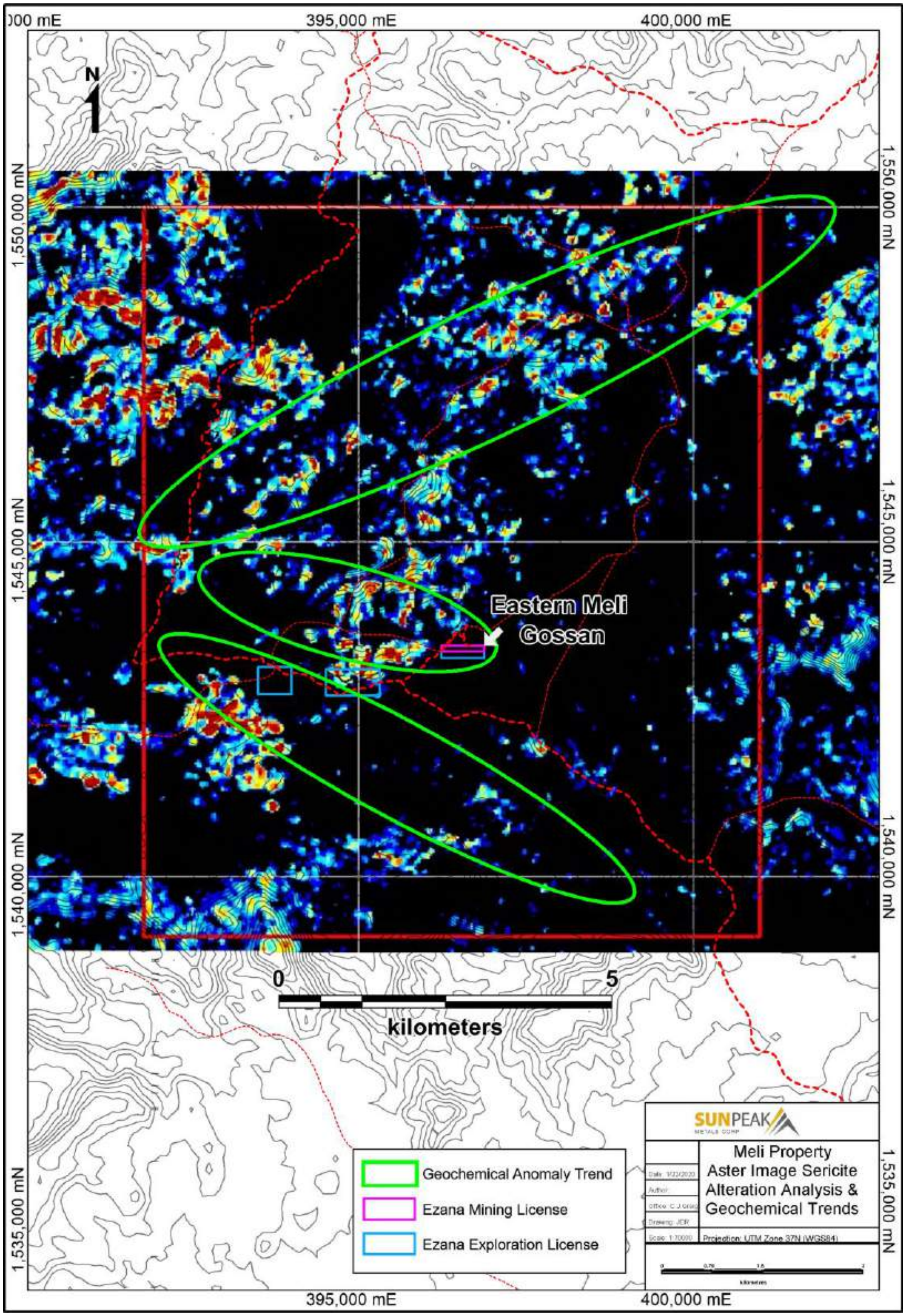
Likewise, at the Emba Derho Cu-Zn-Au-Ag deposit (Asmara project) in southern Eritrea, 5 separate operators since the 1960's had explored and drilled the large gossan zone with minimal success. In 2005, the present Sun Peak team (with Sunridge Gold at the time) applied the same modern exploration techniques, identifying a large geophysical anomaly offset from the gossans. The first hole targeting this anomaly intersected 206 meters of massive sulphides, which subsequently led to delineation of a sizeable mineralized body.

9.1 Meli Exploration

In 2018 and 2019 the Ezana-Sun Peak joint venture (Axum) compiled and re-interpreted maps and data from historic work at Meli, as well as conducting geological field visits to evaluate the targets derived from the re-interpretations. Historical data primarily consisted of results of work in the Meli gossan zones, and this included geological mapping, ground geophysical and geochemical surveys, and trenching and drilling. 20 man-days of office work were undertaken by two geological personnel during the 2 year period to collect historical data, to compile the data into acceptable format for GIS software use and to review the results, generating priority targets for field follow-up. 60 man-days of geological field evaluation were undertaken at several of the targets in 2018. $22,000 was expended during this preliminary stage of data compilation and evaluation.

In 2018 Axum contracted Aster satellite image analysis to Dirt Exploration of Cape Town, South Africa, who used high resolution imagery (0.5 meter/ pixel) to examine the Meli Exploration License area. The cost for purchase of the satellite imagery and the consulting fee for analysis and reporting totalled $3,800. Major alteration zones comprised of sericite, iron oxides, kaolinite, chlorite, biotite and/or alunite were detected. These are alteration types which may be associated to varying degrees with either VMS-style, orogenic shear hosted gold, or intrusion hosted gold deposits.

