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

Prepared for

Tigray Resources Inc.

Dr. Sandy M. Archibald, PGeo, Aurum Exploration Services
Christopher Martin, CEng, Blue Coast Research Ltd
David G. Thomas, PGeo, Fladgate Exploration Consulting Corporation

February 14, 2014

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Standard Units & Abbreviations

%	Percent
<	Less than
>	Greater than
°	Degree
°C	Degrees Celsius
µm	Micrometre (micron)
a	Year (annum)
Au	Gold
cm	Centimetre
DDH	Diamond drillhole
EM	Electro-magnetic
g	Gram
g/t	Grams per tonne
GPS	Global Positioning System
h	Hour
HDPE	High Density Polyethylene
in	Inch(es)
k	Kilo (thousand)
kg	Kilogram
kg/m^2	Kilograms per square metre
kg/t	Kilograms per tonne
km	Kilometre
km^2	Square kilometre
kt	Thousand tonnes
m	Metre
M	Million
m^2	Square metre
Ma	Million years ago
masl	Metres above sea level
mm	Millimetre
Mt	Million tonnes
NI 43-101	National Instrument 43-101
oz	Ounce, Troy (31.1035 g)
P.Eng.	Professional Engineer (Canadian Designation)
P.Geo	Professional Geologist (Canadian Designation)

C.Eng	Chartered Engineer (British Designation)
ppm	Parts per million
QP	Qualified Person
SG	Specific gravity
t	Tonne (metric, 1,000 kg = 2,205 lbs)
VMS	Volcanogenic Massive Sulphide

Drill Core Sizes

Size	Hole diameter, mm	Core diameter, mm
NQ	75.7	47.6
NTW	75.7	56.0
HQ	96	63.5
PQ	122.6	85.0

Source: Wikipedia

1 SUMMARY

This technical report presents an independent initial mineral resource estimate for the Terakimti prospect area of Tigray Resources Inc.'s ("Tigray") Harvest project in accordance with the requirements of National Instrument 43-101. 'Standards of Disclosure for Mineral Projects', and the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves, adopted by CIM Council, as amended. Tigray will be using the Report to support the press release of January 23, 2014, entitled "Tigray Completes Initial Resource Estimate for Terakimti, Harvest Project, Ethiopia".

The Harvest base- and precious-metal property is located in the Tigray Region of northern Ethiopia, approximately 900 km north-northeast of Addis Ababa. The property is 206.36 km^2 and comprises of two exploration licences, which contain the Terakimti, Hamlo, Medre Felasi, Adi Nebried, Igub and Nefasit concessions.

The property is underlain by Neoproterozoic rocks of the Adi Nebrid terrane of the Arabian-Nubian Shield. The rocks are interpreted to represent a volcanic back arc sequence and are comprise of basalt, rhyolite, mafic- and felsic- volcanic tuff, shale and chert. The sequence has been intruded by syntectonic quartz-feldspar porphyries, and later granite and minor gabbro. All of the rocks have been affected the Pan-African orogeny and display greenschist facies metamorphism and varying degrees of deformation.

Mineralization at the Harvest property occurs as three main forms: volcanogenic massive sulphide ("VMS"), including supergene enrichment zone; gold oxide (related to weathering of the primary sulphide mineralization); and orogenic-lode gold mineralization. The VMS mineralization is identified in three main trends, i.e., Terakimti, Hamlo, and Adi Angoda. Surficial oxidation of the sulphide in these trends resulted in the formation of gold-silver enriched gossans. Orogenic shear-zone hosted gold mineralization is present in the Ruwa Ruwa Trend, a 4.5 km long parallel structure to the Terakimti Trend.

A variety of large and small scale geochemical (portable XRF, shallow soil, lithogeochemistry) and geophysical (IP, gravity, VTEM) surveys, remote sensing studies, and basic prospecting and mapping were carried out on the property. These surveys included portable XRF soil analysis, shallow soil gold geochemistry, lithogeochemistry, gravity, ground EM, and airborne EM, magnetics and radiometrics. The results of these investigations were the successful discovery of numerous basemetal and gold prospects, showings, occurrences and anomalies.

Exploration diamond drilling occurred on five prospects in two programs (2009-2010) and (2011-2013). The first 17 hole drilling program was performed by Harvest Mining PLC, and resulted in 12 holes being drilled at Terakimti (Terakimti and Hamlo concessions) and 5 holes on the Adi Angoda (Nefasit concession). Encouraging mineralization was encountered at both properties, but especially at Terakimti where elevated gold grades corresponded to material within the oxide zone, elevated copper and gold grades in the supergene enrichment, and moderate grades within the primary sulphide zone were traced over a distance of 800 m.

The second more extensive, and thorough, drilling program was undertaken by Tigray following their acquisition of 70% of Harvest Mining PLC. A total of 68 holes were drilled for a combined length of 15,007.51m. The holes were drilled either on 40 or 80 m spaced fence lines and were designed to test oxide-, supergene- and primary sulphide- mineralization. This drilling identified four stacked massive sulphide lenses up to approximately 25 m true thickness, but more often 5 to 15 m, plunging to the northeast over a distance of 800 m.

The lowermost lens is termed the Lower Zinc Lens and was identified in several drillholes, including TD040 where an intersection of 27.70 m (approx. 12 m true thickness) at 0.26 % Cu, 0.5 g/t Au, 7 g/t Ag and 4.40 % Zn from a depth of 215.0 m was encountered. This interval included a 3.5 m interval grading 1.41% Cu, 2.09 g/t Au, 11 g/t Ag and 23.03% Zn from a depth of 239.2 m. The overlying Southern Lens contains a barren pyrite base that is overlain by a Cu-Au rich sulphide interval. The best intercept of the primary massive sulphide is from drillhole TD043 where an 11.15 m interval (approx. 5.60 m true thickness) returned concentrations of 3.05% Cu, 1.28 g/t Au, 14 g/t Ag and 0.56% Zn. The overlying Central Lens attains a maximum thickness of 14 m and the highest grades encountered within the primary sulphide zone was in hole TD011, which intersected 15.2 m (at a high angle to the core axis) grading 2.61% Cu, 1.84 g/t Au, 43 g/t Ag, and 6.77% Zn from a depth of 181.75 m. The Northern Lens is separated from the Central Lens by a series of quartz-feldspar porphyry dykes, and is up to 20 m thick. The richest intercept was from this lens was in drillhole TD008 within a zone grading from the supergene enrichment zone to primary sulphide. The intercept returned 20.85 m (close to true thickness) grading 5.67 % Cu, 1.48 g/t Au, 17.59 g/t Ag and 0.77% Zn from a depth of 38.75 m. When the southern, central and northern lenses are present within the oxide zone Au-Ag is enriched, and in the supergene zones Cu-Au-Ag grades show enrichment. Drilling indicates that some of the lenses remain open at depth, and the mineralization remains open down plunge.

Approximately 5.3 km east-northeast and along trend from Terakimti, a strong 200 m EM anomaly was found to be associated with several malachite-rich gossan outcrops. Follow-up trenches confirmed the presence of a gossan, and a single drillhole completed in 2013 returned 3.16 % Cu, 3.97 g/t Au, 87 g/t Ag, and 3.82 % Zn over 10.21 m from a depth of 19.81 metres.

Prospecting at Mayshehagne, approximately 3 km south of Terakimti within a zone parallel to the Terakimti trend, identified a 170 m long sequence of carbonate-altered malachite-strained mafic volcanic rocks associated with jasperoid cherts, chert breccia, barite-rich cherts, and several gossan zones. A total of 10 drillholes have been drilled on the prospect, with one of the better intercepts being 20.70 m of 5.00% Cu, 1.03 g/t Au, 31 g/t Ag and 8.20% Zn from 24.0 m, including 12.8 m of 7.77% Cu, 1.62 g/t Au, 50 g/t Ag and 12.66% Zn (HD002).

Drilling at Adi Angoda identified narrow zones of massive sulphide over a strike length of 1.6 km. The most significant drilling intercepts included 3.0 m at 2.34% Cu, 1.41 g/t Au, and 22.7 g/t Ag in hole 09HND004, from 52.15 metres; and 3.0 m at 0.68% Cu, 1.31 g/t Au, and 5.4 g/t Ag in hole 09HND001, from 71.93 metres. Drilling in 2012 by Tigray produced similar thicknesses and grades, but it not confirm additional massive sulphide lenses.

Metallurgical testing was conducted using 520 drill core intervals from 28 separate drill holes averaging 0.75m in length. These were prepped at Blue Coast Research to construct 16 sub-composites, two being oxide and fourteen being sulphide.

The fourteen sulphide sub-composites were studied using QEMSCAN automated mineralogy. The gangue composition included pyrite, varying from 27% to 82% and non-sulphides, mostly primary silicates but with occasional micas and clays. The supergene samples were enriched in secondary copper, the primary samples were enriched in chalcopyrite and contained zinc as sphalerite. Several of the samples contained sphalerite and secondary copper sulphides at levels that could be problematic for processing, however the author is not aware of whether these samples represent a significant tonnage in the resource.

The oxide samples, assaying 2-4 g/t leached moderately well, with gold extractions in the range of 70-80% achieved even at a fine crush of 1.7mm. This is not in itself coarse enough for heap leaching but the loss in recovery from 100 microns to 1.7 mm was sufficiently modest to suggest that there is a reasonable probability that some amenability to heap leaching will be demonstrated with more testing. The leach was extremely fast, being essentially complete in less than 5 hours.

The sulphide samples were combined to form supergene, primary and sulphide transition composites.

The supergene composite, assaying 5% copper, yielded a concentrate assaying 26% copper, 3.6 g/t Au and 87 g/t Ag in locked cycle testing, at a copper recovery of 87%. The flowsheet employed is conventional for such materials, and quite similar to the flowsheet successfully employed by the author for similar materials in the region. The author should caution that no multi-element scans on the concentrate have yet been conducted to determine the presence of any contaminants.

The primary composite yielded good copper and zinc metallurgy. In locked cycle testing copper flotation yielded a 25% copper concentrate at 89% recovery, and a 60% zinc concentrate at 86% recovery. Total precious metal recoveries were 50% for both gold and silver, and good pay should be realised from the bulk of this metal from copper smelters.

Little testing was conducted on the sulphide transition material. This yielded poor metallurgy and a workable flowsheet was not developed. However, such material is typically present in VMS deposits. Typically the treatment of the material depends on the Cu:Zn ratio and the amount of material that exists in the resource – further work is needed here to find a solution for this material.

The effective date of the mineral resource estimate is January 17, 2014, which represents the cut-off date for the most recent scientific and technical information used in the resource estimate.

The mineral resources reported herein have been estimated using criteria consistent with the CIM Definition Standards (2010) and in conformity with CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" (2003).

Fladgate has prepared a resource estimate for the Terakimti deposit based on drilling information and geological interpretation provided by Tigray. The resource model considers 80 drill holes and is the first resource estimate for the Project.

Interpretations were completed by Tigray based on lithological, mineralogical and alteration features logged in drill core. The interpretations were digitized by Fladgate and linked together to form three-dimensional solids representing the VMS mineralization zones.

Data were composited to 5 m down-hole lengths. Capping was applied to assays prior to compositing to restrict outlier grades. Correlograms were computed to assess appropriate distances for search ellipsoid radii.

To ensure local reproduction of composite grade trends, and to help control grade smearing, Fladgate created probabilistic grade shells for gold and silver within the oxide and supergene mineralization zones; sulphur and zinc probabilistic grade shell models were created in the primary mineralization zone. The probabilistic grade shell was validated using nearest neighbour (NN) models of the gold grade indicator.

A block size of 5 m x 5 m x 5 m was used. Estimation was performed using a combination of ordinary kriging (OK) and inverse-distance to the power of two (IDW2) methods. The resource model was interpolated in three passes using successively larger search radii. Limited composite sharing was permitted across the probabilistic grade shell boundaries.

For passes one and two, a minimum of three and a maximum of 12 composites were used for grade interpolations. In passes one and two, a maximum of two composites per drill hole was allowed. Pass three used a minimum of two and maximum of 12 composites.

Fladgate used 1,818 specific gravity (SG) determinations (high outliers were capped, low outliers were removed from the measurements) performed on drill core samples collected from material within the mineralized zones. The determinations were performed by Tigray personnel using unsealed immersion techniques to measure the weight of each sample in air and in water. Dry bulk density was estimated by interpolation of the SG measurements using an IDW method.

Waste bulk densities were assigned averages by rock type (intrusives and volcanic rock types) and degree of oxidation.

Fladgate conducted an analysis of confidence limits. Accuracy of ±15% or better at a 90% confidence limit on an annual production volume was used as the criteria to select a drill hole spacing to be used to classify Indicated resources. The results show that a spacing of 40 meters x 40 meters meets this criteria.

The geological model, data quality, geological continuity and metallurgical characteristics are also sufficiently well known to allow classification of Indicated mineral resources.

Fladgate classified blocks with two holes falling within 40 m and the closest hole within 30 m (i.e., with a 40 x 40 m spacing). Fladgate manually modified the classification to remove areas drilled with a spacing of 40 m (on section) x 80 m (between sections). Inferred blocks were classified within the mineralization wireframe where samples fell within a 120 m distance from the block centroid.

Reasonable prospects of economic extraction were assessed by applying preliminary economic constraints within an open pit shell. Mining and process costs, as well as operating costs were defined from studies on similar deposits in the Arabian-Nubian Shield. Fladgate used optimistic long-term metal prices which are suitable for an initial mineral resource estimate.

Fladgate defined an NSR cut-off value of 25.6 $/t for reporting open pit oxide mineral resources and an NSR cut-off of 23.9 $/t for reporting of open pit supergene and primary sulphide mineral resources based on the total ore-based process and G&A costs. Primary sulphide underground mineral resources are reported using a cut-off of 63.9 $/t.

Mineral Resources are classified in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (2010). The Mineral Resources do not include external dilution. The Mineral Resource estimate has an effective date of January 17, 2014. David Thomas, P.Geo, an associate geologist with Fladgate is the Qualified Person (QP) for the estimate.

The classified Terakimti Inferred Mineral Resource estimate is summarized in Table 1.1.

Table 1.1: Terakimti Mineral Resource Estimate David Thomas, P. Geo. (Effective Date: January 17, 2014)

	Ore Type	NSR Cut-Off ($/t)		Contained Metal							
			Tonnes ('000s)	**Cu (%)**	**Zn (%)**	**Au (g/t)**	**Ag (g/t)**	**Cu ('000 lb)**	**Zn ('000 lb)**	**Au ('000 oz)**	**Ag ('000 oz)**
Indicated											
	Oxide	25.9	290	0.06	0.02	2.55	10.5	-	-	24	98
	Sulphide	23.9	1,841	2.20	1.65	1.06	17.5	89,477	66,871	63	1,033
	Sub-Total Indicated							89,477	66,871	86	1,130
Inferred											
	Oxide	25.9	398	0.13	0.07	4.77	7.2	-	-	61	92
	Sulphide	23.9	2,583	1.09	1.42	0.96	20.6	62,187	77,101	80	1,712
	Underground Primary	63.9	939	0.69	2.92	0.84	15.2	14,198	60,358	25	459
	Sub-Total Inferred							76,385	137,459	166	2,264

Footnotes to mineral resource statement:

Fladgate undertook data verification, and reviewed Tigray's quality assurance and quality control programs on the mineral resources data. Fladgate concluded that the collar, survey, assay, and lithology data were adequate to support mineral resources estimation.

Domains were modelled in 3D to separate oxide, supergene and primary sulphide rock types from surrounding waste rock. The domains conformed to lithological contacts logged in diamond drill core. Sub-domaining was further warranted to separate different grade populations and zones with differing strike and dip orientation within domains.

Raw drill hole assays were composited to 5 m lengths broken at domain boundaries.

High grade assays were capped prior to compositing. Capping thresholds were assessed within each domain independently.

Block grades for copper, zinc, gold, and silver and lead were estimated from the composites using a combination of ordinary kriging (OK) and inverse distance weighted to the third power (ID3) into 5 x 5 x 5 m blocks coded by domain.

Dry bulk density of the oxide, supergene and primary sulphide was estimated by ID3 interpolation of SG measurements.

Blocks were classified as indicated and inferred in accordance with CIM Definition Standards.

NSR was estimated using undiluted grades, metal prices, recoveries, smelter treatment and refining costs.

Metal Prices used for copper, zinc, gold and silver were $3.50/lb, $0.9/lb, $1,400/oz, and $25/oz respectively.

Metallurgical recoveries, supported by metallurgical test work were applied as follows:

Oxide zone: a recovery of 78.4% was applied for gold and 64.5% for silver. Copper and zinc are not recovered during the oxide phase and therefore are not considered a part of the oxide mineral resources.

Supergene zone: recoveries to copper concentrate of 87%, 36%, and 78% were applied for copper, gold and silver. Zero recovery of zinc from the supergene zone has been assumed. The supergene zinc metal content has not been included in the mineral resource tabulation.

Primary zone: recoveries to copper concentrate of 89%, 45%, and 39%, were applied for copper, gold, and silver respectively. Recoveries to zinc concentrate of 85% and 10% were applied for zinc and silver.

A Lerchs-Grossman pit shell was generated from the NSR and using open pit mining costs of $1.75/t. The total ore based costs (process and G&A) are $25.9/t for oxide, and $23.9/t for the supergene and primary rock types. A constant pit slope of 45° was used in the pit optimization.

Open Pit Mineral Resources were reported within the Lerchs-Grossman pit shell above an NSR cut-off equivalent to the total ore based costs stated above.

Underground Mineral Resources were reported within a grade shell generated at an NSR cut-off of $63.9/t, assuming a $40/t underground mining cost in addition to the ore based costs stated above. Isolated blocks were removed prior to tabulation.

The contained metal figures shown are in situ. No assurance can be given that the estimated quantities will be produced. All figures have been rounded to reflect accuracy and to comply with securities regulatory requirements. Summations within the tables may not agree due to rounding. The sulphide summation for contained zinc does not agree due to exclusion from the mineral resource of the contained zinc metal within the supergene zone.

Sensitivity studies of changes to the mineral resource with lower and higher metal price assumptions show that the mineral resource is robust with respect to the choice of long-term metal price used for mineral resource reporting.

At the Mayshehagne prospect, an exploration target is reported with a tonnage ranging from 100,000 to 400,000 tonnes and grades ranging from 0.2% to 5.0% copper, 0.2 to 2.1 g/t gold, 3 g/t to 31 g/t silver and 0.4% to 8.2% zinc. Fladgate cautions that the potential quantity and grade are conceptual in nature, that there has been insufficient exploration to define the exploration target as a Mineral Resource, and that it is uncertain if further exploration will result in the targets being delineated as a Mineral Resource.

As well as VMS mineralization, the Harvest property also hold potential for orogenic lode gold mineralization. Approximately 1.5 km west of Terakimti numerous gold soil anomalies are present in the area, and abundant artisanal bedrock, eluvial and alluvial gold workings are present over a 7 km strike length (Ruwa Ruwa Trend). The largest bedrock workings and most advanced targets are Lihamat and Adi Goshu. No trenching or drilling has been conducted in these areas, and both merit additional work.

The Harvest property has potential for the identification of addition VMS mineralization either along strike or down dip and plunge from known occurrences. Gold mineralization is present with the VMS mineralization (oxide, supergene and primary occurrences) and also as auriferous quartz veins in the orogenic lode gold systems such as Ruwa Ruwa Trend. The likelihood of documenting additional gold mineralization is high.

Recommendations on the project include: the completion of regional geochemical surveys; ground-truthing of airborne geophysical anomalies; conducting additional metallurgical analyses on existing samples, a targeted RC program and minor trenching to improve definition in metal/mineral zoning, and subsequent additional metallurgical testing to assist in further resource definition at Terakimti; the above work will assist in establishing the extent of sulphide transition mineralization, and further metallurgical work should be performed to assess the zone metallurgically; performing additional phase 2 drill testing down plunge at VTEM09; undertake trenching at defined Au zones on the property that require further testing to warrant additional assessment for drill testing; additional oxide metallurgical testing to further develop heap leach potential. If these studies prove positive, the second phase of contingent work would include: an update to the current mineral resource estimate at Terakimti; Downhole EM geophysics at Terakimti and Mayshehagne; and preliminary metallurgical testwork at VTEM09 and Mayshehagne.

The total cost of this work is estimated to be $ 1,602,000.

2 INTRODUCTION

2.1 Terms of Reference, Scope & Purpose of Report

In September 2013, Tigray Resources Inc. ("Tigray") retained Aurum Exploration Services and Fladgate Exploration Consulting Corporation to prepare a mineral resource estimate in accordance with the requirements and standards of National Instrument 43-101, '*Standards of Disclosure for Mineral Projects' ("NI 43-101"),* for the Terakimti area of Tigray's 70% owned Harvest polymetallic exploration project. Tigray is a Vancouver-based mineral exploration company focused on exploration of mineral resource projects in Ethiopia. Tigray's shares trade on the TSX Venture Exchange under the symbol TIG. Additional information about Tigray, including press releases and public documents, can be viewed at the company's website www.tigray.ca or at www.sedar.com.

The initial Terakimti mineral resource estimate, the subject of this technical report, was successfully completed in the first quarter of 2014 with the assistance of a variety of organizations forming the Harvest project team. The organizations who contributed to this work and their scope of responsibility are summarized in Table 2.1.

Table 2.1: General Areas of Responsibility

Organization	**Main Scope of Responsibility**
Aurum Exploration Services	Site physical inspection, drilling QA/QC program auditing, drilling database validation, including assessment of QA/QC program, assay results, standard/blank use, assay certificates, laboratory and procedures.
Fladgate Exploration Consulting Corp	Site physical inspection, mineral resource statistical analysis, block modelling, data validation, estimation and mineral resource classification
Blue Coast Research Ltd	Metallurgical testwork design, execution, analysis and evaluation, including program management
ACME Labs, ACME Analitik Laboratuar Hizmetleri Limited Sirketi, ACME Analytical Laboratories (Vancouver) Ltd., ALS Chemex (Vancouver), and Ultratrace (Perth, Australia)	Sample receipt, sample preparation and geochemical laboratory testing
Tigray Resources Inc. and/or Harvest Mining PLC.	Overall project management, general study coordination, topography, land ownership, access to data and sampling, geological interpretation.

The primary objectives of this report are to:

- consolidate and review all available past and present work
- review all available drilling, sampling and analytical procedures used at site, in the laboratories and in record retention
- collect field samples for independent testing and verification
- review and validate all drilling data collected for this report, including assessment and validation of associated QA/QC programs and assay results
- identify risks and opportunities for the project
- make recommendations for a path forward and for further work.

This report was prepared in accordance with the requirements and standards for disclosure of the stock exchanges overseen by the Canadian Securities Administrators, namely, NI 43-101, Companion Policy 43-101CP, Form 43-101F and the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards on Mineral Resource and Reserves – Definition and Guidelines.

2.2 Sources of Information & Data

The authors prepared this report using information from the following sources, with further details of the specific sources set out in Section 21 "References":

- drilling and assay data obtained from Tigray through a program of field sampling and analytical laboratory processing of field samples
- visits to the project site
- information from previous technical reports prepared in accordance with NI 43-101 requirements
- site physical inspection, observation and database validation activities, including but not limited to:

– Review and observation of drilling, sampling, logging and core retention procedures and practices at site

– sampling, shipping and assaying of independently collected and processed material samples, including use of an independent assay laboratory

– review and examination of drill core material from selected holes

– Drilling database validation, including assessment of QA/QC program, assay certificates, laboratories and procedures

– Metallurgical results from industry standard testing

– information supplied by other experts as listed in Section 3 of this report.

2.3 Visits to the Property by the Qualified Persons

Table 2.2 lists the dates the Qualified Persons for this report visited the site.

Table 2.2: Qualified Person Site Visits

Qualified Person	Visit Dates	Purpose
Dr Sandy Archibald, P.Geo.	Sept21-22, 2013 Sept 22 – Oct 1, 2011 June 16 – Jun27, 2011 April 21 – May 3, 2011 Feb 19 – Feb 23, 2011	NI 43-101 visit Contract Contract Contract NI 43-101 visit
David Thomas	Nov 13 – Nov 16, 2013	NI 43-101 visit
Christopher Martin	Did not visit	Not required

3 RELIANCE ON OTHER EXPERTS

The authors of this report have relied upon the following documents and experts (who are not qualified persons), and in this regard the authors disclaim responsibility for information provided in the following:

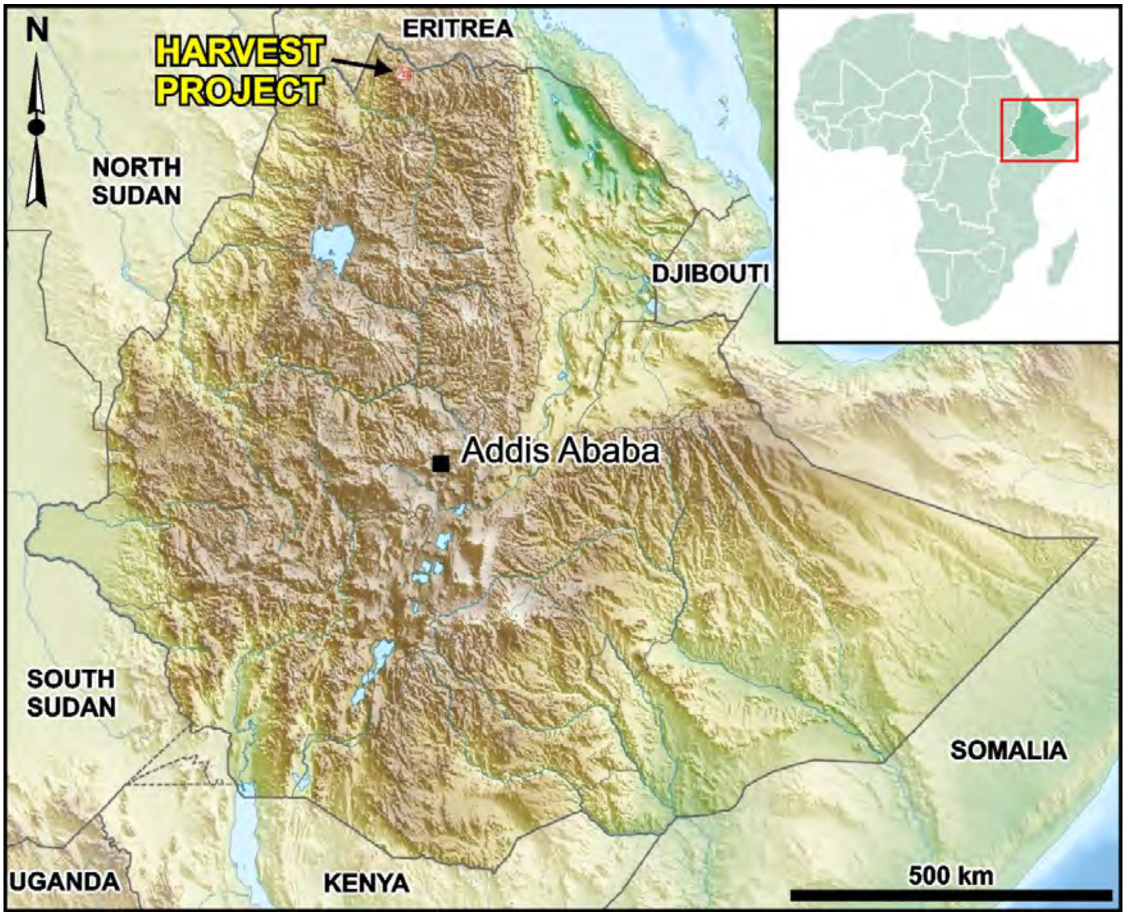
- Legal audit and opinion with regard to the title, mining concessions, and registration issues provided by Worku Fantahun Shumiye, Legal Affairs Consultant and Attorney at Law (Addis Ababa, Ethiopia) in a letter dated October 7, 2013. This information pertains to Section 4.2.2.
- Geological and topographic mapping data and information from Mr. Cris Carman of CEC Geology LLC, Mr. Iain Groves of Insight Geology PTY. Geology maps presented in Sections 7.2 and 7.3.
- Annual exploration reports (2011 and 2012; see reference section) prepared by Dr. Stephen Gardoll, Mr. Iain Groves, Ms. Helen Warren and Ms. Sarah Caven, which describe the geology of the property. This information is presented verbatim in Section 7.2, and has been incorporated in Sections 7.3, 7.4, and parts of Section 9.
- Petrographic study of Harvest samples prepared Dr. Gawen Jenkin, Mr. C. Davidson and Mr. A. Walsh, University of Leicester, UK (2013; see reference section). This information is summarized in Section 9.8.
- Sample preparation and laboratory assay results provided by Acme Analytical Laboratories, Vancouver, ALS Chemex Laboratories, Vancouver, and Ultratrace Laboratories, Perth.
- All metallurgical data was generated by Blue Coast Research, including all assay data from Blue Coast's assay laboratory. QEMSCAN data were obtained from Xstrata Process Support in Sudbury.

4 PROPERTY DESCRIPTION & LOCATION

4.1 Size & Location

The Harvest property comprises six contiguous Exploration Licences (Terakimti, Midre Felasi, Hamlo, Igub, Adi Nebried, and Nefasit) that cover an area of 206.36 km^2 located in Tigray Region of the Federal Democratic Republic of Ethiopia. The property is approximately 600 km north-northeast of the capital city of Addis Ababa (pop. 3,385,000 in 2008) as shown in Figure 4-1. The Federal Democratic Republic of Ethiopia comprises a total area of 1,104,300 km^2 and is located between longitudes 33°E to 48°E and latitudes 3°N to 15°N. The country is bounded by Eritrea to the north, Djibouti and Somalia to the east, Somalia and Kenya to the south, with North Sudan and South Sudan to the west.

Figure 4-1: Property Location



Source: Archibald et al., 2014

4.2 Mineral Tenure

4.2.1 General Tenure Rights

During the communist regime of 1974 to 1991 mineral exploration and extraction rights of Ethiopia were not available to the private sector. Only government institutions had the right to explore and develop the country's mineral wealth. A new national market-oriented economic policy was introduced in 1991 and the government made changes to encourage the participation of private capital in mineral prospecting, exploration and development in the mining sector.

In the early 1990s, the Mining Proclamation 52/1993, Mining Regulations 182/1994 and Income Tax proclamations 53/1993 were issued to attract private investment. These proclamations gave foreign investors incentives such as duty-free imports of equipment and repatriation of profits. A new law (Mining proclamation 678/2010) was issued, and came into effect in August 2010.

The new proclamation provides:

- Non-exclusive reconnaissance rights (for a maximum period of 18 months);
- Initial three-year exclusive exploration licences, with two renewals of one year each (after each renewal period the licence must be reduced by 25%). The Licensing Authority may allow further extension of renewals at their discretion; and
- Mining licence for 10 or 20 years for small-scale and large-scale operations, respectively, with unlimited renewal periods (of 5 or 10 years each).

The new proclamation also makes provision for the adequate health and safety of employees, environmental protection, and for environmental and social impact assessments (depending on the type and nature of the project). It requires a community development program, guarantees the licensee's right to sell the minerals, and provides exemption from customs duties and from taxes on the equipment, machinery and vehicles necessary for the mineral operations.

Government royalties range from 3% for construction materials to 8% for precious stones and minerals. This calculation is based on the net value of mineral production.

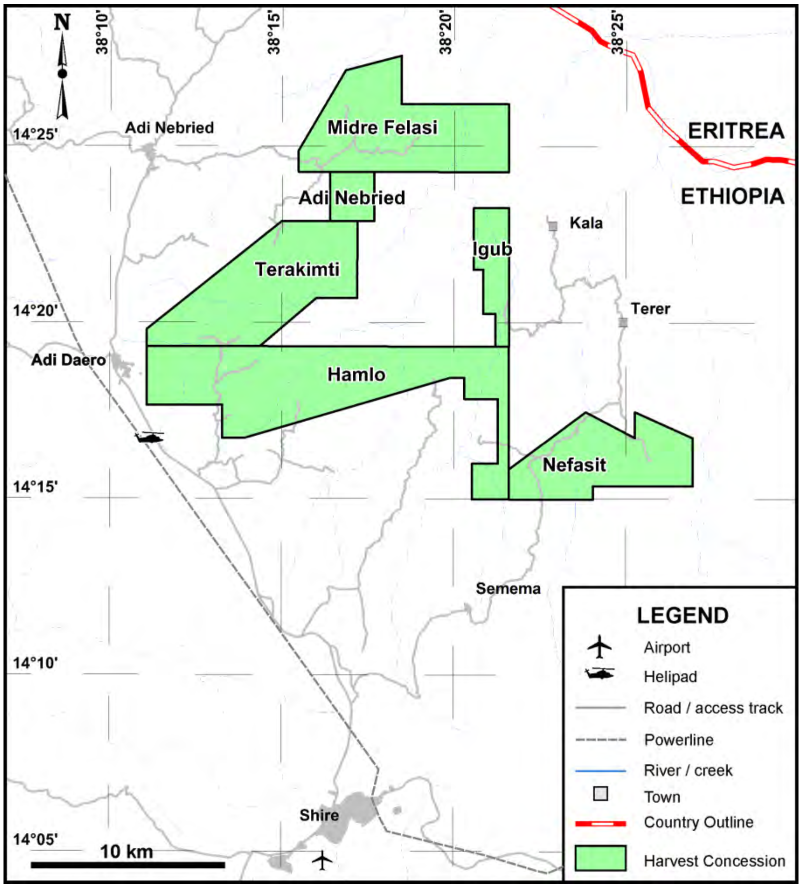
4.2.2 Harvest Property Tenure Rights

The property consists of six concessions known collectively as the Harvest property. These areas are outlined in Figure 4-2 and Table 4-1. The exploration concession corners (Table 4.1) were established by GIS coordinate points, and have not been surveyed or marked on the ground. Terakimti, Hamlo, Igub, Adi Nebried, and Nefasit were acquired from Ezana Mining Development ("Ezana"), as part of the formation of the Harvest Mining PLC. The five concessions were granted on January 11, 2007. The Midre Felasi licence was acquired separately by Harvest on December 19th, 2008.

A joint venture was established between Ezana and Beijing Donia Resources Co. Ltd ("Beijing Donia") in 2007, and entailed the transfer of ten exploration and two prospecting licences to three companies: Makeda Mining PLC, Donia Mining PLC, and Harvest Mining PLC ("Harvest Mining"). Harvest Mining was a joint venture company owned 70% by Beijing Donia and 30% by Ezana. Canaco Resources Inc. ("Canaco Resources") acquired the 70% interest in Harvest Mining from Beijing Donia. On July 4, 2011, pursuant to a plan of arrangement, Canaco Resources transferred its interest in Harvest Mining to Tigray (a previous wholly-owned subsidiary) along with working capital of CDN $4,000,000 in exchange for common shares of Tigray, which common shares were then distributed to the Canaco shareholders. The non-controlling interest is carried at 30% until the completion of the feasibility study. Subsequent to any feasibility study any approved contributions by Tigray for which Ezana elects not to contribute or elects to contribute less than its equity interest may increase Tigray's interest.

There are no royalties, back-in rights, payments or encumbrances in the current joint venture.

Figure 4-2: Property Tenure Map



Source: Tigray, 2014

Copies of title documents were provided by Harvest and reviewed by the author. The documentation supports the information provided in Table 4.2. A letter related to the title opinion from Worku Fantahun Shumiye, Legal Affairs Consultant and Attorney at Law (Addis Ababa, Ethiopia), on October 7, 2013, for both licences (MoM/326-354/99 and MoM/0246-0250/2001) indicated that they were in good standing. The title opinion also notes that a moratorium on the issue of new licences by the Ministry of Mines of the Federal Democratic Republic of Ethiopia since November 2011 was lifted in March 2013. This moratorium affected Tigray Resources and Harvest Mining's ability to acquire additional property in Ethiopia.

On February 12th 2014 Tigray submitted a request for the fifth renewal on the Harvest Licence (MoM/ 326-354/99 comprising the Terakimti, Nefasit, Hamlo, Adi Nebrid and Igub concessions) to the Ministry of Mines. Based on the work completed to date and the expenditures submitted it is considered extremely unlikely that the renewal would be refused.

The Midre Felasi licence is scheduled to be abandoned by Tigray, upon approval by the Ministry, with acceptance anticipated in March 2014.

Table 4.1: Property Tenure Location

		Northing			Easting		
Concession	**Node**	**Deg**	**Min**	**Sec**	**Deg**	**Min**	**Sec**
Terakimti	1	14	19	18.80	38	11	3.80
	2	14	19	48.00	38	11	3.80
	3	14	22	52.00	38	14	58.90
	4	14	22	52.00	38	17	11.00
	5	14	20	40.90	38	17	11.00
	6	14	20	40.90	38	15	59.00
	7	14	19	18.80	38	14	20.80
Nefasit	1	14	15	50.00	38	21	36.00
	2	14	17	28.00	38	23	50.30
	3	14	16	44.00	38	25	16.00
	4	14	17	28.00	38	25	16.00
	5	14	16	44.00	38	26	57.10
	6	14	15	22.00	38	26	57.10
	7	14	15	22.00	38	24	2.50
	8	14	14	59.00	38	24	2.50
	9	14	14	59.00	38	21	36.00
Hamlo	1	14	15	59.40	38	20	31.60
	2	14	15	59.40	38	21	17.00
	3	14	17	50.00	38	21	17.00
	4	14	17	50.00	38	20	18.00
	5	14	18	26.00	38	20	18.00
	6	14	18	26.00	38	19	53.00
	7	14	16	43.30	38	13	55.00
	8	14	16	43.30	38	13	16.00
	9	14	17	39.10	38	13	16.00
	10	14	17	39.10	38	11	3.80
	11	14	19	18.80	38	11	3.80
	12	14	19	18.80	38	21	36.00
	13	14	14	59.00	38	21	36.00
	14	14	14	59.00	38	20	31.60

		Northing			Easting		
Concession	**Node**	**Deg**	**Min**	**Sec**	**Deg**	**Min**	**Sec**
Adi Nebrid	1	14	24	15.80	38	17	40.20
	2	14	22	52.00	38	17	40.20
	3	14	22	52.00	38	16	23.00
	4	14	24	15.80	38	16	23.00
Igub	1	14	19	18.80	38	21	12.20
	2	14	20	15.00	38	21	12.20
	3	14	20	15.00	38	20	51.00
	4	14	21	29.90	38	20	51.00
	5	14	21	29.90	38	20	33.70
	6	14	23	15.00	38	20	33.70
	7	14	23	15.00	38	21	36.00
	8	14	19	18.80	38	21	36.00
Midre Felasi	1	14	24	16.00	38	15	28.00
	2	14	24	52.00	38	15	28.00
	3	14	27	8.80	38	16	50.00
	4	14	27	33.00	38	18	27.40
	5	14	26	11.80	38	18	27.40
	6	14	26	11.80	38	21	35.00
	7	14	24	16.00	38	21	35.00

Note: The “Harvest Licence” is comprised of Terakimti, Nefasit, Hamlo, Adi Nebrid and Igub concessions. The “Midre Felasi Licence” is only composed of the Midre Felasi concession.

Table 4.2: Property Tenure Location and Status

Concession	Licence No	Original Area (km^2)	Current Area (km^2)	Licence initiation date	Current licence period	Licence status (renewal period)
Terakimti	326-354/99	107.73	43.1	Jan 11, 2007	Jan 11, 2014 - Jan 10, 2015	5th renewal period
Nefasit	326-354/99	91.31	36.65	Jan 11, 2007	Jan 11, 2014 - Jan 10, 2015	5th renewal period
Hamlo	326-354/99	263.77	65.61	Jan 11, 2007	Jan 11, 2014 - Jan 10, 2015	5th renewal period
Igub	326-354/99	26.33	10.34	Jan 11, 2007	Jan 11, 2014 - Jan 10, 2015	5th renewal period
Adi Nebreid	326-354/99	32.02	5.98	Jan 11, 2007	Jan 11, 2014 - Jan 10, 2015	5th renewal period
Midre Felasi	246-250/2001	84.09	44.68	Dec 19, 2008	Dec 19, 2013 - Dec 18, 2014	3rd renewal period
	Total Area	605.25	206.36			

4.2.3 Environmental Liabilities

Tigray is not aware of any current or past environmental liabilities on the Harvest property.

4.2.4 Exploration Permits and Significant Risk Factors

Harvest property exploration work described in this report and conducted under Tigray's supervision was completed in accordance with Ethiopian Mining Law through the granting of the Exploration Licence. No additional permits are required for the current work program.