Figure 9-1 Aster image sericite analysis with anomalous geochemical trends

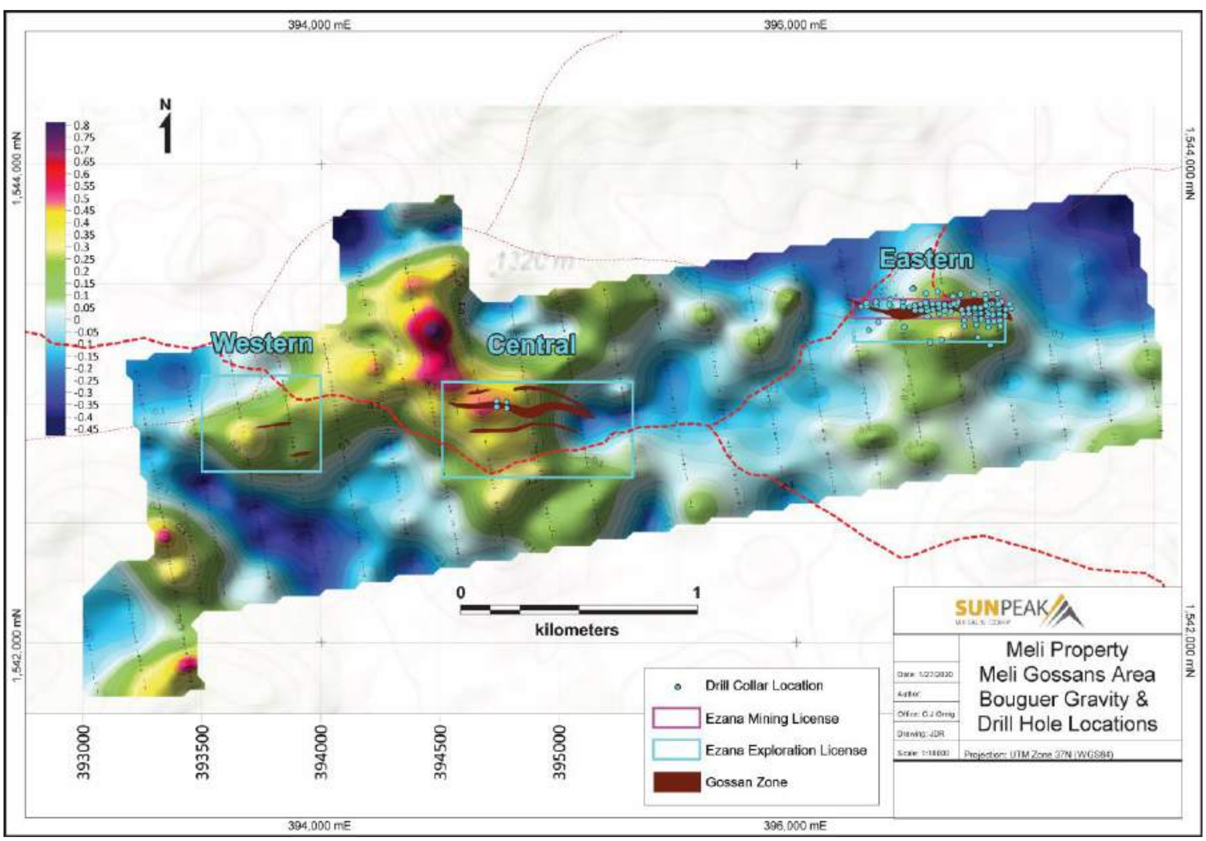


The Aster satellite work outlined a considerable number of areas apparently underlain by rocks affected by strong sericitic alteration. Figure 9-1 shows areas of potential sericite alteration, as well as outlines of areas containing anomalous Zn, Ag, Cu, Au in stream sediment samples. The stream sediment anomalies are discussed in Section 6.0 above, and it is apparent from the figure that there are several areas of concentrated sericitic alteration that coincide with anomalous stream sediment geochemistry. These represent excellent exploration targets, particularly those immediately west and northwest of known VMS-style mineralization at the Eastern Meli gossan zone.

Some of the highest priority Aster image targets have been followed up with geological mapping and prospecting traverses that were laid out to cross the main VMS zones and regional trends. $14,000 was expended for 20 man-days of geological work and sample analyses. These and other promising targets will continue to receive follow-up work.

In February, 2018 a detailed ground gravity survey was conducted by MWH Geosurveys at a cost of $56,000 over the 3.5 km long Meli gossans trend. The survey consisted of 2,000 gravity stations at 20 meter station intervals on grid lines spaced at 200 meters. The 4 km x 1 km grid covered the Eastern, Central and Western VMS gossan zones (Figure 9-2).

Figure 9-2 Meli gossans area with gravity anomalies (warmer colours represent higher gravity strength)



This modern gravity survey indicates that the strongest gravity anomaly coincides with the Central Meli gossan and extends to the NNW for approximately 700 m. It occurs within a much larger gravity high of moderate intensity that is continuous with that surrounding the Western gossan zone. Previously the Central gossan zone has been tested by only four drill holes. They were drilled between 2009 and 2012 and were located on the southeastern-most margin of the gravity high. Unfortunately, results from the holes are not available to the authors.

A moderate gravity high is also present to the south of the Eastern Meli gossan zone. It is approximately 500 m long in an east-west direction and is interpreted to reflect possible thickening of the sulphide body at the Eastern Gossan zone that is known from drilling to dip approximately 55° to the south from the surface gossan exposure. A down-dip projection to the center of the gravity high puts it at a dip length of about 175 m, well below the depth of previous drill holes at Eastern Meli. The Company has plans to test this down-dip potential with a number of drill holes in 2020.

In 2019 Axum commissioned Geotech Geophysical of Ontario, Canada to fly an airborne magnetic and VTEM electromagnetic survey across the entire Meli License area, covering 100 sq km at a cost of $197,000. Figure 9-3 shows the VTEM results, with strongly conductive areas shown in warmer colours (yellow, red and pink). A broad northwest-trending strongly conductive area crossing the south and southwestern parts of the concession appears, at least in part, to be mapping out a sequence which includes phyllitic metasedimentary rocks that are likely rich in graphitic horizons, which would be strongly conductive. Some of these strongly conductive rocks to the south of the Meli gossan zones coincide with a trend of geochemically anomalous stream sediment samples, and as a consequence these areas warrant further exploration. The presence of a similarly conductive unit to the northwest of the Western Meli gossan zone may also suggest that similar and possibly correlative rocks lie in the hinge of a regional-scale fold of uncertain overall orientation.

Another notable conductive feature is the strong conductor apparent near the eastern end of the Eastern Meli gossan zone. It may be an indication of the presence of massive sulphide mineralization that is known to underlie the gossan. Two areas of strong conductivity to the north of the Eastern gossan zone are likely caused by cultural anomalies, because they are located in the areas of the Ezana mill and camp buildings.

A number of weakly to moderately conductive areas fall within the extensive geochemical trend in the north part of the Property (Figure 9.3). These should be followed up with geological, prospecting and further reconnaissance rock and soil sampling. While this area has been mapped as being underlain by granitoid rocks, it also hosts a number of prominent Aster satellite alteration features and may be expected to be underlain by extensive areas of metavolcanic rocks which may be favourable hosts for VMS-style mineralization.

Figure 9-3 Meli concession with mineral showing areas and VTEM conductor anomalies (warmer colours represent higher conductivity)

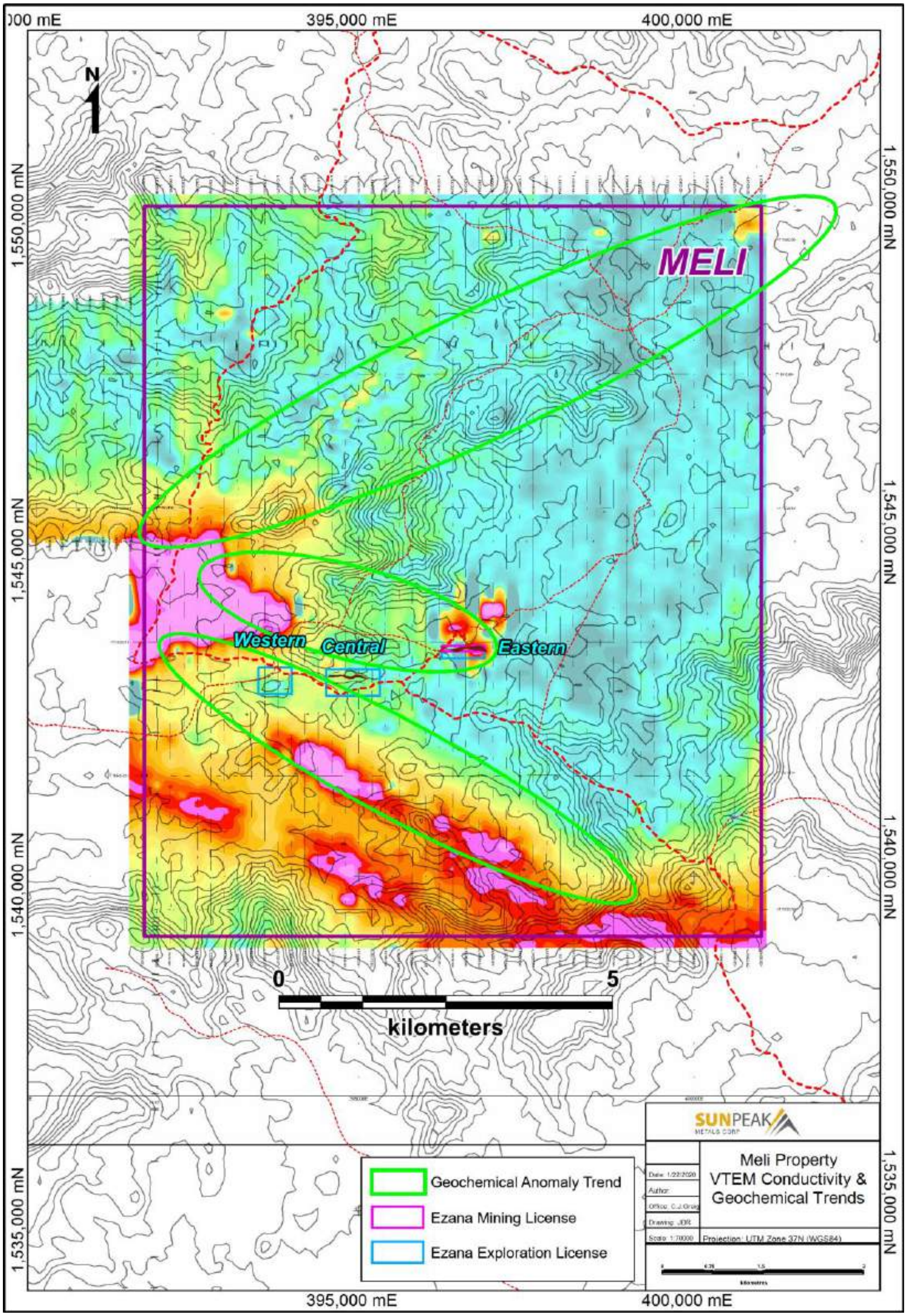
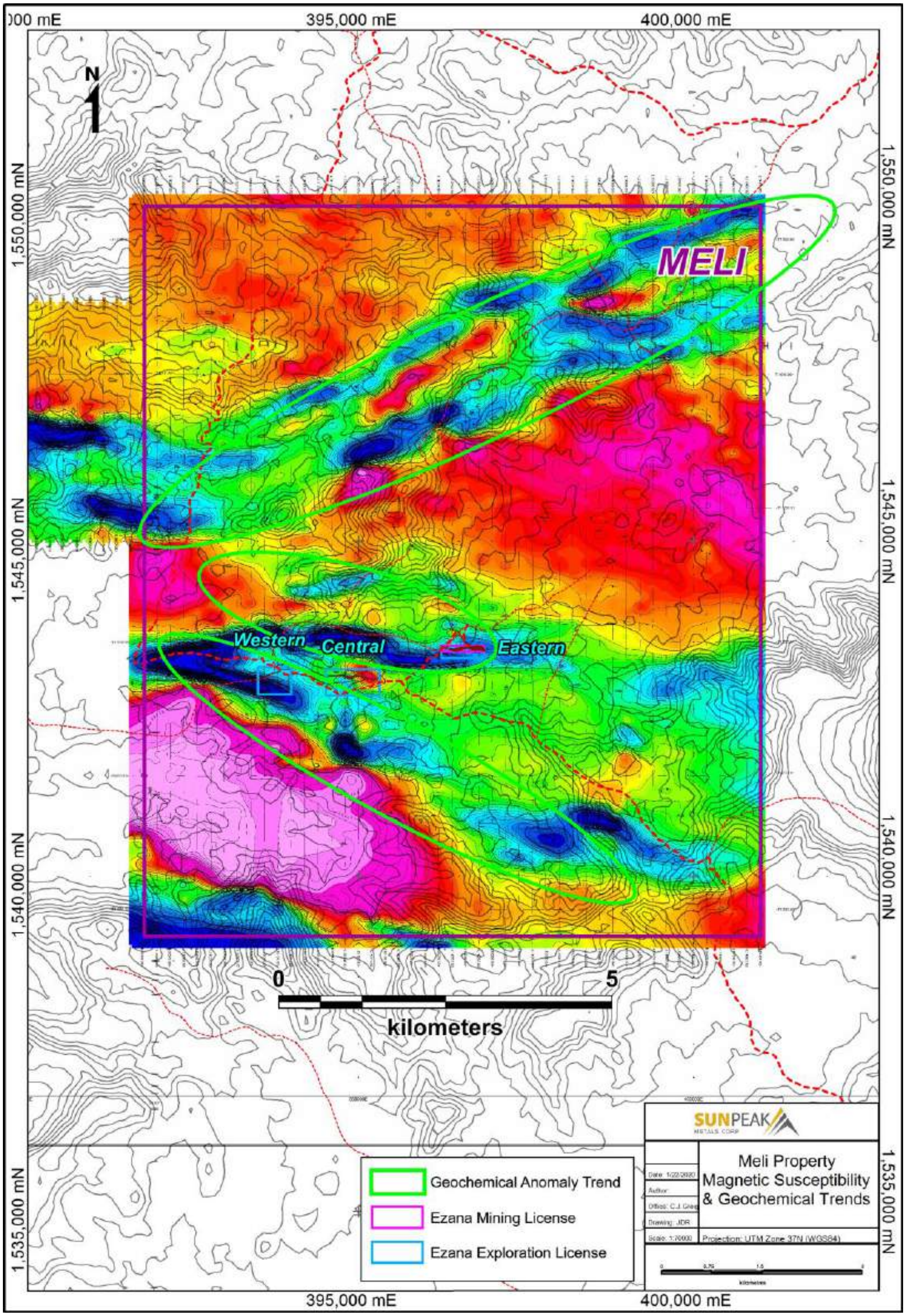


Figure 9-4 Meli concession with mineral showing areas and Magnetic anomalies (warmer colours represent higher magnetic intensity)



The magnetic susceptibility map generated by the same airborne survey flown by Geotech Geophysical (Figure 9-4) is considered by some to be less definitive than VTEM survey, but a number of features are worthy of note and deserve an improved understanding. For one, some of the most intense and continuous magnetic highs appear to correlate well with the conductive belts discussed above and interpreted to be underlain in part by phyllitic and graphic metasedimentary rocks. Another intriguing observation is that the two belts of relative magnetic lows display a positive correlation with the three main areas of anomalous stream sediment geochemistry, the one on the north with the decided east-northeast trend and the one on the south which is broader, less well-defined, and which encompasses the Meli gossans as well as both of the other areas of anomalous stream sediment geochemistry. In a general sense, might these areas best outline the areas underlain by belts of metavolcanic rocks with variable magnetic susceptibilities and with the highest exploration potential for VMS-style mineralization? In detail, exceptions to generalities such as these certainly do occur. For example, to the north of the Meli gossan zones an east-west trending magnetic high underlies the central part of one of the anomalous geochemical trends. The strongest Au, Ag, Zn and Cu values occur at the west end of that geochemical trend, which coincides with the highest magnetic susceptibility, as well as an area of high conductivity. This presents a very compelling exploration target that is worthy of follow-up.

What the airborne geophysical and satellite imagery surveys really suggest, particularly when considered in the context of the stream sediment sampling results and previous geological mapping, is that much of the Meli License remains ripe for exploration. To best direct this exploration, these data sets need to be integrated and used to generate targets for follow-up field-based surveys. Previous work has focussed largely on surface sampling and drilling of exposed gossanous oxide zones. The authors and the Axum team strongly believe, however, that much of the Meli concession area remains under-explored and excellent potential exists for new mineral discoveries at relatively shallow depths.

10.0 DRILLING

No drilling has been completed by the company.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

All samples collected by the Company on the Meli project are subject to quality control procedures to ensure industry best practices are utilized for the handling, sampling, transporting, analysis, storage and documentation of sample materials and their analytical results. The Company is planning to collect stream sediment and soil geochemical samples and grab samples from rock outcrop, to be followed by drill core samples.