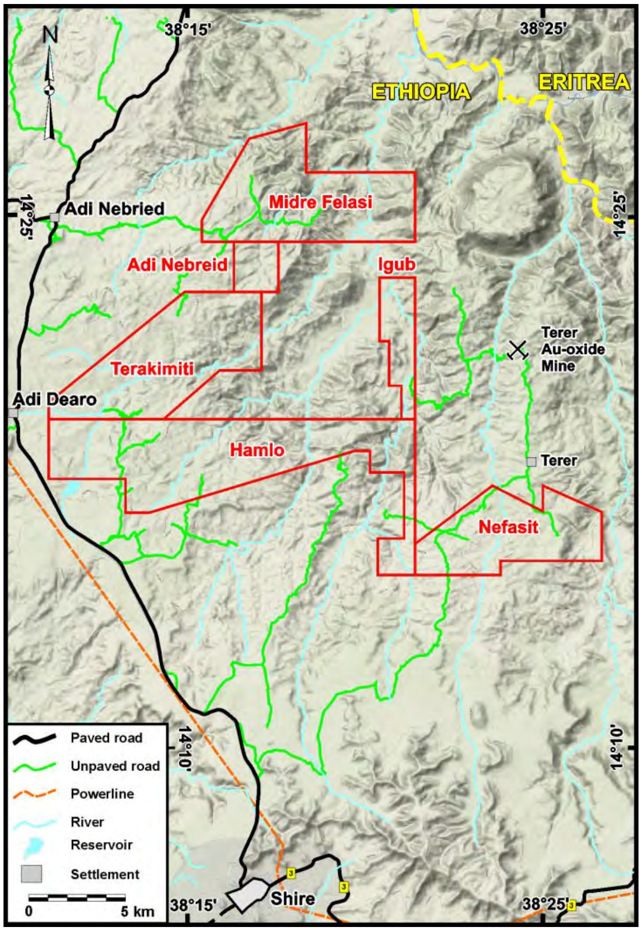
No risk factors are known that may affect access, title, or the right or ability to perform work on the property. A discussion of potential risks and opportunities that may be related to this project is presented in Section 25.2 to provide further clarification for the reader.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

5.1 Accessibility

The Project is located in the Tigray State of north Ethiopia, 600 km north of the capital of Addis Ababa. It can be accessed directly by scheduled flights from Addis Ababa to Shire (pop. 43,967) during the dry season or via Axum (pop. 47,320) all year-round. If arriving from Axum and additional 70 km drive westward along a recently completed (2012) paved highway is necessary. The field administration office is maintained in Shire. The project area can be accessed from this base area via a paved highway that passes along the western side of the concession area, followed by dirt road access to individual exploration licenses (Figure 5-1).

Figure 5-1: Property Location & Access Routes



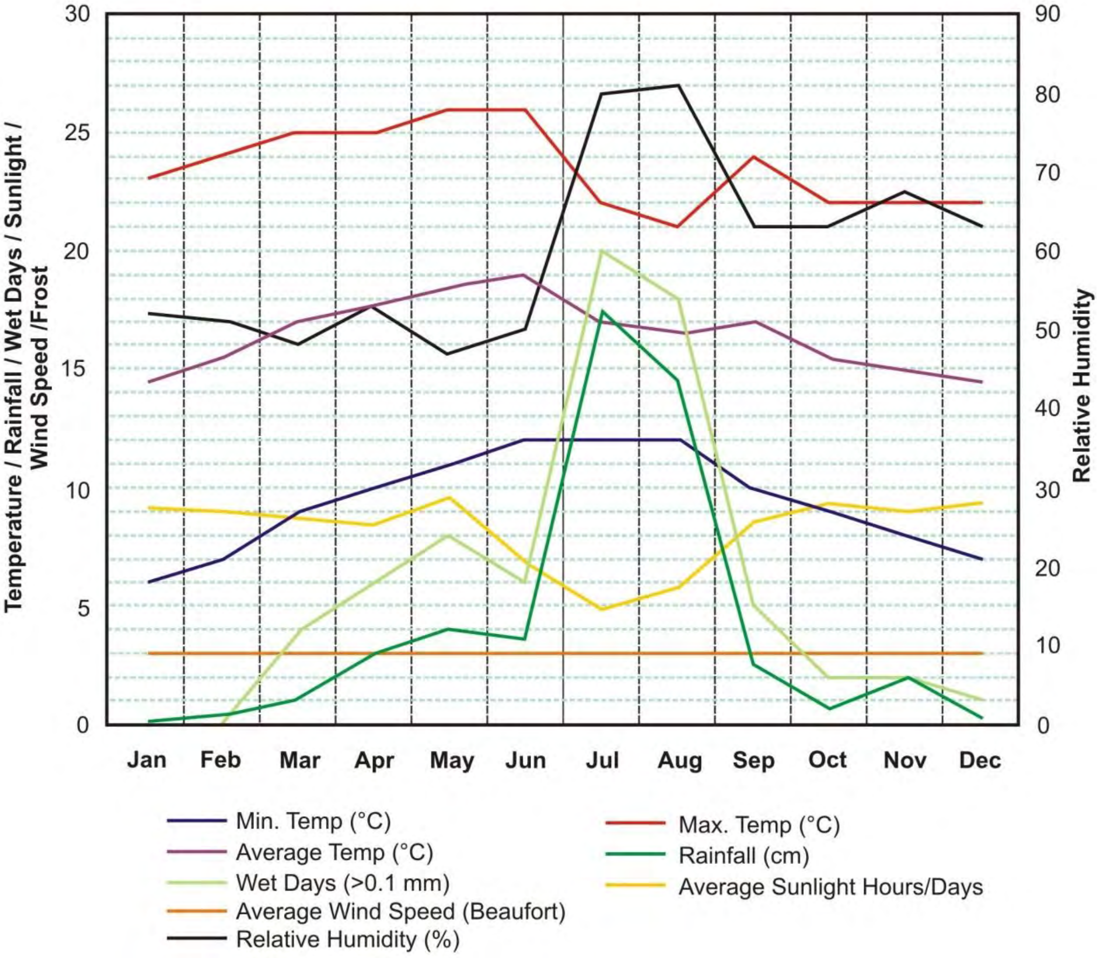
Source: Archibald et al., 2014

5.2 Climate

The project region is characterized by a temperate to hot climate and has both dry and wet seasons. The rainy season extends from mid-June to mid-September with average rainfall of 800-1000 mm per annum. Mean daily temperatures range from a high of 32.5°C in March to a minimum of 13°C in January. Most of the region is devoid of vegetation, with minor areas of shrub brush and trees most commonly located along tributaries and main drainages. The climate graph below for Asmara (Figure 5-2) typifies weather in south-central Eritrea, 130 km northwest of the property location. Extremes of heat are tempered by elevated plateau present throughout much of Ethiopia.

Exploration activity can be conducted year round, although extra caution must be exercised on the roads and while crossing streams in the wet season (June to September).

Figure 5-2: Climate Chart for Asmara, Eritrea (2,325 m)



Data from climatemps.com

5.3 Local Resources (Tigray Region)

Following the secession of Eritrea, Ethiopia is now a landlocked country. It is accessed and serviced via air, roadway, and one poorly-maintained, narrow-gauge rail system from Djibouti. At present port-related import and export is cycled through facilities at Djibouti, located 560 km to the southeast. Tensions exist between the countries over the monopolized system of port services. 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. Historically, Gambela has served as a port.

Roughly 50 civil airports exist in the country, including five in the Tigray Region (viz., Axum, Dansha, Humera, Makale, and Shire), along with two major military airports. In June of 2009, the Ethiopian government announced plans to construct 5000 km of new railway for the country, primarily to facilitate the transportation of goods.

In the Harvest Project area, a major infrastructure initiative has recently taken place. The main highway through the region is now paved between Axum and Shire. Shire is a university town with a population of 47,284 (2007 census). Many districts of the town have modern amenities such as running water, sewerage, and a hospital. A scheduled air service is operated during the dry season and a variety of commercial premises are located in the town. However, a subsistence lifestyle is evident in the villages in proximity to the project, and only limited power and water is available for the inhabitant. Livestock and agriculture are emphasized (Photo 2). Water is predominantly sourced through wells, as tributary drainages are mostly seasonal, although the rivers observed during visits to Terakimti and Adi Angoda did contain water during the dry season. The most significant source of water is the Mareb River that demarcates the Ethiopian-Eritrean border in the region, and is located 20 km north of the Project. The Mareb can also be dry for much of the year, and is subject to flash floods during the rainy season.

5.4 Infrastructure

Significant infrastructure in the area includes high voltage power lines installed along the Shire to Adi Daero and Adi Nebried to Shiraro roads (Figure 5-3), a large reservoir located 2 km NW of Adi Daero (Figure 5-4), a heliport 1 km south of Adi Daero and an airport at Shire. The mobile network and internet are reliable over the majority of the exploration area. The authors were unable to determine the exact capacity of the high voltage transmission lines, but the Ethiopian Power Corporate state that the lines within the country include 45, 66, 132m 230 and 400 kV.

Figure 5-3: Paved Road, Telephone Lines, and High Tension Power Lines near the Western Boundary of the Property

Source: Archibald et al., 2014

Figure 5-4: Reservoir Approximately 3 km southeast of Adi Daero

Source: Archibald et al., 2014

5.5 Physiography

The Tigray region is an upland landlocked area in northern Ethiopia. Topography in the licence area is characterized by gently rolling plateaus, with an average elevation of 1,700 m, cut by moderate north- and northeastern flowing river valleys, and deeply incised valleys that commonly host seasonal tributaries (Figure 5-5, Figure 5-6). Rivers in the project area flow into the Mereb River, 10 to 30 km northeast of the property. The Mereb River defines the Ethiopian-Eritrean border. Vegetation consists of open grassland and arable fields on the plateaus and man-made terracing, whereas river valleys and steep hills are typically covered in small shrubs or succulents. Soil cover is typically less than one metre.

Figure 5-5: Terakimti Concession after the Rainy Season (September)

Source: Archibald et al., 2014

Figure 5-6: Nefasit Concession during the Dry Season (February)

Source: Archibald, 2011

If the Harvest Project proves to be economic there is sufficient space on each of the licences to cover mining infrastructure such as mine buildings, offices, mills, tailings storage, and waste storage (Figure 5-1). As stated in Section 5.4, there is also adequate water and power in the local area to facilitate extraction and processing. Skilled local labour is available in the Tigray Region for most aspects of any mining operation, however highly technical roles would be filled by national and overseas staff.

6 HISTORY

Historic exploration on the Harvest property is summarized as follows:

- Exploration in the area during the 1970s was conducted by the Ministry of Mines, with work suspended from 1975 to 1993 due to civil war. Upon cessation of hostilities (1994 to 1995) Ministry of Mines fieldwork resumed in the form of regional and follow-up geological and geochemical surveys. Additional fieldwork, including geological mapping, trenching and IP geophysical surveys in selected areas was undertaken by the Ethiopian Geological Survey Bureau.

- In 1996 the area was licensed to Ezana who conducted additional stream sediment, soil and rock chip geochemical surveys. The surveys were successful in identifying areas prospective for base metals and gold.

- In 2004, Ezana contracted Fugro to carry out a 1:20,000 scale airborne EM survey covering most sulphidic zones in the northern Shire area, outlining over 10 aerial EM anomalies with potential for VMS-type Cu-Zn-Au-Ag targets. These targets were then tested by drilling confirming the mineralization potential of the area.

- In 2007, Ezana completed an RC drill program, drilling one reverse circulation drillhole at Medadib (located in the eastern part of the Nefasit concession), encountering 20 m of gold enriched gossan, with the top 10 m grading 4.6 g/t Au.

- Given the positive results of regional exploration, and similarities in geology to VMS mineral discoveries in Eritrea, the Adi Nebried, Hamlo, Igub, Nefasit and Terakimti concessions were licensed on the 20th of April 2007 to Harvest Mining and Ezana under a joint venture agreement (see Section 4.2.2). Other licences owned by Ezana were joint ventured to Makeda Mining PLC (including the Terror property), and Donia Mining PLC.

- In 2008, 1,920 rock chip samples were collected over the concession areas as part of a regional program including trenching. All samples were analysed by handheld XRF with 1,138 selected for laboratory assay. Results indicated anomalous Au, Cu, Zn and Pb. A regional stream sampling program of 1,714 samples was conducted across the concessions.

- During 2009, Landsat and Quickbird image interpretation was conducted in addition to mapping and rock chip sampling. 4,274 rock chip samples were collected, of which 3,593 were collected as part of a regional program on 400 m spaced traverses and 681 trench samples were collected. All samples were analysed by XRF and 2,343 were selected for laboratory assay.

- In 2010, Harvest conducted a regional rock chip program, mapping, soil sampling and trenching. 1,845 regional rock chip samples were collected on 200 m spaced traverse lines over the east to north-east of Terakimti concession. These rock chips were analysed by handheld XRF. 8,018 soil samples were collected over Terakimti and samples were analysed by handheld XRF. Trenching was conducted in northeast Terakimti concession, a total of 153 samples were collected and sent for laboratory analysis. Results revealed moderate discontinuous Cu anomalies. Diamond drilling on the Project included 1,814 m in 17 holes, including 1,372 m in 12 holes at the Terakimti VMS prospect and 442 m in 5 holes at the Adi Angoda prospect on the Nefasit concession.

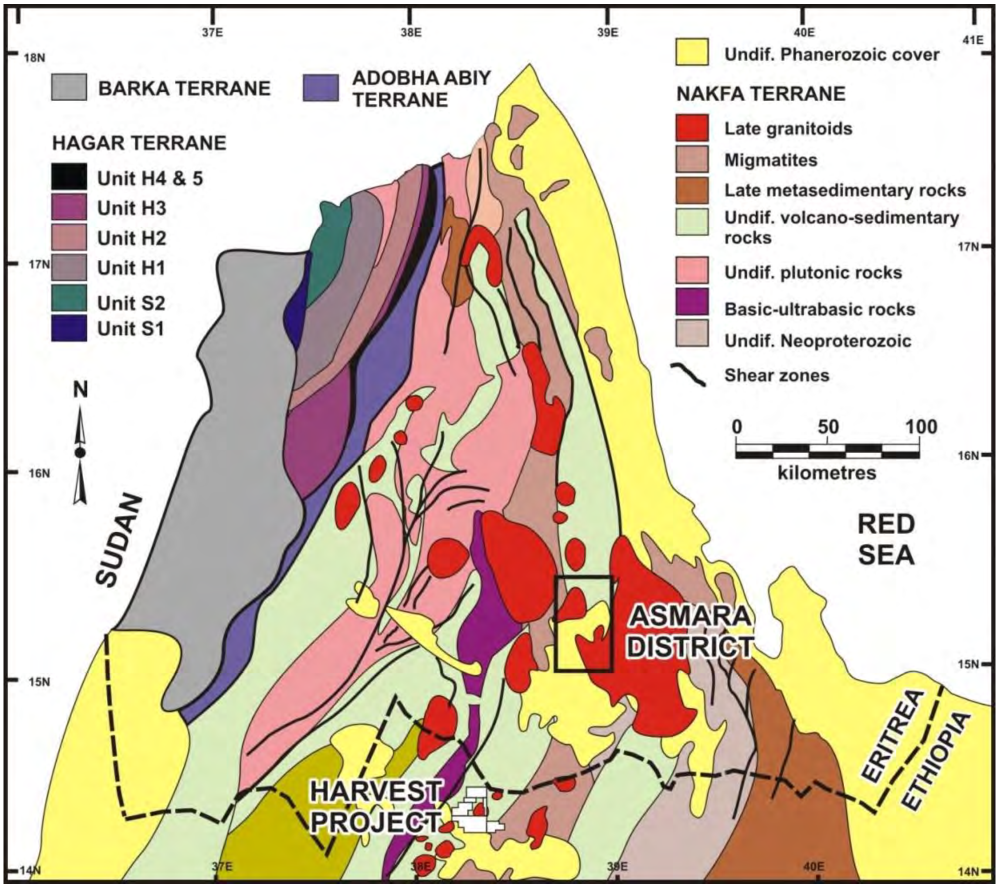
On July 4, 2011 Tigray Resources Inc. acquired 70% of the Harvest Mining PLC from Canaco Resources Inc. Ezana Mining Development PLC holds the balance (see Section 4.2.2 for additional information). All exploration work conducted by Tigray is presented in Section 9.

7 GEOLOGICAL SETTING & MINERALIZATION

7.1 Regional Geology

The Harvest Project is located within the Pan African, Neo-Proterozoic, Arabian-Nubian Shield. This belt of rocks comprises a composite set of granitoid-greenstone terranes located in NE Africa, and extends through Eritrea, Egypt, Sudan, Ethiopia, and western Saudi Arabia. The Eritrea-Ethiopian terranes are showing in detail in Figure 7-1. This collage of tectonostratigraphic terranes has been identified and described and named in differing ways by various academic and exploration groups working throughout these regions. However, the core geological characteristics make it similar to other terranes found in Canada that contain significant VMS deposits. The shield is believed to have amalgamated through convergence between 870 Ma and 650 Ma. This coupling resulted in deformation, metamorphism, uplift, and a late-post tectonic granitoid intrusive event.

Figure 7-1: Geological Setting Map (with relation to Asmara properties)



Source: Redrawn after Drury and De Souza-Filho, 1998

7.2 Local Geology

The diversity of lithologies present on the property is a function of the collapsed back-arc basin geological setting of the area (Figure 7-2). This setting is postulated due to the presence of cycles of mafic and felsic volcanic and volcanoclastic rocks, synvolcanic intrusions, and the occurrence of deep and shallow water sediments (Adi Nebrid Block). The area underwent significant deformation during destruction of the back-arc basin resulting in the development of isoclinal and recumbent folds as well as thrust and shear faults. A period of crustal thickening followed, resulting in the emplacement of late orogenic granites, such as the intrusion located between the Igub and Terakimti concessions.

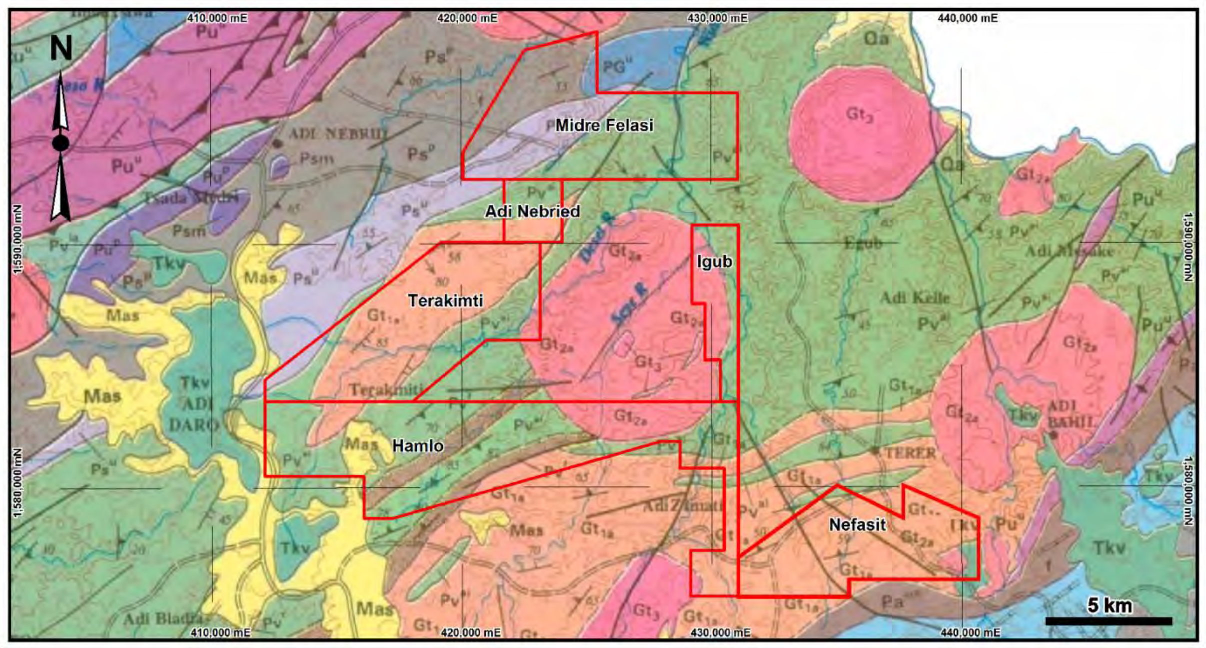
The following section has been taken directly from Gardoll *et al.,* 2012 (2012 Annual Exploration Report) since it describes chronologically the dominant lithologies present in the property. Major rock groups can be correlated in the text with Figure 7-2.

1) *Basement Rocks: The basement stratigraphy does not outcrop on the Harvest concessions, but does outcrop to the east and west. Both outcrops are sheared ultramafic complexes that were thrust to the surface during collapse of the basin. Both ultramafic complexes are interpreted to be oceanic crust. The western complex is interpreted as older basement crust that later became part of the forearc. Whereas, the eastern complex is interpreted to be more juvenile back-arc basement crust that formed during the growth of the back-arc basin.*

   A NE trending granite parallel to stratigraphy is interpreted to be a late syn-tectonic granite that exploited a thrust zone. Locally the granite is sheared and its northern boundary cross-cuts the stratigraphy. Initially the package was interpreted to be the basement, however mapping has established that this is not the case.

2) *Sedimentary Package: During extension of the crust before rifting was initiated and any volcanic activity began, sedimentation would have occurred. However, the expected sedimentary package has not been found. This package of rocks could have included conglomerates, sandstones and quartzites. Crucial to resolving this issue is understanding the metamorphic sedimentary rocks on the eastern edge of the Nefasit concession. At the time of compiling this report, these rocks have not been mapped sufficiently to resolve two possible theories about the nature of the eastern Nefasit rocks, these theories include; 1) the rocks are the pre-rifting sedimentary package, which are occurring along a thrust zone that has brought the deeper eastern ultramafic sequence to the surface, or 2) these rocks outline the basement closure and are the sediments formed during the end of the rifting event and possibly the same rocks (shale and intermediate volcanic sequences) as those on the western part or the Adi Nebried concession.*

Figure 7-2: Property Geology from the 1:250k Geological Survey of Ethiopia (1999) Axum Map Sheet



PALEOZOIC-MESOZOIC

Mas	Reddish sandstone, laminated siltstone, conglomerates and minor Paleozoic boulder bed (tillite).

NEOPROTEROZOIC

ADI NEBRID BLOCK

Ps^u	Undifferentiated metasediments: intercalations of siltsone, chert, phyllitic schist and minor sandstone.
Ps^p	Phyllitic and graphitic schists, quartzite and metagreywacke.
Pv^i	Sericite- quartz- feldspar schist: (metarhyolite) with lenses of quartzite, graphite and phyillitic schist.
Pv^{ai}	Meta-agglomerate and intermediate metavolcanics: epidotized agglomerate with mafic and felsic clasts interlayered with intermediate metavolcanics.

CHILA BLOCK

Pa^{am}	Amphibole schist with marble bands.
Pa^{pc}	Phyllite and quartzite with calcareous bands.

GRANITIC INTRUSIVES

Gt_3	Granite: coarse grained, pink biotite granite and hornblende biotite granite; commonly contains laths of large potassium feldspar.
Gt_{2a}	Granitoid: coarse grained xenolithic granodiorite, diorite, tonolite and granite. Distinct marginal foliation and zone of hybridization is characteristic.
Gt_{2b}	Large feldspar granite (Shire granite).
Gt_{1a}	Granitiod: biotite tonolite; granodiorite and diorite; strongly deformed and contains metavolcanic mega-xenoliths.

MAFIC AND ULTRAMAFIC INTRUSIVES AND ASSOCIATED ROCKS

Pu^m	Metagabbro: melanocratic, medium grained, massive and marginally sheared.
Pu^u	Undifferentiated gabbroic rocks; coarse grained, leucocratic to mesocratic, locally layered gabbros.
Pu^u	Undifferentiated mafic and ultramafic rocks: talc-schist, tremolite-chlorite schist, altered pyroxenites, metavolcanics and ultramafic melange.

3) *Felsic and Mafic Dominant Volcanics: A large package of felsic- and mafic-dominated volcanic rocks comprises the first sequence of extrusive rocks deposited during back-arc basement development. From east to west, these rocks are found on the Nefasit, Hamlo, Igub and eastern Terakimti concessions. The rocks are commonly light green, green-grey to grey and fine- to medium-grained. When weathered, the mafics can display remnant pillow structures (Figure 7-3C, D) and the felsics can be crusted red-brown (Figure 7-3A, B, E, F). They are weakly deformed and can contain chlorite, amphibole, feldspar and sericite. The true thickness of this package is difficult to assess, as the rocks are interpreted to be folded and perhaps structurally repeated across the concessions. The inferred thickness of the rocks is between 2,000 and 3,000 m.*

   Regional mapping has identified that there is a repetition in the stratigraphy from felsic to mafic dominant. Detailed mapping at prospective localities has identified that the packages are a complex sequence of inter-bedded extrusive and some intrusive rocks, that on occasion, include minor chert horizons. The extrusive rocks can include tuffaceous and volcaniclastic sequences. These rocks are very sparsely intruded by late quartz veins and very few felsic dykes. Chlorite or epidote alteration is common and appears to be spatially associated with inferred faults and possible shear zones.

   The mafic dominant package is associated with thin BIF, quartz veins and felsic dykes. The BIF layers are rare and typically 10-30 m in outcrop and less than 1m thick. The quartz veins are common and are often parallel to stratigraphy and sometimes 50-100 m long. Around the Terakimti prospect quartz veins trend NW and represent a different quartz veining event or reflect structural modification by growth faults. Felsic dykes are rare and typically follow stratigraphy.

   All of the VMS prospects on the Harvest concessions occur within the felsic and mafic dominant package of rocks. This includes the Terakimti, Mayshehagne, VTEM09 and Adi Million VMS prospects. Locally, at the Terakimti and Mayshehagne VMS prospects, BIF and chert horizons have also been found and jasperoid alteration is common.

4) *Mafic Dominant Volcanics: These occur throughout the western and central part of the Terakimti concession and are inferred to be dextrally faulted to the eastern side on the Adi Nebried concession and folded around the northern part of the Igub granite and onto the very northern part of the Igub concession. The unit compromises numerous volcanic sequences but is comprised dominantly of mafic (basalt) and mafic volcaniclastic rocks. The sequence is inferred to be 2000-2500 m thick displaced by late cross cutting faults and folded around the Igub syenite granite intrusion during the collapse of the back-arc basin. Some intermediate volcanics are present and this may be related to bimodal volcanism at the time.*

   Typically, the mafics are fine-grained, chloritic and weathered on the surface. However, the variety of mafics is quite complex and there are chlorite altered mafics with pyrite, mafics with 1-5 cm volcaniclastic clasts and coarse-grained unaltered mafics. Chlorite is the *dominate alteration, with epidote and silica alteration commonly associated with interpreted faults. In the mafic volcaniclastic rocks the clasts can often be epidote rich. The rocks appear to have undergone little deformation however; folded quartz and epidote veining suggests ductile deformation occurred within the sequence. Cross-cutting quartz veins, felsic and aplite dykes are common. BIF/Ironstone has been found as float across the package (Figure 7-3G). The mafic dominant units form topographic highs, unless the sequence is dominated by volcaniclastic rock which is more susceptible to erosion.*

5) *Shale and Intermediate Volcanic Dominant Sequence: This sequence occurs on the western side of the Adi Nebried concession. The sequence of rocks is between 1500 to 2500 m thick. The sequence is comprised of shale with silicified chert horizons inter-bedded with intermediate volcanics. Some mafic flows are present and one gabbro intrusion has been mapped to the south west of the concession. The area is intruded by a few small granite plugs. The shale units are soft and light grey in colour with some units containing coarse pyrite. The shale, sometimes altered to sericite, contains silicified chert, banded chert and brecciated chert zones. The nature of the breccia is unknown, but in places it appears to have a jigsaw texture suggesting possible hydrothermal association, if so this could suggest epithermal type mineralization potential in the region. The basalts and mafic rocks in the area exhibit jasperoid, silica and epidote alteration to varying degrees and are sulphidic in places with several exposures exhibiting pyrite rich "pods". Quartz veining is observed, variably suphidic and heavily oxidised with occasional boxwork. Topographically the silicified cherts form high ridges sometimes with steep cliffs.*

6) *Shale Dominant Sequence: This sequence of rocks does not occur on any of the Harvest Mining concessions in this report, but is the next stratigraphic unit and the last in the basin formation. It is included in this report for completeness. This sequence of rocks, formed in a deep quiet basin away from the rift zone and any other volcanic activity. The rocks outcrop to the west of the concessions and are interpreted to be between 500 to 5000 m thick trending roughly NE. The variability in the thickness of the shale may be due to growth faults and structural repetition. The soft rheology of the shales have accommodated the majority of the strain during the basin collapse, and are likely to be highly contorted and sheared; duplex complexes are possible. The shale occurs in fine-grained massive sequences that rarely outcrop but form a white-grey powder clay-rich soil. Outcrops of the shale are seriticized shear zones that form thin ridges that often extend for hundreds of metres. Topographically the shale sequence forms low undulating ridges. These rocks are important because where they have thickened the stratigraphy in the basin has been faulted to SE.*

7) *Syn-Tectonic Granite Intrusions: The geometry of all the units in the Harvest Mining license is dominated by a syn-tectonic syenite intrusion (Figure 7-3H). The syenite granites are alkaline feldspar dominant, coarse-grained and pink in colour. Some smaller intrusions of coarse-grained, white tonalities are also associated with the syenites, but their relationship has not yet been defined and could be mineral segregation, later intrusions and cross cutting dykes.*

The largest intrusion, known as the Igub granite, is about 20 km in diameter and is located between and overlaps onto the Terakimti, Hamlo and Igub concessions. The Igub granite, has locally structurally affected all of the surrounding rocks, overturning the stratigraphic package at Adi Nebried, thrusting out the felsic and mafic volcanics between the Terakimti and Igub concession and folding all of the Hamlo stratigraphy around the southern end of the granite. Also associated with the Igub granite is late faulting on the south western and eastern margins, occurring late in the basin collapse as the volcanic packages are deformed around the rigid granite. Interestingly, the Igub granite is possibly a ringed granite, in which rafts of country rock are still preserved within the granite. This is evident from local scale mapping on the Igub concession and regional satellite interpretation.

Several small syenite intrusions are just off the current concessions; these include one south of Hamlo and another east of Nefasit. Locally the stratigraphy has been deformed around these intrusions. Another interesting feature of the syenite granites is that they are associated with later gabbroic intrusions that that have formed along their margins in pressure shadows. The late gabbro intrusions are discussed below.

8) *<u>Late Quartz Porphyry Intrusions</u>: Quartz porphyries are late intrusive events. Typically the rocks are coarse grained light grey to light green in colour. Structurally the porphyries are intruding the mafic volcanics along fracturing during deformation. At the Terakimti Cu-Zn-Au VMS prospect the porphyries are possibly intruding along growth faults that formed during the deposit formation. Porphyry intrusions have been discovered along the Ruwa-Ruwa gold trend, in south Hamlo and in central Nefasit. The geometry of the porphyries is parallel to stratigraphy and normal to principle stress during the collapse of the basin. However, the contacts are intrusive and irregular. The porphyries are fresh resistive rocks and easily identifiable in the field. Along the Ruwa-Ruwa gold trend they are associated with gold mineralization.*

9) *<u>Late Gabbro</u>: Gabbroic intrusions (Figure 7-3I) have been found on the Nefasit and Hamlo concessions and these rocks are interpreted to be related to the late mantle plume event. Most of the intrusion are small between 100-500 m in diameter and are often in granite pressure shadows. The rocks are poorly weathered, fresh coarse-grained and typically topographic highs. No sulphides have been identified in any of the intrusion mapped to date.*

10) *<u>Cover</u>: Late Palaeozoic to Mesozoic ironstone cover (Figure 7-3J) is found in the SE corner of the Hamlo concession.*

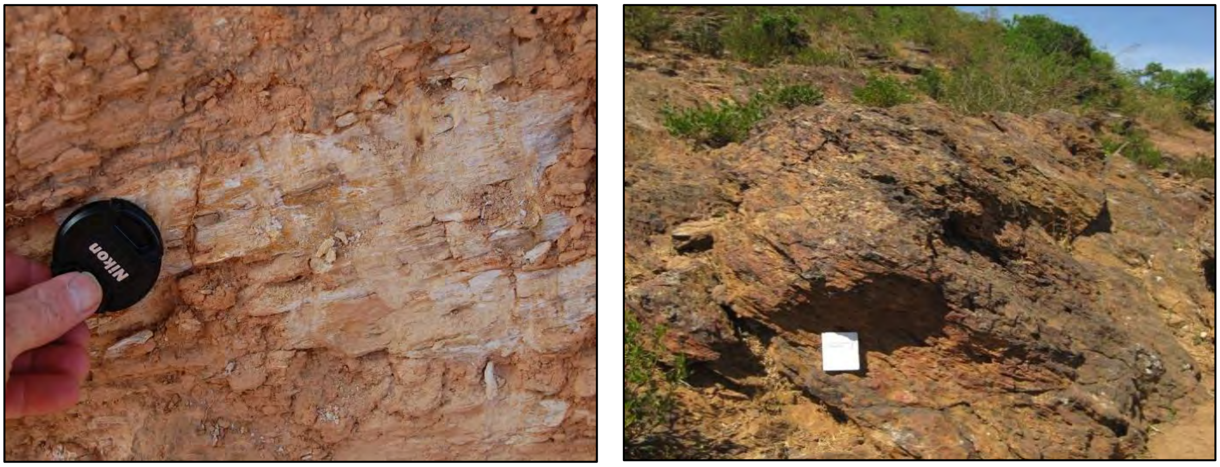
Figure 7-3: Typical Rock Types Found Throughout the Harvest Property

A) Felsic volcanic rock with silica alteration, Hamlo

B) Felsic volcanic rock, Terakimti

C) Mafic rock with chlorite alteration, Terakimti

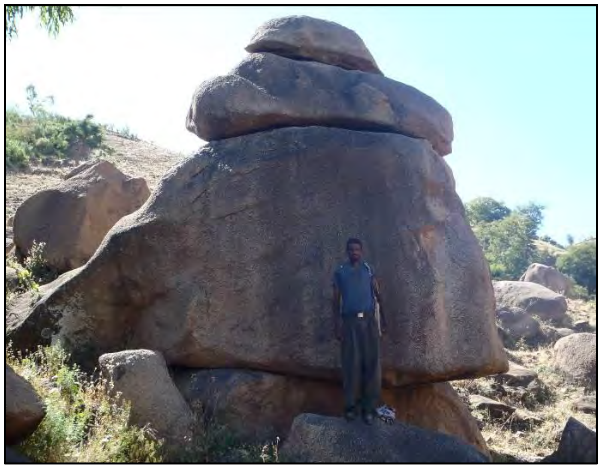
D) Mafic rock with epidote alteration, Terakimti



E) Intense sercitic alteration in felsic volcanic rock, Terakimti

F) Hematite-rich gossan, Terakimti

G) BIF with magnetite and jasperoid, Terakimti



H) Syenite granite intrusion, Hamlo

I) Gabbro, Nefasit

J) Ironstone cover, Hamlo

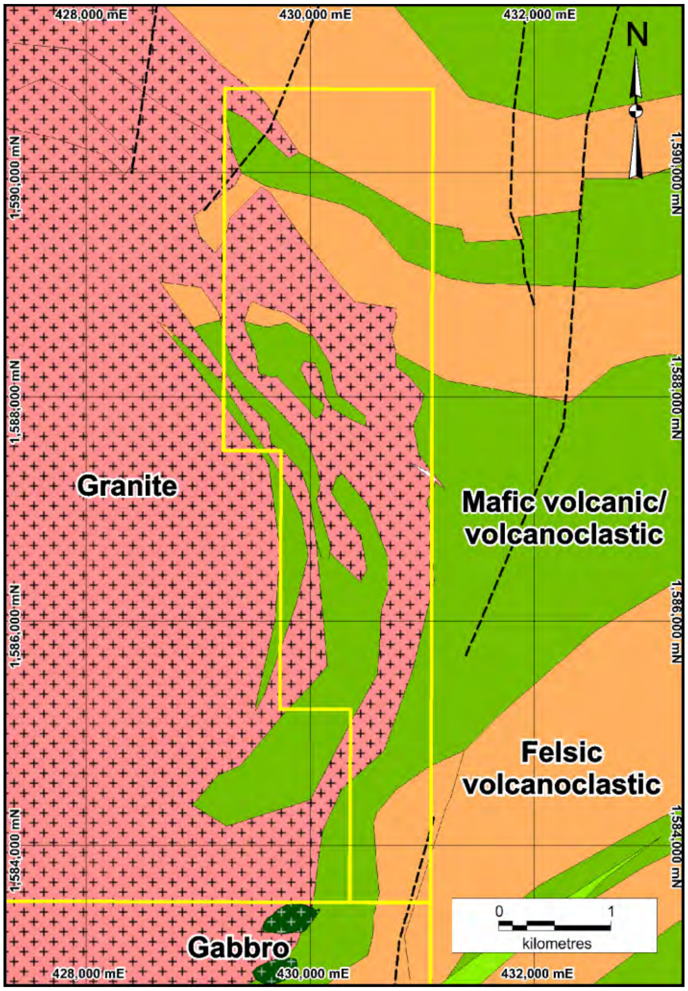
Source: Tigray Resources 2013

7.3 Property Geology

Igub

This concession covers an area of 65.61 km^2 and is underlain by a variety of rock types. These include: pink and grey coloured coarse- to very coarse grained muscovite-rich granite; fine- to medium- grained feldspar and quartz rich felsic rock; weakly foliated aplite; massive, crystalline BIF; and isolated outcrops of altered mafic, intermediate, basalt and dolerite (Figure 7-4). The general trend of the lithologies is NW-SE, some with a north-south orientated, and variable dips from 40-90°.

Figure 7-4: Igub Property Geology



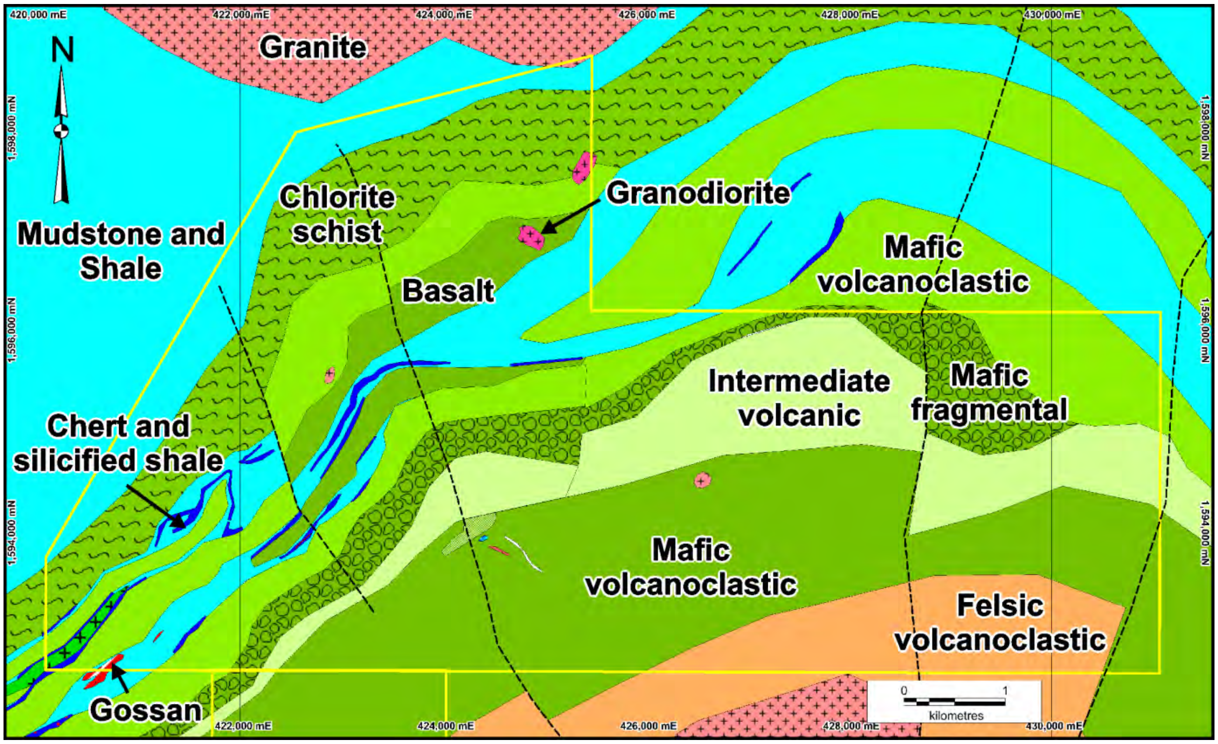
Source: Tigray Resources 2014

Mineralization is recorded in the concession and consists of chalcopyrite and malachite-stained basalt (containing 3.17% Cu), BIF outcrops containing 0.4% Cu, and a pyrite-bearing silica-rich unit that contained 830 ppm Cu and 240 ppm Zn. In addition to these bedrock sources, three semi-continuous gold soil anomalies, present over a strike length of 1.4 km, are also located on the concession. The westernmost part of the anomaly is composed of samples that contained 1430, 966, 608, 600, 533 ppb Au.

Midre Felasi

This 44.68 km^2 concession is underlain by a volcanosedimentary sequence and associated intrusive rocks (Figure 7-5). Rock types include mafic volcanic and tuff, chert, chlorite schist, sericite schist, sericite chlorite schist, shale, felsic, intermediate, diorite, granodiorite, dolerite, granite and ultramafic units.