Field samples will be geochemically analyzed for base metals and trace elements using a Niton Thermo Scientific XRF instrument owned and operated by Sun Peak Metals. This unit does not provide low level gold and silver analyses due to its high detection limit for these elements. Samples that show high values for base metals will be independently analyzed for gold and silver at a laboratory in Mekele or Addis Ababa.

For rock chip, soil and stream sediment samples, the Company has implemented standardized documented procedures for the collection, handling, preparation and analyzing by XRF unit, as well as the processing and digital cataloguing of the analytical results. The authors have reviewed the documentation and find that the procedures meet accepted industry standards. In-house analyses of samples using an XRF instrument provide sufficient accuracy for base metals (Cu, Zn, Pb) for reconnaissance exploration purposes. Any samples that will be used for purposes of resource calculations, such as surface channel rock samples or drill core will be sent to an accredited laboratory for analyses. As well, Standards and blanks will be submitted with the sample lots to the laboratory, following proper QA/QC procedures.

11.1 Sample Submission Procedures

When samples are dispatched to the laboratory, a complete sample submission form accompanies the samples detailing the sample number sequence, the elements required and the analytical methods to be used. After analysis the assay results are received electronically by e-mail or by hard copy from the assay laboratory. On reception of the assay results the samples are checked against the sample numbers on the submission form to verify the submitted samples were all analyzed according to instructions.

11.2 Sample Security

All samples are held at the Sun Peak secure warehouse in Shire prior to transport to the laboratory and sample pulps are stored in the warehouse following analysis. Transport to the laboratory located in either Mekele, or Addis Ababa, is by company vehicle.

11.3 Sample Preparation and Analysis

11.3.1 Preparation of Rock Samples

All grab rock samples from VMS gossans and gossanous exhalites are crushed and pulverized in a steel mortar and pestle, which are cleaned after every sample, by using steel brushes, rags and clean quartz sand wash. The pulverized material is sieved through a 200 mesh screen and approximately 250 grams of the sieved material is put into a plastic sample bag.

Samples are analyzed for 22 elements, including copper, zinc and lead with the Niton XRF unit.

11.3.2 Preparation of Stream Sediment and Soil Geochemical Samples

Stream sediment samples of approximately 6 kg weight are collected in the field as a single sample, which is dried and sieved into two size fractions. This includes a coarse fraction

(+75µ to -2mm) and fine fraction (-75µ), which are placed in separate bags. The fines are analyzed (see methodology below) using the Niton XRF unit and the coarse fractions are pulverized using a steel mortar and pestle to pass -75µ and analyzed using the same XRF method.

In the field, soil samples are collected and sieved to pass -2 mm to produce about 300 grams. The sample material is bagged in a kraft soil sample bag and air dried. The dried sample is pulverized by using a steel mortar and pestle to pass -75 µ and analyzed.

Analysis for base metals and trace elements is done with the Niton XRF instrument at the Shire warehouse. Gold and silver analyses are done at the Ezana laboratory in Mekele by 25g aqua regia digestion with ICP finish, having detection limits of 0.02 ppm for gold and 0.2 ppm for silver.

Niton Thermo Scientific XRF Analysis

The procedures for analysis of base metal and trace elements using the Niton Scientific portable XRF unit are as follows:

1. Fix the Niton XRF gun on the mobile test stand
2. Connect the Niton XRF to the computer using USB cable
3. On the computer launch NDTr program, wait until the system initializing is finished, next it will show the safety warning and proceed to the next step.
4. Every day run a system check
5. Once the system check is done select sample type (soil or rock)
6. Go to element range, make sure the main range and low range time is set to 60 secs.
7. To sort elements based on your preference go to advanced, then click on element sorting. It will show the list of elements in their current sequential order that you may change or add.
8. Go to the main menu and click on analyze
9. Click on data entry, enter sampling prospect, testing date and morning (M) or afternoon (A)
10. To set location use project name
11. On the inspector field put your name
12. Once every week before testing samples run the standards available in the lab to check calibration.
13. Open the test chamber on the top of the mobile test stand, insert the sample and close properly. Check on the computer screen to see the green mobile test stand sign indicating the test chamber is properly closed.
14. Click on the start button and wait for 60 seconds. When finished, flip the sample onto its other side and click start to repeat the analysis. Then after 60 seconds it will give you the average of the two tests.

15. On the Niton test note book record the date, your name, time of day (morning/ afternoon), the grid lines, sequence of sample numbers analyzed for that period, the starting number on the Niton and the total number of samples analyzed.
16. All elements analyzed are reported in ppm.
17. Precious metals analyses are done at an external laboratory.
18. To download data, first close the NDTr window, then open NDT program, click on download, then click on the test button to show that the hardware is successfully communicating and click OK.
19. Type a file name, click on query readings, then choose the soils done in the current session, then click on download and click done.
20. At the end of the session save your data on the external hard drive and keep it inside the safe lockbox.

11.5 Quality Control and Quality Assurance

Sun Peak has introduced external QA/QC procedures to monitor the accuracy and reproducibility of soil and rock geochemical sample data from XRF analyses, and to monitor the reliability of preparation and assay results from the laboratory. For all sampling programs, Sun Peak routinely inserts blanks, certified standards and field duplicate samples randomly into the shipments of samples.

12.0 DATA VERIFICATION

One of the authors (Greig) undertook various aspects of data verification both during a site visit, and also subsequent to the Project visit. No field exploration was taking place at the time of the visit.

- During the Project visit, the Meli concession area was investigated, including outcrops and historic trench and drill locations.
- With no active drilling taking place written core handling and sampling procedures were reviewed.
- Niton XRF soil geochemistry and standard soil sampling practices were reviewed and the authors were satisfied that good practices were employed at all times by the field crews.
- Personal verification of historic drill pad locations were made at Eastern Meli gossan zone on the Meli concession.

- Personal verification samples were not collected.

- The security of the warehouse core and sample storage areas was corroborated.

Since the time of the author's (Greig) visit to the Property in 2018 airborne magnetic and VTEM electromagnetic surveys were flown over the entire area of the Property. The authors have had access to all of the information from this recent geophysical work. The information has been included in this report and the authors have offered interpretations for some of the results in Section 9.1 of this report. The authors are of the opinion that there has been no substantive change in the geological understanding of the type of mineral targets on the Property or the potential for mineral discovery on the Property since the time of Greig's inspection.

Drill collar locations have recently been measured where possible by Company personnel using a handheld GPS unit. Logs for the historic drill holes are not available; however, Axum has recently acquired the drill core from the Eastern and Central Meli gossan zones for all of the holes that intersected sulphide mineralization beneath the oxide cap. The core is currently stored in the Company's warehouse in Shire and Company personnel will re-log the core and collect check samples that will be sent to an accredited laboratory. Two or three different certified standards will be inserted into the sample batches of core samples to reference Au, Ag, Cu and Zn, for both lower values and for higher values in the upper 1% range. This practice should be maintained for future drilling programs on the Property.

Reports of historic work commonly do not have verifying analytical certificates, since the samples were analyzed at an in-house laboratory or by portable XRF unit. Therefore, many of the geochemical anomalies previously identified will require check sampling and analyses. The Company plans to re-sample streams and soil samples that historically were reported to contain anomalous levels of gold, silver and base metals within the most prospective target areas.

Previous detailed geological mapping was conducted only in the relatively small area of the Meli gossans, whereas the remainder of the Property has seen only generalized and broad-scale mapping. The Company will be undertaking detailed geological mapping in the main target areas, as defined by geochemical and geophysical surveys.

Historical geophysical surveys, including magnetic, gravity and IP surveys, were restricted to the small area of the Meli gossans. The Company has recently flown the entire Property with a modern VTEM survey and will undertake detailed ground gravity surveys to follow-up the main targets.

Field work data collected by predecessor companies is primarily stored as Microsoft Excel files, Microsoft Word files, Adobe Portable Document Files (pdf), and image files, although some of the reports are incomplete, and may lack suitable maps or figures. Some of the previous information has been coupled with standard GPS location information to produce georeferenced maps and data for compilation and presentation in MapInfo GIS software, and Sun Peak continues to build on this GIS database, which was made available to the authors.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing has been carried out by the Company on mineralization from the Meli property.

14.0 MINERAL RESOURCE ESTIMATES

The Meli Property currently has no defined Mineral Resources. There is insufficient data to determine such an estimate.

15.0 ADJACENT PROPERTIES

Forty-five kilometers to the north-northeast of the Meli property, the Harvest project consists of 3 concessions that are 70% owned by East Africa Metals Inc., a Canadian company that is exploring the Terakimti VMS mineral deposit, on which they have reported an Indicated resource that includes a near-surface oxide layer containing 114,000 ounces of gold, with additional silver, as detailed in Table 15-1. Supergene gold and copper, and primary sulphide copper, gold and zinc resources that underlie the gold oxide zone are also included in the table.

Table 15-1 Terakimti mineral Resources estimate, David Thomas, P. Geo. (Effective Dates: Jan 17, 2014 and Oct 18, 2015)

Mineralization Class	Mineralization Type	NSR Cut-Off ($/t)	Contained Metals								
			Tonnes ('000s)	Cu %	Au g/t	Ag g/t	Zn %	Cu ('000 lb)	Au ('000 oz)	Ag ('000 oz)	Zn ('000 lb)
Indicated	Oxide		1,110	0.08	3.2	23.6		-	114	841	-
	Sulphide	23.9	1,841	2.2	1.06	17.5	1.65	89,477	63	1,033	66,871
	Sub-Total Indic		2,951					89,477	177	1,874	66,871
Inferred	Oxide		15	0.04	1.94	13.5		-	1	7	-
	Sulphide	23.9	2,583	1.09	0.96	20.6	1.42	62,187	80	1,712	77,101
	Underground Primary	63.9	939	0.69	0.84	15.2	2.92	14,198	25	459	60,358
	Sub-Total Infer		3,537					76,385	106	2,178	137,459

The Ethiopian Ministry of Mines, Petroleum, and Natural Gas granted East Africa Metals a Mining License in December, 2017 to mine the oxide portion of the deposit. Potential also exists to develop the supergene and primary sulphide resources following mining of the gold oxide zone.

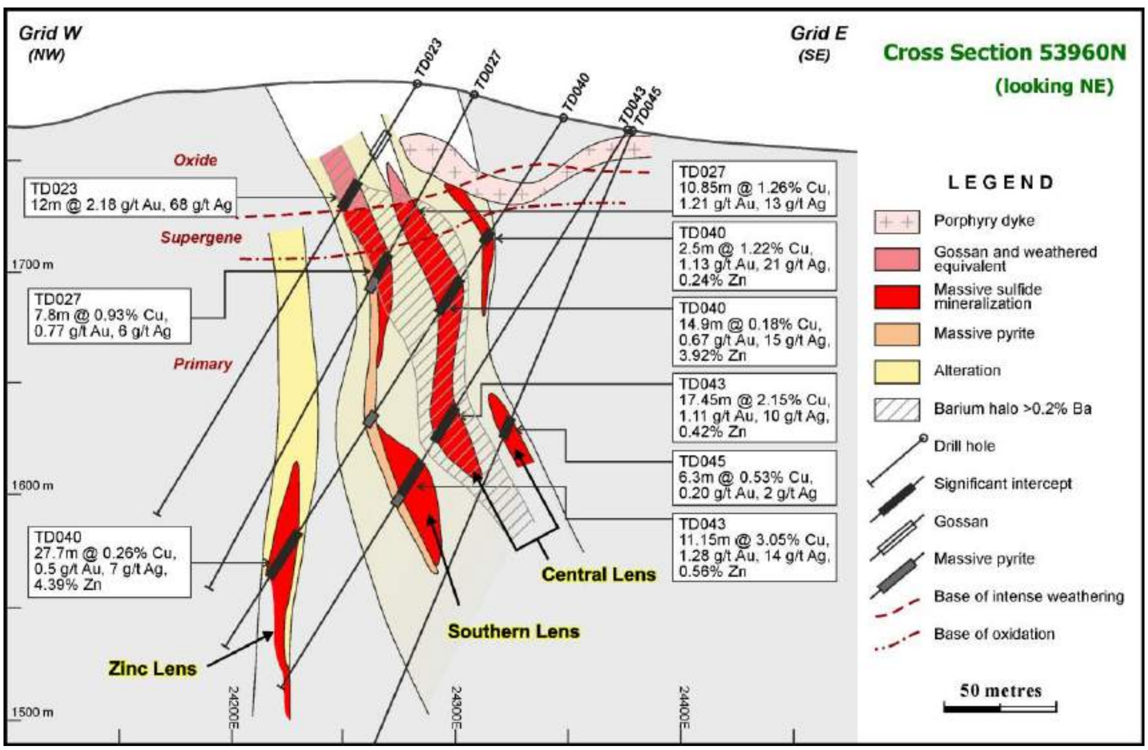
The Harvest project area is underlain by similar Neoproterozoic rocks to those that underlie much of the Meli project area. Lithologies are primarily made up of basalt, rhyolite, mafic- and felsic- volcanic tuff, shale and chert, which have been intruded by syn-tectonic quartz-feldspar porphyries, and later granite and minor gabbro.

The Harvest Project is reported to contain multiple trends of copper-gold-silver-zinc rich gossans that represent VMS horizons and numerous artisanal bedrock quartz vein gold workings on its three exploration licenses. The ground had not been subject to modern exploration until 2009-2010 when 12 holes were drilled at Terakimti by Jintai Drilling Limited. In 2011-2013 Tigray Resources Inc. became involved in a joint venture, drilling four prospects with 84 diamond drill holes totalling 17,765 metres, as well as undertaking heliborne VTEM, magnetic and radiometric surveys, ground-based gravity and EM surveys, collecting over 90,000 surface soil, stream and rock chip samples, and carrying out geological mapping.

The Terakimti zone was initially recognized by its outcropping gossans during geological mapping and prospecting. Geochemical and geophysical techniques helped to identify the mineral potential that was then tested by drilling. Soil geochemical concentrations of Cu, Pb, Zn and As defined a clear zonation of the VMS system.

The mineralization at Terakimti consists of four stacked lenses of bedded polymetallic (Cu-Au-Ag-Zn-Pb) massive sulphide over a strike length of 800 m (Figure 15-1). These lenses plunge to the northeast and the structure remains open down plunge.

Figure 15-1 Terakimti stacked VMS lenses in cross section view (source: Archibald et al., 2014)



Significant chlorite, sericite, and silica alteration is associated with the conformable mineralized horizons located in the contact zone between intermediate and felsic volcanic rock packages; quartz-eye volcanic rocks and intrusive rocks are also present in this altered zone. Gossanous iron oxide caps that have developed in the deeply weathered zones overlying the auriferous massive sulphide mineralization have been leached of copper and zinc, but have been enriched in gold and silver. Siliceous iron formations (exhalites) are noted at the periphery of the gossan area. The rocks have locally been affected by intense deformation and although folding is present, no large scale folds have been identified.

The Southern Lens is the thickest, at up to 50 m thick, 360 m long and up to 170 m wide (down dip dimension). The lens shows compositional zonation, with the basal 5 m composed of massive pyrite (with low base and precious metal values). The best intercept of the primary massive sulphide is at a depth of 57.45 m, with grades of 3.77% Cu, 1.31 g/t Au, 14 g/t Ag, and 0.72% Zn over 73.85 m (not true thickness) (hole TD004). Some of the higher grade gold enriched oxide intercepts include 8.8 m grading 9.19 g/t Au and 78 g/t Ag (hole TD029) and 6.1 m grading 27.2 g/t Au and 13 g/t Ag (hole TD053).