Figure 7-5: Medri Felasi Property Geology



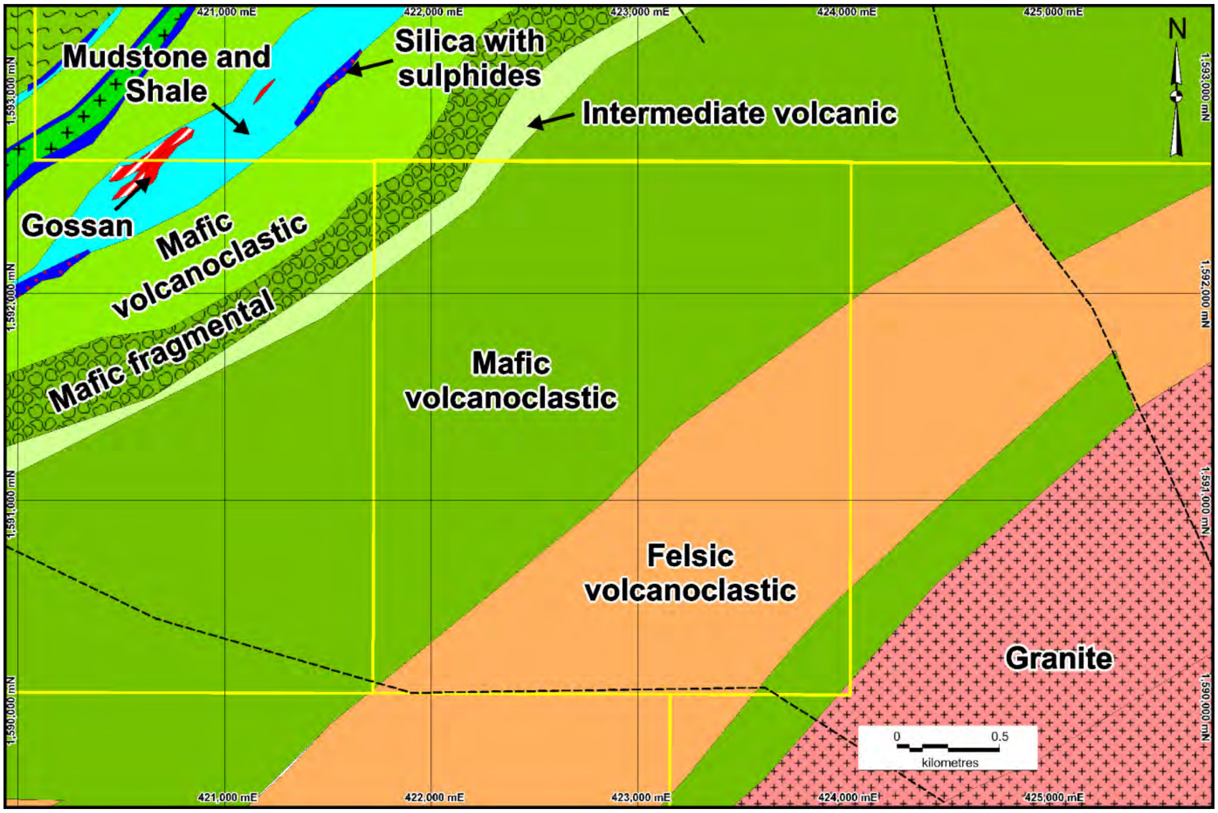
Source: Tigray 2014

Near Midre Felasi village a 5-10 m wide and 650 – 700 m long gossanous zone is present, which displays elevated gold stream sediment samples. The gossan is dark reddish brown and occurs at the contact between shale and a silicified conglomerate. Coarse-grained pyrite is associated with chert and shale at eastern part of the gossan. Minor pyrite mineralization is also associated with sericite schist in the central part of the concession and with mafic lava towards the northeast of the concession. The peak gold values from stream samples were 50, 37, 34 and 24 ppm Au and lie within a NNE trending zone over a strike length of 2.5km in the southwest part of the concession.

Adi Nebried

The main lithologies observed in this 5.984 km^2 concession are felsic metavolcanoclastics, intermediate metavolcanoclastics, quartz-feldspar-sericite schist and amphibole schist (Figure 7-6). Foliation is prominent in the concession, and strikes east-northeast with moderate dips. Disseminated sulphides have been identified in the north-central portion of the concession. Minimal mapping has been conducted on this concession, with limited detailed mapping in one area.

Figure 7-6: Adi Nebried Property Geology



Source: Tigray Resources 2014

Exploration potential of the Adi Nebried concession is restricted to a VMS target in the northwest of the concession (VTEM08) and an anomalous gold target in the centre of the concession. The VTEM08 anomaly is centred on a gossan that returned a peak copper concentration of 212 ppm. Rock chip sampling revealed weak geochemical anomalism; Au (20 ppb Au), 310 ppm Cu, and 300 ppm Zn from a sulphide-bearing chert.

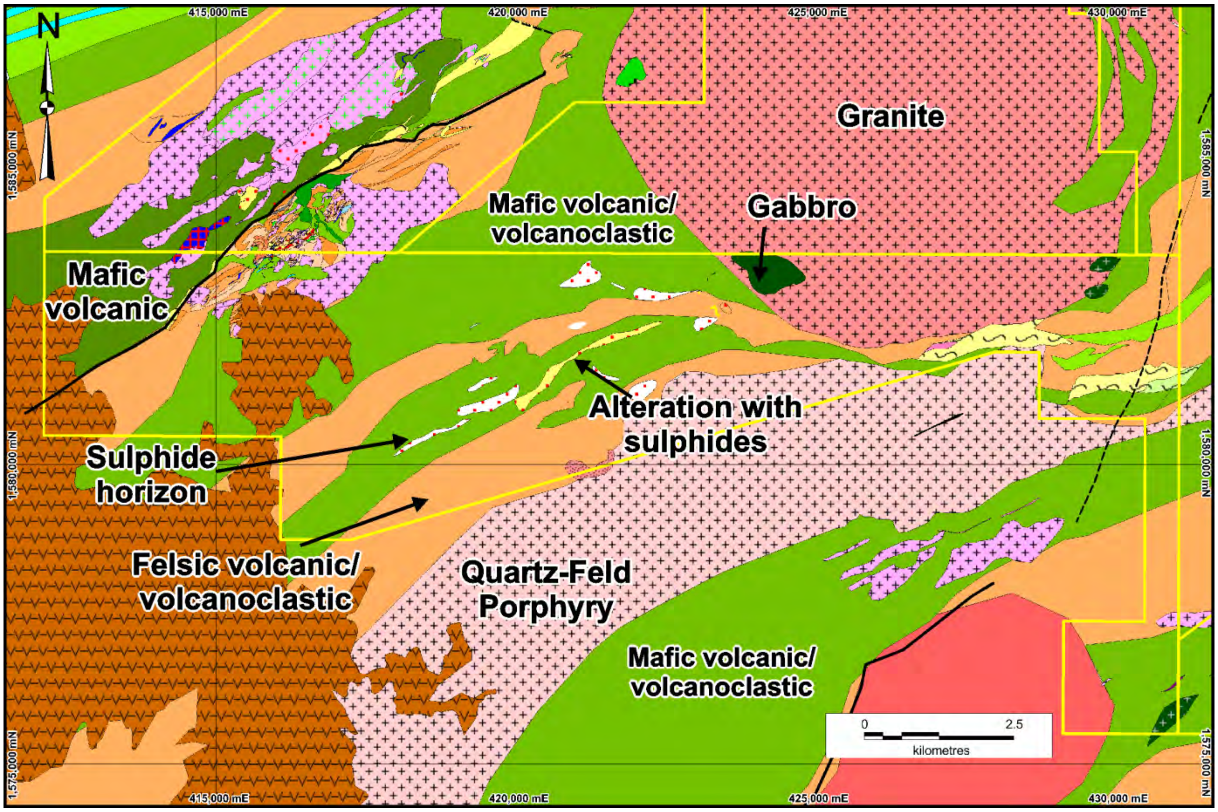
Hamlo

The Hamlo concession covers an area of 65.61 km^2. The property is underlain by a generally ENE-trending assemblage of felsic volcanic rocks and related intermediate to mafic volcanic rocks in the northwestern and southeastern sections of the property, separated by a central belt of highly strained altered felsic quartz-eye intrusive rock interpreted as a synvolcanic intrusion (Figure 7-7). This intrusion is characterized as a fine- to medium-grained, generally weakly deformed quartz-feldspar-biotite and hornblende rock, locally altered to chlorite and sericite. The aforementioned unit also hosts volcanic xenoliths. The felsic volcanic rocks are dull white-grey in colour, fine-grained, and strongly deformed in comparison to the intermediate to mafic volcanic assemblage. They are characterized as lapilli tuffs, whereas the intermediate to mafic volcanic are identified as agglomerates (siliceous and epidotized), and fine volcaniclastic rocks. The matrix consists of fine grained chlorite, feldspar, amphibole and epidote. Quartz-feldspar-sericite schist occurs locally within the volcanic rocks, associated with the sulphide zones. These schists commonly contain disseminated pyrite. Contact metamorphic effects are noted where the schist is in contact with later granitoids. A number of post- to syn-tectonic granitoid intrusions are present, and intrude the syn-volcanic intrusion. A thin veneer of ferruginized conglomerate and associated sandstone, mudstone, and chert are evidenced in portions of the property.

Sulphide horizons are located in the volcanic horizons that are in proximity to the central synvolcanic intrusive rock. Minor late gabbro plugs are associated with the late syntectonic granitoids. Two prominent foliations dominate the assemblage: F1 is interpreted as an E-W steep foliation, whereas F2 trends to the north-northeast, and dips steeply eastwards. NNE, NW, and EW lineaments on the property are interpreted to be related to strike-slip movement.

Apart from the southern extension of the Terakimti deposit, two main mineralized zones were identified on the Halmo concession, these are: Adi Million and Mayshehagne. All zones are represented by gossans and represent exhalative mineralization.

Figure 7-7: Hamlo Property Geology

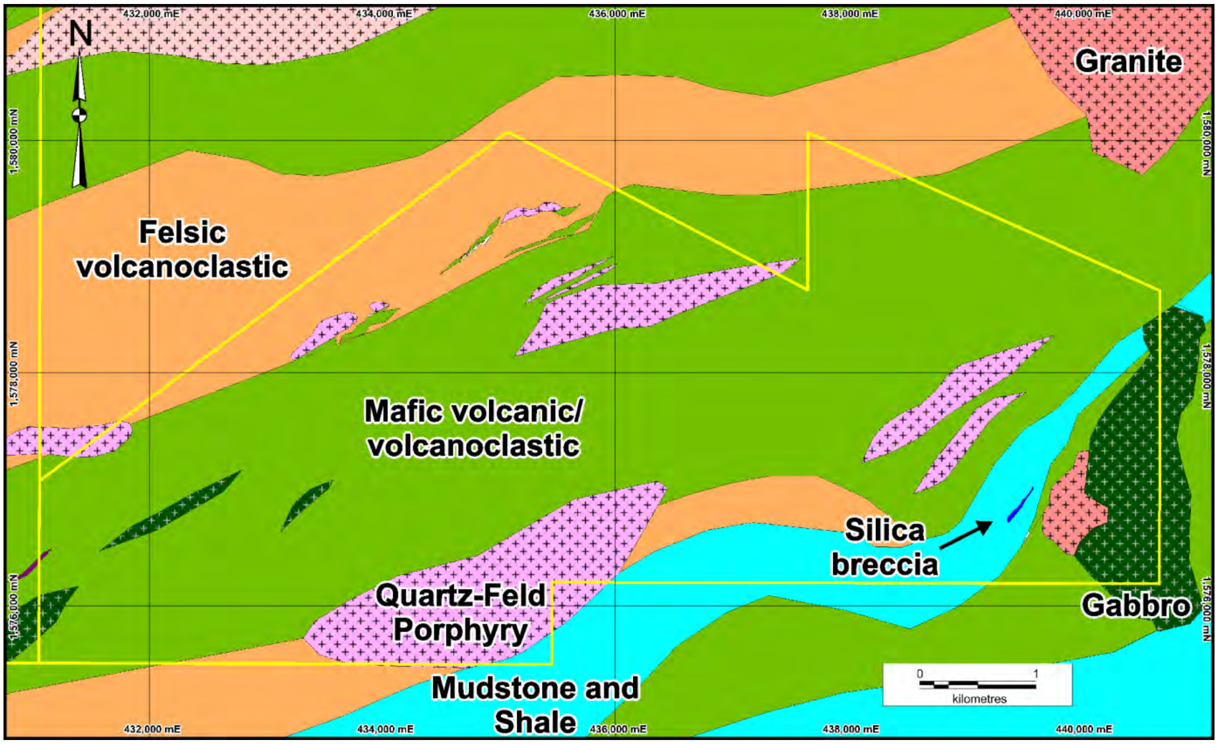


Source: Tigray Resources 2014

Nefasit

The concession is dominated by east-northeast trending felsic to mafic metavolcanic rocks and metavolcaniclastic rocks, with minor metasedimentary rocks and syn-tectonic granitoids (Figure 7-9). Linear gossan horizons trend in a similar manner to the lithological contacts. The most prominent alteration types include sericitization and chloritization, and locally silicification is associated with gossans. Northwest trending faults are observed to cause strike slip displacement of geological contacts, and regional folding along the northeast trending foliation is observed. A minor veneer of Mesozoic to Paleozoic sedimentary rocks occurs within the concession. Towards the southeastern portion of the Nefasit concession, lithologies of the Chila block (a thick, > 3000 m, metasedimentary rock package) have been observed, evidenced by prominent phyllitic beds and graphite schist.

Figure 7-8: Nefasit Property Geology

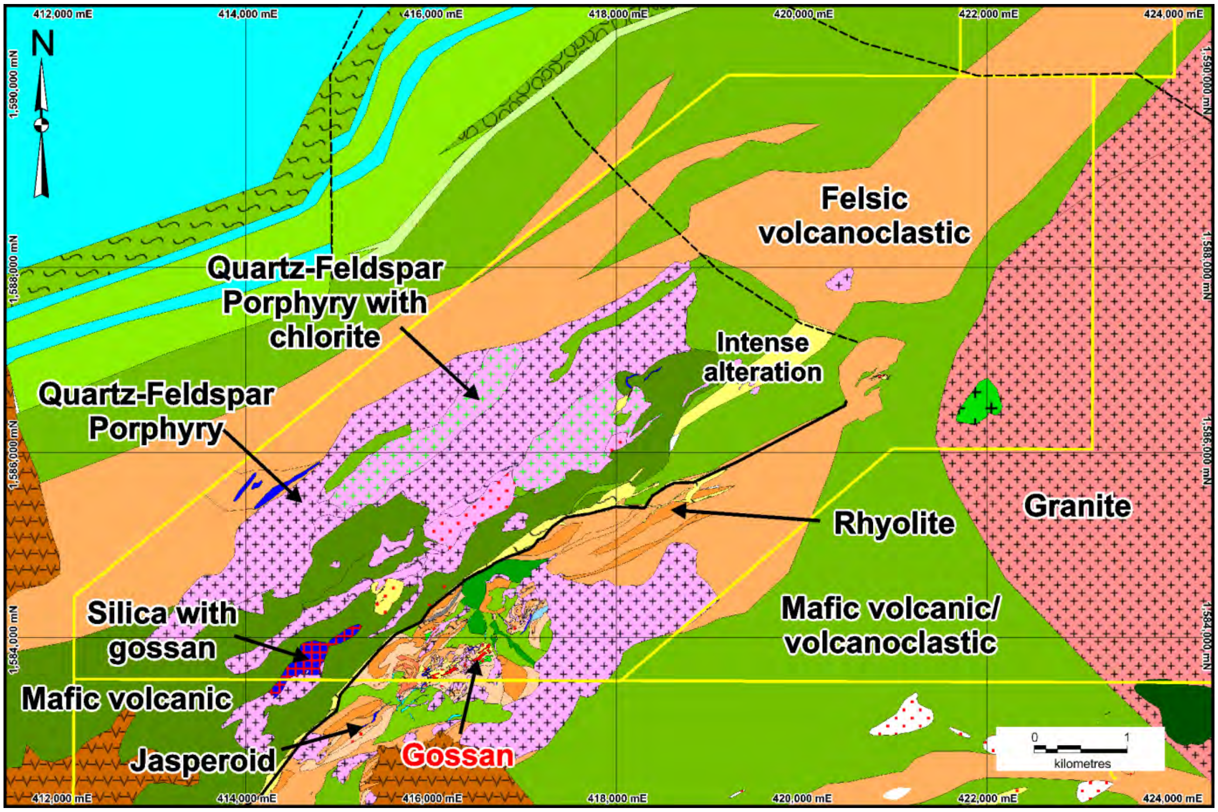


Source: Tigray Resources 2014

Terakimti

The general geology and targets of the Terakimti (formerly Mae Sensala) target area, located in the southwest area of the property, is provided in Figure 7-9. This concession comprises a northeast trending, central belt of intermediate porphyritic metavolcanic rocks flanked to the north by Neoproterozoic metasedimentary rock and granodiorite, and to the south by intermediate to mafic volcanic rocks. Significant chlorite, sericite, and silica alteration is associated with conformable gossanous horizons associated with the contact area of the intermediate and felsic volcanic rock packages, quartz-eye volcanic rocks and intrusive rocks are also present in this altered zone. The gossans are associated with auriferous massive sulphide (Au-Cu-Pb-Zn) mineralization at depth. Magnetic cherts are noted in the gossan area. The rocks have been affected by intense deformation, resulting in the development of a penetrative fabric in all lithologies, but in particular ones rich in sericite. Local folding is present, but large scale folds have not been identified.

Figure 7-9: Terakimti Property Geology



Source: Tigray Resources 2014

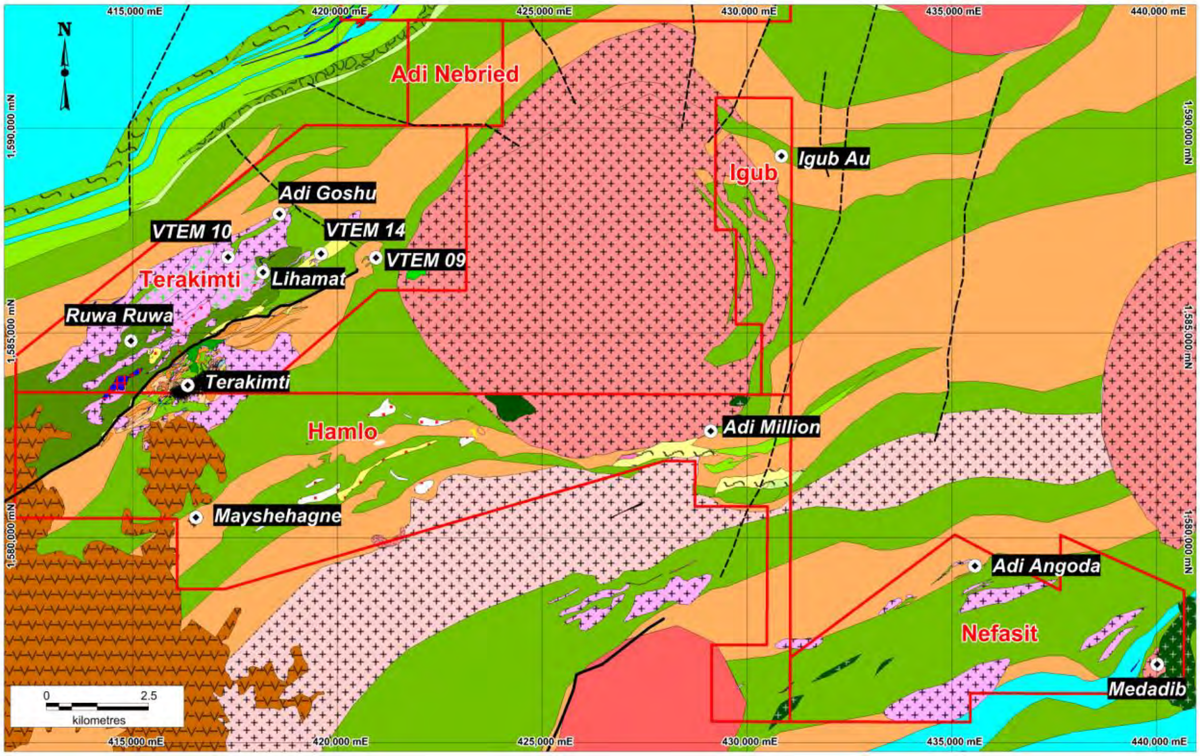
7.4 Mineralization

Three types of mineralization are recognized on the Harvest Project: primary polymetallic (Cu-Zn±Pb-Au) volcanogenic massive sulphide (VMS) related mineralization, identified by drilling; surficial oxide mineralization hosting gold and minor base metals (oxidized VMS mineralization); and shear-zone hosted orogenic gold mineralization. Table 7.1 lists the style of mineralization present at each showing on the Harvest Project and Figure 7-10 the geographical distribution.

Table 7.1: Prospects and Style of Mineralization

Prospect	Licence(s)	Style of mineralization
Terakimti	Terakimti/Hamlo	VMS & oxide gold
VTEM09	Terakimti	VMS
Adi Goshu	Terakimti	Orogenic Gold (shear zone-hosted)
Lihamat	Terakimti	Orogenic Gold (shear zone-hosted)
Mayshehagne	Hamlo	VMS
Adi Million	Hamlo	VMS
Adi Angoda	Nefasit	VMS & oxide gold
Medadib	Nefasit	VMS
Igub	Igub	Orogenic Gold (shear zone-hosted)

Figure 7-10: Prospects Mentioned in the Text



Source: Tigray Resources 2014

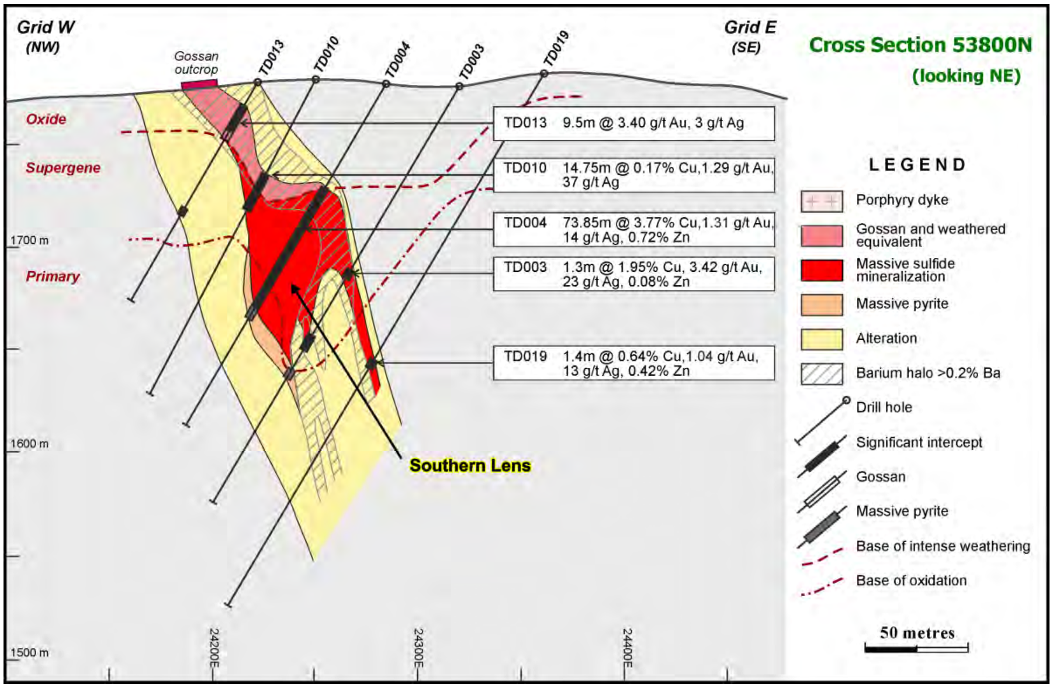
Note: The key for lithologies in this figure are presented in individual concessions maps in Section 7.3.

Terakimti

The main prospect on the Harvest property is Terakimti. Extensively drilling at 40 by 40 metre to 40 by 80 metre drill spacing has defined four copper-gold-silver-zinc-rich stacked lenses over an 800 metre strike length. The lenses are hosted within a sequence of intermediate volcanic rocks, with basalt in the hanging wall. Exhalative siliceous iron formation occurs at the periphery of the mineralized zone. Several quartz-feldspar porphyry dykes intrude the centre of the mineralized system. Mineralized lenses and associated alteration have a moderate east-northeast trend.

The Southern Lens, named by Tigray geologists (Groves et al., 2013), is up to 50 m wide, 360 m long and attains a maximum height of 170 m (Figure 7-11). The lens shows compositional zonation, with the bottom 5 m composed of massive pyrite (with low base and precious metal concentrations) and takes the form of a mound containing stringers in the footwall. Due to the plunge of the system this Southern Lens outcrops, which results in supergene enrichment caused by the oxidative effects of the ground water. The best intercept of the primary massive sulphide is from a depth of 57.45 m in drillhole TD004 where a 73.85 m thick (apparent thickness) mineralized zone grades 3.77% Cu, 1.31 g/t Au, 14 g/t Ag, and 0.72% Zn. Gold enriched oxide mineralization is located in drillhole TD029 including 8.8 m grading 9.19 g/t Au and 78 g/t Ag in hole TD029.

Figure 7-11: Drill Section 53,800N through Southern Lens at Terakimti

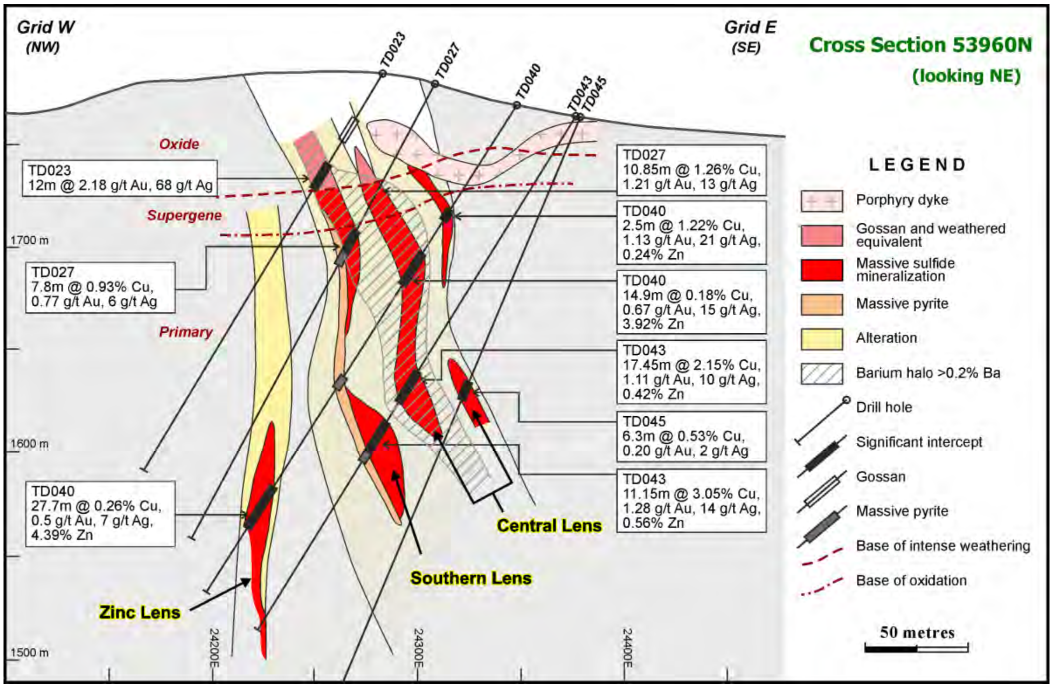


Source: Groves et al., 2013

The Central Lens is stratigraphically higher than the Southern Lens and attains a maximum thickness of 14 metres, length of 400 m, height of 150 metres, and is open down plunge and down dip (Groves et al., 2013). The lens is comprised of banded to often massive sulphide with several thinner lenses present in the hanging wall. These thinner lenses contain high-grade metal concentrations. The highest grades encountered within the primary sulphide from the Central Lens is hole TD011, which intersected 15.2 m (at a high angle to the core axis) grading 2.61% Cu, 1.84 g/t Au, 43 g/t Ag, and 6.77% Zn from a depth of 181.75 m (Figure 7-12). Within the oxide zone the highest grade recorded was from drillhole TD023 which intersected 12.0 m of 2.18 g/t Au and 68 g/t Ag from a depth of 51.2 m. This intersection also included 4.0 m of 5.68 g/t Au and 157 g/t Ag.

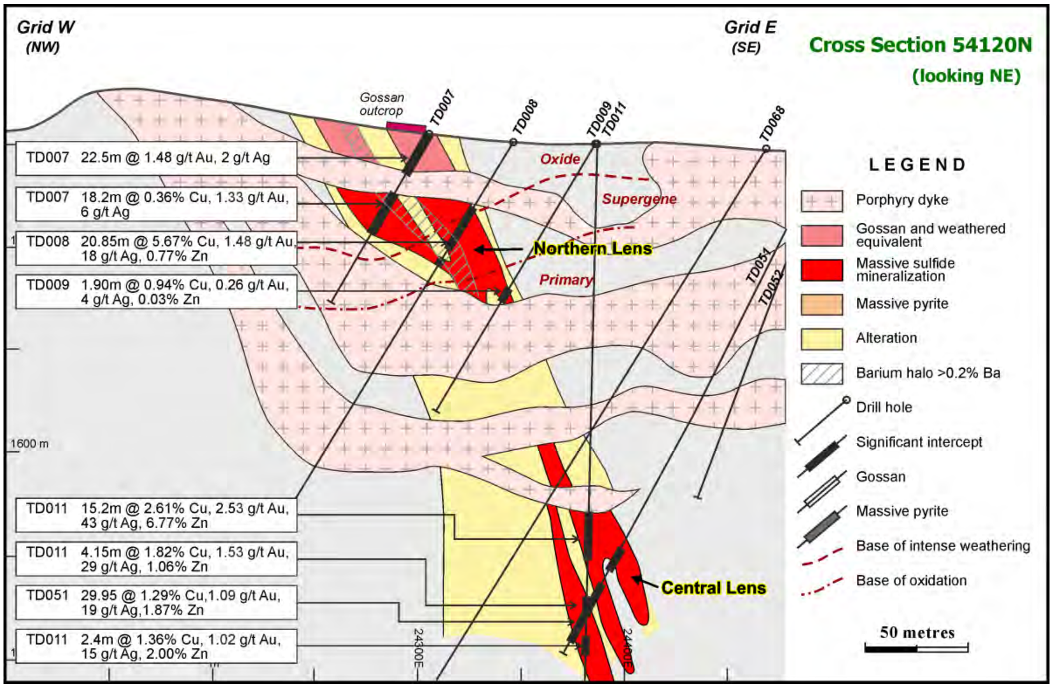
The Northern Lens is separated from the Central Lens by a series of quartz-feldspar porphyry dykes, and is up to 20 m thick, 320 m long, 120 metres high and remains open down plunge (Figure 7-13). This lens displays banded primary sulphides (Figure 7-14), and elevated gold grades in the near surface oxide zone. The richest intercept was from drillhole TD008 in a zone grading from the supergene enrichment zone to primary sulphide, which returned 20.85 m (close to true thickness) grading 5.67 % Cu, 1.48 g/t Au, 17.59 g/t Ag and 0.77% Zn from a depth of 38.75 m. High grade supergene enrichment is indicated in multiple holes, e.g., TD053 contains 6.12 m of 27.2 g/t Au and 13 g/t Ag and TD034 with 29 m at 3.4 g/t gold and 11 g/t Ag.

Figure 7-12: Drill Section 53,960N through Southern and Central Lenses at Terakimti



Source: Groves et al., 2013

Figure 7-13: Drill Section 54,120N through Central and Northern Lens at Terakimti



Source: Groves et al., 2013

Figure 7-14: Terakimti VMS mineralization (10HTD001)

Notes: Fine-grained pyrite, sphalerite and galena, cut by diffuse chalcopyrite veins from the Northern Lens, 10HTD-001. Source: Archibald, 2011

The fourth lens in the system is termed the Zinc Lens (Groves et al., 2013) and was intersected in several drillholes, e.g., TD017 and TD022. Hole TD040 intersected 27.70 m of 0.26 % Cu, 0.5 g/t Au, 7 g/t Ag and 4.40 % Zn from a depth of 215.00 m (Figure 7-12), and included a 3.5 m interval grading 23.03% Zn, 1.41% Cu, 2.09 g/t Au and 31 g/t Ag from a depth of 239.2 m. Mineralization is typically brecciated and displays jasperoidal alteration. Porphyry dykes intrude along the structure. This mineralization may provide a lead-in to additional mineralization.

In addition to these four lenses, a barium halo, with concentrations > 0.2% Ba overlaps the three sulphide lenses, and is located in the structural hanging wall. No barium enrichment is noted in the Lower Zinc Lens. Bedded barite mineralization is not seen at Terakimti.

Supergene processes have affected the near-surface part of the Terakimti system, and has resulted in a distinct vertical mineral zonation (Groves et al., 2013). Four zones are present:

1. ***Oxide Zone*** (gossan). This zone is characterized by gold enrichment where no sulphide minerals are present;

2. ***Silver Enriched Transition Zone*** with variable gold. All primary ore sulphides area absent, but pyrite remains. High gold and silver (up to 300 g/t Ag) are present with covellite and pyrite preserved as sulphides;

3. ***Supergene Copper Zone****.* This zone is weakly developed and is composed of predominantly of primary sulphides and approximately 5 to 20% secondary minerals. Secondary copper minerals include predominately covellite and minor chalcocite, occurring with primary chalcopyrite. Primary sphalerite is unaffected by oxidizing fluids; and

4. **Primary Zone**. Several lenses with different characteristics are present and have been described in detail above. Generally the main lenses are composed of massive to sub-massive fine-grained pyrite with overprinting, interstitial and fracture-related chalcopyrite and low-Fe sphalerite, and rare galena. Gold and silver occur with pyrite, or as banded sulphide layers and occasional high grade stringer zones.

VTEM09

Approximately 5.3 km east-northeast and along trend from Terakimti, and strong 200 m airborne VTEM anomaly was identified. Subsequent prospecting documented several malachite-rich gossan outcrops. Follow up trenches confirmed the presence of a gossan with samples from a 10 m section containing 3.85 g/t Au, 26 g/t Ag, 0.84 % Cu and 0.67 % Pb, including 5 m at 7.27 g/t Au, 45 g/t Ag, 0.65% Cu and 1.14% Pb. A second trench contained a 2 m wide interval with 9.58 g/t Au, 161 g/t Ag, 0.21 % Cu and 0.78 % Pb.

In 2013, a single drillhole was collared at VTEM09 and intersected 10.21 m of 3.16 % Cu, 3.97 g/t Au, 87 g/t Ag, and 3.82 % Zn from 19.81 metres. This intersection also includes a higher grade interval of 2.82 m of 5.61 % Cu, 7.48 g/t Au, 102 g/t Ag, and 0.72 % Zn.

Mayshehagne

The prospect is located approximately 3 km south of Terakimti within a zone parallel to the Terakimti trend (Terakimti – VTEM09), and is characterized by a 170 m long sequence of carbonate-altered malachite-strained mafic volcanic rocks associated with jasperoid cherts, chert breccia, barite-rich cherts, and several gossan zones (probably representing exhalites). Mayshehagne, formerly AMEM3, was originally identified by an airborne EM survey in 2006, and the target refined by geological mapping and surface geochemistry, which ultimately lead to a ten hole drilling program.

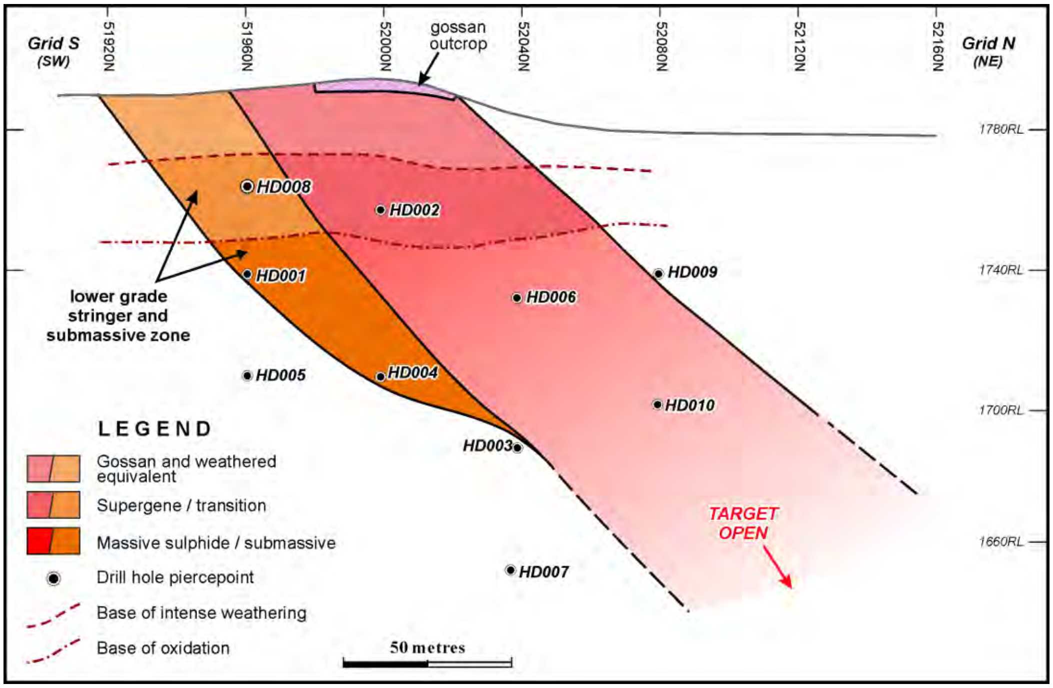
A total of 10 drillholes have been collared on the Mayshehagne prospect on four sections over 160 m of strike (Figure 7-15). Best results include:

20.70 m of 5.00% Cu, 1.03 g/t Au, 31 g/t Ag and 8.20% Zn from 24.0 m, including 12.8 m of 7.77% Cu, 1.62 g/t Au, 50 g/t Ag and 12.66% Zn (HD002); and

18.0m of 3.23 % Cu, 0.95 g/t Au, 22 g/t Ag and 3.86% Zn from 60.0 m (approx. 35 m below surface), including 5.45m of 7.05% Cu, 1.24 g/t Au, 46 g/t Ag and 6.53% Zn from 62.0 m.

Tigray geologists note that the high-grade massive sulphide body remains open down plunge and down dip to the northeast, and the alteration and volume of disseminated sulphide increases to the northeast (Groves et al., 2013). This likely indicates moving away from the vent environment.

Figure 7-15: Mayshehagne VMS Mineralization (10HTD001)



Source: Tigray, 2012

Adi Million

The Adi Million prospected is located within the Hamlo concession and consist of a 1.5 km strike gossan and associated sulphide alteration zone. The zone attains a maximum with of approximately 450 m, and occurs at the boundary between felsic volcanic rocks to the north and mafic volcanic rocks to the south. The surface gossan is associated with gold and lead soil anomalies, and a broad (1 km long and 100 m wide) copper soil anomaly is present at the footwall contact. Zinc anomalism is noted to the north and south of the main gossan.

Lithogeochemical sampling of rock chips over the gossan returned copper concentrations >300 ppm. A malachite-stained mafic volcanic rock south of the gossan contained 6,530 ppm Cu and 2,100 ppm Zn. A total of 12 rock chips assayed greater than 100 ppb gold in the gossan and altered sulphidic zone. The maximum gold concentration recorded from three samples collected from the gossan was 331 ppb, whereas the highest lead concentrations was 900 ppm.

Medadib

Medadib prospect is located on the Nefasit concession, approximately 24 km east-southeast of Terakimti. Several northeast-trending gossans are associated with a 900 metre gold soil anomaly with gold concentrations >20 ppm. The gossans are hosted in a felsic volcanic/sedimentary sequence that has been intruded by multiple felsic intrusions, resulting in the development of hornfels. The best interval recorded from trenching across the gossans include 4 m at 1.85 g/t Au, and a single vertical 30 m RC hole was drilled by Ezana in the late 1990s and resulted in the intersection of 18 metres at 2.72 g/t Au and 5.0 g/t Ag.

Adi Angoda

Gold and copper soil anomalies are present over 1.6 km strike at the Adi Angoda prospect on the Nefasit concession, approximately 20 km east-southeast of Terakimti. The anomalies are associated with narrow VMS gossan outcrops and highly sulphidic porphyry bodies with minor bedrock artisanal workings.

Ten diamond drillholes were drilled in 2010 and 2012 to test VMS potential on the Adi Angoda prospect. Two holes intersected significant zones of massive sulphide, with peak results including:

3.0 m at 2.34% Cu, 1.41 g/t Au, and 22.7 g/t Ag in hole 09HND004, from 52.15 metres; and

3.0 m at 0.68% Cu, 1.31 g/t Au, and 5.4 g/t Ag in hole 09HND001, from 71.93 metres.

Ruwa Ruwa Gold Trend (Lihamat and Adi Goshu)

The primary orogenic gold target on the Harvest property is the Ruwa Ruwa Trend which includes such prospects as Lihamat and Adi Goshu. The trend is located on the Terakimti concession approximately 1.5 km west of the Terakimti VMS trend. Numerous gold soil anomalies are present in the area, and abundant artisanal bedrock gold workings are present over a 7 km strike length (Figure 7-16). The largest bedrock workings and most advanced targets are Lihamat and Adi Goshu.

At Lihamat, extensive artisanal bedrock workings occur over a strike length of 225 m and the mineralized zone is up to 50 metres wide with shafts up to 15 metres deep. Visible gold is mined in numerous quartz veins that are hosted in a coarse-grained sericite altered quartz porphyry, which has intruded into a sequence of mafic and felsic volcanic rocks and banded iron formation. No drilling has been performed on this prospect.

At Adi Goshu, mine workings attain depths in excess of 20 m in an effort to mine a series 20 m wide auriferous quartz veins over a 100 m strike length on two trends. Soil geochemical sampling has defined a 500 metre long >100 parts per billion gold soil anomaly with five samples assaying > 1.0 g/t Au. No drilling has been performed on this prospect.

Figure 7-16: Artisanal Miners Panning at Ruwa Ruwa

Source: Archibald, 2011

Medadib

The Medadib gold prospect is located on the Nefasit concession, approximately 24 km east-southeast of Terakimti. Several 1 to 5 m wide northeast-trending gossans are associated with a 900 metre long and 90 m wide gold soil anomaly hosted within a felsic volcanic/sedimentary sequence. Maxiumum gold concentrations from the eight trenches included: 4 m @ 1.85 g/t Au ; 5 m @ 0.2 g/t Au (T3); 2 m @ 0.28 g/t Au (T4); 3m @ 0.37g/t Au (T6). Only one RC drill hole (vertical) has been drilled on the prospect, which intersected 18 m @ 2.72 g/t Au and 5 g/t Ag. In addition to the gold results, soil geochemistry identified one sample containing >550 ppm copper northwest of the main gossan zone.

Igub

Evidence for shear-zone hosted gold mineralization on the Igub concession consists of four semi-continuous NNW-trending alluvial gold areas in the river on the eastern flank of the Igub granite. Follow-up lithogeochemical exploration on a previously identified gold soil anomaly identified gold mineralization within the granitic intrusion. Peak rock chip results include: 6.34 g/t Au, 0.86 g/t Au, and 0.437 g/t Au. All of the samples were collected from sulphide-bearing quartz veins and are located over 430 m of strike. The width of the veins was not noted, but are likely narrow.

8 DEPOSIT TYPES

Two deposit types are currently being explored at the Harvest property, i.e., volcanogenic massive sulphide (VMS) and orogenic lode-gold mineralization.

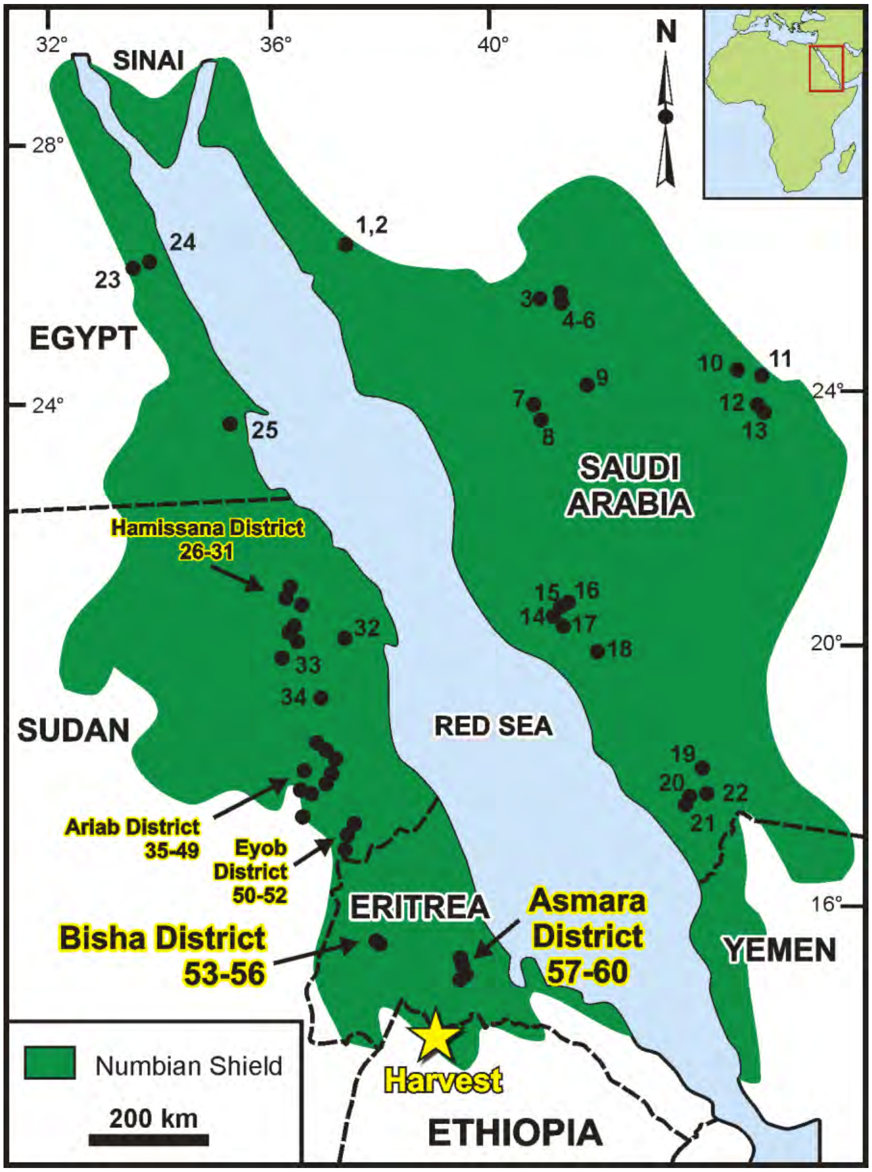
8.1 Volcanogenic Massive Sulphide Deposits

The Arabian-Nubian shield hosts numerous VMS deposits (Figure 8-1). The Harvest project area is analogous to the precious and base metal VMS deposits located at Bisha (Nevsun Resources Ltd), Debarwa and Emba Derho (Sunridge Gold Corporation). All three deposits are located in the Nafka Terrane.

The VMS mineralization in the Adi Nebried/Asmara back arc basin have 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. 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 lens 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 into, an iron-rich silica facies that is usually manifested as a banded iron formation (BIF). Surficial weathering results in the primary sulphides forming secondary, supergene minerals such as chalcocite, covellite, digenite, and bornite. The surface manifestation of a VMS system is the total leaching of metals with the exception of silica and iron to produce a hematite-goethite gossan. 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). The schematic model of active VMS formation, alteration and mineralization is presented in Figure 8-2.

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 centre; geochemical surveys to identify elements (Cu, Zn, Pb, Au, Ag, etc) indicative of mineralization; geophysical surveys to identify contrasts between magnetic, electrical conductance, and gravity measurements; and drilling to identify, then delineate mineralization.

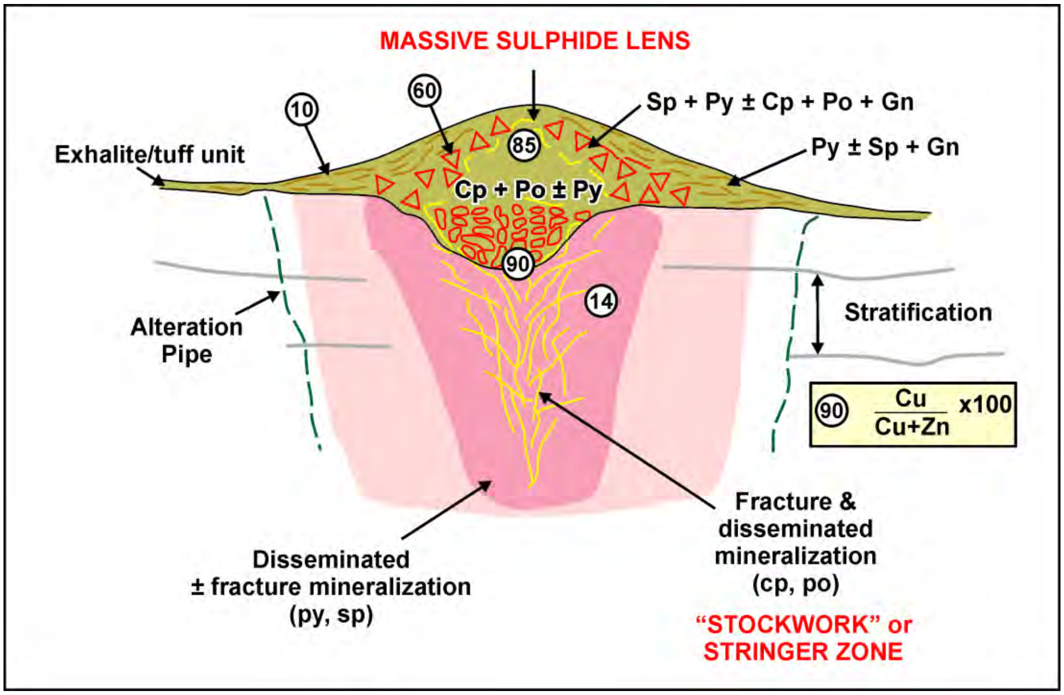
Figure 8-1: VMS Deposits of the Arabian-Nubian Shield



Source: Barrie *et al.,* 2007.

Location of the Bisha district and other VMS deposits in the Arabian-Nubian shield. **Saudi Arabia:** 1 = Ash Shizm, 2 = Jabal Ash Shizm, 3 = Nuqrah, 4 = Nuqrah North, 5 = An Nimahr, 6 = Nuqrah South, 7 = Jabal Sayid, 8 = Umm Ad Damar, 9 = As Safra, 10 = Ar Ridaniyah, 11 = Khnaiguiyah, 12 = Al Amar, 13 = Umm Ash Shalahib, 14 = Shaab At Tare, 15 = Wadi Bidah, 16 = Gehab, 17 = Rabathan, 18 = Jadma, 19 = Al Masane, 20 = Farah Garan, 21 = Kutam, 22 = Al Halahila. **Egypt:** 23 = Hamama, 24 = Abu Marawat, 25 = Um Samuiki. **Sudan:** 26 = Uar, 27 = Hamissana, 28 = Onib, 29 = Tbon, 30 = Eigiet, 31 = Adarmo, 32 = Gebiet, 33 = Bir Katieb, 34 = Serakoit, 35 =Tobay, 36 = Tibiry, 37 = Kalkoi, 38 = Igarairi, 39 = Shulai, 40 = Mandilu, 41 = Ashash, 42 = Hadal Auatib, 43 = Talaiderut, 44 = Ganeat, 45 = Oderuk, 46 = Kamoeb, 47 = Hassai, 48 = Adaimet, 49 = Tongi, 50 = Tohamyam, 51 = Abu Samar, 52 = Eyob. **Eritrea:** 53 = Bisha, 54 = Bisha Northwest, 55 = Harena, 56; Hambok, 57 = Adi Nefas, 58 = Emba Derho, 59 = Debarwa, 60 = Adi Rassi (see Barrie and Hannington, 1999, and Franklin et al., 2005).
Source: Barrie *et al.,* 2007.

Figure 8-2: Schematic Model for Active VMS Mineralization Showing Principal Alteration and Mineralization Types



Notes: Idealized VMS deposit showing a stratiform 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: After Gibson (2005)

8.2 Orogenic Gold Deposits

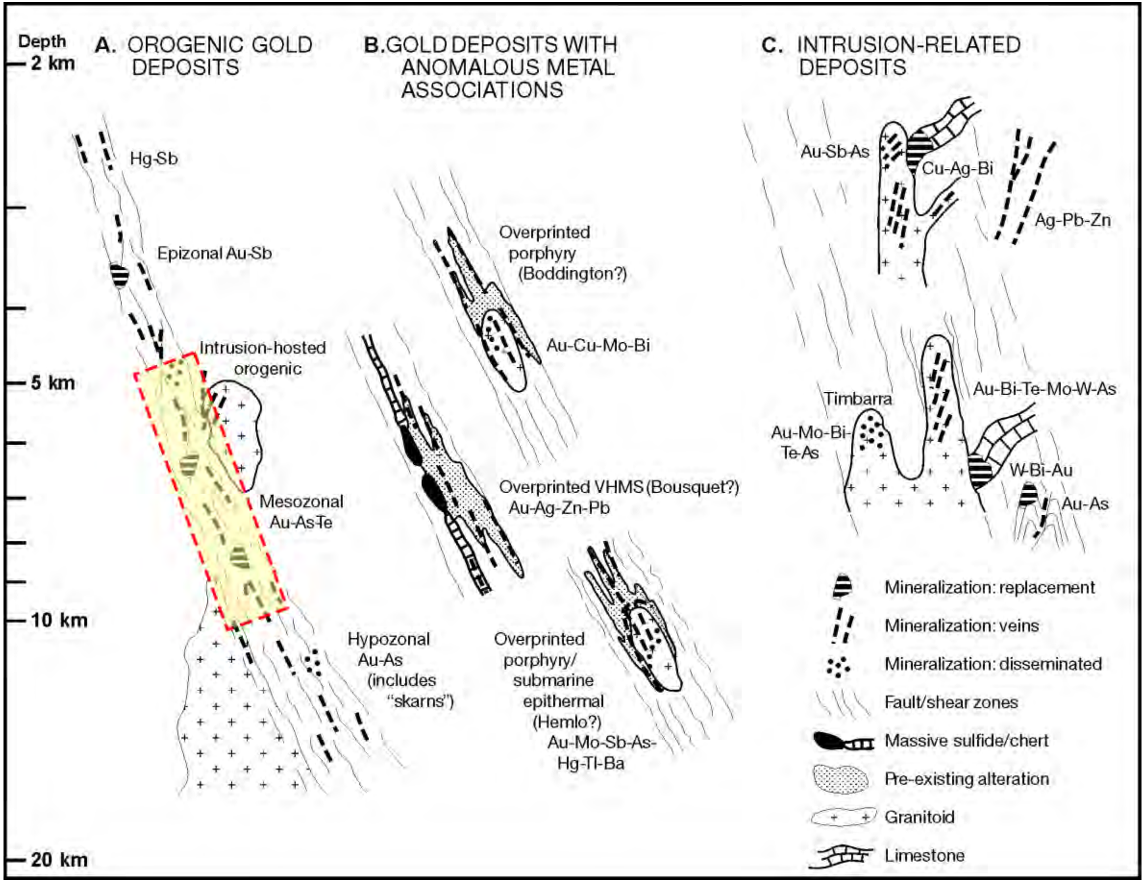
Lode-gold deposits are intimately associated with orogeny and other plate collision events within geologic history. Most lode gold deposits are sourced from metamorphic rocks because it is thought that the majority are formed by dehydration of basalt during metamorphism. The gold is transported up faults by hydrothermal waters and deposited when the water cools too much to retain gold in solution.

The Arabian-Nubian Shield is also a significant gold producer with numerous gold deposits and artisanal workings across the whole terrane (Figure 8-3). The host rocks range from graphitic mica schist and ultramafic rocks (Laga Dambi, Ethiopia), to granite stocks (Sukhaybarat East, Saudi Arabia), and along granite contact facies (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, e.g., quartz veins, pods, veinlets, stringers, stockworks, and breccias. Vein mineralogy is dominated by quartz, carbonate (calcite, dolomite and siderite), pyrite, arsenopyrite and pyrrhotite, and the wallrock alteration is typically sericite, chlorite, and carbonate.

Many gold occurrences are also noted in the district with widespread artisanal workings. Gold is associated with shear hosted quartz veining and often occurs in association with sulphides hosted within vein quartz. The lode dimensions and orientation are varied across the terrane. At Laga Dambi, the steeply-dipping ore zones are located within a 1500-m-long by 200-wide belt. Individual veins are up to 3 m in thickness. Quartz veins at the Zalm mine are as long as 300 m and as wide as 3 m. In the Al Wajh district, individual veins are less than 100 m long and 1 m wide, but combine to make sheeted zones 100 to 200 m long and > 2 m wide. Most lodes are oriented N-S, parallel to the main trend of the orogen.

Typically the ore minerals are pyrite, arsenopyrite and pyrrhotite. In Saudi Arabia, grades average 2.5 g/t at the Sukhaybarat East deposit and 3-4 g/t for veins in the Al Wajh district. Some small southern Saudi Arabian vein systems are much higher grade (e.g., Ad Duwayah=11 g/t and Bi'r Tawilah=14 g/t). Parts of the vein system at the Zalm mine grade near 100 g/t, although grades typically average between 2.5-12.5 g/t.

Figure 8-3: Schematic Representation of Crustal Environments of Orogenic Gold Deposits



Notes: The most likely depth of formation of gold in the Arabian-Nubian Shield is between 5 and 10 km (shown in yellow box). Source: Groves *et al.,* 2003.

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

9 EXPLORATION

All mineral exploration to date has been conducted by Tigray, except for initial Niton portable XRF soil analyses and geological mapping by C. Carman and I. Groves of CEC Geology LLC and Insight Geology Pty. respectively; petrographic work conducted by Dr. Gawen Jenkin of Leicester University, Dr F. Colombo of Vancouver Petrographics Ltd, and Dr Craig Leitch (independent consultant) of the GSC(?); ground geophysics by Abitibi Geophysics, and airborne geophysics by Geotech.

9.1 Geological Mapping

As noted in Section 6, geological mapping of the Harvest property was performed by the Ethiopian Geological Survey and Ezana. However, systematic mapping of the property was first undertaken by Donia Mining geologists who performed regional and detailed mapping by visiting outcrops at regular intervals. In 2011 detailed mapping of the initial prospects was performed at a scale of 1:500 by Iain Groves (Insight Geology) at Adi Angoda (Nefasit), while Cris Carman (CEC Geology) mapped the Terakimti and Adi Million areas. The study involved investigating as many of the outcrops in the mapping area as possible and accurately describing the geology (lithology, alteration, grain size variations) and taking structural measurements (bedding, foliation, lineation, etc). As exploration progressed using a variety of techniques (e.g., soil geochemistry, airborne radiometrics and magnetics) the interpretations were combined with existing and new mapping to produce an accurate geology map of the property, e.g., Figure 7-8.

9.2 Soil Sampling

Portable XRF Geochemistry

Tigray has carried out regional and detailed soil geochemistry surveys over 70% of the Harvest property, resulting in the analysis of 53,846 samples (Figure 9-1). Initial soil geochemistry focused on several mineralized gossan zones in the Hamlo, Terakimti and Nefasit concessions using a portable (handheld) Thermo Scientific Niton XRF analyser, but as exploration expanded most of the property is now covered by results. Typically, local measurements are taken using a grid spacing of 40 x 40 m, with infill to 20 x 20 m when anomalous readings are recorded. Detailed surveys over the mineralized areas at Adi Angoda and Terakimti were conducted at a grid spacing of 10 x 10 m. Elements analyzed include As, Bi, Ba, Ca, Co, Cr, Cs, Cu, Fe, Hg, K, Mn, Mo, Ni, Pb, Rb, S, Sn, Sr, Te, Th, Ti, U, V, W, Zn and Zr. Shallow soil gold geochemistry and portable XRF geochemistry are typically performed over the same area, but owing to the speed and tremendous cost savings of the unit the sample density of XRF analysis is considerably better.

Results of the survey demonstrate that Cu, Pb, Zn and As XRF concentrations define a clear zonation of the VMS system. Other elements show similar patterns and it is possible to determine distal and local exhalite facies, as well as what appears to be the high temperature feeder zone of the system. This technique is being used throughout the Harvest Property to characterize the gossans as base-metal bearing, or barren.

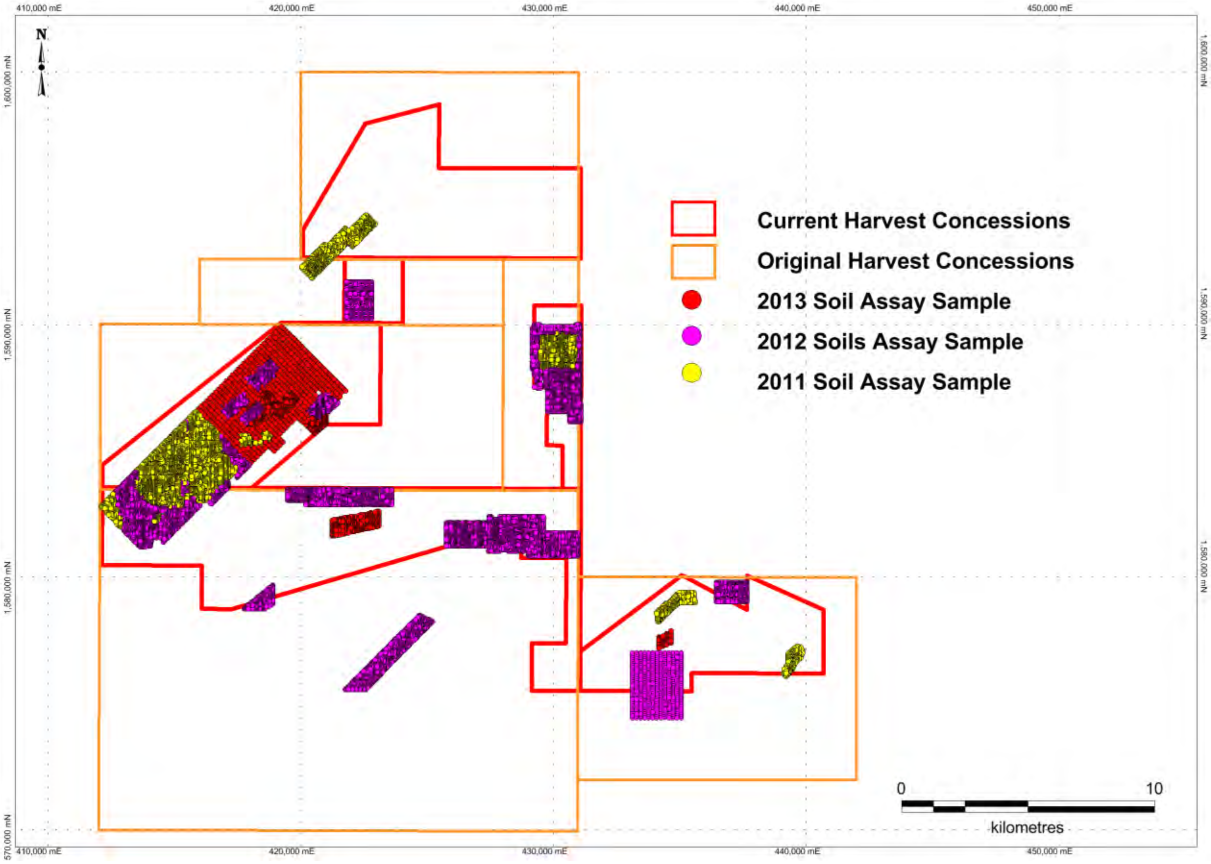
Figure 9-1: Distribution of XRF Soil Sampling Campaigns

Source: Archibald et al., 2014

Gold Soil Geochemistry

A total of 26,711 soil samples (9,439 in 2011, 14,997 in 2012, and 2,275 in 2013) were collected throughout the property and analyzed for gold, at the locations shown in Figure 9-2. Sampling was concentrated on areas and trends of interest from Tigray's compilation of geological information on the property. A line and sampling spacing of 40 m was conducted in these areas of prospective interest. From this work, a 7 km long zone of gold anomalism in soil was identified, covering the Ruwa Ruwa Trend (from Ruwa Ruwa in the southwest to in Adi Goshu in the northeast). The average gold concentration of the soil samples was 12.65 ppb, with a lower analytical limit of detection of 1 ppb. From the total samples collected only 475 had gold concentrations greater than 100 ppb. The maximum concentration recorded was 3,660 ppb Au from the Ruwa Ruwa prospect.

Figure 9-2: Gold Shallow Soils Sampling Campaigns



Source: Archibald et al., 2014

9.3 Stream Sediment Sampling

Steam sediment sampling was carried out by Tigray over all concessions with the exception of the Igub concession and with property coverage of approximately 20% (Figure 9-3). Stream sediment sampling campaigns over the property were carried out during 2008, 2011 and 2012 with a total of 1,288 samples acquired during the 3 campaigns. Elements analyzed include Au, Ag, As, Ba, Co, Cr, Cu, Hg, Mn, Ni, Pb, Sr, V, and Zn.

Nine highly anomalous gold (>250 ppb Au) samples collected in the 2008 program clearly identified the VMS mineralization at Terakimti and a broad NE-trending anomaly along the Ruwa Ruwa Trend. Two isolated highly anomalous gold samples were recorded in part of the Hamlo concession that was subsequently relinquished.

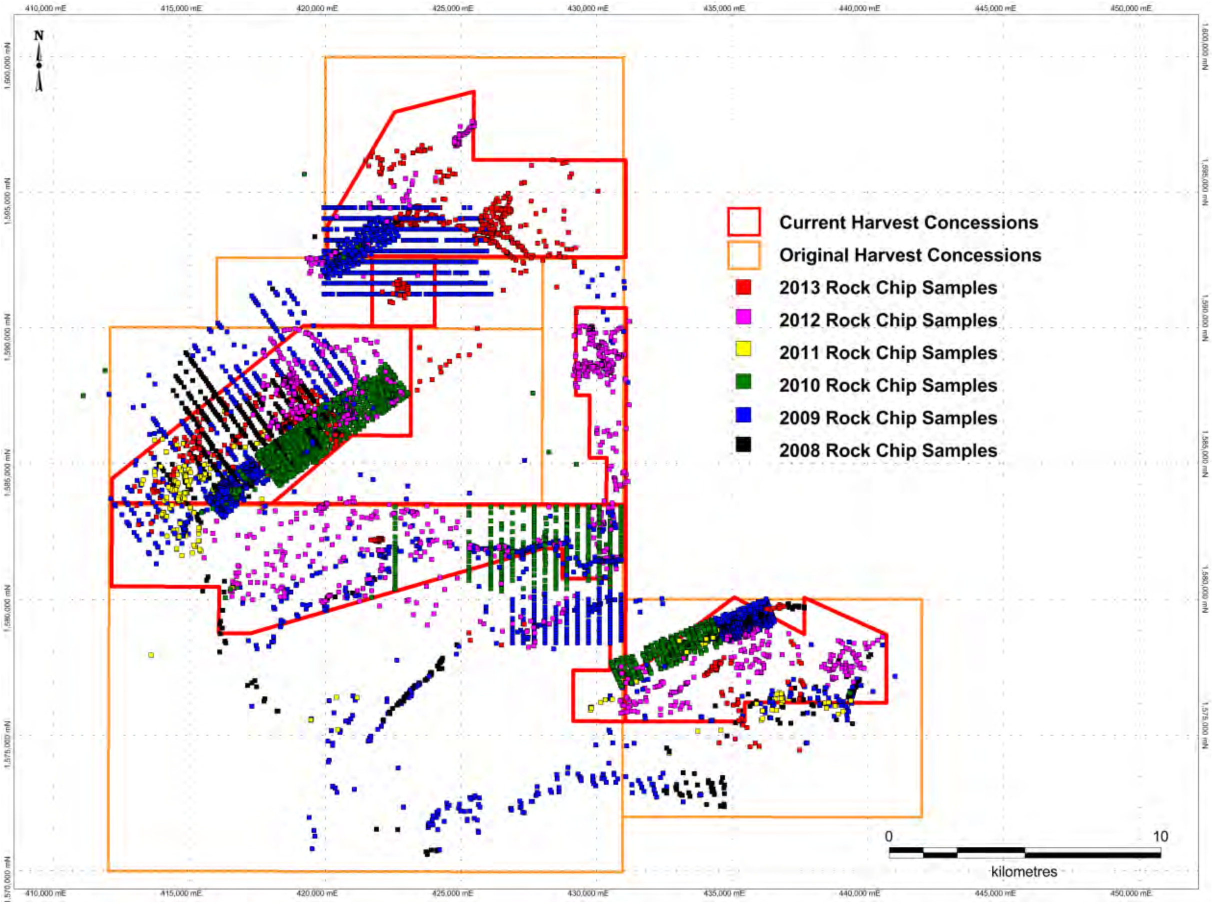
Figure 9-3: Locations of Stream Sediment Samples

Source: Archibald et al., 2014

9.4 Lithogeochemical Sampling / Trenching

A total of 10,676 rock samples were collected during the history of the Harvest Property, of which 9,076 are located on the current concessions. The location of the samples is illustrated in Figure 9-4. Lithogeochemical samples (grab, chip or channel) were taken during routine prospecting and also during trenching programs. Samples are analysed using the Niton XRF analyser, and if elevated base metals or gold pathfinder elements are detected the sample is sent to the assay lab.

Figure 9-4: Lithogeochemical Sample Locations and Campaigns



Source: Archibald et al., 2014

Trenching has taken place at six locations in the property, namely: Terakimti (17 trenches with 691 samples); Terakimti NE (3 trenches with 66 samples), Adi Angoda (18 trenches with 527 samples); Medadib (8 trenches with 151 samples); VTEM09 (4 trenches totalling 378 m with 433 samples; Figure 9-5); and Adi Goshu (3 trenches with 56 samples). The latter two programs were conducted by Tigray. Results were encouraging since four of the five prospects have been drilled following the trenching programs.

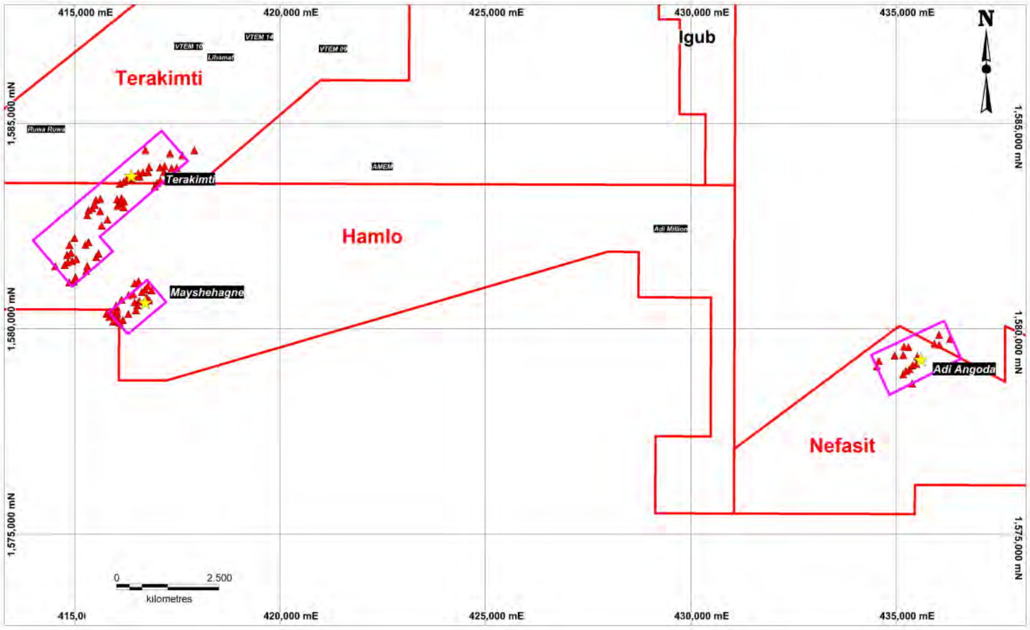
Figure 9-5: Location of trenches at VTEM09, looking NW

Source: Tigray, 2014

9.5 Ground EM Geophysics

A ground TDEM (in-loop) survey was carried out at three locations on the Harvest property by Abitibi Geophysics between March 26th and May 28th, 2011. The survey totalled 84.5 line km over 3 grids (Figure 9-6): Terakimti (Terakimti) and AMEM-3 (subsequently known as Mayshehagne on the Hamlo concession) and Adi Angoda (Nefasit). The Terakimti grid consisted of 42 NW and 9 NE survey lines, the AMEM-3 grid of 13 NW lines and the Adi Angoda grid of 20 NW survey lines. Line spacing was 100 m with an interval reading of 50 m. The survey covered 54.4 line km over the Terakimti grid, 9.75 line km over the Amem-3 grid and 20.35 line km over the Adi Angoda grid. The TDEM survey employed a Geonics TEM57 MK II transmitter (serial nos. 61103Z & 40805) with a bipolar wave, 50% duty cycle transmitted signal and a refresh rate of 30 Hz (T/4 = 8.33 ms). The TDEM receivers were Geonics Protem 67D (serial nos. 72603 & 52407) with crystal mode Tχ synchronization, 1 cycle/30 s integration time, and 20 geometrically spaced gates. The surface sensor was a Geonics 3D-3 induction coil (serial no. 203) which simultaneously measured the Z, X and Y components over an effective area of 200 m^2.

Figure 9-6: Locations of the 2011 Ground EM Survey



Source: Tigray, 2014

Notes: Outline of the EM survey area is shown by the magenta polygons. The site of the named prospect is illustrated by a yellow star. EM anomalies as determined by Abitibi Geophysics are represented by red triangles. Source: Tigray, 2013.

The study indicated that only weak to moderate conductors were present in the three areas at depths up to 125 m. At Terakimti the survey indicated the presence of 55 weak conductors over a strike length of 4.5 km, with 39 at depths between ground level and 50 m, and the rest at depths up to 125 m. At Mayshehagne, 28 TDEM conductors were identified, with 25 of the anomalies modelled at a maximum depth of 25 m, 3 at depths of 50 m, and two at an undermined depth. All of the Mayshehagne conductors were weak. A total of 17 weak to moderate conductors were identified at Adi Angoda; 10 were related to outcrop, 2 between 25- 50 m, 2 at approximately 50 m, and 3 conductors between 75-100 m. On review of the data it appears that the contractor had optimised the ground survey for near surface conductors.

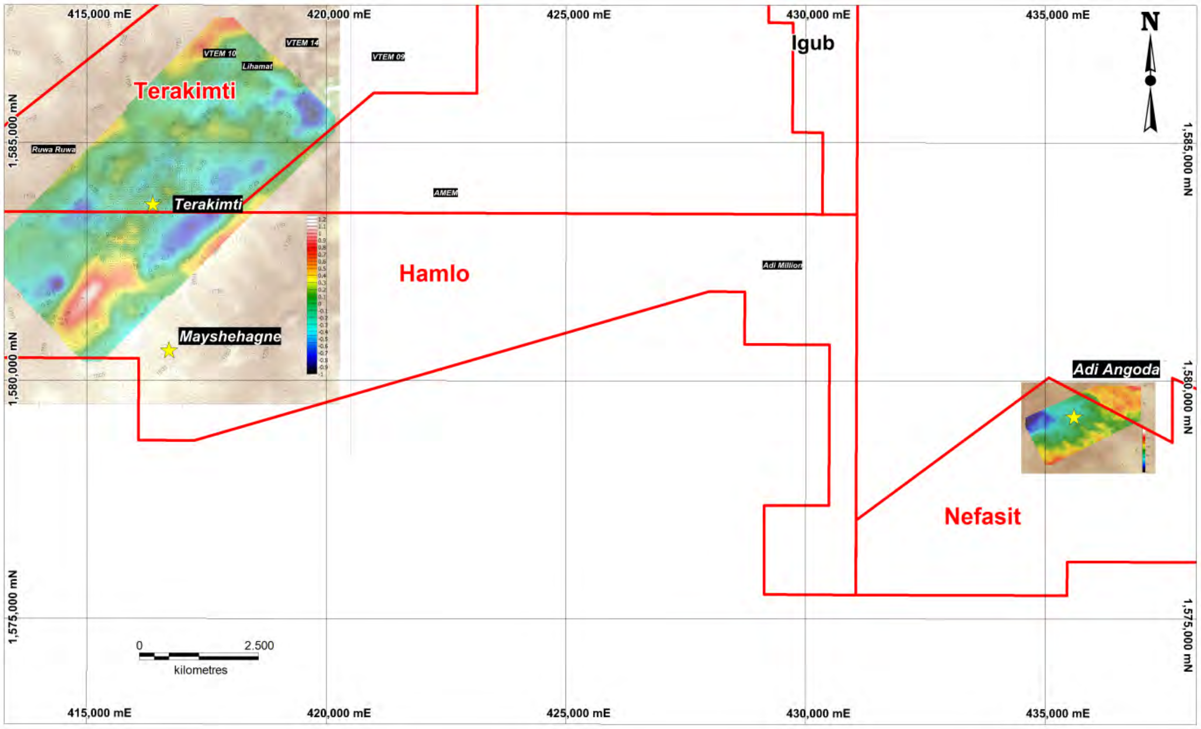
9.6 Gravity

Two ground gravity surveys were carried out on the Harvest property by Geo-Surveys International Inc., a subsidiary of Reno, Nevada, based MWH Geo Surveys. The areas surveyed were Terakimti and Adi Angoda. Both surveys were orientated to correspond to the regional strike of the rocks, i.e., east-northeast direction, and their location is illustrated on Figure 9-7.

LaCoste and Romberg electronic gravity meters operated via proprietary controller software were used to collect the gravity data with detailed station surveying performed by Ashtech ProMark and ProFlex 500 dual frequency, dual constellation RTK GPS receivers. The digital gravity readings obtained in the field were reduced to Observed Gravity by converting to milligals and correcting for: earth tides, instrument height, instrument drift and base shifts. Bouguer gravity was then calculated by applying latitude, inner terrain, free air and Bouguer corrections to the Observed Gravity values. The processed data was then plotted.

The survey performed at Terakimti comprised 1864 sample stations and 145 repeat readings. Two grid spacings were employed: a 200 m spaced grid where 512 readings were taken, and a smaller grid centred over the known mineralization at Terakimti where 1352 reads were taken at a grid spacing of 20 m. The dimension of the tighter grid spacing was 1200 m x 2700 m. The data was process to produce a residual gravity plot which represents local geology after the regional background is removed. Initial interpretation seems to indicate that massive sulphide mineralization identified during drilling is characterized by moderate gravity highs. The gravity lows in the same area correspond to areas underlain by quartz feldspar porphyry, or areas with intense hydrothermal alteration. The highest gravity values in the survey area corresponded to mafic intrusions when ground truthed.

Figure 9-7: Bouger Gravity Map over the Terakimti VMS System



Source: Tigray, 2014

The survey performed at Nefasit comprised 946 sample stations and 48 repeat readings. A grid spacing of 50 m was employed through the 1000 x 2500 m survey area. None of the drilling targets corresponded to gravity highs. It is evident that additional residual processing might be required to extract meaningful information from the dataset.

9.7 Airborne Geophysics

Two airborne geophysical surveys have been performed on the Harvest Property. These include an EM survey flown by Fugro Systems in 2003 and a heliborne VTEM^{plus}, gamma-ray spectrometry and aeromagnetic survey by Geotech Ltd in 2012. The results of both surveys are summarised below.

Fugro Airborne Surveys (2004)

From August 25 to September 11 in 2004, a 421 sq. km DIGHEM survey was flown over parts of the Nefasit, Hamlo, and Igub concessions (Figure 9-8). The survey was described as a multi-coil, multi-frequency electromagnetic system, supplemented by a high-sensitivity, cesium magnetometer. Survey coverage consisted of approximately 2250 line-km, including 210 line-km of tie lines. Flight lines were flown with a line separation of 200 metres. Tie lines were flown orthogonal to the traverse lines with a line separation of 2000 metres. The helicopter flew at an average airspeed of 125 km/h with an EM sensor height of approximately 30 metres. The base information was compiled and processed by Fugro in Toronto, Canada, and further recompilation refinement was done by LUL Earth Sciences of Addis Ababa, which identified eight targets over the survey area. Some of these targets are located on Nefasit and Hamlo. The original digital data and maps were not provided as part of the data package supplied by Harvest.