Shear zone hosted (orogenic) gold is also present on the Terakimti property, approximately 1.5 km to the west of the VMS trend. This area is known as the Ruwa Ruwa trend, and includes such prospects as Lihamat and Adi Goshu. At the Lihamat showings, extensive artisanal bedrock workings occur over a strike length of 225 m and the zone of mineralized veining is up to 50 metres wide, with shafts up to 15 metres deep. Visible gold is hand-mined from numerous quartz veins that are hosted in a coarse-grained, sericite altered, quartz porphyry that has intruded a sequence of mafic and felsic volcanic rocks and banded iron formation.

Numerous gold-in-soil anomalies are present in the Lihamat area, and several artisanal bedrock gold workings are present over a 7 km strike length. Soil geochemical sampling has defined >0.1 ppm Au soil anomalies several hundred meters in length, with some samples returning >1.0 g/t Au. No drilling has been done on this prospect.

At Adi Goshu, mine workings attain depths in excess of 20 m to hand-mine a series of auriferous quartz veins over a 20 m width and 100 m strike length on two trends. Soil geochemical sampling has defined a 500 metre long >0.1 ppm gold soil anomaly with five samples assaying > 1.0 g/t Au. No drilling has been done on this prospect.

16.0 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information required for disclosure in this NI 43-101 technical report.

17.0 INTERPRETATION AND CONCLUSIONS

Axum Metals Share Company has undertaken two years of preliminary work on its 100 square kilometer Meli property in northern Ethiopia in preparation for drill testing in 2020. Axum's recent work, plus a compilation of the results of historic exploration work by previous companies has indicated that significant VMS mineral occurrences are present and that there is very good potential to discover economic mineralization on the Property.

The Meli property is underlain by east to northeast trending belts of weakly metamorphosed Neoproterozoic rocks comprised mainly of mafic to felsic flows and pyroclastic rocks, as well as related volcaniclastic and sedimentary rocks. This same belt of rocks hosts significant VMS mineral deposits in the Asmara area of Eritrea, 170 km north-northeast of the Property.

Gossanous, oxidized, sulphide zones up to 80 m or more in width and 600 m in strike length have been discovered within a 3.5 km-long easterly elongate belt hosted by metavolcanic rocks in the south-central part of the Property. VMS-style polymetallic sulphide mineralization has been discovered by drilling beneath one of the gossanous oxide zones, with excellent precious and base metals-bearing intercepts of over 17 m in thickness.

Geochemical exploration elsewhere in the Meli area has indicated, through the presence of anomalous gold, silver, copper and zinc from stream sediment sampling, that other extensive (up to 10 km in length) linear belts of favourable volcanic host rocks also exist. Prospecting and follow-up of stream sediment geochemical anomalies in 2006 was responsible for locating the known gold-enriched gossan zones in the south-central part of the Property—these are the Eastern, Central and Western Meli gossan zones, detailed above, which are exposed over a length of approximately 3.5 km.

The most extensive mineralized gossan at Meli is the Eastern zone, which consists of a lens of gold-bearing goethite-limonite material within strongly chlorite-sericite altered volcanic rocks. Percussion and diamond drilling in more than 95 holes drilled between 2008 and 2012 focussed on defining a shallow gold-rich zone within the oxide cap. The oxide gold zone extends to depths of 25 to 30 m, and in 2009 Ezana made a preliminary, non-compliant estimate, suggesting that the mineralized cap may contain approximately 4 tons (3600 kg) of gold with an average grade of 4.0 g/t Au calculated with a 0.3 g/t Au cut-off (Ezana private company report).

Only a few of the holes in the Eastern gossan were drilled to depths greater than approximately 50 meters. Where drilled deeper, the holes indicate that the sulphide zone, which is continuous with the gold-bearing oxide zone, dips about 55° to the south, continues at least 100 m down dip, and contains VMS-style base metals and gold mineralization. A number of holes returned very significant intercepts, including 4.2% Cu, 0.7% Zn, 1.5 g/t Au, 37.1 g/t Ag over 17.4 m (hole RH-DH-01, 28.65-46.05 m) and 2.4% Cu, 1.0% Zn, 2.6 g/t Au, 37.8 g/t Ag over 15.1 m (hole RH-DH-49, 65.0-80.1 m). The sulphide zone in these two holes shows consistent strong copper mineralization with associated zinc mineralization, and zinc values appear to increase in grade downhole (0.2 to 2.3% Zn). Lead values coincide with zinc, but for the most part they are of lower tenor, returning less than 0.3% Pb. This zone is open to expansion at depth and along strike.

In 2007, Ezana ran a number of geophysical surveys across the Eastern Meli gossan zone. The surveys indicated that chargeability and density decreased to the west, but that they were both strong and open to the east. The surveys also suggested that a possible parallel zone occurred approximately 250 m to the south. In 2013, Ezana applied for, and was granted, a mining license by the Ethiopian Ministry of Mines. A mill was built and open cut extraction of the Eastern Meli gossan zone commenced in 2017. The mill has operated intermittently since that time, with a capacity of producing up to 4,500 grams of gold per day.

In 2017, Axum Metals Share Company (Axum) was formed by Sun Peak and Ezana as a jointly owned company with a mandate to explore the Meli property for VMS-style and orogenic gold deposits. Ezana retains small mining and exploration license areas over the three Meli gossan zones, with the right to mine the oxide cap material and recover the gold therefrom. The rights to the underlying sulphide mineralization are held by Axum, as are the mineral rights for the remainder of the Property.

In 2018 and 2019 Axum compiled and re-interpreted maps and data from the historical work at Meli, and the Company conducted geological field visits to evaluate targets developed during the compilation and re-interpretation. In addition, the company undertook ground-based gravity surveys, heliborne VTEM and magnetic surveys, and satellite image analysis to identify alteration assemblages. In the Aster satellite image analysis, the data suggested that the greater Meli area encompassed areas outside of the Meli gossans area which were strongly and extensively sericite altered. Some of these areas coincided with regions of anomalous stream sediment geochemistry, and so they represent compelling and largely untested greenfields exploration targets.

Another component of Axum's exploration were detailed ground gravity surveys, including one conducted across the 3.5 km long trend hosting the known Meli gossans. The strongest gravity anomaly corresponded with the Central gossan zone and extended to the NNW for about 700 m. Four drill holes have been drilled previously on the southeastern margin of the gravity high, but no results are available from that drilling and the majority of the gravity anomaly has not been drill tested. A moderate gravity high is also located to the south of the Eastern Meli gossan zone, and this is interpreted to represent a thicker part of the known sulphide body that dips approximately 55° south from the surface exposure of the gossan. The projection of the anomaly puts it about 175 m down dip, which is below the depth of any previous drilling. Drill-testing this down-dip potential is a priority for the Company in 2020.

In the heliborne VTEM survey, a strong conductor was identified that lay near the eastern end of the Eastern Meli gossan zone. It was interpreted to indicate the presence of the known Eastern Meli massive sulphide mineralization that is known to underlie the surface gossan. Further potential was suggested in the VTEM and airborne magnetic surveys by the presence of moderately to strongly conductive areas, in part coincident with extensive bands of alternating high and low magnetic susceptibility that fall within the extensive anomalous geochemical trends in the northern and southern parts of the Property. While these show potential the geophysical data needs to be thoroughly integrated with other data sets to select areas with the greatest mineral potential, and follow-up ground-based exploration strategies need to be established.