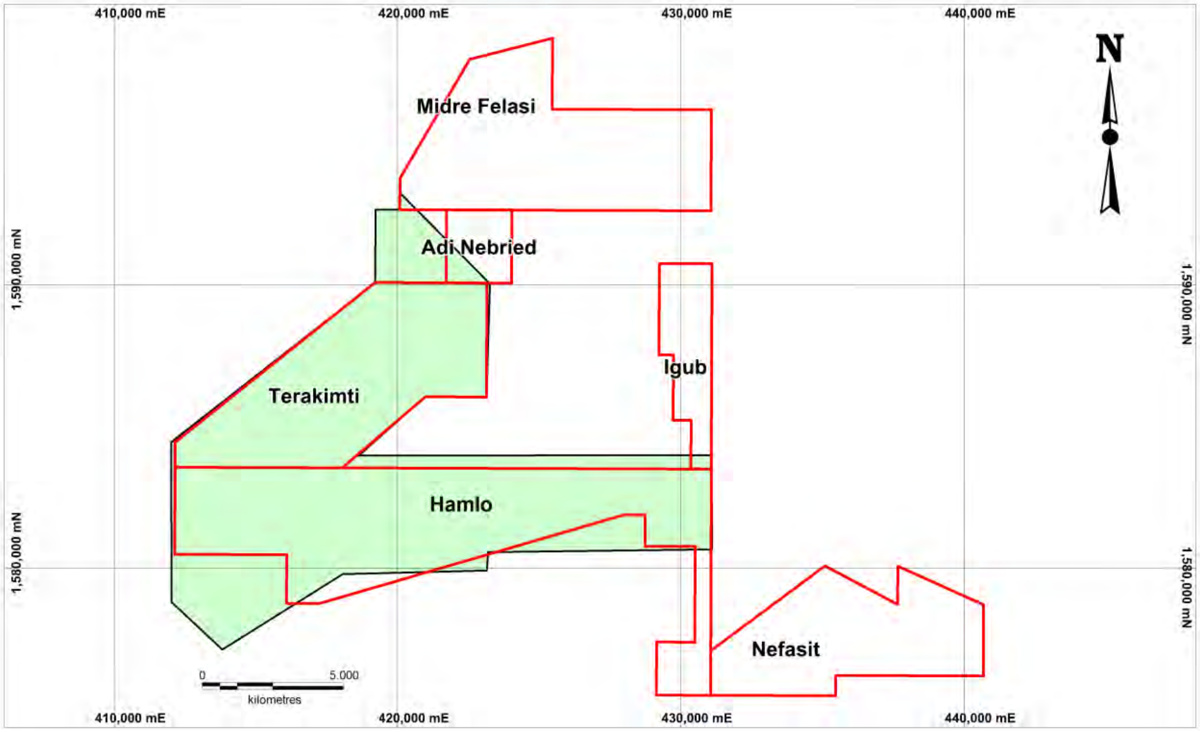
Figure 9-8: Location of the 2004 Fugro Airborne EM Survey

Source: Tigray, 2014

Geotech Ltd (2012)

A heliborne versatile time domain electromagnetic (VTEM^{plus}), gamma-ray spectrometry and aeromagnetic survey was carried out over portions of the Harvest concessions of Midre Felasi, Adi Nebried, Terakimti, and Hamlo (Figure 9-9) from April 1-19, 2012 by Geotech Ltd. of Aurora, Canada. The survey was flown using a Eurocopter Aerospatiale (Astar) 350 B3 helicopter and a total of 1531.1 line-km of geophysical data were acquired during the survey. Principal geophysical sensors included a versatile time domain electromagnetic (VTEM^{plus}) system, RSI ARGS RSX-5 spectrometer and a cesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. The electromagnetic system was a Geotech Time Domain EM (VTEM^{plus}) system. VTEM, with the serial number 28 had been used for the survey. During the survey the helicopter was maintained at a mean altitude of 94 metres above the ground with an average survey speed of 80 km/hour. This allowed for an actual average EM bird terrain clearance of 63 m and a magnetic sensor clearance of 81 m.

Figure 9-9: Location of the 2012 Geotech Airborne EM Survey



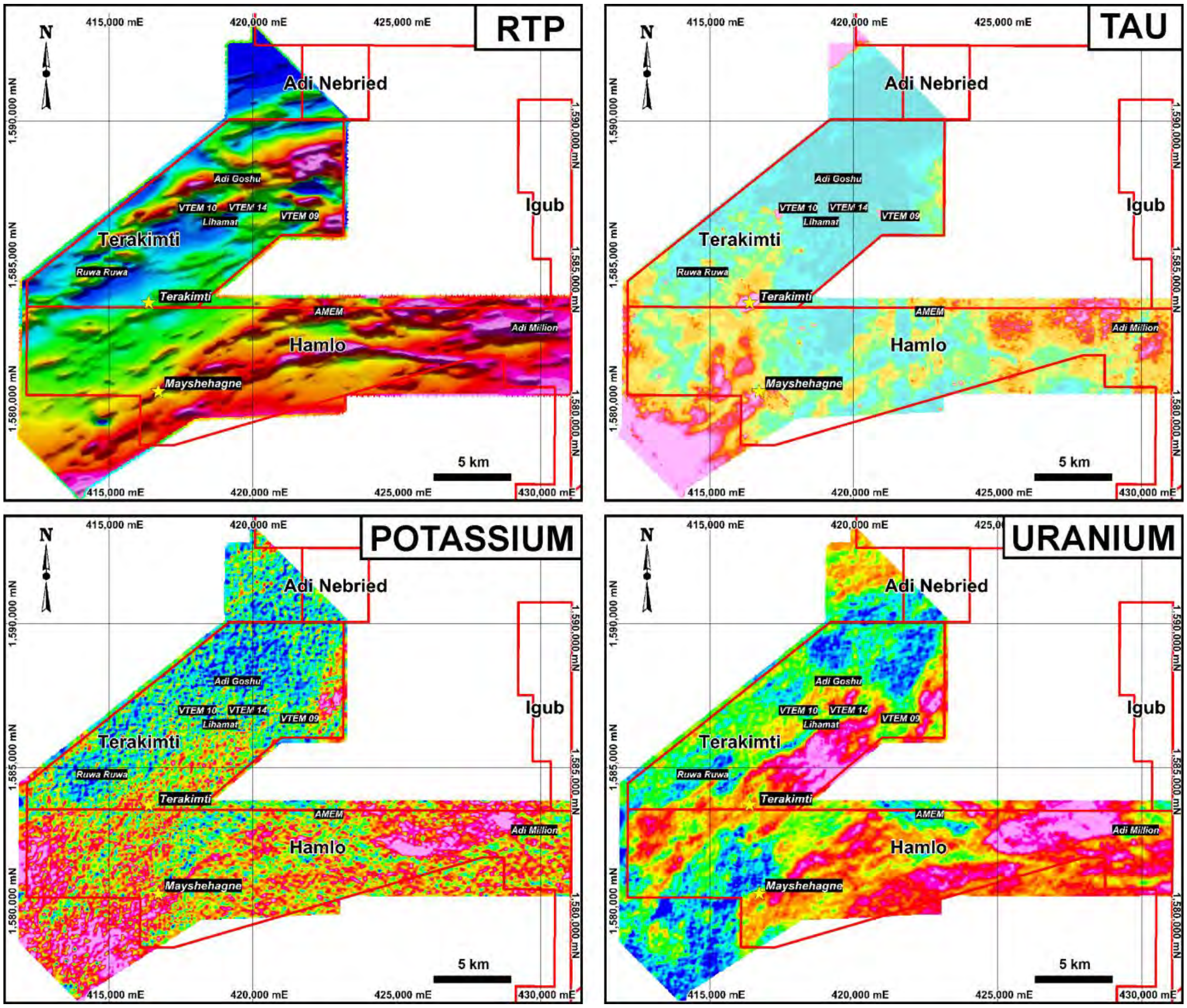
Source: Tigray, 2014

The survey area was carried out over areas defined as the ‘Red block’ (Terakimti, Adi Nebried, and the western part of the Hamlo concession) and the ‘Blue block’ (Hamlo concession) covering an area of 131 km^2. The Red block was flown in a SE-NW direction (N135E), with a line spacing of 100 m. Tie lines were flown perpendicular to the traverse lines (N45E) at a spacing of 1000 m. The Blue block was flow in a N-S direction (N0E), with a traverse line spacing of 100 m and tie lines flown perpendicular to the traverse lines (N90E) at a spacing of 1000 m. Some follow-up infill lines were flown at 50 m line spacing (no further details provided).

The results of the survey identified 6 and 9 conductive zones for the blue block and red block, respectively. These conductors are interpreted to represent potential alteration zones, sub-horizontal lithological conductors, gently dipping structures and/or local targets with at least 1 conductor in the red block identified as a highway and power lines.

Examples of some of the final products from the airborne geophysical survey are shown on Figure 9-10.

Figure 9-10: Examples of Airborne Geophysical Survey Data



Notes: RTP – reduced to pole magnetic data; TAU - EM field decay time constant (TAU parameter) that directly depends on conductance of the targets; Potassium – gamma ray count attributed to decay of potassium; Uranium – gamma ray count attributed to decay of uranium. Terakimti and Mayshehagne VMS targets are denoted by yellow stars. Source**:** Tigray, 2012

9.8 Petrographic Studies

Three petrographic studies have been performed on rocks collected from the Harvest property. Three samples were studied by Vancouver Petrographic in 2011, 18 samples by Dr Craig Leitch in 2011, and 12 samples by University of Leicester in 2013.

Vancouver Petrographics Ltd. (2011)

Three samples from the Terakimti VMS prospect were submitted for petrographic analysis by Dr F. Colombo, PGeo, at Vancouver Petrographics Ltd. in June, 2011. The samples were made into polished thin sections and analysed under transmitted and reflected light. The study showed the samples were comprised sulphide-rich, pyrite-dominated units from the replacement zones. The interstices of the fine-grained pyrite aggregates were filled with copper-rich minerals (chalcopyrite, covellite), with chalcopyrite being replaced by covellite in one of the samples, and sphalerite occurring as an accessory mineral. No gold was observed in the submitted samples.

Craig Leitch (2011)

Eighteen samples were submitted to Dr Craig Leitch, PEng, in December 2011 for petrographic analysis of polished thin sections. The samples were comprised of massive/semi-massive sulphides (12), felsic/intermediate meta-volcanics (4), intermediate/mafic meta-volcanics (2), and were all collected from drillhole TD004 with the exception of one oxide sample collected from drillhole TD008. The massive sulphides are interpreted as being syngenetic within a VMS setting and some evidence existed for stockwork veining. Mineralogy was relatively simple, with the sulphides composed of pyrite, chalcopyrite, sphalerite, galena and arsenopyrite, and the presence of covellite after chalcopyrite. A sulphosalt, possibly tetrahedrite, was present in most of the sulphide-bearing samples. No gold or electrum was observed during petrographic analysis.

University of Leicester (2013)

Seven samples were submitted for petrographic analysis of polished thin sections at the University of Leicester in April 2013. The samples were investigated by two students, C. Davidson and A. Walsh, as part of their undergraduate degree under the supervision of Dr. G. Jenkin. The study noted the samples had undergone deformation and metamorphism with the subsequent recrystallization of sulphides, generation of pyrite porphyroblasts, and development of sericite along cleavages. The 7 samples were from the Mayshehagne (1) and Adi Angoda (3) VMS prospects, and the Adi Goshu (3) orogenic gold prospect.

The single Mayshehagne sample was Zn-Pb-Cu bearing with primary sulphide present as sphalerite, galena and chalcopyrite, and secondary supergene copper suphides (covellite and digenite). No gold/electrum was observed, although they might be present as unidentified tellurides.

The three Adi Angoda samples were of generally unmineralized chlorite-rich wall rock containing minor disseminated and vein sulphides. The sulphides are dominantly pyrite, lesser chalcopyrite and rare sphalerite. No gold/electrum was observed.

Three samples from the Adi Goshu orogenic gold prospect were studied to determine the nature of gold in the area. Two of the samples, one fresh and the second altered, contained only minor fine-grained cubic pyrite, and the third sample collected from artisanal pits contained quartz vein pyrite and very fine-grained chalcopyrite (or possible gold). The vein material contained abundant goethite.

It was recommend that additional work should be performed on the Mayshehagne, Adi Angoda, and Adi Goshu samples using a scanning electron microscope (SEM) to definitively determine the distribution of the gold mineralization

9.9 Remote Sensing

In 2011 Worldview-2 colour satellite imagery was purchased from, and interpreted by, PhotoSat Information Ltd, Vancouver. The 50 km^2 0.46 cm resolution image was used to generate 1 m topographic contours. The image and contour files are used as base maps during field exploration.

Limited alteration and structural interpretation of Landsat 741 imagery was undertaken by Tigray geologists in 2011 and 2012. The results were integrated with geological mapping, soil geochemistry, and airborne geophysical studies to refine the geological map of the area, and identify areas with containing abundant iron oxides (gossans).

9.10 General Exploration Quality

The authors are satisfied that the samples collected by Tigray are representative and factors that might have resulted in sample bias have been minimized or eliminated entirely. Industry best practices have been followed at all times to ensure the best sampling quality.

10 DRILLING

10.1 General

The first known drillhole to be drilled on the Harvest Property was a single reverse circulation hole drilled at Medadib on the Nefasit concession in 2007. This was followed in 2009 and 2010 by 12 diamond drillholes on the Terakimti concession and 5 diamond drillholes on the Nefasit concession at Adi Angoda for a total depth of 2,085.75 m. These diamond holes were drilled by Jintai Drilling Limited. Subsequent drilling by Tigray on behalf of the JV has drilled an addition 84 holes for a total depth of 17,765.43 m at four prospects. These locations are Terakimti (68 holes), VTEM09 (1 hole), Mayshehagne (10 holes), and Adi Angoda (5 holes). A summary of the drilling is tabulated in Table 10.1.

Table 10.1: Summary of Drilling on the Harvest Project

		RC		Diamond	
Year	**Prospect**	**Holes**	**Metres**	**Holes**	**Metres**
2007	Medadib	1	30		
2009	Adi Angoda			5	513.00
	Terakimti			5	674.90
2010	Terakimti			7	897.85
2011	Terakimti			48	9,538.76
	Mayshehagne			2	282.80
2012	Terakimti			20	5,468.75
	Mayshehagne			8	1,369.45
	Adi Angoda			5	1,018.80
2013	VTEM09			1	86.87
Totals		1	30	101	19,851.18

10.2 Reverse Circulation Drilling

One reverse circulation drillhole was drilled on the Harvest Property, viz., 07HRC001 (Table 10.2). This 30 m long vertical hole was drilled at the Medadib showing (Nefasit concession) by Ezana in 2007. The drillhole encountered 20 m of gold enriched gossan, with the top 10 m grading 4.6 g/t Au. The true thickness of mineralization is not known.

10.3 Diamond Drilling

Diamond drilling at the property was conducted by three contractors: Jintai Drilling (Shanghai, China) from December 12, 2009 to June 18, 2010, and also August 20, 2011 to March 29, 2012; Nubian Drilling Limited (Geneva, Switzerland) from October 30, 2011 to May 3, 2012; and Kluane Drilling Limited (Yukon, Canada) in March 2013.

Drilling started in August 2011 and terminated in June 2012 with a total of 68 diamond holes drilled for a total length of 15,007.51 m. Drilling was initiated at Terakimti on 7th August with the use of one electric powered Jintai Drilling rig (model HXY-42). A second Jintai rig started drilling on 8th October, working on a double shift basis. Jintai drilling contract was completed in January 2012. Jintai used a variety of differing length rods and subs that were non-standard and calculated down hole depths by measuring each rod (minus the thread), therefore the core was recovered in non-standard intervals.

Nubian began drilling on 30th October 2011, with one rig (Longyear LF 90D) and completed drilling on the 3rd May 2012. Nubian utilized standard equipment including 3 m rods and 3 and 1.5 m core barrels. Kluane employed a custom-built man portable KD600 unit (due to the poor accessibility to the drillsite) to drill one NTW diameter hole.

A summary of drill holes completed by different contractors are as follows:

- Jinati 1 – (3,879.41 m, 19 holes), 09 and 10 prefix holes, TD 1-9, 11, 12, 15, 20, 23, 27, 34, 36, 41, 46).
- Jinati 2 – (2,922.25 m, 14 holes), TD 10, 13, 14, 17, 19, 24, 28, 33, 39, 42, 44, 48, 49, 50.
- Nubian – (8,205.85 m, 35 holes), TD 16, 18, 21, 22, 25, 26, 29, 30, 31, 32, 35, 37, 38, 40, 43, 45, 47, 51-68.
- Kluane – (86.87 m, 1 hole), TVD001

Drilling collar locations post 2010 were accurately surveyed in using a Trimble® differential GPS system, where drilling pads were cleared and built up. All holes Tigray holes were completed on a 40 m to 80 m grid spacing and were drilled at an azimuth of 270°. This proposed drill spacing was chosen to facilitate a resource estimation, and to allow infill drilling to maintain an even spaced grid. Drilling down dip was planned to intersect the mineralization at 40 m down dip intervals. Pierce points for the drilling targets were perpendicular to the interpreted strike of targeted mineralization to try and ensure true thicknesses of target rocks were intercepted.

Downhole survey measurements were taken at various depths, ranging from 6 to 50 m intervals down each drillhole using a Reflex EZ-Shot orientation instrument. A final reading was taken approximately 6 m from the bottom.

An example of a drillhole in progress is illustrated in Figure 10-1. A list of drillhole locations on the Harvest Property displaying the salient features is tabulated in Table 10.2.

Figure 10-1: Drilling of an Inclined Diamond Hole (TD07)

Source: Archibald, 2011

Table 10.2: Mineral Exploration Diamond Drill Holes on the Harvest Property

Hole ID	Easting	Northing	Azimuth (°)	Dip (°)	Total Depth (m)	Prospect
07HRC001	439495	1576803	0	-90	30.00	Medadib
09HTD001	416043	1583513	308.5	-75	100.60	Terakimti
09HTD002	416663	1583817	323.5	-65	178.10	Terakimti
09HTD003	416542	1583799	323.5	-75	134.50	Terakimti
09HTD004	416279	1583609	323.5	-70	124.70	Terakimti
09HTD005	416411	1583661	308.5	-75	137.00	Terakimti
10HTD001	416579	1583727	323.5	-70	122.10	Terakimti
10HTD002	416472	1583710	323.5	-65	42.30	Terakimti
10HTD003	416161	1583553	309.5	-76	140.35	Terakimti
10HTD004	416956	1584075	323.5	-65	85.65	Terakimti
10HTD005	416319	1583540	323.5	-65	182.90	Terakimti
10HTD006	416197	1583484	308.5	-65	176.15	Terakimti
10HTD007	416451	1583591	308.5	-75	148.40	Terakimti
TD001	416310	1583570	318.5	-60	218.90	Terakimti
TD002	416310	1583570	318.5	-69	240.16	Terakimti
TD003	416239	1583524	318.5	-60	235.20	Terakimti
TD004	416217	1583551	319	-60	196.65	Terakimti
TD005	416151	1583509	318.5	-60	148.65	Terakimti
TD006	416151	1583509	318.5	-74.5	223.55	Terakimti
TD007	416477	1583741	318.5	-60	93.30	Terakimti
TD008	416503	1583710	318.5	-60	203.85	Terakimti
TD009	416529	1583680	318.5	-60	150.00	Terakimti
TD010	416194	1583578	318.5	-63	170.55	Terakimti
TD011	416530	1583679	318.5	-90	262.00	Terakimti
TD012	416257	1583630	318.5	-71	207.75	Terakimti
TD013	416176	1583600	318.5	-60	120.40	Terakimti
TD014	416243	1583581	318.5	-65	202.35	Terakimti
TD015	416257	1583629	318.5	-60	250.00	Terakimti
TD016	416149	1583511	320.5	-45	182.30	Terakimti
TD017	416158	1583557	318.5	-60	165.35	Terakimti
TD018	416274	1583547	318.5	-58	251.50	Terakimti
TD019	416265	1583492	318.5	-60	300.50	Terakimti
TD020	416226	1583603	322.5	-60	151.35	Terakimti
TD021	416274	1583546	318.5	-70	300.20	Terakimti
TD022	416309	1583572	318.5	-51	215.30	Terakimti
TD023	416338	1583656	318.5	-60	221.50	Terakimti
TD024	416093	1583450	318.5	-60	300.20	Terakimti

Hole ID	Easting	Northing	Azimuth (°)	Dip (°)	Total Depth (m)	Prospect
TD025	416191	1583520	318.5	-58	191.40	Terakimti
TD026	416192	1583520	315.5	-70	212.50	Terakimti
TD027	416355	1583638	318.5	-63	251.05	Terakimti
TD028	416593	1583851	318.5	-60	200.50	Terakimti
TD029	416148	1583568	318.5	-60	101.50	Terakimti
TD030	416135	1583586	322.5	-61	50.00	Terakimti
TD031	416036	1583516	318.5	-60	191.50	Terakimti
TD032	416024	1583531	318.5	-60	80.50	Terakimti
TD033	416629	1583809	318.5	-60	220.75	Terakimti
TD034	416410	1583693	319.5	-61	101.95	Terakimti
TD035	416569	1583756	318.5	-55	110.50	Terakimti
TD036	416410	1583693	318.5	-80	272.60	Terakimti
TD037	416569	1583756	310.5	-75	152.60	Terakimti
TD038	416619	1583820	313.5	-55	137.60	Terakimti
TD039	416651	1583783	318.5	-60	180.10	Terakimti
TD040	416381	1583607	318.5	-60	272.70	Terakimti
TD041	416107	1583559	318.5	-60	200.45	Terakimti
TD042	416673	1583758	318.5	-60	262.70	Terakimti
TD043	416400	1583585	323.5	-61	281.50	Terakimti
TD044	416069	1583542	319.5	-60	200.05	Terakimti
TD045	416400	1583584	323.5	-70	362.50	Terakimti
TD046	416708	1583717	318.5	-56	250.50	Terakimti
TD047	416237	1583652	318.5	-60	80.00	Terakimti
TD048	416109	1583495	317	-60	161.80	Terakimti
TD049	416088	1583518	318.5	-60.5	130.80	Terakimti
TD050	416629	1583686	318.5	-76.1	306.20	Terakimti
TD051	416602	1583596	318.5	-67	422.50	Terakimti
TD052	416602	1583596	308.5	-73	341.50	Terakimti
TD053	416395	1583711	321.5	-60	80.50	Terakimti
TD054	416523	1583809	318.5	-60	48.50	Terakimti
TD055	416453	1583646	327	-45	170.30	Terakimti
TD056	416453	1583646	326	-60	227.50	Terakimti
TD057	416479	1583614	324	-60	257.10	Terakimti
TD058	416480	1583614	321.5	-73	443.60	Terakimti
TD059	416690	1583861	321	-60	197.40	Terakimti
TD060	416746	1583795	321.5	-60	242.50	Terakimti
TD061	416669	1583885	321.5	-57	110.40	Terakimti
TD062	416783	1583752	325	-60	269.50	Terakimti

Hole ID	Easting	Northing	Azimuth (°)	Dip (°)	Total Depth (m)	Prospect
TD063	416626	1583690	324.5	-60	236.50	Terakimti
TD064	416697	1583605	333	-77	500.40	Terakimti
TD065	416808	1583723	328	-61	401.50	Terakimti
TD066	416719	1583951	0	-90	401.60	Terakimti
TD067	416503	1583586	323	-75	359.95	Terakimti
TD068	416583	1583615	330.7	-60	320.50	Terakimti
09HND001	435617	1579301	323.5	-70	92.90	Adi Angoda
09HND002	435792	1579432	148.5	-65	141.00	Adi Angoda
09HND003	434880	1579101	323.5	-80	100.50	Adi Angoda
09HND004	436077	1579418	323.5	-65	77.15	Adi Angoda
09HND005	434738	1579017	323.5	-80	101.45	Adi Angoda
ND001	435582	1579340	155	-50	200.50	Adi Angoda
ND002	435531	1579449	153.5	-50	235.50	Adi Angoda
ND003	435344	1579284	153.5	-50	230.40	Adi Angoda
ND004	435214	1579182	154.2	-50.4	218.40	Adi Angoda
ND005	435655	1579374	153.8	-49.3	134.00	Adi Angoda
HD001	416498	1580387	138.5	-60	142.50	Mayshehagne
HD002	416528	1580416	140	-60.8	140.30	Mayshehagne
HD003	416531	1580475	138.5	-60	220.05	Mayshehagne
HD004	416500	1580448	141	-60.5	150.30	Mayshehagne
HD005	416482	1580409	140	-60.5	170.60	Mayshehagne
HD006	416532	1580473	142.4	-45	110.50	Mayshehagne
HD007	416531	1580476	144	-74	248.60	Mayshehagne
HD008	416499	1580385	142	-44.5	107.40	Mayshehagne
HD009	416580	1580479	143	-58.5	134.50	Mayshehagne
HD010	416549	1580516	140	-60	227.50	Mayshehagne
TVD001	420909	1586812	318	-46.5	86.87	VTEM09

During exploration, Tigray and their drilling contractors conducted the drilling program according to industry best practices. Drill hole collar coordinates were surveyed and at completion the holes were capped with concrete monuments as shown in Figure 10-2. These coordinates were surveyed prior to drilling and again after drilling, by a qualified Tigray surveyor using a DGPS Epoch 25 with a measurement accuracy of ±1 cm. Jintai used a Tropari Gimble for down hole survey for all holes in 2009 and 2010 and for drill hole TD001 to 11 and TD013. All contractors used a multi-shot Reflex EZ-Shot orientation instrument for down hole surveys for all other drill holes including TD012 and TD014 to 68. Azimuth and dip information was recorded down hole at roughly 30 m intervals, and a final reading approximately 6 m from the bottom of every hole.

Jinati Drilling utilized a down hole spear for core orientation purposes (in an effort to facilitate structural studies on the core), and Nubian Drilling used a state of the art Acer Reflex tool. However, the poor training of the operators resulted in the failure to calibrate of one of the Acer reflex tools effectively rendered much of the core orientation data for structural work useless.

Core orientation information was initially taken at approximately 30 m intervals, and reduced to 6 m intervals in areas of mineralization to determine the orientation of mineralization and structures (e.g., foliation) within the rock. Core orientation measurements were collected every 6 m during drilling in 2011 and 2012 to increase the confidence and reliability of the measurements.

All holes were capped upon completion, with the collar points surveyed and denoted by cement markers. All drill sites were remediated at the end of the program and most have returned to agricultural use (Figure 10-3).

Figure 10-2: Cement Marker Denoting the Location of Drill Hole Collars

Source: Archibald et al., 2014

Drill core recoveries for the project were acceptable, and the samples collected were representative of the observed mineralization. Determining the exact true thickness from individual drillholes is difficult, but generally drillhole intercepts represent 60 to 70% of the true thickness.

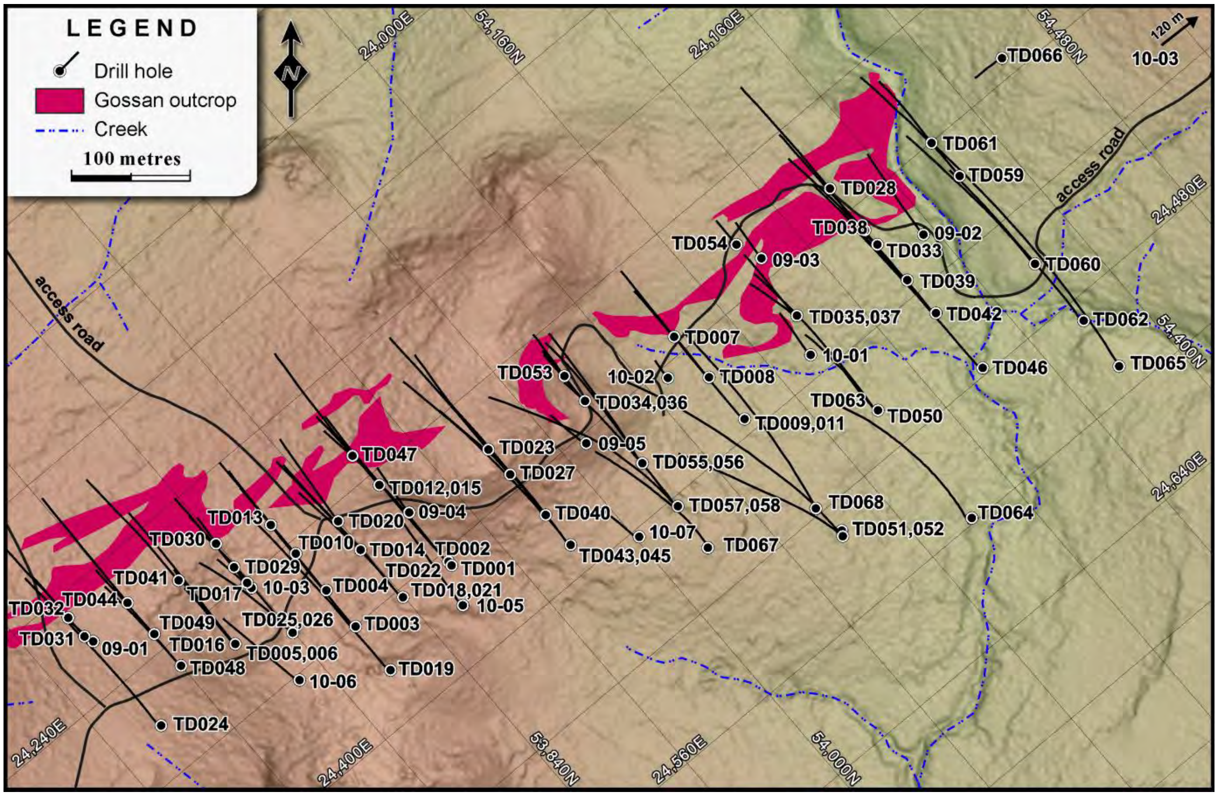
Figure 10-3: Remediated Drilling Pad (TD61)

Source: Archibald et al., 2014

10.4 Terakimti

At Terakimti, 80 diamond drillholes on 19 sections were drilled with 40 m spacing between sections at the southwest of the prospect and 80 m spacing in the northeastern part. A plan of all of the drillholes is presented in Figure 10-4. Drilling was undertaken to define polymetallic mineralization identified by earlier prospecting, mapping, trenching and ground geophysics. The first drilling on the property was in late 2009 and early 2010 where 12 holes drilled a total of 1,572.75 m. Drilling performed by Tigray started in August 2011 and terminated in June 2012 with a total of 68 diamond holes drilled for a total length of 15,007.51 m. All holes were collared using HW diameter core rods before utilizing HQ diameter rods. Where necessary due to depth or ground conditions the rod diameter was further reduced to NQ. Despite several attempts to keep the holes open with PVC piping (for future downhole geophysics), only 5 holes were successfully lined.

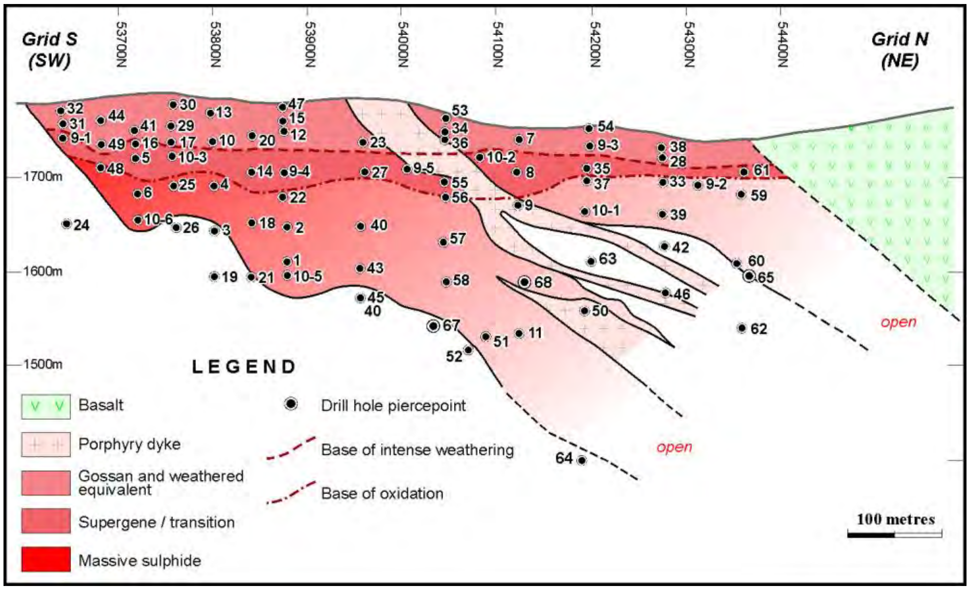
Figure 10-4: Terakimti Drill Hole Plan showing Collar Locations



Source: Tigray, 2014

A summary of significant mineralized intercepts from each drillhole at Terakimti is presented in Table 10.3. A general description of the mineralization encountered is presented Section 7 of this report, but in summary it consists of four lens of bedded polymetallic (Cu-Au-Ag-Zn-Pb) massive sulphide over a strike length of 800 m. These lenses plunge to the northeast and the structure remains open downplunge (Figure 10-5).

Figure 10-5: Terakimti Long Section



Source: Tigray, 2014

Table 10.3: Terakimti Diamond Drill Holes

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
09HTD001		39.00	42.00	3.00	3.75	0.39	11	0.01	260	-75
09HTD002		42.00	54.00	12.00	1.06	0.88	24	4.11	275	-65
		75.00	92.00	17.00	0.33	0.38	10	1.10		
09HTD003		17.00	22.00	5.00	0.61	0.70	41	1.51	275	-75
		41.00	52.20	11.20	0.34	0.37	3	0.15		
09HTD004		69.00	76.00	7.00	0.30	0.37	11	4.21	275	-70
09HTD005		66.30	69.90	3.60	3.05	1.58	30	1.68	260	-75
		77.00	90.90	13.90	2.67	1.17	22	3.42		
10HTD001		71.70	79.30	7.60	2.07	4.01	36	2.59	275	-70
		85.30	93.80	8.50	0.41	0.32	5	0.59		
10HTD002		28.80	42.00	13.20	0.16	2.84	300	0.02	275	-65
10HTD003		45.60	97.70	52.10	4.10	1.55	26	0.13	261	-76
	inc	54.20	93.70	39.50	5.35	1.74	21	0.15		
10HTD004		No Significant Results							277	-65
10HTD005		164.60	167.80	3.20	0.83	1.57	8	5.02	275	-65
10HTD006		149.20	154.00	4.80	0.32	0.35	13	2.43	260	-65
10HTD007		No Significant Results							260	-75
TD001		44.00	46.00	2.00	1.63	1.41	23	1.70	270	-60
		53.30	55.40	2.10	2.80	1.09	12	0.19		
		90.15	95.75	5.60	1.11	0.54	17	4.96		
		138.40	140.00	1.60	2.89	2.54	16	0.99		
		148.00	152.20	4.20	1.51	0.43	5	0.03		
TD002		106.00	110.25	4.25	0.12	0.26	6	4.70	270	-69
TD003		104.80	106.10	1.30	1.95	3.42	23	0.08	270	-60
		135.75	142.90	7.15	0.29	0.20	2	0.06		
TD004		57.45	131.30	73.85	3.77	1.31	14	0.72	270	-60
	inc	78.65	115.10	36.45	6.01	1.70	19	1.31		
		162.50	163.75	1.25	0.68	0.73	15	4.76		
TD005		71.40	90.10	18.70	2.12	0.96	18	3.58	270	-60
	inc	77.60	90.10	12.50	3.04	1.24	24	4.55		
TD006		99.00	102.50	3.50	0.99	0.59	8	0.16	270	-75
		111.00	113.75	2.75	0.40	1.02	14	0.19		
		129.50	131.45	1.95	1.18	2.56	25	2.79		
TD007		0.00	22.50	22.50	0.05	1.48	2	0.07	270	-60
	inc	6.30	21.50	15.20	0.05	2.00	3	0.06		

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
		31.20	49.40	18.20	0.36	1.33	6	0.00		
	inc	42.85	49.40	6.55	0.78	2.83	0	0.00		
	inc	44.50	48.70	4.20	0.85	4.27	0	0.00		
TD008		38.75	59.60	20.85	5.67	1.49	18	0.77	270	-60
	inc	40.70	54.45	13.75	7.49	2.07	24	1.09		
TD009		82.50	84.40	1.90	1.18	0.33	5	0.04	270	-60
TD010		56.00	70.75	14.75	0.17	1.29	37	0.00	270	-63
	inc	56.00	62.85	6.85	0.03	1.84	71	0.00		
TD011		181.75	196.95	15.20	2.61	2.53	43	6.79	270	-90
	inc	181.75	193.45	11.70	3.26	3.10	53	8.40		
		220.10	224.25	4.15	1.82	1.53	29	1.06		
		229.70	232.10	2.40	1.36	1.02	15	2.00		
TD012		40.28	44.75	4.47	0.03	4.26	77	0.02	270	-71
TD013		14.10	23.60	9.50	0.09	3.40	3	0.05	270	-60
TD014		57.45	94.45	37.00	3.53	1.21	26	1.32	270	-65
	inc	58.20	80.50	22.30	5.35	1.65	40	2.08		
TD015		40.25	43.75	3.50	0.02	1.24	23	0.01		
TD016		80.40	98.15	17.75	2.98	1.61	20	0.03	270	-45
TD017		54.85	63.95	9.10	0.24	1.40	65	0.03	270	-60
		80.00	82.90	2.90	1.59	1.14	8	0.07		
		121.30	141.70	20.40	0.13	0.30	7	1.63		
	inc	138.40	141.70	3.30	0.29	0.62	14	4.89		
TD018		85.90	89.90	4.00	0.04	0.06	0	2.42	270	-58
		93.90	96.00	2.10	3.58	1.22	20	2.04		
		124.05	154.80	30.75	2.55	0.99	9	1.52		
	inc	124.05	130.75	6.70	1.09	0.45	3	0.12		
	and inc	135.63	154.80	19.17	3.68	1.40	13	2.37		
	inc	138.89	154.80	15.91	4.07	1.35	13	2.83		
TD019		160.00	161.40	1.40	0.64	1.04	13	0.42	270	-60
TD020		38.00	39.20	1.20	0.01	1.10	7	0.00	270	-60
TD021		47.95	65.95	18.00	0.62	0.02	0	0.43	270	-70
		139.20	152.00	12.80	0.29	0.70	6	0.34		
	inc	146.90	152.00	5.10	0.42	1.11	9	0.40		
		250.00	252.00	2.00	0.28	0.40	13	3.63		
TD022		87.35	116.30	28.95	2.99	0.83	23	3.56	270	-51
	inc	87.35	94.65	7.30	3.55	1.05	31	6.43		

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
	inc	100.80	115.45	14.65	4.05	1.05	28	3.52		
		199.50	209.50	10.00	0.22	0.73	9	2.23		
	inc	204.00	209.50	5.50	0.29	0.74	10	3.11		
TD023		51.20	63.20	12.00	0.01	2.18	68	0.00	270	-60
	inc	51.20	55.20	4.00	0.01	5.48	157	0.01		
TD024	No Significant Results								270	-60
TD025		74.70	80.50	5.80	3.52	1.20	23	0.72	270	-58
		93.85	125.60	31.75	1.84	0.86	17	7.03		
	inc	106.50	123.20	16.70	2.37	0.93	19	9.16		
	and inc	110.50	122.40	11.90	3.08	1.11	20	9.54		
TD026		98.80	102.40	3.60	0.91	1.01	28	4.34	267	-70
TD027		55.95	66.80	10.85	1.26	1.21	13	0.02	270	-63
	inc	55.95	57.80	1.85	4.56	1.71	34	0.04		
		81.10	88.90	7.80	0.93	0.77	6	0.02		
	inc	81.10	84.90	3.80	1.19	1.32	10	0.03		
TD028		29.35	34.25	4.90	0.91	0.61	4	0.10	270	-60
	inc	32.15	34.25	2.10	2.09	0.62	3	0.24		
TD029		36.45	45.25	8.80	0.01	9.19	78	0.00	270	-60
	inc	38.30	41.90	3.60	0.01	21.88	168	0.00		
		55.75	62.80	7.05	1.19	0.01	0	0.31		
TD030		7.20	17.70	10.50	0.08	6.30	16	0.05	274	-60
TD031		21.80	23.60	1.80	0.03	0.82	0	0.00	270	-60
TD032		4.70	8.00	3.30	0.09	1.08	20	0.02	270	-60
TD033		25.10	27.10	2.00	0.03	0.71	25	7.35	270	-60
		52.00	56.00	4.00	0.16	0.34	9	2.86		
TD034		0.00	29.00	29.00	0.14	3.40	11	0.08	270	-61
	inc	20.20	29.00	8.80	0.29	8.77	34	0.12		
TD035		52.00	59.80	7.80	3.31	1.45	9	1.46	270	-55
		70.80	77.50	6.70	1.61	2.32	10	0.49		
TD036		17.10	25.75	8.65	0.21	2.18	6	0.07	270	-80
		81.40	89.10	7.70	2.32	1.23	21	2.71		
		220.10	228.00	7.90	0.19	0.39	9	4.70		
		256.55	263.60	7.05	0.34	0.72	13	5.01		
TD037		53.15	69.85	16.70	1.23	2.37	36	8.07	270	-75
	inc	59.80	66.70	6.90	1.08	3.86	57	15.39		
TD038		14.50	20.00	5.50	0.02	5.94	9	0.02	264	-55

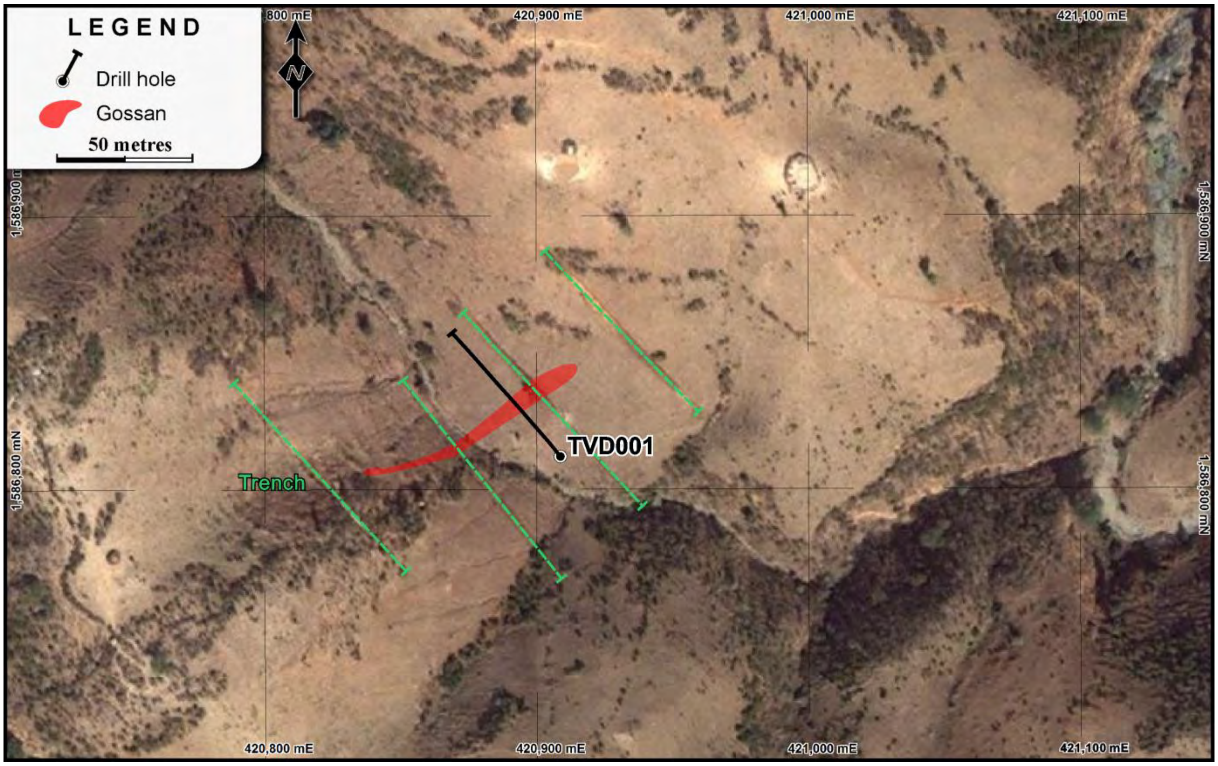
Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
		49.80	52.80	3.00	0.75	0.42	11	0.01		
TD039		86.15	105.90	19.75	2.39	1.81	13	1.99	270	-60
		114.70	115.40	0.70	1.57	3.61	9	0.60		
TD040		58.70	61.20	2.50	1.22	1.13	21	0.20	268	-60
		83.60	98.50	14.90	0.18	0.72	15	3.95		
		215.00	242.70	27.70	0.26	0.50	7	4.40		
	inc	239.20	242.70	3.50	1.41	2.09	31	23.03		
TD041		28.50	31.65	3.15	0.02	5.32	9	0.00	270	-60
		50.90	54.35	3.45	0.55	0.02	0	0.01		
TD042		82.10	83.20	1.10	0.11	0.48	6	5.75	270	-60
TD043		147.70	195.50	47.80	1.01	0.70	6	0.72	270	-61
		174.20	191.65	17.45	2.15	1.11	10	0.42		
	inc	174.95	186.10	11.15	3.05	1.28	14	0.56		
TD044		0.00	33.95	33.95	0.06	1.43	2	0.03	270	-60
	inc	17.20	30.60	13.40	0.10	2.92	2	0.03		
TD045		140.00	146.30	6.30	0.53	0.20	2	0.06	270	-70
TD046	No Significant Results								270	-56
TD047		0.00	4.90	4.90	0.14	0.43	0	0.07	270	-60
TD048		81.85	87.35	5.50	1.51	0.83	31	13.26	270	-60
TD049		38.90	58.00	19.10	0.01	0.57	42	0.00	270	-61
TD050		169.35	173.00	3.65	0.02	0.78	1	0.09	270	-76
TD051		211.55	225.75	14.20	0.55	0.73	13	0.32	270	-67
		233.35	263.30	29.95	1.29	1.09	19	1.87		
	inc	242.95	256.25	13.30	2.52	1.95	36	3.48		
TD052	No significant intercepts								270	-73
TD053		10.88	17.00	6.12	0.19	27.17	13	0.08	270	-60
TD054		0.00	4.95	4.95	0.11	1.94	0	0.04	270	-60
		27.65	33.05	5.40	2.26	1.72	20	1.46		
TD055		98.50	104.65	6.15	1.37	0.29	5	0.30	270	-45
TD056		77.65	80.45	2.80	2.60	1.26	19	3.46	270	-60
		90.45	104.35	13.90	1.87	0.97	18	3.55		
	inc	90.45	97.93	7.48	2.87	1.19	24	2.98		
TD057		140.90	143.70	2.80	2.12	3.00	33	0.72	270	-60
		148.80	153.85	5.05	2.97	2.77	20	2.36		
TD058		134.70	136.10	1.40	0.01	1.01	30	9.27	270	-73
		144.80	147.45	2.65	0.45	4.33	58	10.00		

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
		158.95	161.35	2.40	0.06	2.50	33	3.13		
		173.95	188.70	14.75	0.44	0.94	17	0.84		
	inc	178.10	181.65	3.55	0.93	2.22	42	2.12		
TD059		56.00	67.05	11.05	0.08	0.18	2	0.70	270	-60
TD060		99.15	107.45	8.30	0.45	1.32	19	2.41	270	-60
	inc	104.90	107.45	2.55	1.05	3.25	47	4.60		
TD061		45.25	47.35	2.10	1.34	0.34	7	0.01	270	-57
TD062	No Significant Results								275	-60
TD063	No Significant Results								276	-60
TD064	No Significant Results								285	-77
TD065		233.55	241.05	7-Jan-00	0.02	0.06	0.00	0.51	280	-60
	inc	238.00	241.05	3-Jan-00	0.03	0.08	0.00	0.82		
TD066	No Significant Results								310	-90
TD067	No Significant Results								275	-75
TD068		182.20	188.80	6.60	0.26	0.82	10.00	2.48	282	-60
	inc	186.45	188.80	2.35	0.60	1.21	18.00	3.22		

10.5 VTEM 09

Based on encouraging results from trenching at the prospect, one diamond drillhole (TVD001) totalling 86.87 m was drilled at the VTEM09 prospect during 2013 (Figure 10-6) and intersected 10.21 m of 3.16 % Cu, 3.97 g/t Au, 87 g/t Ag, and 3.82 % Zn from 20.29.81 metres. This intersection also includes a higher grade interval of 2.82 m of 5.61 % Cu, 7.48 g/t Au, 102 g/t Ag, and 0.72 % Zn. Mineralization was in the form of polymetallic massive sulphide.

Figure 10-6: VTEM09 Drill Hole Plan



Source: Tigray 2014

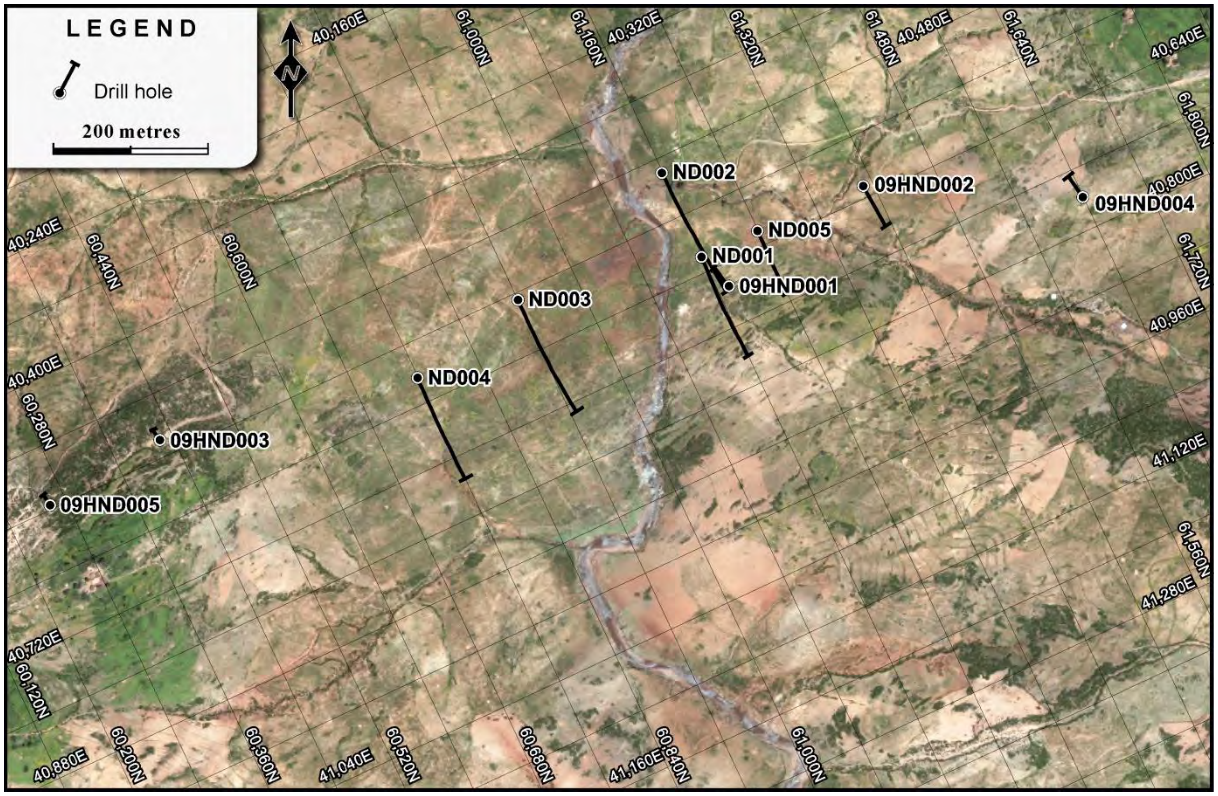
Table 10.4: VTEM09 Diamond Drill Holes

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
TVD001		20.29	30.50	10.21	3.16	3.97	87	3.82	320	-47
	inc.	21.58	24.40	2.82	5.61	7.48	102	0.72		

10.6 Adi Angoda

Five diamond drillholes totalling 1,018.80 m were drilled at the Adi Angoda prospect during 2012 (Figure 10-7). Drilling focused on extending mineralization encountered during drilling of five holes in 2009 along strike and down dip. Drilling targets were located based on lithological, geochemistry and geophysical targeting. The results of the drilling program are tabulated in Table 10.4. Two of the holes did not intersect mineralization (ND002 and ND003), and two holes intercepted gold-rich exhalite (ND004 and ND005). The best drillhole in terms of mineralized interval and overall grade was the ND001, close to a gossan, which returned grades 2.73 g/t Au, 55 g/t Ag, 3.51% Cu, and 2.23% Zn over a 2.80 m interval from a depth of 43.50 m.

Figure 10-7: Adi Angoda Drill Hole Plan (2012)



Source: Tigray, 2014

Table 10.5: Adi Angoda Diamond Drill Holes

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
09HND001		71.93	74.93	3.00	0.68	1.13	5	0.12	262	-70
09HND002		138.65	139.75	1.10	0.32	0.06	2	0.02	87	-65
09HND003		59.10	60.10	1.00	0.39	0.08	4	0.02	262	-80
09HND004		52.15	55.15	3.00	2.34	1.41	23	0.09	262	-65
09HND005	No Significant Results								262	-80
ND001		43.50	46.30	2.80	3.51	2.73	55	2.23	92	-50
	inc.	44.05	45.65	1.60	6.01	4.22	92	3.86		
ND002	No Significant Results								90	-50
ND003	No Significant Results								90	-50
ND004		29.55	34.05	4.50	0.08	1.24	11	0.04	91	-50
	inc.	29.55	31.60	2.05	0.16	2.47	19	0.10		
ND005		119.55	122.10	2.55	0.02	1.00	0	0.06	90	-50

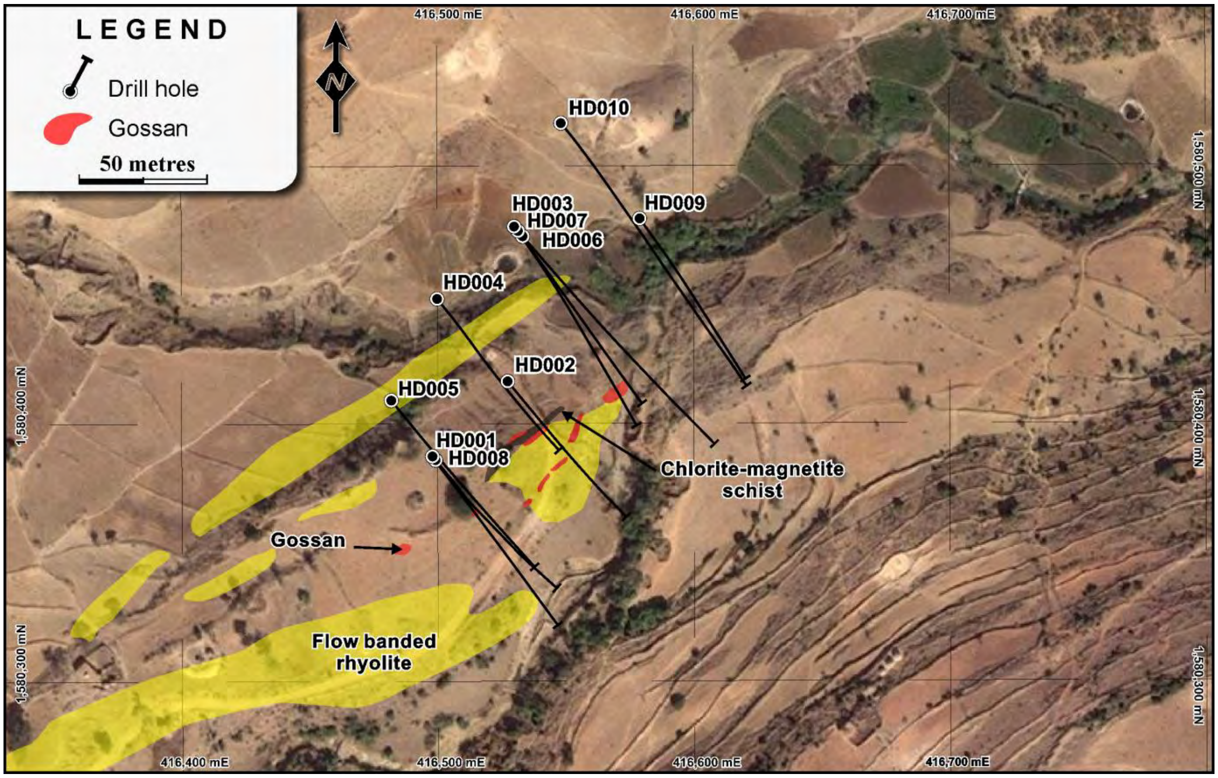
10.7 Mayshehagne

Initial and follow-up diamond drill programs were completed at the Mayshehagne prospect (formerly known as AMEM3) during 2011 and 2012. A total of 1,652.25 m was cored in ten holes (Figure 10.8). Preliminary drilling established the width, grade and plunge of mineralization, whereas the follow-up drill program focused on extending known mineralization along strike. Eight mineralized zones were intercepted in seven drillholes, with the remaining three holes not recording significant results (Table 10.3). The presence of supergene enrichment is indicated by the high copper concentrations (up to 7.72% Cu) and elevated gold (2.07 g/t Au) and silver (50 g/t Ag).

Recoveries for all drilling on the project averaged 98.8% all samples sent to the assay lab were measured for density, and all drillholes were surveyed upon completion. Large variations in any of these parameters could materially impact the accuracy and reliability results. Since no large variations were noted the authors believe the drilling results can be relied upon.

Where any higher grade intervals were present within lower grade zones, these intervals have been presented in Tables 10.3 to 10.6.

Figure 10-8: Mayshehagne Drill Hole Plan



Source: Archibald, 2014

Table 10.6: Mayshehagne Diamond Drill Holes

Hole ID		From (m)	To (m)	Interval (m)	Copper %	Gold g/t	Silver g/t	Zinc %	Local Azimuth	Dip
HD001		54.60	58.70	4.10	0.84	0.24	5	2.64	90	-60
HD002		24.00	44.70	20.70	5.00	1.03	31	8.20	90	-61
	inc.	28.75	41.55	12.80	7.77	1.62	50	12.66		
HD003	No Significant Results								90	-60
HD004		84.50	85.10	0.60	0.22	0.44	16	5.56	90	-61
		101.10	104.10	3.00	0.17	0.28	4	1.99		
HD005	No Significant Results								90	-61
HD006		62.00	80.00	18.00	3.23	0.95	22	3.78	90	-45
	inc.	62.00	67.45	5.45	7.05	1.24	46	6.45		
HD007	No Significant Results								95	-75
HD008		34.30	35.05	0.75	1.20	0.31	4.00	1.22	94	-45
HD009		44.65	54.35	9.70	0.45	0.16	3.00	0.44	95	-60
HD010		89.55	93.25	3.70	1.79	2.07	13	3.01	90	-60
		99.00	99.80	0.80	1.96	0.48	21	5.94		

11 SAMPLE PREPARATION, ANALYSES & SECURITY

The following sections summarize the extent of the author's knowledge regarding the sample preparation, analysis, security and Quality Assurance/Quality Control ("QA/QC") protocols used in the drilling programs at the Harvest Property.

11.1 Sampling Method & Approach

Several exploration sampling techniques are employed on the Harvest Property including: sieved soil samples, stream sediment samples, rock chip samples, channel samples, and diamond drilling. The emphasis of the collection techniques are to collect geological material using standardised sample procedures, and insertion of suitable blanks, standards and replicates to monitor the accuracy and precision of sampling errors and deficiencies in laboratory procedures and results. Although not stated in the text most lithological samples are 2 kg. The following descriptions of sampling procedures, with the exception of drilling, are taken from the Tigray protocol manual and 2013 Harvest Mining Annual Report (Gardoll *et al.,* 2013).

Stream Sample Procedure

Stream sediment samples are taken on a regional scale to identify anomalous catchment areas for further follow up work. Samples are taken from the surface of the stream bed and sieved using -60 mesh with a final weight of approximately 250 g. Active river sediment (excluding sand) is collected in stream samples. All samples are bagged into soil packets or plastic bags to avoid contamination. Standards and replicates are routinely inserted for quality control and quality assurance purposes. Pans are cleaned between sample sites to avoid contamination.

The productivity of a stream sample program is routinely maximised with the geologist making notes on geology, taking grab samples of any mineralised float or outcrop, and recording the location of alluvial workings as appropriate. This process is delayed in the wet weather when sieving samples is impossible and streams are flowing.

Soil Sample Procedure

Soil samples are collected on a predetermined soil sample grid at a variety of scales depending on the stage of exploration (e.g. regional soil programs or detailed infill grids over a prospect).

A sample is taken from a depth of 0.15 m below surface and sieved using -60 mesh to remove coarse material. The total sample weight aims to be at least 200 g. Standards and replicates are routinely inserted for quality control and quality assurance purposes. Pans are cleaned between sample sites to avoid contamination.

The sampler may adapt the program in the field if required. For example; issues with the safety of sample site or non-representative surface material (e.g. flood plain material or disturbed ground chemically altered by farming processes). This process is delayed in wet weather when sieving samples is impossible.

The 2 kg samples were collected in clear plastics bags and a sample tag was inserted prior to sealing. Sample standards and duplicate samples were inserted at 50 sample intervals. The samples were transported to the assay laboratory (Ultratrace, Perth, Australia), and upon arrival they were dried, sieved using a 2 mm screen, split to produce a 25 to 50 g aliquot, which was digested in *aqua regia* and diisobutyl ketone (DIBK), prior to atomic absorption (AA) gold analysis.

Rock Chip Sample Procedure

Rock chip samples are taken from surface outcrops or float material to assess metal contents of selected rock samples. Wherever possible, fresh material is sampled. The location of the sample should be recorded with accurate GPS coordinates. Standards and replicates are routinely inserted for quality control and quality assurance purposes.

Trenching Procedure

Trenches are dug down to fresh or saprolitic rock, generally 1 m. Trenches are not dug above shoulder height for safety reasons and during the rainy season care must be taken to only work when conditions are safe. They are dug with a pre-planned orientation perpendicular to mineralization. The geologist will adapt the trench as required for safety or geological reasons.

Channel Sample Procedure

Channel rock chip samples are taken as a method of continuous geochemical analysis. They are collected along the face of an artisanal working or from a purpose dug exploration trench. Samples are typically taken over 1 m intervals (dependant on geology) with continuous chips taken equally along the length of the sample interval. Standards and replicates are routinely inserted for quality control and quality assurance purposes.

Handheld XRF Analysis

All exploration samples are analysed on site using a handheld XRF instrument (Niton®)for a range of elements including base metals; Ag, As, Ba, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Hg, K, Mn, Mo, Nb, Ni, Pb, Pd, Rb, S, Sb, Sc, Se, Sn, Sr, Te, Th, Ti, U, V, W, Zn, and Zr. This technique can also be used in the field to allow for geochemical traverses of either soil or rock material.

To ensure the XRF is operating correctly the instrument is routinely calibrated and a range of standards are analysed before and during sampling exploration materials. Sample standards were purchased from the Canadian National Laboratory, and are created via ICP-AES and AAS finish. A SiO_2 blank was provided by the XRF manufacturer to limit contamination in the XRF sample window. The XRF data is currently used for internal company reconnaissance checks.

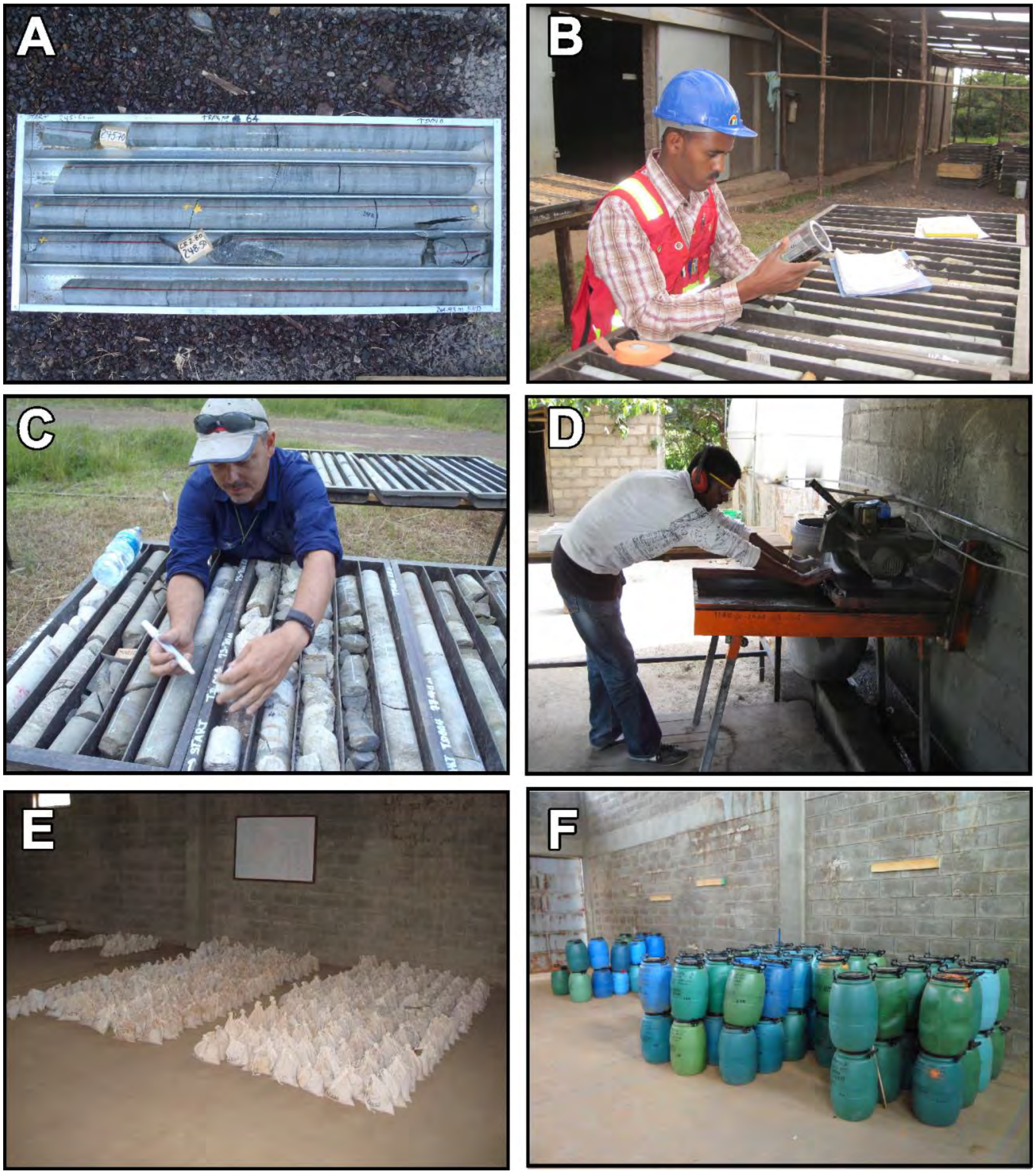
Drillcore

Geotechnical logging was performed on the core samples at the drill site to avoid unnecessary breaks that might affect the RQD of the core. Core orientation marks were taken every 6 m using a spear and the core was oriented and marked. At the end of every shift the core was transported by pick-up truck to the core logging facilities at the Guna logging and storage facility in Shire. The core logging process involved an initial cleaning of the core and checking of the core tags, and mark-ups on the individual boxes. Any discrepancies noted were addressed with the driller who was responsible for the core. At the camp all core was photographed (Figure 11-1A) prior to being logged by the geologist with an emphasis on structure, lithology, alteration and mineralization (Figure 11-1B). Completed drillcore logs are always scrutinized by a senior geologist to check consistency in logging.

Sample intervals were marked-up by the geologist logging the core and were based on sample intervals of either 0.7 m for mineralized core or 1 m for unmineralized core (Figure 11-1C). Sample intervals did not cross geological contacts. The physical sampling of the core was done with a diamond blade core cutting saw. The core was sawn in half along the line marked by the geologist to ensure a representative sample is taken (Figure 11-1D).

Cloth sample bags were pre-numbered by a technician and the split core was moved to the sampling area for final preparation. Individual samples were then bagged and the ticket book filled out with tickets added to the sample and to the core box. The “side” of the split core was chosen systematically by reference to the orientation line and foliation in order to prevent any bias in sample selection. The samples from each drillhole were laid out in succession within the sampling area and loosely tied before being taken to the specific gravity station, where the specific gravity is determined and recorded by emersion of the sample in water. The samples are patted dry and then rebagged, whereupon they are securely tied using the draw string and a final weight of the sample, and bag, is recorded for export purposes. All bags were sealed at the end of each shift (Figure 11-1E). All sample preparation, and in particular the selection and insertion of QC samples, was undertaken under the direct supervision of the logging/project geologist. The remaining core was retained in the core trays and taken to the storage area. The individual sealed sample bags were placed in 60 L polypropylene barrels and sealed with tape preparation for shipment to the preparation laboratories (Figure 11-1F). All samples are inspected by the Ministry of Mines (MoM) in Addis Ababa to obtain an export permit. This requires the local Tigray representative to be present while the barrels are opened and bags removed. The MoM official opens each sample to visually inspect the contents and weighs each sample to ensure no extra material is being exported. Once a export permit has been obtained the Tigray representative seals the samples and barrels again, and takes them directly to the shipping company. The next time the samples are opened it is at the sample preparation laboratory in Ankara.

Figure 11-1: Core Handling & Sampling Photographs



Note: See text for a description of the sampling procedures illustrated. Source: Archibald et al., 2014

Certified reference materials are stored in the main office building in clearly marked plastic bags (Figure 11-2A). The clear plastic bags hold individual 100 g standards in clear plastic bags with removable identification labels to minimise the insertion of an incorrect standard (Figure 11-2B).

Certified blanks are stored in 100 g sealed plastic bags in the office. Coarse reject pulverized rock samples and the remainder of the base pulps (the remainder of the initial 1 kg of pulverized sample) are stored at the initial preparation facility in Turkey (Acme Turkey), and analytical pulps are stored at Acme Vancouver.

Duplicate soil sample paper bags are sorted and placed in cloth calico bags before being catalogued and stored in the core shed at Guna (Figure 11-2C). Similarly, diamond drillcore is stored inside in one of two sheds at Guna (Figure 11-2D). The core shed is clean and well organized.

In the author’s opinion, industry best practices have been employed during the sampling of the drill core, the storage of the reference materials and storage of returned samples.

Figure 11-2: Security & Chain of Custody Related Photographs

Note: See text for a description of the security of samples, standards, and blanks.
Source: Archibald et al., 2014

11.2 Laboratory Procedures

All drill core samples were collected and provided to independent laboratories by Tigray. This report presents an independent review and validation of the procedures and data for results that have been analysed to the date of July 16th, 2013.

As discussed in section 10.1 of this report, diamond drilling programs on the property can be subdivided into two distinct phases. Initial drilling was undertaken between 2009 and 2010 by Jintai Drilling Limited and consisted of 12 diamond drillholes on the Terakimti concession and 5 diamond drillholes on the Nefasit concession at Adi Angoda for a total depth of 2,085.75 m (Phase 1). The later program of drilling (Phase 2) was completed by Tigray and consisted of 84 holes for a total depth of 17,765.43 m at Terakimti (68 holes), VTEM09 (1 hole), Mayshehagne (10 holes), and Adi Angoda (5 holes) (see table 10.1).

Initial sampling of 17 Phase 1 boreholes was limited to high priority zones where mineralization and/or alteration were recorded during the core logging procedure. The resultant samples were submitted to ALS Laboratories in Vancouver for analysis. Later in the exploration program, retrospective sampling was conducted on lower priority sections of these drillholes that material was processed at ACME Laboratories Ankara. Consequently, the situation exists where sample suites from 10 of the Phase 1 drillholes were sampled, prepared and analysed in different laboratories at different times (68% of Phase 1 samples at ALS and 32% at ACME). In contrast, all samples taken from the Phase 2 boreholes drilled by Tigray were prepared at ACME Laboratories Ankara and analysed at ACME Analytical Laboratories (Vancouver) Ltd.

The ALS Laboratory Group in Vancouver carries current ISO 9001:2008 and ISO/IEC 17025:2005 accreditation. ACEM Analytik Ankara has IS0 9001:2008 Quality Management System accreditation. ACME Analytical Laboratories (Vancouver) Ltd. carries current ISO 9001:2008 accreditation for the provision of assays and geochemical analyses.

The sample preparation and assay methodologies used at each of the laboratories, employed by Tigray, are largely comparable. A summary of the preparation and analytical procedures at ACME and ALS is detailed in Table 11.1.

Table 11.1: Preparation & Assay Methods used during Analysis of Exploration Samples at ACME & Ultratrace

Sample Type	Laboratory	Preparation	Analytical Technique	Analytes	Detection limit
Soil and Stream	Ultratrace	Samples pulverised	Aqua Regia digest and ICP-MS analysis	Au	1 ppb
				Ag	0.05 ppm
Drilling, (RC and Diamond), Rock chip, trenching and channel sample	Acme	Samples crushed 1 kg to 80% passing 10 mesh, split 1000g and pulverized to 85% passing 200 mesh	Hot Aqua Regia digestion for base-metal sulphide and precious-metal ores. ICP-ES analysis.	Cu, Pb, Zn, Ag plus other multi-elements; Al, As, Bi, Ca, Cd, Co, Cr, Fe, Hg, k, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sr, W.	Ag 2 ppm Cu 0.001 % Pb 0.01 % Zn 0.01 %
			Fire assay	Au	0.005 ppm
			Gravimetric fire assay if Au > 10 ppm	Au	> 10 ppm
			Gravimetric fire assay if Ag > 300 ppm	Ag	> 300 ppm
			Volumetric titration if Cu > 20 %	Cu	> 20 %
			Titration if Pb > 10 %	Pb	> 10 %
			Titration if Zn > 40 %	Zn	> 40 %

Source: Tigray 2013

In the author's opinion, all drill core samples were prepared and assayed using appropriate techniques at the laboratories.

11.3 Sample Security & Chain of Custody Procedures

The chain of custody procedure from the extraction of the core from the core barrel, through logging and sampling up to the point of dispatch to the laboratory is described in Section 11.2. Through all of these stages the responsibility for security lies with Tigray and their on-site personnel. Samples are transported from Shire to the Ministry of Mines in Addis Ababa, then onwards to Bole International Airport by an Ethiopian haulage company. After this the samples are in the care of airline cargo companies and international courier companies when shipped to the overseas laboratories. The security of the sample during transit cannot be guaranteed as tamper proof seals are not used on the sample bags. Upon receipt at the laboratory, the chain of custody passes to the assayer. Following assay, the remaining material is stored under secure conditions at the laboratory facilities. Approximately 1 kg of pulp is created from each drillcore sample, with 100 g sent to Acme's Vancouver laboratory for analysis and the remaining 900 g stored in Turkey for potential follow-up work. The chain of custody reverts to Tigray if the samples leave the assay laboratory storage facilities. This is the case with remaining pulp material following analyses, which is transferred back to Tigray in Vancouver, who then sent to a secured warehouse location for storage.

In general, industry best practices with respect to chain of custody procedures are followed on site. However, the weakest point in any chain of custody is during transport. The absence of tamper proof fastenings on the samples has been noted and their introduction would greatly improve the chain of custody between the site and laboratory. However, the physical inspection and weighing of all exported material by the Ministry of Mines in Addis Ababa adds complexity to this solution.

11.4 Drill Program QA/QC

Diamond drilling at Harvest was initially supervised by Chinese geologists before the Tigray geologists took over in 2011. The geologists directed and managed the preparation, logging and sampling of core. With several geologists logging the drillholes variation in lithologies invariably occurs. In May 2012, Paul Cranney, an independent geological consultant, visited the property and spent 19 days relogging all core drilled on the property, with the exception of 10HTD004. This relogging was necessary to rationalise the variation inherent with multiple geologists logging core. By performing this study it greatly aided correlations between sections lithological, but also geochemically through assaying.

During sampling, quality control standards and blanks were inserted to confidentially monitor laboratory performance. The progressive introduction and refinement of QA/QC procedures at Harvest included the implementation of field, reject and pulp duplicates, as well as specific programs of re-analysis and umpire laboratory assaying; all consistent with industry best practice.

As described in section 10, two distinct drilling programs have been undertaken at Harvest. Phase 1 was completed during 2009-2010 and consisted of 17 boreholes. Phase 2 drilling comprised of some 84 boreholes completed between 2011 and 2013. The majority of samples from the Phase 1 boreholes were analysed at ALS Vancouver whereas the subsequent Phase 2 samples were processed at ACME. For this reason, QA/QC procedures and results for each individual phase of drilling are presented in the following sections.

11.4.1 Phase 1 Diamond Drilling QA/QC

Phase 1 drilling includes drillholes 09HTD001 to 005, 09HND001 to 005, and 10HTD001 to 007. Initial sampling of these holes was restricted to zones of mineralization and/or visible alteration and were prepared and analysed by ALS. Subsequently, retrospective sampling was undertaken on lower priority sections of a sub-set of 10 of these holes. These samples were processed by ACME. Quality control standards and blanks were inserted routinely into the sample stream and are described as follows.

11.4.1.1 Phase 1 Certified Reference Materials (Standards)

A variety of CRMs derived from Certified Laboratories in Australia and Canada were used during the initial sampling of the Phase 1 drillholes. Specifically, certified laboratory standards were obtained from CDN Labs and Ore Research and Exploration for incorporation into the sampling sequence. These samples were inserted at a rate of approximately 9% and were analyzed at ALS. A summary of the standards is presented in Table 11.2.

Table 11.2: CRMs Used During Initial Sampling of Phase 1 Drill Holes (ALS Samples)

PHASE 1 - STANDARDS							
CRM ID	**Au ppm**	**Cu %**	**Ag ppm**	**Pb %**	**Zn %**	**Source**	**Times Used**
CDN-BL-6	<0.01	n/a	n/a	n/a	n/a	CDN Labs	8
CDN-GS-1F	1.16	n/a	n/a	n/a	n/a	CDN Labs	3
CDN-GS-2E	1.52	n/a	n/a	n/a	n/a	CDN Labs	3
CDN-HZ-3	0.55	0.61	27.3	0.707	3.16	CDN Labs	2
CDN-ME-11	1.38	2.44	79.3	0.86	0.96	CDN Labs	3
CDN-ME-2	2.1	0.48	14	n/a	1.35	CDN Labs	7
CDN-ME-6	0.27	0.613	101	1.02	0.517	CDN Labs	14
OREAS111	n/a	2.3	<20	0.0375	0.4099	Ore Research & Exploration	5
OREAS97	n/a	6.31	19.6	0.0147	0.0646	Ore Research & Exploration	1

Subsequently, retrospective sampling was undertaken on a sub-set of the drillholes which analysed at ACME. A different suite of standards sourced from Geostats Pty Ltd were used during this period and inserted at a rate of approximately 8%. These standards are summarised in Table 11.3.

Table 11.3: CRMs Used During Initial Sampling of Phase 1 Drill Holes (ACME Samples)

PHASE 1 - STANDARDS							
CRM ID	**Au ppm**[1]	**Cu %**	**Ag ppm**	**Pb %**	**Zn %**	**Source**	**Times Used**
GBM307-1	3	0.0059	n/a	0.0005	0.009	Geostats Pty Ltd	1
GBM998-9	1740	0.0022	101.2	0.0008	0.0027	Geostats Pty Ltd	2
GBM309-1	57	0.1554	6	0.0092	0.5239	Geostats Pty Ltd	2
GBM908-10	446	0.363	3	0.2067	0.1046	Geostats Pty Ltd	3
GBM310-2	688	0.6936	45.5	0.6577	2.068	Geostats Pty Ltd	2
GBM310-3	1160	1.4443	19.4	1.0687	3.0935	Geostats Pty Ltd	3
GBM399-5	3490	2.9424	24.2	2.1173	0.9493	Geostats Pty Ltd	1
GBM309-16	679	5.3098	28.14	1.5041	10.6947	Geostats Pty Ltd	1
GBM908-11	167.5	17.7033	29.78	0.0547	2.3604	Geostats Pty Ltd	1
GBM906-16	1060	10.6807	n/a	0.0239	0.4783	Geostats Pty Ltd	1

[1] The GBM standards are not certified for gold – indicative Neutron Activation Result

It should be noted that the GBM series standards are base metal Certified Reference Materials (CRM) and are not certified for gold. The use of the GBM standards is therefore considered unsuitable as a monitor for gold assay performance and precision.

Pass/Fail thresholds for standard performance is set in accordance with the published certificate as follows:

- any CRM measurement in excess of ± 2 standard deviations from the recommended value was considered a “caution”
- any CRM measurement in excess of ± 3 standard deviations from the recommended value was considered a “fail”

Control charts of standard performance during Phase 1 sampling program were created and reviewed. A selection of these control charts for various standards is presented in Figures 11-3 to 11-5.