For the Meli project in 2020, Axum has proposed a comprehensive work program totalling more than US$1.1 million. This includes at least 4,000 meters of diamond drilling to test the well-defined Eastern Meli massive sulfide zone to depth, as well as testing of property-wide targets via ground-based geophysical, geochemical and geological surveys. The authors are in agreement with the proposed exploration work and strategies and agree that the budgeted amounts of expenditures are reasonable and warranted.

Considering that the Meli project area is host to a known precious metals-rich VMS sulphide zone with overlying gold-rich oxides, and considering that the area includes widespread stream sediment geochemical anomalies associated with geophysical targets and satellite-indicated altered host rocks along regional strike from rich and well-known Eritrean VMS districts, it can be concluded that the Meli project represents a highly prospective area for exploration of gold-rich copper-zinc massive sulphide mineralization. Despite its excellent potential for precious and base metals mineralization, the Meli concession and the Meli gossans area remain under-explored and are only now receiving the advanced exploration that they deserve, and which are required for discovery.

18.0 RECOMMENDATIONS

Axum has submitted exploration proposals to the Ethiopian Ministry of Mines as part of the requirements for retaining their exploration license. The authors' recommendations for exploration are consistent with the remaining uncompleted work, listed below, that was part of the Company's proposal and which is expected to be completed over the next year.

18.1 Proposed Work

The previous operator in the Project area has targeted drilling based on the mapping of gossans and then drilling directly beneath them. This is a logical first pass method, but more sophisticated exploration techniques must be applied to the project in order to find an economic deposit that may not come to surface.

Compilation and re-interpretation of historic work from 2018 to present by the Axum team has defined a number of potential VMS or orogenic gold targets in the Meli concession. These targets have initially been identified by anomalous gold and base metal values in stream sediment samples that were collected over the entire Property at moderate density. The Company has recently flown an airborne VTEM survey over the Property and the identified conductive zones that coincide with geochemical anomalies will be priority 1 targets for follow-up.

The next phase of exploration work proposed for the Meli concession is as follows:

- Regional geological mapping and prospecting, concentrating on belts of favourable metavolcanic lithologies and geochemical anomalies.
- Detailed geological mapping of VMS gossans and exhalites (mapped as quartzites, banded iron formation and chert) identified along each of the trends.
- As a follow up on the extensive stream sediment sampling programs already completed by previous exploration companies, specific areas lacking sample coverage or requiring verification will be sampled; estimated at 200 stream sediment samples to analyze for base metals and gold.
- Soil sample grids will be established over potential VMS and orogenic gold mineral trends with sample spacing nominally at 200 m x 50 m; estimated 2000 soil samples to analyze for base metals with selected samples analyzed for gold.
- During geological and structural mapping and prospecting approximately 100 rock chip samples will be collected and analyzed for base metals with selected samples analyzed for gold.
- Ground gravity surveys over defined VMS trends to follow up geochemical and airborne EM anomalies; estimated minimum of 1,000 stations.
- A minimum of 4000 meters of diamond drilling (HQ or NQ size) will initially test the VMS mineralized trend at depth beneath the Eastern Meli gossan zone, as defined by previous shallow drilling. Additional drilling will test VMS and orogenic gold targets as they are defined by geochemical and geophysical surveys.

18.2 Proposed Budget

Axum Metals plans a logical sequence of exploration work beginning with the compilation of all historical data, and following with re-logging and re-sampling of historical drill core that will be acquired from Ezana. This will be supplemented by regional prospecting and detailed geological and structural mapping in selected areas, especially along the VMS trends. In the first year, a variety of geophysical and geochemical surveys will be undertaken, along with re-mapping and re-sampling of existing trenches, and drilling of approximately 4,000 meters of diamond drill core to test the Eastern Meli massive sulfide zone and its extensions. Tables 18.1 and 18.2 show the proposed work and budget for year one.

Table 18-1 Summary of first year exploration work

No	Types of work	Quantity	Remark
1	Compilation of historical exploration data		Office work
2	Data interpretation		Office work
3	Re-logging/re-sampling old drill core	200 samples	
4	Regional prospecting	50 samples	1:10,000
5	Detailed geological mapping	50 samples	1:2,000
6	Ground gravity surveys	1,000 stations	200m X 20m
7	Soil geochemical surveys	2,000 samples	200m X 40m
8	Stream sediment surveys	200 samples	regional
9	Diamond drilling	4,000m	
10	Interpretation/compilation of field data		Office work

Table 18-2 Summary of first year budget

Core drilling - 4,000m	750,000
Assaying	150,000
Gravity surveys - 1,000 stns	30,000
Soil geochemical surveys - regional	20,000
Stream sediment surveys	10,000
Mapping - regional and detailed scale	10,000
Claims and permitting	5,000
Vehicles (1 - Toyota Hilux)	40,000
Fuel	40,000
Contingency	80,000
Total in USD	**1,135,000**
Total in CDN using an exchange rate of 1.33	**$1,509,550**

Note 1: USD FX rate = 1.35

19.0 REFERENCES

Archibald, S. M., Martin, C., and Thomas, D.G., 2014. NI43-101 Technical Report on a Mineral Resource Estimate at the Terakimti Prospect, Harvest Property (centred at 38°21’E, 14°19’N), Tigray National Region, Ethiopia. Report prepared for Tigray Resources Inc., 199 pp.

Archibald, S. M., 2011. NI43-101 Technical Report on the Harvest Property Centred at 38°21’E, 14°19’N, Tigray National Region, Ethiopia. Report prepared for Tigray Resources Inc., 111 pp.

Barrie, C.T., 2004. Report on geology and geochemistry for the Bisha VMS deposit and property, western Eritrea: internal company report, Nevsun Resources, August 2004.

Barrie, C.T., Nielsen, F. W., and Aussant, C., 2007. The Bisha volcanic-associated massive sulfide deposit, Western Eritrea: Economic Geology, v. 102, 717-738.

Chewaka, S. and DeWit, M.J., 1981. Plate tectonics and metallogenesis: some guidelines to Ethiopian mineral deposits. EIGS, Addis Ababa, Bulletin No. 2, 129p.

DAT Environmental Auditing and Management Consulting, 2019. Environmental and Social Impact Assessment Report on Meli Gold and Base Metals Exploration, private report for Axum Metals Share Company.

Daoud, D., 2019. Axum Metals Share Company Application for Meli Mineral Exploration License, Tigray Region, submitted to the Mineral Licensing and Administration Directorate Ministry of Mines, Petroleum and Natural Gas, FDRE, July, 2019. 45 pp.

Drury, S.A. and De Souza Filho, C.R. 1998. Neoproterozoic terrane assemblages in Eritrea: review and prospects, Journal of African Earth Sciences, v27, 331-348.

Ezana Mining Development PLC., 2009. Geological Report of Meli Area, private company report, 28 pp.

Galley, A.G., and Koski, R.A., 1999, Setting and characteristics of ophiolite hosted volcanogenic massive sulfide deposits, in Barrie, C.T., and Hannington, M.D., eds., Volcanic-Associated Massive Sulfide Deposits: Processes and Examples in Modern and Ancient Settings: Reviews in Economic Geology, v. 8, p. 215-236.

Galley, A.G., Hannington, M.D., and Jonasson, I.R., 2007. Volcanogenic massive sulphide deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 141-161.

Ghebreab, W., Greiling, R.O. and Solomon, S., 2009. Structural setting of Neoproterozoic mineralization, Asmara district, Eritrea. Journal of African Earth Sciences, 55, 219-235.

Gibson, H. L., Allen, R. L., Riverin, G. and Lane, T. E., 2007. The VMS Model: Advances and Application to Exploration Targeting. In: B. Milkereit (Editor). Proceedings of Exploration 07: Fifth Decennial International Conference on Mineral Exploration, 713-730.

Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M., Hagemann, S.G., Robert, F., 1998. Orogenic gold deposits: a proposed classification in the context of their crustal distribution and relationship to other gold deposit types: *Ore Geology Reviews*, v. 13, p. 7–27, doi: 10.1016/S0169-1368(97)00012-7

Hannington, M.D., 2009. Modern submarine hydrothermal systems – a global perspective on distribution, size and tectonic settings, in Cousens, B.L. and Piercey, S.J., eds., Submarine Volcanism and Mineralization: Modern Through Ancient: Geological Association of Canada, Mineral Deposits Division, Short Course Volume 19, p 91-146.

Horan, M., Huang, J., Ghaffari, H., Thomas, D.G., 2018. National Instrument 43-101 Technical Report and Preliminary Economic Assessment for the Da Tambuk Project, Adyabo Property, Tigray National Regional State, Ethiopia. Report prepared for East Africa Metals Inc., 220 pp.

Johnson, P.R.; Zoheir, B.A.; Ghebreab,W.; Stern, R.J.; Barrie, C.T.; Hamer, R.D., 2017. Gold-bearing volcanogenic massive sulfides and orogenic-gold deposits in the Nubian Shield. *S. Afr. J. Geol. 2017*, 120, 63–76.

Lul Earth Sciences, 2007. Technical Report on Integrated Ground Geophysical Survey Conducted at the Rahwa VMS Related Gold/Base Metal Prospect Area Northern Tigray, Ethiopia, private report for Ezana Mining Development, 75 pp.

Miller, N. R., Avigad, D., Stern, R. J., & Beyth, M., 2011. The Tambien Group, Northern Ethiopia (Tigre): *Geological Society Memoir*, *36*(1), 263-276. https://doi.org/10.1144/M36.21

Samuel, A., Bheemalingeswara, K. and Solomon, G., 2015. Geology of volcanogenic massive sulfide deposit near Meli, northwestern Tigray, northern Ethiopia: *Momona Ethiopian Journal of Science (MEJS), V7(1): 85-104, 2015.*

Stern, R.J., Johnson, P.R., Kröner, A., Yibas, B., 2004. Neoproterozoic ophiolites of the Arabian-Nubian shield. Dev. Precambrian Geol. 2004, 13, 95–128.

Tadesse, T., Hoshino, M., and Sawada, Y., 1999. Geochemistry of low-grade metavolcanic rocks from the Pan-African of the Aksum area-Northern Ethiopia. Precambrian Research 99, 101-124.

Tadesse, T., 1997. The Geology of Aksum area (ND 37-6): Memoir No.9. Ethiopian Institute of Geological Survey, Addis Ababa, Ethiopia, 192 pp.

20.0 DATE AND SIGNATURE PAGE

The undersigned prepared this Technical Report, titled "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern Ethiopia", with an effective date of January 31, 2020, in support of the public disclosure of technical aspects of the Meli property owned by Sun Peak Minerals Inc. The format and content of the report are intended to conform to Form 43-101F1 of National Instrument 43-101 (NI 43-101) of the Canadian Securities Administrators.

Effective Date: January 31, 2020

Signed by

_"signed"_______________________
Charles J. Greig, M.Sc., P.Geo.
Dated this 31 day of January, 2020

_"signed"_______________________
Jeffrey D. Rowe, B.Sc., P.Geo.
Dated this 31 day of January, 2020

21.0 CERTIFICATES OF QUALIFICATIONS

I, Charles J. Greig, am a professional geologist residing at 250 Farrell St., Penticton, British Columbia, Canada and do hereby certify that:

- I am an author of "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern Ethiopia", dated January 31, 2020;
- I am a Registered Professional Geoscientist (P. Geo.), Practising, with the Engineers and Geoscientists, British Columbia, (License no. 27529) and with the Professional Geoscientists of Ontario (Member ID no. 1751).
- I am a graduate of the University of British Columbia with a B.Comm. (1981), a B.Sc. (Geological Sciences, 1985), and an M.Sc. (Geological Sciences, 1989). I have practiced my profession continuously since graduation, having worked as a geoscientist in the minerals industry for over 35 years.
- I visited the Meli property in March of 2019.
- I have had no prior involvement with the Meli property and no other involvement with the Property until contracted to write this technical report;
- I am responsible for all sections of "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern Ethiopia", dated January 31, 2020.
- I am independent of Sun Peak Metals Corp. as independence is described in Section 1.5 of NI 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Sun Peak Metals Corp.;
- I am independent of Ezana Mining Development PLC, the Vendor of the Meli concession, as independence is described in Section 1.5 of NI 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Ezana Mining Development PLC.
- I was retained by Sun Peak Metals Corp. to prepare an exploration summary on the Meli Property Tigray National Regional State, Ethiopia, in accordance with National Instrument 43-101. The report is based on my property visit, and on a review of project files and information provided by Sun Peak Metals Corp. personnel and publically available data;
- I have read National Instrument 43-101 and Form 43-101F1 and, by reason of education and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI43-101. This technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
- As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- I, the undersigned prepared this report entitled "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern

Ethiopia", dated January 31, 2020, in support of the public disclosure of the geological exploration potential of the Meli property of Sun Peak Metals Corp.

Effective Date: January 31, 2020

Signed this 31st day of January, 2020 in Penticton, British Columbia:

__*"signed"*_______________

Charles J. Greig, B. Comm., B.Sc., M.Sc., P.Geo. (PGBC no. 27529)

(signed and sealed original copy on file)

I, Jeffrey D. Rowe, am a professional geologist residing at 111-6109 Boundary Drive W, Surrey, British Columbia, Canada and do hereby certify that:

- I am an author of "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern Ethiopia", dated January 31, 2020;
- I am a Registered Professional Geoscientist (P. Geo.), Practising, with the Engineers and Geoscientists, British Columbia, (License # 19950).
- I graduated from the University of British Columbia, Canada, with a B.Sc. (Geological Sciences, 1975).
- I have worked as a geoscientist in the minerals industry for over 35 years, I have been directly involved in the exploration, evaluation and mining of mineral properties, mainly in Canada and Mexico, for gold, silver, tungsten, molybdenum and base metals;
- I have not visited the Meli property.
- I have had no prior involvement with the Meli property and no other involvement with the Property until contracted to write this technical report;
- I am responsible for all sections of "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern Ethiopia", dated January 31, 2020.
- I am independent of Sun Peak Metals Corp. as independence is described in Section 1.5 of NI 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Sun Peak Metals Corp.;
- I am independent of Ezana Mining Development PLC, the Vendor of the Meli concession, as independence is described in Section 1.5 of NI 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Ezana Mining Development PLC.
- I was retained by Sun Peak Metals Corp. to prepare an exploration summary on the Meli Property Tigray National Regional State, Ethiopia, in accordance with National Instrument 43-101. The report is based on my review of project files and information provided by Sun Peak Metals Corp. personnel and publically available data;
- I have read National Instrument 43-101 and Form 43-101F1 and, by reason of education and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI43-101. This technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
- As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- I, the undersigned prepared this report titled "NI 43-101 Technical Report, A Geological Evaluation of the Meli Property, Tigray National Regional State, Northern Ethiopia", dated January 31, 2020, in support of the public disclosure of the geological exploration potential of the Meli property of Sun Peak Metals Corp.

Effective Date: January 31, 2020

Signed this 31st day of January, 2020 in Surrey, British Columbia:

__*"signed"*________________

Jeffrey D. Rowe, B.Sc., P.Geo. (PGBC license no. 19950)

(signed and sealed original copy on file)