Figure 11-3: Control Charts for Gold Performance of Selected Standards Analysed at ALS

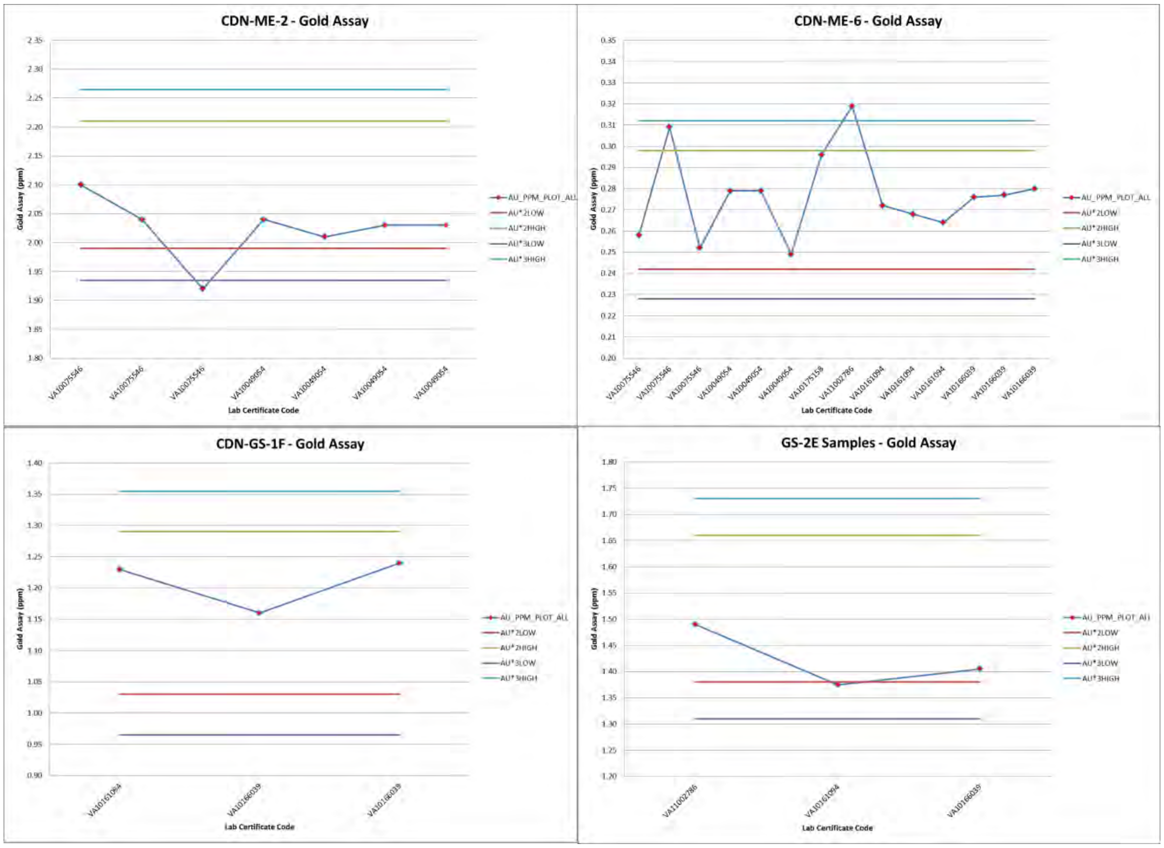
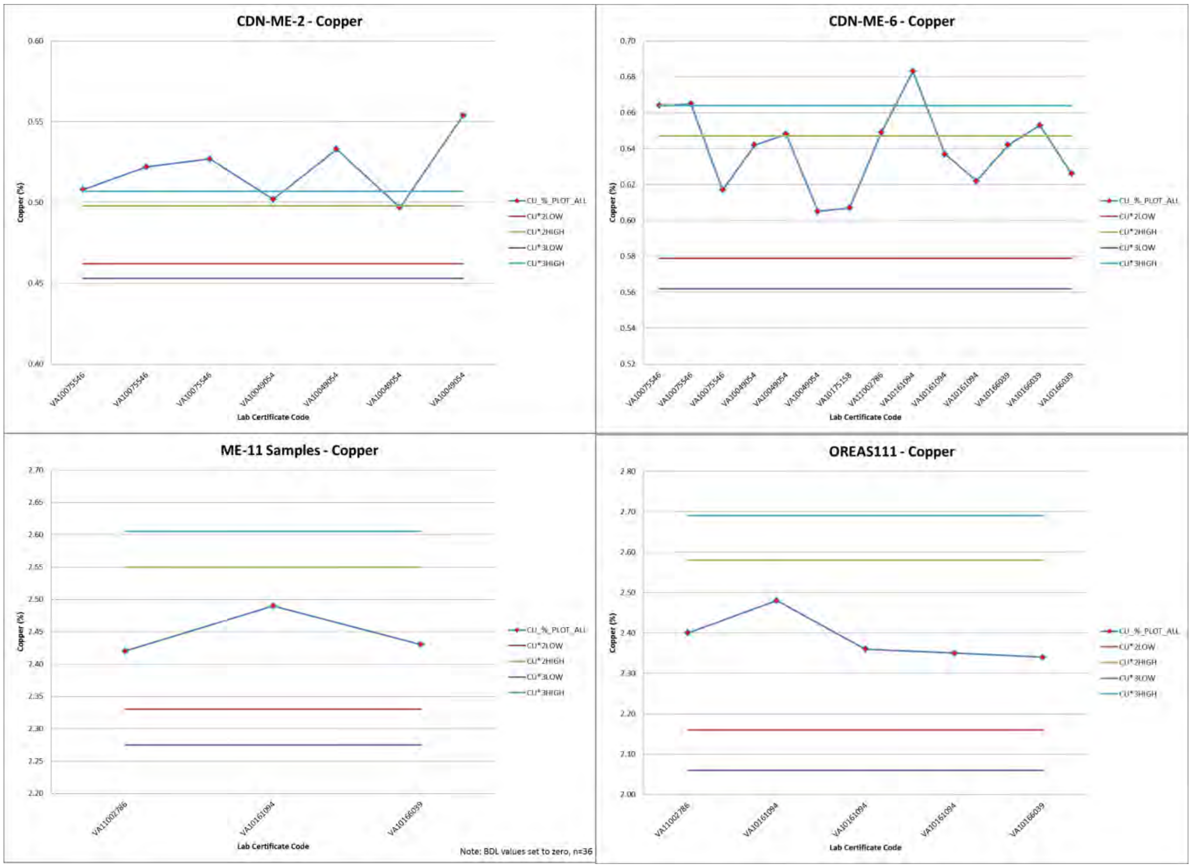
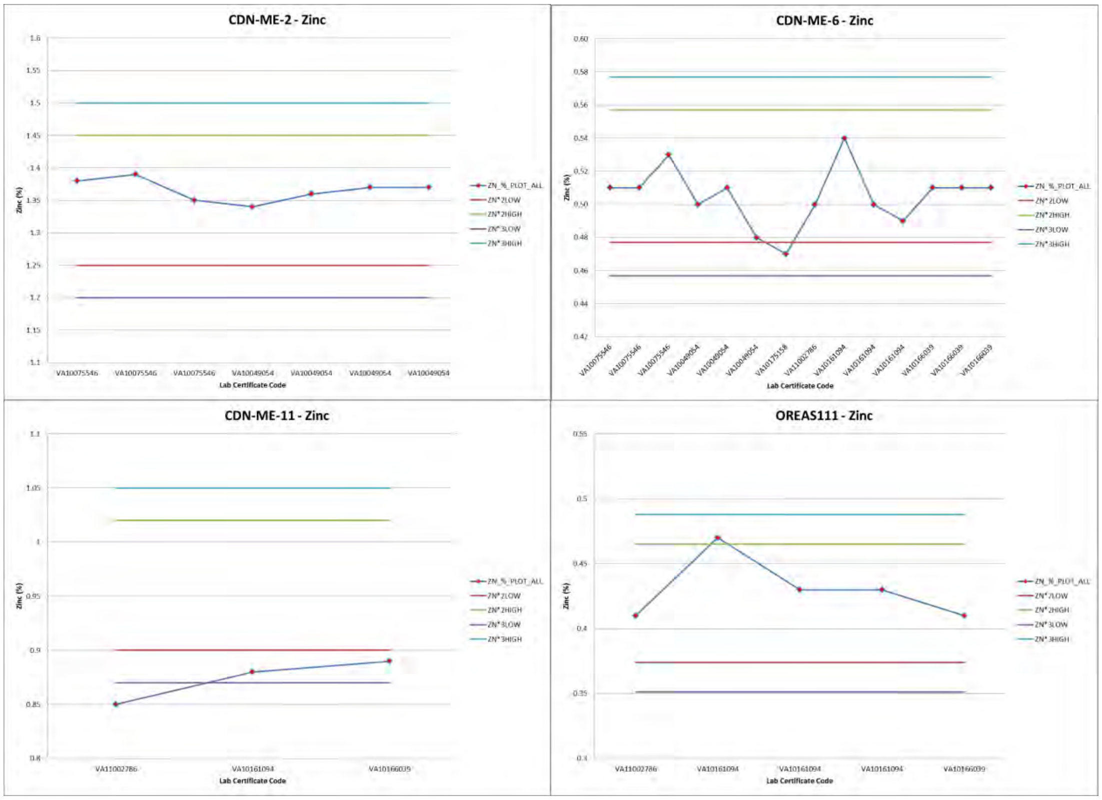


Figure 11-3: Control Charts for Copper Performance of Selected Standards Analysed at ALS



Note: BDL values set to zero, n=36

Figure 11-5: Control Charts for Zinc Performance of Selected Standards Analysed at ALS



The performance of specific gold standards (e.g. CDN-GS-1F) was within acceptable limits but the precision of more general multi-element standards for gold was more variable. Similarly, the performance of different standards for copper was also variable. CRMs such as OREAS111 and CDN-ME-11 were within acceptable thresholds whereas CDN-ME-4 was more variable. In contrast, CDN-ME-2 returned copper results which were higher than recommended values. The majority of the most commonly used standards were within acceptable limits for zinc. However, CDN-ME-11 returned results which consistently below recommended guidelines. Lead results for the majority of standards were within acceptable limits.

The variable performance recorded for standards used at ALS prompted the introduction of a new suite of standards (GBM series). These were used during the retrospective sampling of lower priority sections of the Phase 1 drilling which were analysed at ACME. Although a large range of standards were used, individual standards were only used on small number of occasions (see Table 11-3). As such, control charts are not presented here. Overall, the performance of the GMB standards was good for the base metals and silver. Issues were noted for GBM-310-3 which recorded a number of fails for silver, copper, lead and zinc in 2 samples. Elsewhere only one other fail was recorded for lead in GBM-309-1.

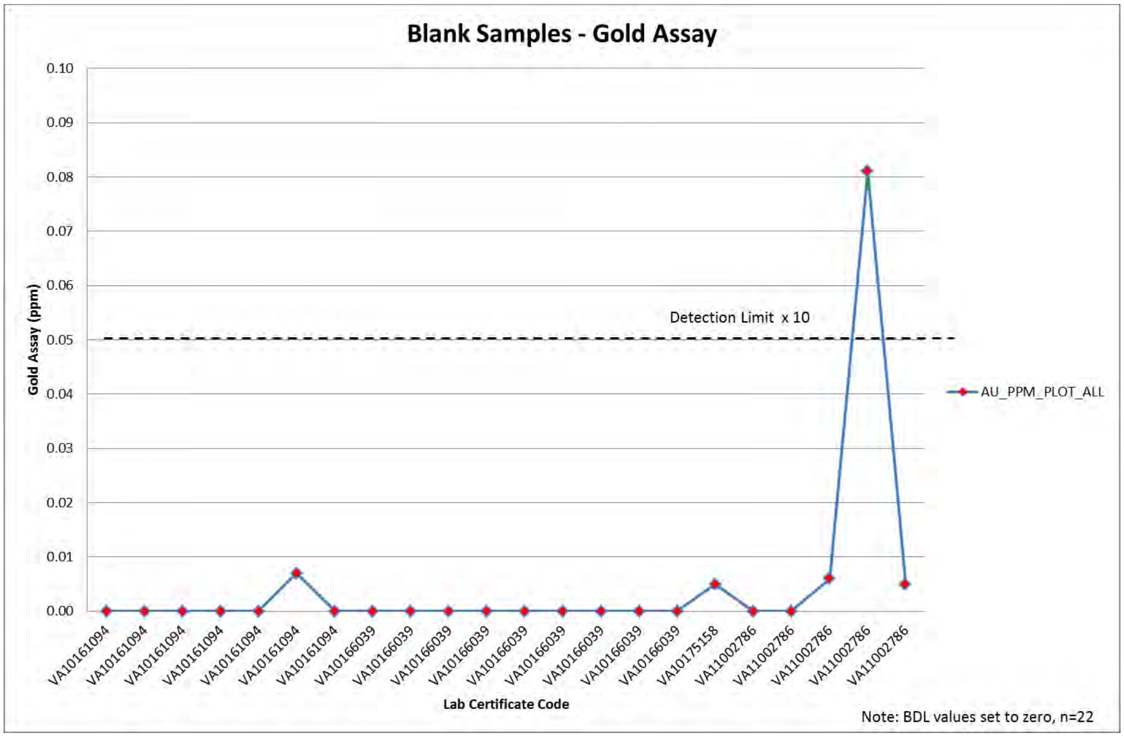
As discussed above, the GBM series standards are specifically designed for base metals and are not certified for gold. This is in contrast to the CDN Labs multi-element standards used in the initial sampling of the Phase 1 drillholes; which are carrying an additional certification for gold by fire assay. Therefore, the retrospective sampling of the Phase 1 drillholes are essentially uncontrolled for gold. This is not considered significant as the majority of samples were gold poor with only 2 samples returning values in excess of 0.5 ppm Au.

11.4.1.2 Phase 1 Blanks

Unmineralized basalt was used as a blank control sample during sampling of the Phase 1 drilling. In addition, another blank sample (DD-Blank) was also used during the initial sampling. This blank was a barren gravel collected from a Vancouver gravel pit. Together, these were inserted at a rate of approximately 6% for samples analysed at ALS. Unmineralized basalt was used consistently during the retrospective sampling of low priority sections of these Phase 1 drillholes analysed at ACME. These were inserted at a rate of approximately 6%.

Control charts for all of the metals of interest (Au, Ag, Cu, Pb and Zn) were created and reviewed. With the exception of a single gold assay in drillhole 10HTD001 analysed at ALS (Fig. 11-6) batch VA11002786) all of the blanks from Phase 1 drilling were within acceptable limits. For this reason, no systematic contamination is suspected.

Figure 11-6: Control Chart for Gold Assays of Unmineralized Basalt Blank Samples Assayed at ALS



11.4.1.3 Phase 1 Check Assays

During 2013, Tigray sent a representative selection of 274 pulp duplicate samples for check assaying of gold at the ALS Chemex laboratory in Vancouver. The sample batches included gold standards, blanks and duplicates.

Fladgate compared the ALS Chemex results with the original results obtained from ACME. The results of the comparison show that there is < 1% difference in the mean gold grade of the two datasets. Fladgate used a reduction-to-major-axis (RMA) regression to fit the data. The bias on the slope of the regression line is 2%.

Fladgate concludes that the gold assays from the Phase 1 drilling campaign are suitably accurate to support mineral resource estimation.

11.4.2 Phase 2 Diamond Drilling QA/QC

Phase 2 drilling includes all drillholes completed at Harvest between 2011 and 2013 and specifically boreholes HD001 to 10, ND001 to 5, TD001 to 68 and TVD001 (84 holes). All samples taken from these drillholes were prepared at ACME Ankara and subsequently analysed at ACME Vancouver. Quality control standards and blanks were inserted routinely into the sample stream. Field, reject and pulp duplicates were also introduced during this drilling campaign as part of efforts to improve QA/QC procedures. The various QC samples and results are described in the following sections.

11.4.2.1 Phase 2 Certified Reference Materials (Standards)

A variety of CRMs derived from Certified Laboratories in Australia and Canada were used during the initial sampling of the Phase 2 drillholes. Specifically, certified laboratory standards were obtained from CDN Labs and Ore Research & Exploration and Geostats Pty Ltd. for incorporation into the sampling sequence. These samples were inserted at a rate of approximately 6% and were analyzed at ACME. A summary of the standards is presented in Table 11.4.

Table 11.4: CRMs Used During Initial Sampling of Phase 1 Drill Holes (ACME Samples)

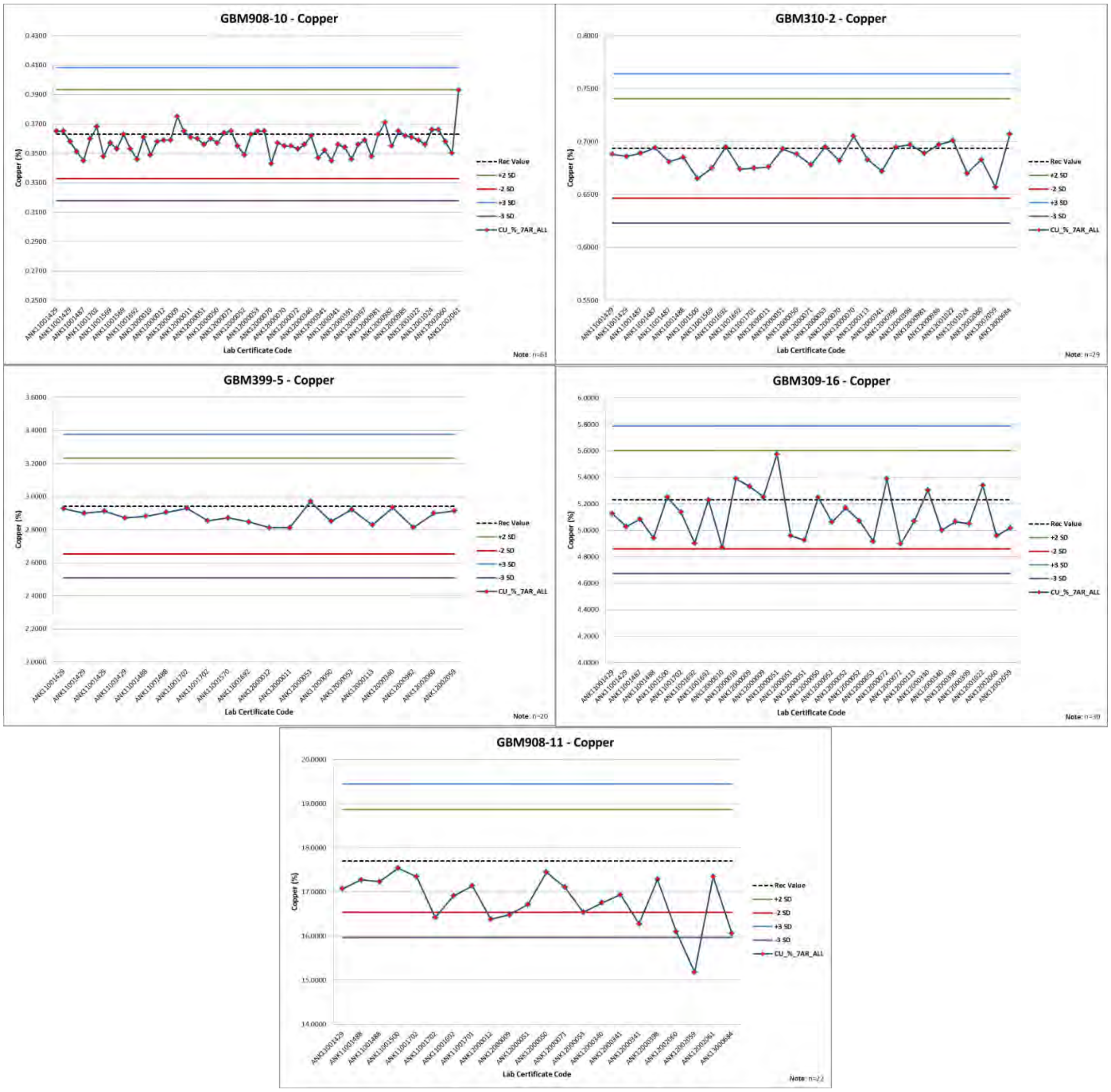
PHASE 2 - STANDARDS							
CRM ID	**Au ppm**	**Cu %**	**Ag ppm**	**Pb %**	**Zn %**	**Source**	**Times Used**
GBM307-18*	0.003	0.0059	n/a	0.0005	0.009	Geostats Pty Ltd	62
GBM998-9*	1.740	0.0022	101.2	0.0008	0.0027	Geostats Pty Ltd	41
GBM309-1*	0.057	0.1554	6	0.0092	0.5239	Geostats Pty Ltd	67
GBM908-10*	0.446	0.363	3	0.2067	0.1046	Geostats Pty Ltd	61
GBM310-2*	0.688	0.6936	45.5	0.6577	2.068	Geostats Pty Ltd	29
GBM310-3*	1.160	1.4443	19.4	1.0687	3.0935	Geostats Pty Ltd	23
GBM399-5*	3.490	2.9424	24.2	2.1173	0.9493	Geostats Pty Ltd	20
GBM309-16*	0.679	5.3098	28.14	1.5041	10.6947	Geostats Pty Ltd	30
GBM908-11*	0.168	17.7033	29.78	0.0547	2.3604	Geostats Pty Ltd	22
GBM906-16*	1.060	10.6807	19.2	0.0239	0.4783	Geostats Pty Ltd	12
GLG995-4	8.480	n/a	n/a	n/a	n/a	Geostats Pty Ltd	4
GLG900-7	3.189	n/a	n/a	n/a	n/a	Geostats Pty Ltd	4
GLG995-1	2.638	n/a	n/a	n/a	n/a	Geostats Pty Ltd	4
GLG901-7	3.580	n/a	n/a	n/a	n/a	Geostats Pty Ltd	3
GLG398-2	0.420	n/a	n/a	n/a	n/a	Geostats Pty Ltd	3
GLG302-10	0.165	n/a	n/a	n/a	n/a	Geostats Pty Ltd	3
GLG304-1	0.154	n/a	n/a	n/a	n/a	Geostats Pty Ltd	13
GLG307-4	0.052	n/a	n/a	n/a	n/a	Geostats Pty Ltd	10
CDN-FCM-7	0.896	0.526	64.7	0.629	3.85	CDN Labs	1
CDN-GS-1H	0.972	n/a	n/a	n/a	n/a	CDN Labs	10
CDN-GS-3H	3.040	n/a	n/a	n/a	n/a	CDN Labs	9
CDN-ME-6	0.270	0.613	101	1.02	0.517	CDN Labs	2
CDN-ME-16	1.480	0.671	30.8	0.879	0.807	CDN Labs	1
CDN-ME1101	0.564	0.663	68.2	0.459	1.56	CDN Labs	16
CDN-ME-1204	0.975	0.519	58	0.443	2.36	CDN Labs	1
CDN-ME-1205	2.200	0.218	25.6	0.13	0.369	CDN Labs	2
CDN-ME-1206	2.610	0.79	274	0.801	2.38	CDN Labs	15
OREAS-42P	n/a	0.0389	n/a	0.015	0.0615	OREAS	3
OREAS-44P	n/a	0.0423	n/a	0.0217	0.0625	OREAS	6

[*] The GBM series standards are not certified for gold – values are indicative Neutron Activation results

With respect to drill core assessment, Tigray has utilized a well-designed suite of standard samples, in terms of precious and base metal tenor in addition to representative sample geology.

Monitoring of CRM performance was undertaken by Tigray personnel throughout the drilling and lab work program. A selection of control charts for various elements are presented in Figures 11-7 to 11-10.

Figure 11-7: Control Charts for Copper Performance of Selected Standards Analysed at ACME



GBM908-10 - Copper

GBM310-2 - Copper

GBM399-5 - Copper

GBM309-16 - Copper

GBM908-11 - Copper

Figure 11-8: Control Charts for Silver Performance of Selected Standards Analysed at ACME

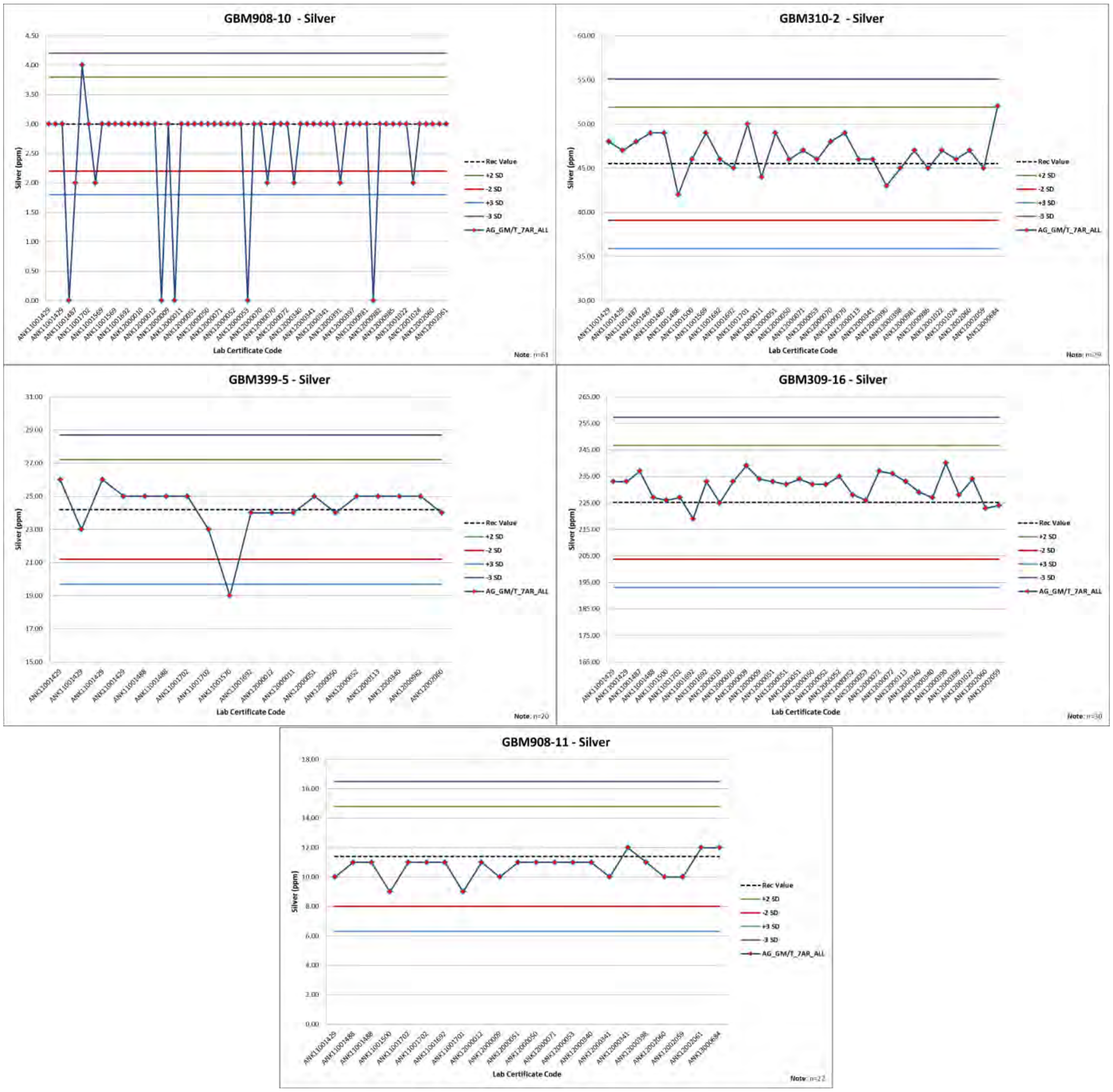


Figure 11-9: Control Charts for Lead Performance of Selected Standards Analysed at ACME

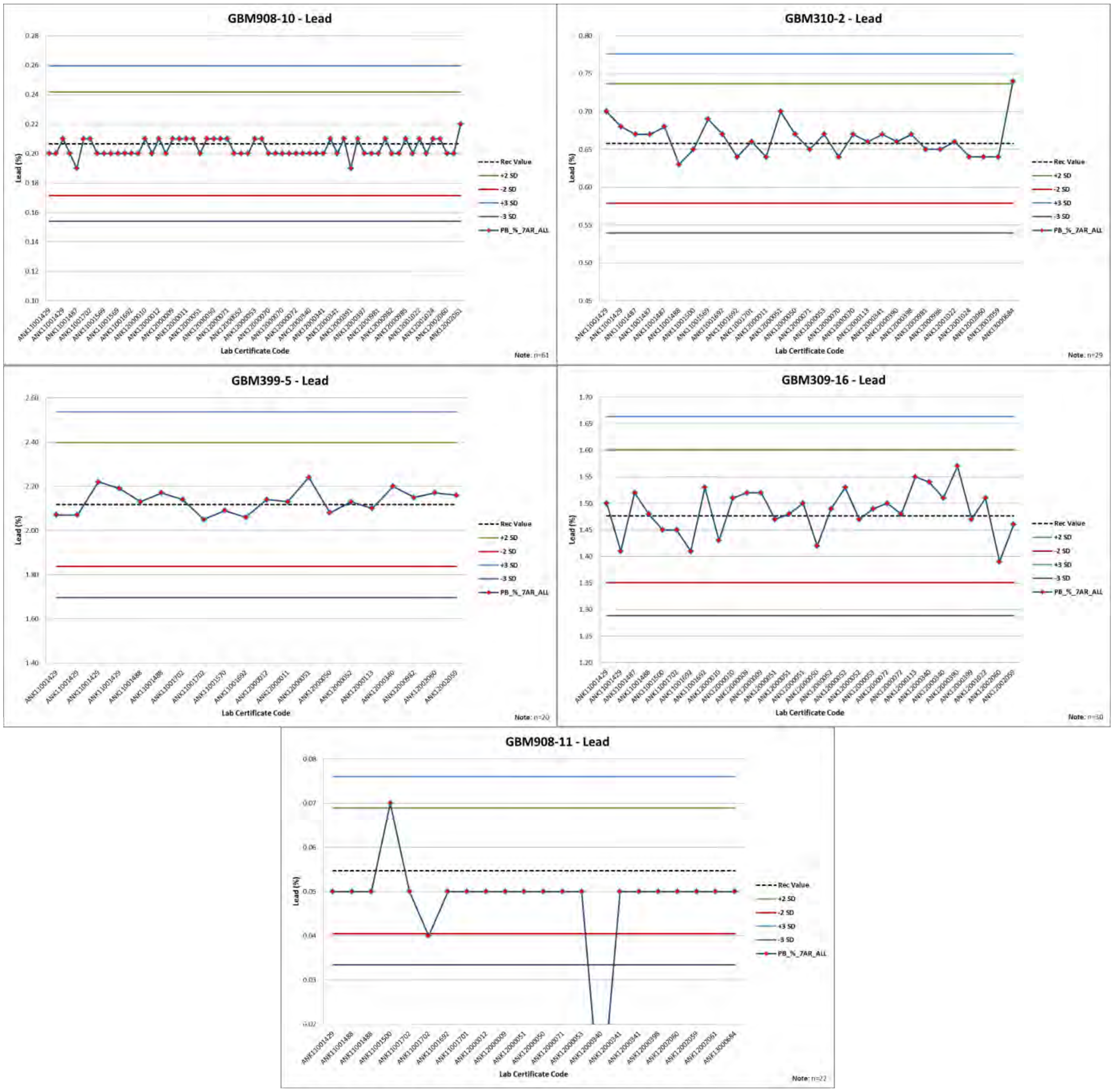
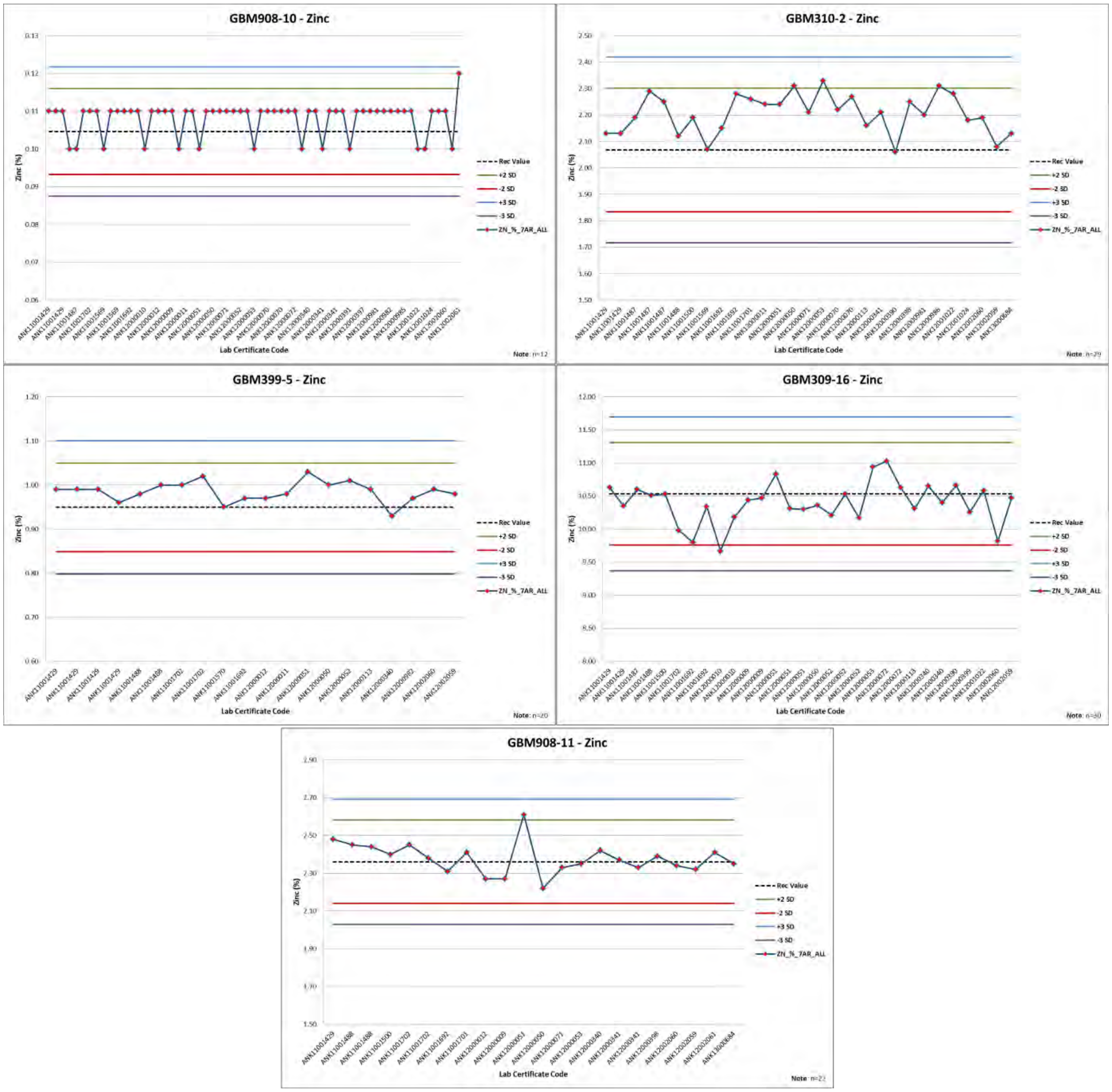


Figure 11-10: Control Charts for Zinc Performance of Selected Standards Analysed at ACME



Pass/Fail thresholds for standard performance is set in accordance with the published certificate as follows:

- any CRM measurement in excess of ± 2 standard deviations from the recommended value was considered a "caution"
- any CRM measurement in excess of ± 3 standard deviations from the recommended value was considered a "fail"

In general, the overall performance of the standards is within acceptable limits for base metals (Cu, Pb, Zn) and silver. On an individual basis, there are samples which register caution or fail warnings for various elements. When these events occur, Tigray undertake remedial action through re-analysis of samples surrounding failing standard, particularly when located within or adjacent to a mineralized section within a drillhole. To date, 678 re-assays for gold and 264 re-analyses for base metals have been undertaken as part of the corrective action process.

As mentioned in section 11.4.1.1, the GBM series standards are uncertified for gold and are unsuitable for monitoring precision with respect to gold fire assay. During the Phase 1 drilling program, multi-element CRMs were used which included certified values for gold using fire assay techniques (e.g., CDN-ME-11; see Table 11-2). During the initial portion of Phase 2 drilling it was incorrectly assumed that the GBM series standards were also certified for gold. As such, samples originally assayed from December 2011 to February 2012 are essentially uncontrolled for gold. Once this oversight was identified, Tigray immediately introduced gold CRMs into their standard stream. They undertook a detailed review of the gold value results from the GBM series standards, reviewed lab QAQC, created performance gate thresholds, and reanalysed any samples that were interpreted as providing a questionable result. Since February 2012, dedicated gold standards have been included in addition to base metal standards in areas of suspected mineralization/alteration which is considered to be potentially gold bearing. Control charts for these standards are shown on Figures 11-11 and 11-12.

Figure 11-11: Control Chart for Gold Performance of CDN-GS-1H Assayed at ACME

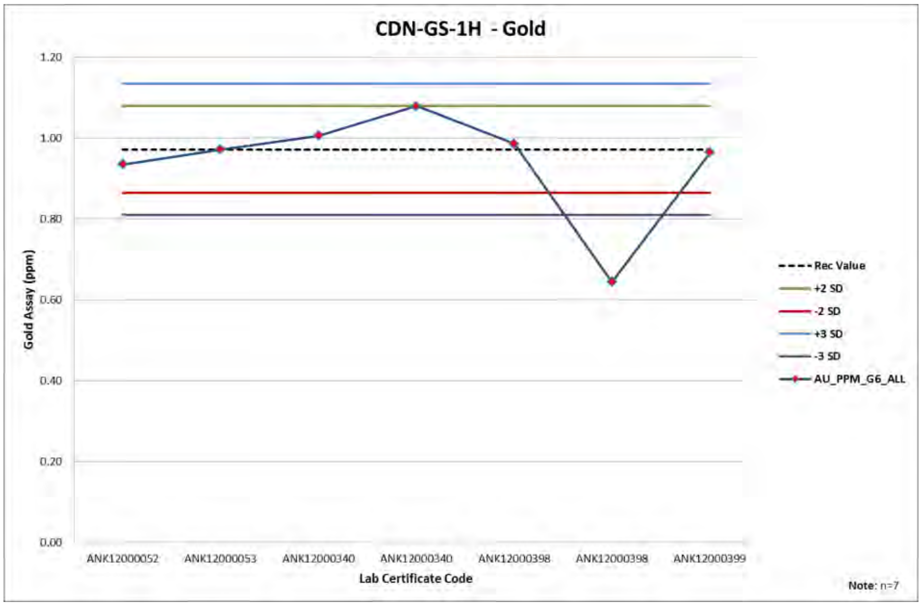


Figure 11-12: Control Chart for Gold Performance of CDN-GS-3H Assayed at ACME

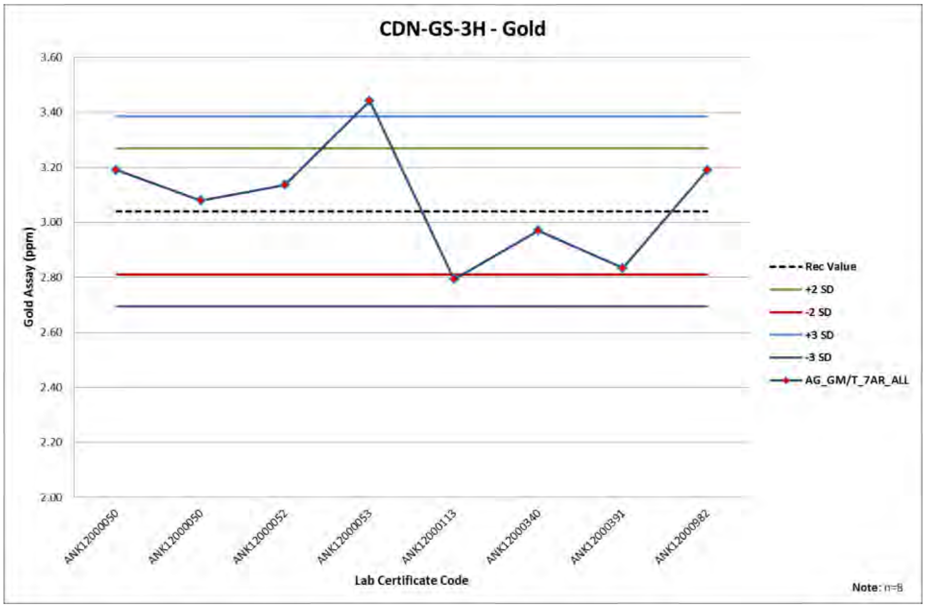


Figure 11-13: Control Chart for Gold Performance of GBM998-9 Assayed at ACME

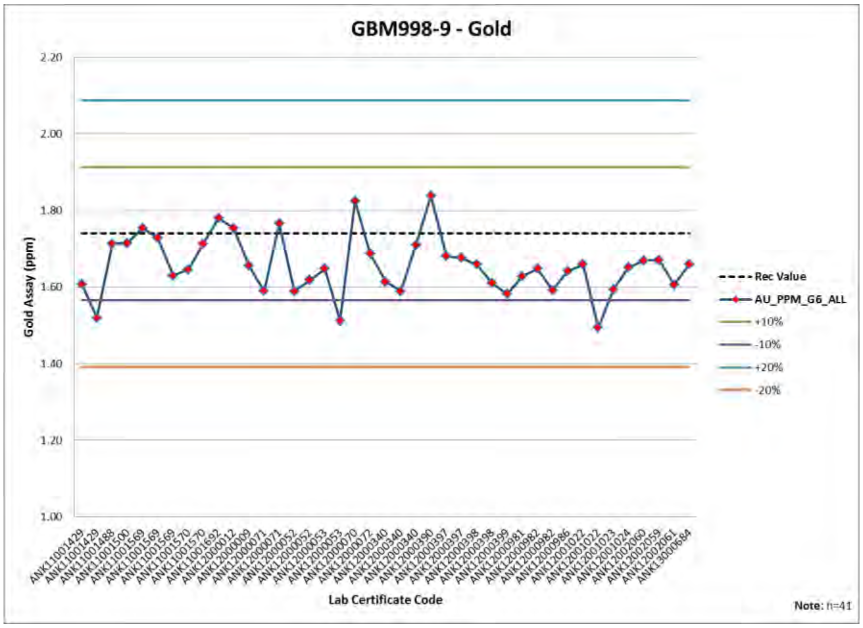
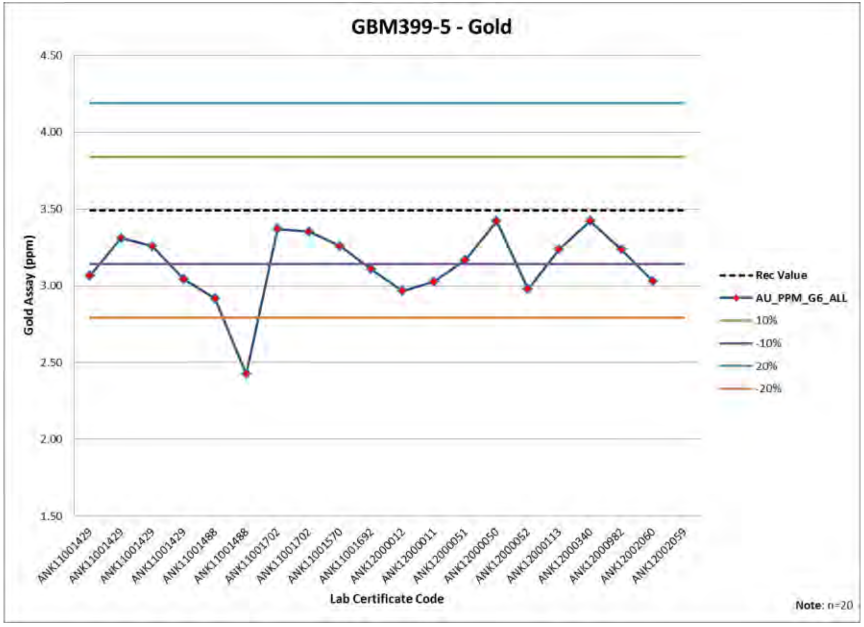


Figure 11-14: Control Chart for Gold Performance of GBM399-5 Assayed at ACME



As can be seen, the overall performance of both CDN-GS-1H and CDN-GS-3H is generally within acceptable thresholds although an individual sample fail is evident for both standards. Although the GBM series standards are not certified for gold, they accompanying documentation provides an indicative value for gold, albeit determined through Instrumental Neutron Activation Analysis as opposed to fire assay. Control charts for gold from GBM998-9 and GBM399-5 were plotted to review the behaviour of the assays relative to the indicative result (Figures 11-13 and 14). In both cases, the fire assay values are, on average, lower than but a similar order to the indicative value. Although this suggests that the fire assay results for the samples are likely to be broadly correct, the gold results up to February 2012 must be treated with caution unless a re-assay has been completed.

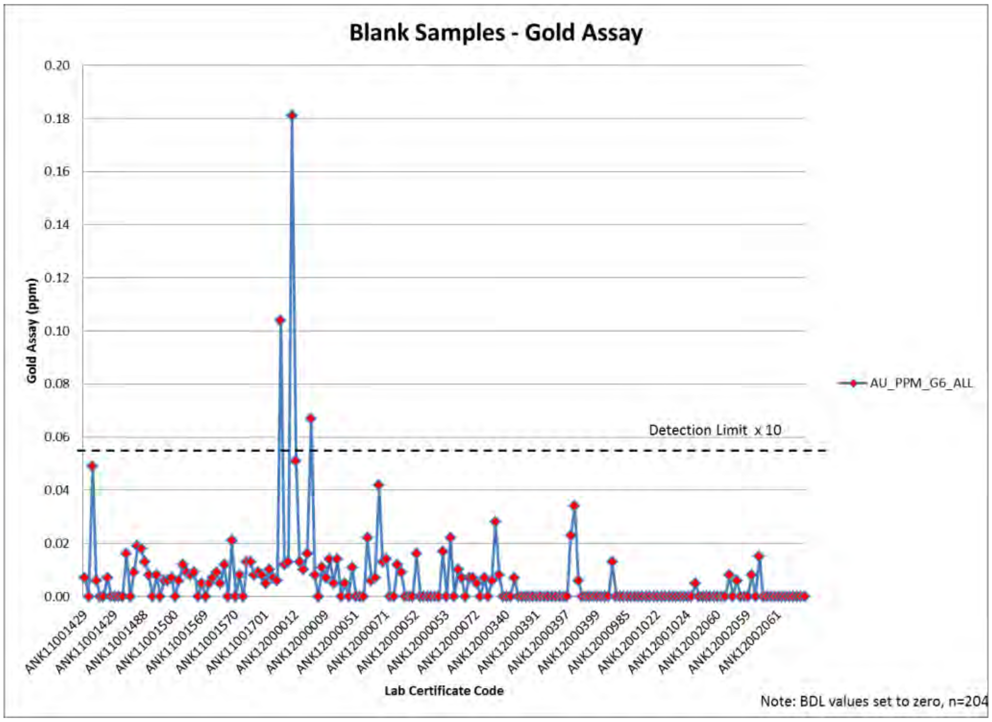
Tigray have been meticulous in their monitoring of CRM performance. Tigray personnel noted that several CRMs returned consistently poor results for certain elements. Examples include GBM906-16 which returned consistently higher values than expected for both silver and copper and GBM309-1 which yielded lower than expected values for silver. The poor performance of these standards was not supported by adjacent CRMs which were in general within acceptable limits. Consequently, it was concluded that the standards in question were not a reliable test of the analytical technique and were replaced with alternative CRMs of similar grade. Another issue was noted with respect to multi-element standard OREAS-42P which was supplied to Tigray by a third party and used in three drillholes. This standard returned low order results for all elements and on investigation it was discovered that blank material had been supplied in error. These examples demonstrate that Tigray have been proactive in their monitoring of CRM performance and prompt in implementing corrective action once an issue has been identified.

11.4.2.2 Phase 2 Blanks

As per the Phase 1 drilling, unmineralized basalt was used as a blank control sample during sampling of the subsequent drilling.

Control charts for all of the metals of interest were created (Au, Cu, Pb and Zn) were created and reviewed. These are presented in Figures 11-15 to 11-18.

Figure 11-15: Control Chart for Gold Assays of Unmineralized Basalt Blank Samples used in Phase 2 Drilling and Assayed at ACME



Blank performance for gold is generally good. A series of fails were recorded across three consecutive batches ANK12000010, ANK12000012 and ANK12000009 (all from end January 2012) which may suggest minor contamination or perhaps an issue with the blank material. Otherwise, there is no evidence to suggest systematic contamination with respect to gold.

The pattern for copper is unusual. There are scattered fails up to batch ANK12000981 but thereafter no fails are recorded (September 2012 onwards). It is considered unlikely that this reflects systematic contamination at the laboratory as other base metals such as lead and zinc perform within acceptable limits. The pattern may reflect a low order copper content within the blank material itself. The improved performance from late 2012 possibly reflects a replenishment of the blank supply with later samples being barren with respect to copper.

Figure 11-16: Control Chart for Copper of Unmineralized Basalt Blank Samples used in Phase 2 Drilling and Assayed at ACME

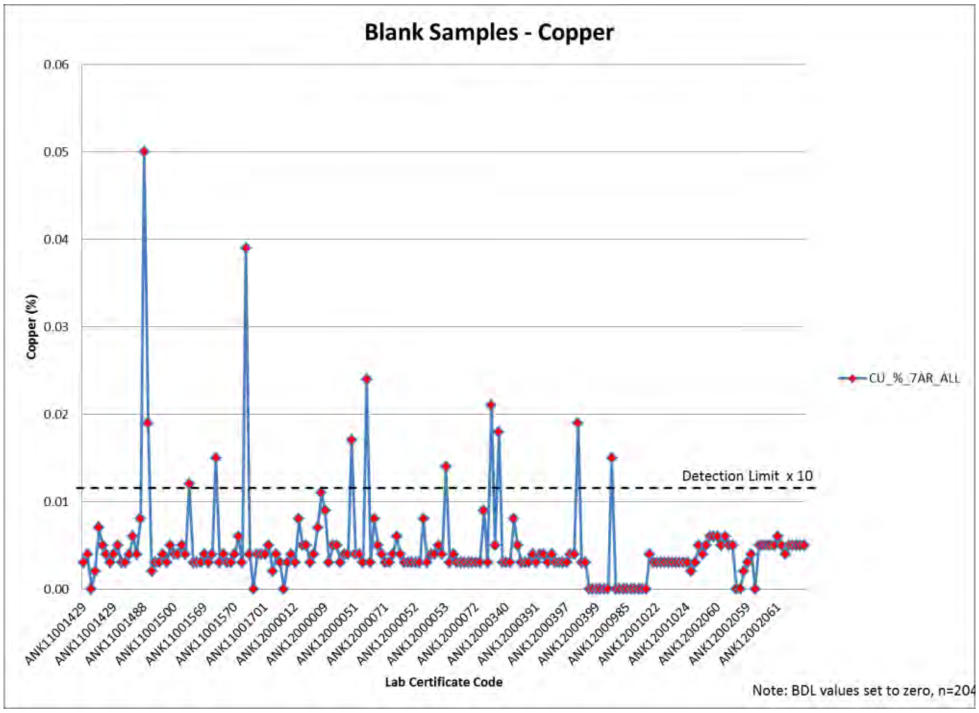


Figure 11-17: Control Chart for Lead of Unmineralized Basalt Blank Samples used in Phase 2 Drilling and Assayed at ACME

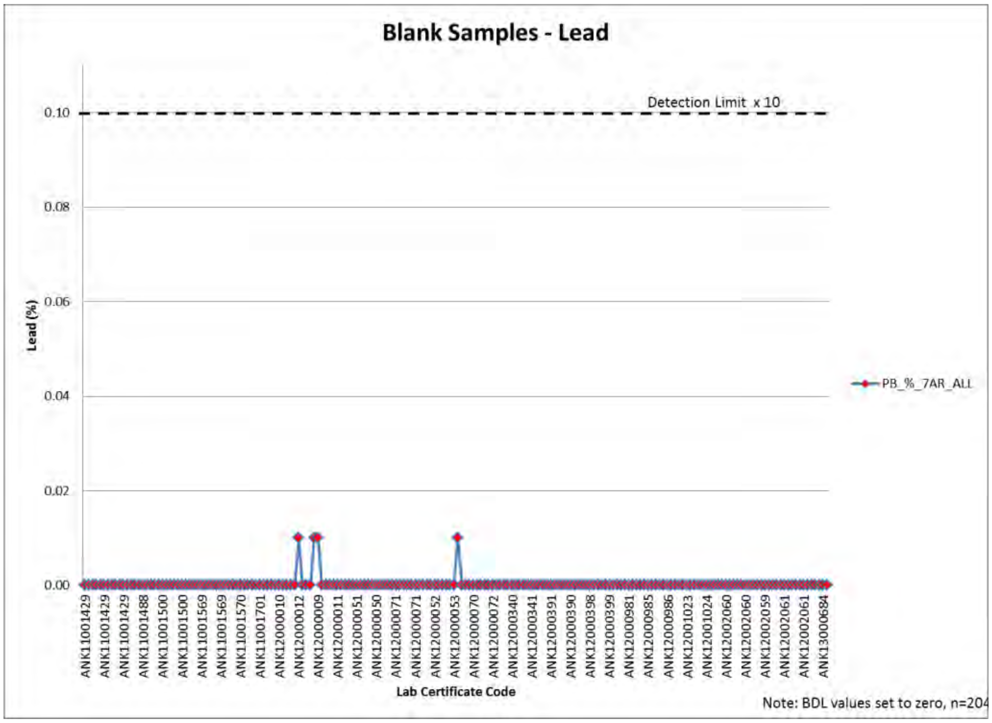
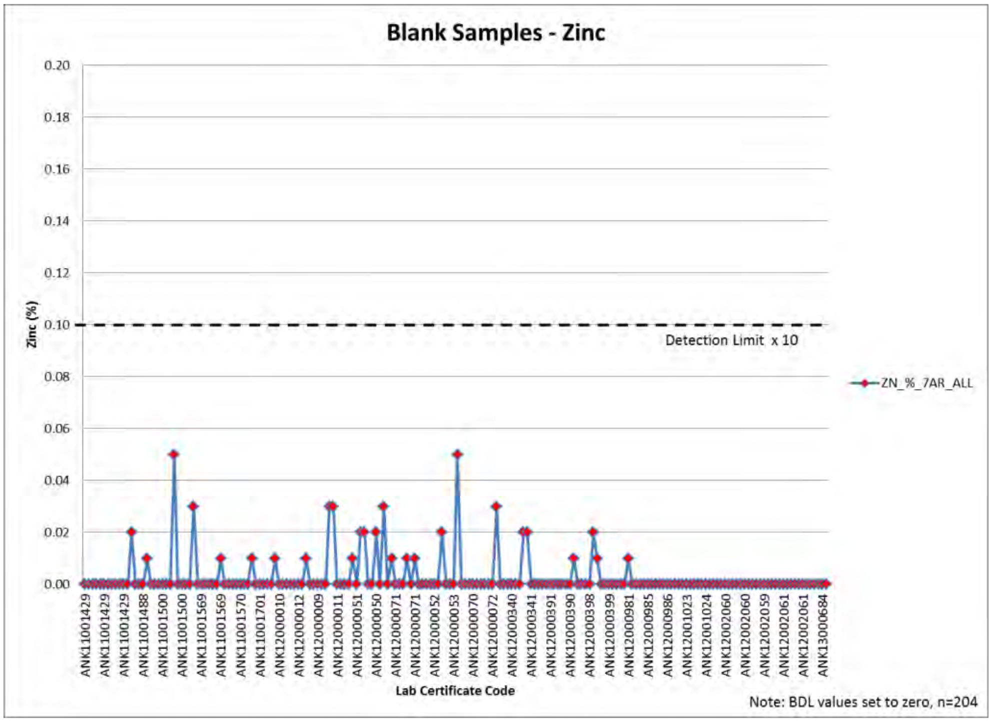


Figure 11-18: Control Chart for Zinc of Unmineralized Basalt Blank Samples used in Phase 2 Drilling and Assayed at ACME



Control charts for lead and zinc analyses of the blank material show good performance throughout with the majority of values being below the detection limit for the technique used. Additionally, all silver results for blank samples were consistently below the detection limit.

In general, the performance of the blank samples is within acceptable limits. There are some concerns with respect to the relatively high fail rate for copper (approximately 6%). However, it is considered unlikely that this reflects systematic contamination at the laboratory as the other base metals are within acceptable limits.

11.4.2.3 Phase 2 Field Duplicates

Field duplicates were not taken routinely as part of the Phase 2 drillhole sampling procedures. However, a series of quarter core duplicate samples were taken retrospectively from each of the Phase 2 drillholes for a total of 404 samples (approximate rate of 5% or 1 sample in 20). These samples were prepared at ACME Ankara and analysed at ACME Vancouver using the same techniques as the original samples. Scatterplots for the main metals of interest (Au and Cu) are presented in Figures 11-19 and 11-20.

Figure 11-19: Scatterplot of Field Duplicate Sample Pairs (Au)

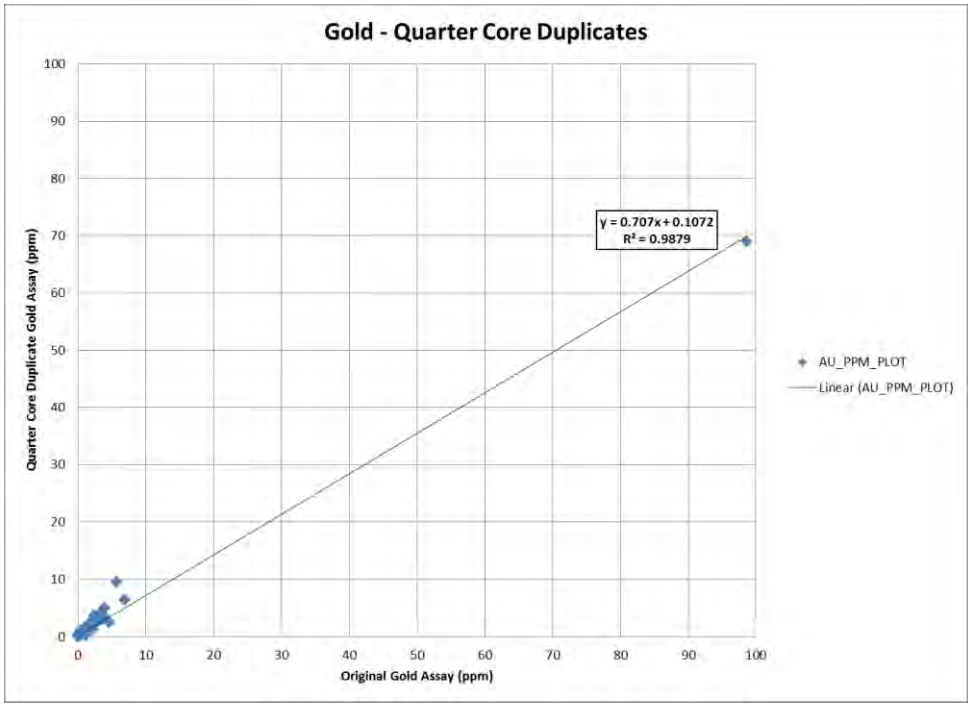
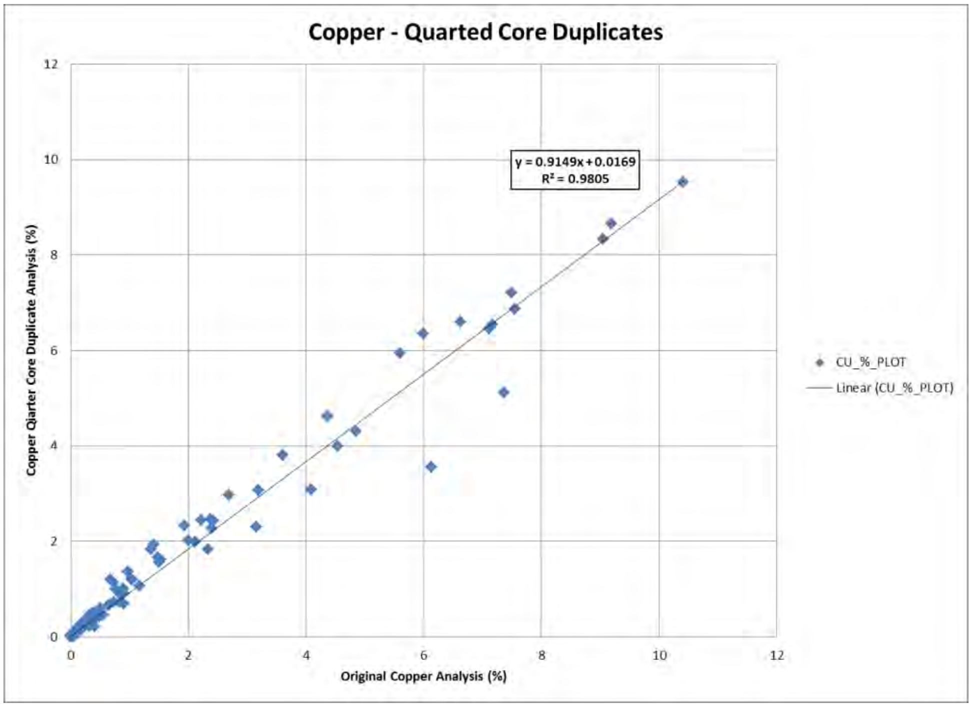


Figure 11-20: Scatterplot of Field Duplicate Sample Pairs (Cu)



The Field Duplicate results show a good correlation for gold (r^2= 0.9879), although a slight tendency toward higher grades for the duplicate samples in the 2-4 g/t range is noted. A similar correlation is seen for copper (r^2= 0.9805), silver (r^2= 0.9672), lead (r^2= 0.9621) and zinc (r^2= 0.9758). In general, the field duplicates show good reproducibility and that geological variation is limited amongst the sample pairs.

11.4.2.4 Phase 2 Reject Duplicates

Reject duplicates (also known as coarse reject duplicates) are splits of a sample taken after the coarse crush but before pulverizing and then assayed as a separate, duplicate sample. Coarse reject duplicates measure the homogeneity of the sample at the coarse reject stage and assesses combined preparation and analytical precision.

A total of 288 reject duplicate samples were taken from the Phase 2 drilling program. These samples underwent further preparation at ACME Ankara and analysis at ACME Vancouver using the same techniques as the original samples. Scatterplots for the main metals of interest (Au and Cu) are presented in Figures 11-21 and 11-22.

Figure 11-21: Scatterplot of Reject Duplicate Sample Pairs (Au)

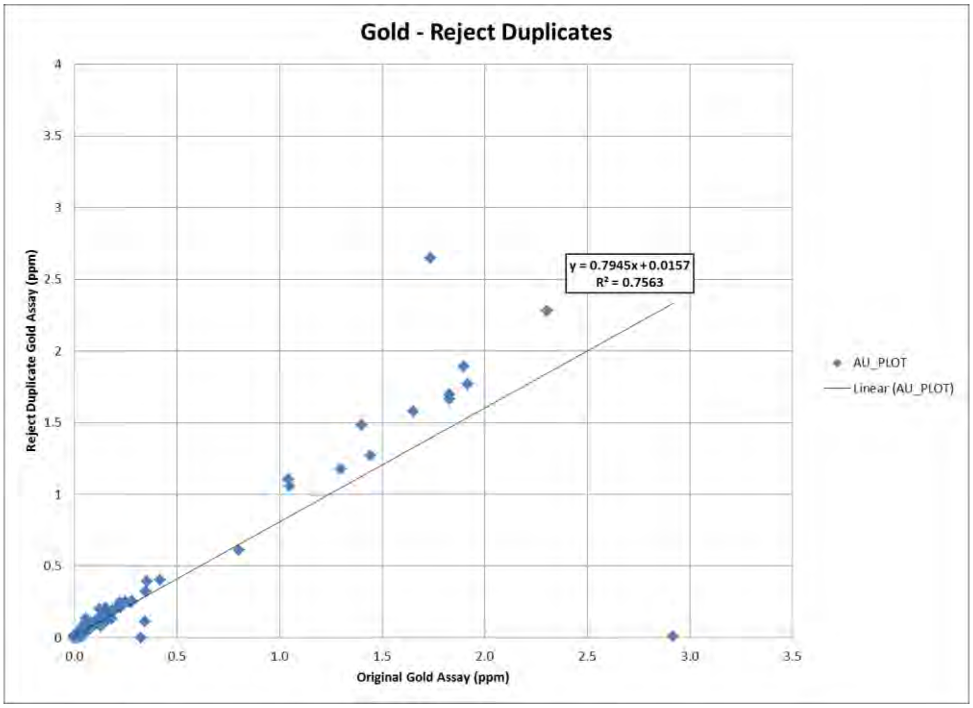
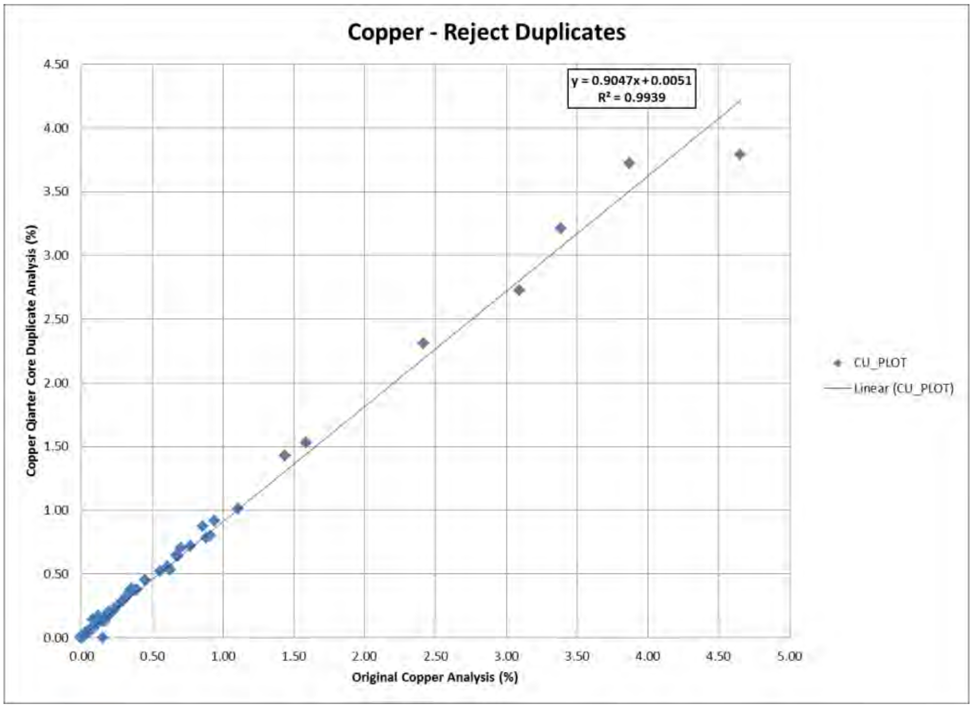


Figure 11-22: Scatterplot of Reject Duplicate Sample Pairs (Cu)



The Reject Duplicate results show a good correlation for the base metals (Copper r^2= 0.9939, Lead r^2= 0.9943 and Zinc r^2= 0.9943). Additionally, silver also show a good correlation between sample pairs (r^2=0.9887), although some variability is evident at higher grades. In contrast, the scatterplot for gold shows a lower correlation (r^2= 0.7563), although this is adversely affected by a single high grade sample from TD043 which had a very poor repeatability in the reject duplicate. If this sample is removed, the reject duplicate dataset show a similar correlation to that for the field duplicates. In general, the reject duplicates show good reproducibility and that no significant bias is being introduced at the coarse crush stage of the preparation procedure.

11.4.2.5 Phase 2 Pulp Duplicates

Pulp duplicate samples are taken from the unused analytical pulp returned from the laboratory and are then sent for analysis at the same laboratory. This sample type provides an extra degree of confidence in the reliability of the initial result and analytical variation.

A total of 335 pulp duplicate samples were taken from the Phase 2 drilling program. These samples were analysed at ACME Vancouver using the same techniques as the original samples. Scatterplots for the main metals of interest (Au and Cu) are presented in Figures 11-23 and 11-24.

Figure 11-23: Scatterplot of Pulp Duplicate Sample Pairs (Au)

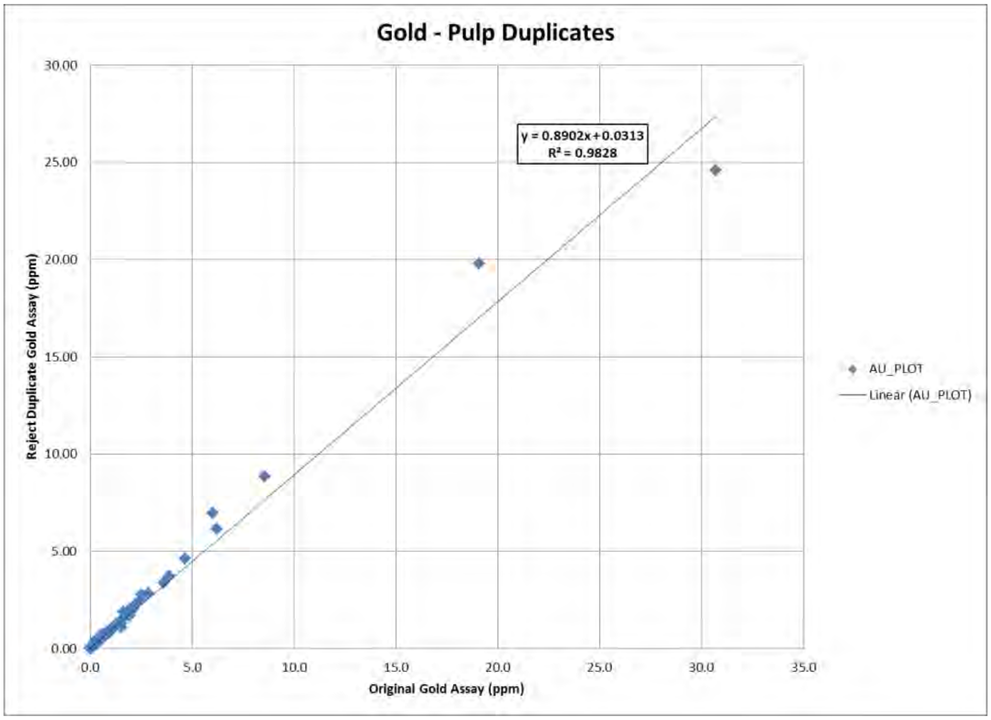
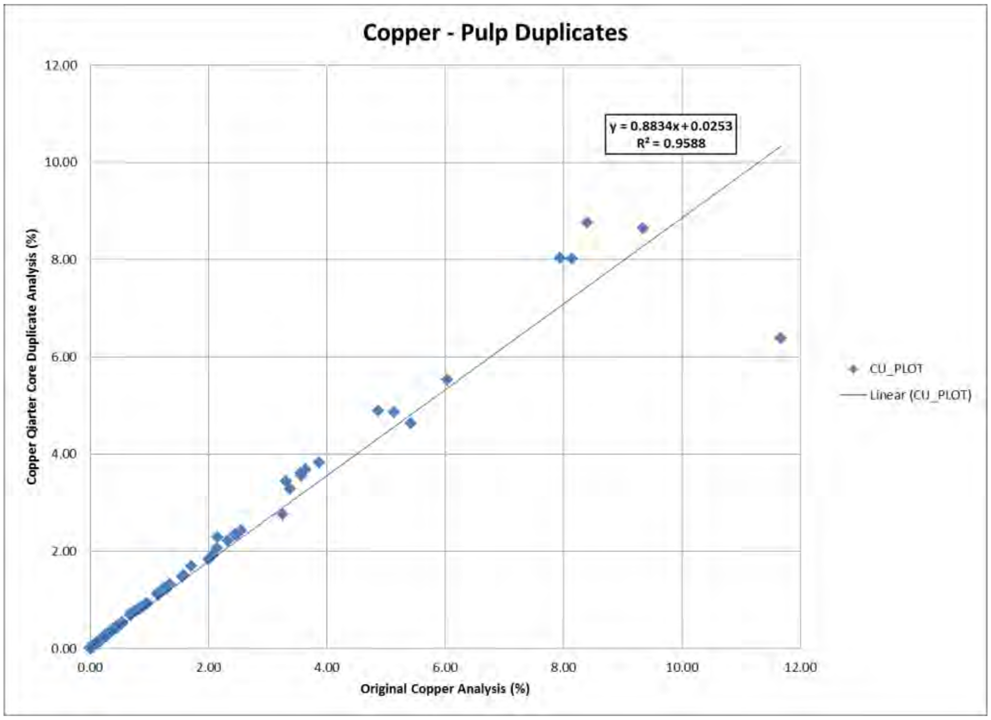


Figure 11-24: Scatterplot of Pulp Duplicate Sample Pairs (Cu)

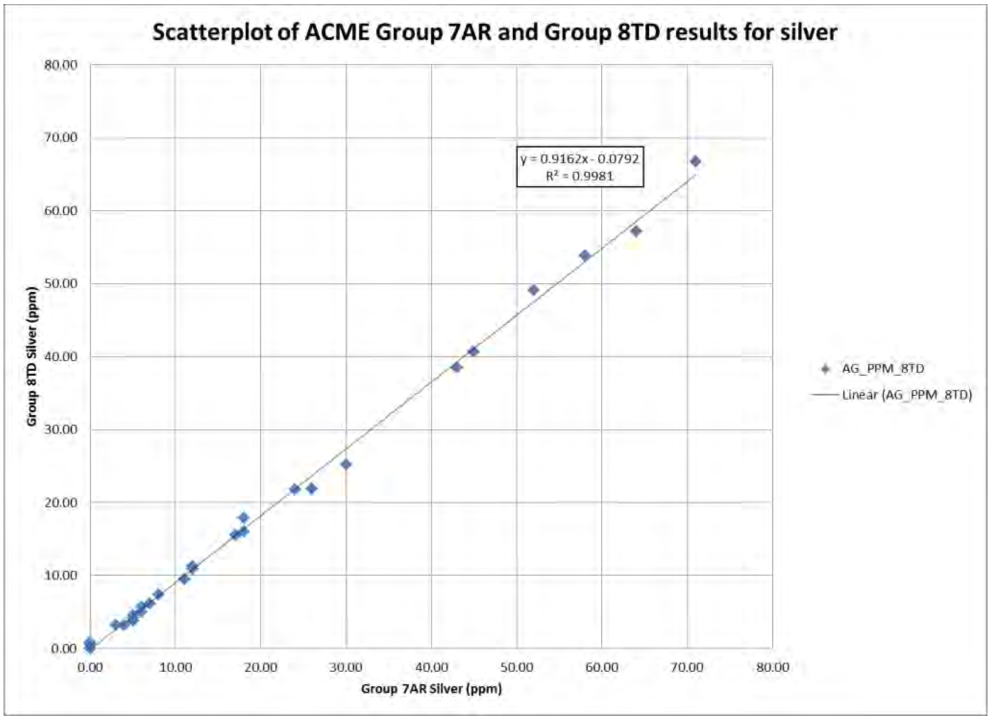


The Pulp Duplicate results show a good correlation for gold (r^2= 0.9828), although slightly higher variation for higher grade samples over 5 g/t is evident. Similarly, lead and zinc show strong correlation between the sample pairs (lead r^2= 0.9859; zinc r^2= 0.9954). In contrast, copper has a much lower correlation (r^2= 0.9588) but this is adversely affected by a single outlier value related to a sample from HD002 which had poor repeatability (original = 11.67% Cu, duplicate 6.39% Cu). If this point is removed, a much stronger overall correlation is evident for copper. Silver also shows a slightly weaker correlation within the pulp duplicate dataset (r^2 = 0.9358) which is in contrast to that noted for the reject duplicates. In particular, higher grade samples in excess of 30 ppm show increased variation. In general, the pulp duplicates show good reproducibility, tend to confirm the original analytical result and indicate that analytical bias is not a concern.

11.4.2.6 Phase 2 Testing of Analytical Technique for Silver

There was a concern amongst Tigray personnel that the Group 7AR technique (Hot Aqua Regia digestion for base-metal sulphide and precious-metal ores) might be under-reporting for silver. To test for this, a selection of samples from drillhole HD006 were analysed for silver using both the Group 7AR and the Group 8TD single element assay technique (4 Acid digestion ore grade / AAS). A comparison of the silver results for both techniques is show in Figure 11-25.

Figure 11-25: Scatterplot of G7AR and G8TD Silver Results from Drill Hole HD006 (Cu)



The results show a strong correlation (r^2= 0.9981) between techniques. There is a very minor tendency for the Group 7AR results to be higher than the corresponding Group 8TD values, but this is not considered significant. It is clear that the Group 7AR technique is providing an accurate estimate of silver content. For this reason, the Group 7AR technique was retained.

11.4.3 Diamond Drilling QA/QC Summary

Throughout the drilling programs on the Harvest Project, Tigray has progressively monitored and improved their QA/QC procedures. This is reflected in the introduction of supplementary quality control samples such as field, reject and pulp duplicates in addition to umpire samples. Where issues have been identified, the company has been proactive in seeking a resolution to the problem through introducing new CRMs, re-analysis of failing samples and running check sample program to determine the veracity of the laboratory techniques used. An obvious lapse in the QA/QC procedures occurred over the period from December 2011 to February 2012 when the GBM series (base metal) standards were used as the sole discriminator of gold performance. This oversight was rectified through the introduction of additional gold standards in subsequent sample batches, and also through the retroactive statistical review of GBM series Au results, and re-analyses of any questionable results.

The author is satisfied that the quality of gold and base metal analytical data is sufficiently reliable to support the conclusions of this report, and that sample preparation, analysis and security are generally performed in accordance with exploration best practices and industry standards.

12 DATA VERIFICATION

In consideration of the data summarized below, as well as information provided elsewhere in this report, the author of this section believes the current Tigray project data are acceptable for the purposes used in this report.

12.1 Electronic Database

Initially, an Access database and related Microsoft Excel spreadsheets were provided by Tigray to Aurum as a universal project dataset along with a full set of assay certificates. Additional GIS data was provided in the form of MapInfo data files.

Information recorded from diamond drill core logging and assaying was integrated using industry standard data management software (Maxwell DataShed). The resultant data was reviewed, including validation of a random selection of data against the source information, and it is considered acceptable for the purpose of this report.

12.1.1 Fladgate Database Verification

Fladgate selected assay certificates containing the highest 5% of the copper, gold, silver and zinc grades in the database from each of the Phase 1 and Phase 2 drilling campaigns. Fladgate requested and received the original assay certificates from the ALS Chemex (Phase 1) and ACME (Phase 2) assay laboratories. From the Phase 1 drilling campaign, a total of 348 assays out of a total of 794 assays were verified, representing 44% of the Phase 1 assay database. In the Phase 2 drilling campaign, a total of 4,100 assays out of a total of 7,691 assays were verified, representing 53% of the Phase 2 assay database.

A comparison was made between the assay data in the database and the assay data in the original assay certificates. No errors were found.

12.2 Drill Hole Collar Checks

Nine drillhole collar checks were undertaken by Aurum during the site visit using a hand held Garmin GPS unit. The average deviation was 1.27 m for the easting and 2.15 m for the northing, with the largest deviation recorded being 2.94 m in the easting and 5.15 m in the northing components for TD020. It was noted that several concrete slabs, e.g., TD50, used to mark the location of the collar positions were absent, probably by local farmers to enable cultivation of their crops. Absent drillhole collars slabs should be replaced for future reference.

12.2.1 Fladgate Drill Hole Collar Checks

During the Fladgate site visit, eight drill hole collar checks were completed using a hand-held Garmin GPS unit. Fladgate found no significant differences between the coordinates in the database and the coordinates collected during the site visit. The results are tabulated in Table 12.1.

12.3 Fladgate Down Hole Survey Checks

During the site visit, Fladgate examined original downhole survey documents and made a comparison with the downhole survey records found in the project database.

Fladgate verified a total of 34 downhole survey records or 5% of the entire downhole survey database. The verified records originated from five drillholes, representing 7% of the total number of drill holes in the database.

No discrepancies were found between the original documents and the database used for mineral resource estimation.

12.4 Fladgate Drill Core Logging Verification

During the site visit, Fladgate examined drill core from four drill holes and verified the drill hole logging. Fladgate made a comparison of the logged intervals of sulphide mineralization in the database with Fladgate's own observations of the sulphide mineralization.

Fladgate found no significant differences.

Table 12.1: Fladgate Verification of Drill Hole Collars

	GPS		Database		Difference (m)	
DHID	**Easting**	**Northing**	**Easting**	**Northing**	**Easting**	**Northing**
TD53	416,406.0	1,583,703.0	416,395.1	1,583,711.3	-10.9	8.3
10HTD02	416,471.0	1,583,713.0	416,472.0	1,583,710.0	1.0	-3.0
TD07	416,477.0	1,583,749.0	416,476.8	1,583,740.6	-0.2	-8.4
TD048	416,111.0	1,583,508.0	416,108.6	1,583,494.8	-2.4	-13.2
TD49	416,091.0	1,583,519.0	416,088.3	1,583,518.4	-2.7	-0.6
TD30	416,141.0	1,583,582.0	416,134.6	1,583,586.1	-6.4	4.1
TD10	416,195.0	1,583,583.0	416,194.3	1,583,578.4	-0.7	-4.6
TD20	416,222.0	1,583,601.0	416,225.9	1,583,602.9	3.9	1.9

12.5 Independent Verification of Mineralization

12.5.1 Core Samples

As part of the review of mineralized intervals within the Tigray drill core, five independent samples were collected for assaying. The samples consisted of quartered core from selected intervals from drillholes TD025, TD040, TD057 (all Terakimti), HD002 (and Mayshehagne), and TVD001 (VTEM09). Two CRM were included with the core samples which were then submitted to OMAC Laboratories Limited, a subsidiary of ALS Minerals based in Loughrea, Republic of Ireland for fire assay, using the Au-GRA22 technique, and base metal assaying using the ME-ICPORE technique.

The results of the independent samples analyzed at ALS are presented alongside the original ACME assay results for the selected intervals in Table 12.1, and the original assay certificates are presented in Appendix B.

Table 12.1: Independent Quartered Core Sample Assay Results

Hole ID	Sample Number	From (m)	To (m)	ACME Au (ppm)	ALS Au (ppm)	ACME Cu (%)	ALS Cu (%)	ACME Pb (%)	ALS Pb (%)	ACME Zn (%)	ALS Zn (%)
HD002	69429	40.05	40.75	1.16	1.23	4.17	3.93	3.17	2.55	17.03	18.65
TD025	69430	75.40	76.25	2.76	2.52	11.64	12.60	0.05	0.06	1.64	1.19
TD040	69431	239.90	240.60	0.19	0.22	0.94	1.22	1.22	1.55	29.72	28.4
TD057	69432	141.60	142.30	2.30	1.83	2.21	2.60	0.06	0.05	0.54	0.69
TVD001	69433	29.30	29.85	3.85	8.41	2.40	2.53	0.81	0.97	7.77	8.19

Given the strong nugget effect typically seen with gold, the variation between the original ACME assay and the ALS verification results is in good agreement. Base metal concentrations are also in reasonably good agreement with the historic data.

12.5.2 Soil Samples

Two independent soil samples were collected for gold assaying to verify the validity of the soil geochemistry program in the Ruwa Ruwa trend. Owing to access problems encountered on the property, caused by the maturation of the grain crop, the author was unable to collect field samples. Instead, two Niton XRF samples from Adi Goshu, which corresponded to sites previously sampled for gold soil analyses, were selected for re assay.

The samples were submitted to OMAC Laboratories Limited, a subsidiary of ALS Minerals based in Loughrea, Republic of Ireland for fire assay, using the Au-GRA22 technique. The results of the independent samples analyzed at ALS are presented alongside the original Ultratrace assay results in Table 12.1, and the original assay certificates are presented in Appendix B.

Table 12.1: Independent Soil Sample Assay Results

Orginal Sample ID	New Sample ID	Ultratrace Au (ppm)	ALS Au (ppm)
W24239	NX25802	1.28	0.60
W24261	NX25854	1.20	0.82

Given the strong variability of gold in soil and the fact the XRF soils were collected at a depth of approximately 10 cm, rather than 20 to 30 cm for soil geochemistry samples, the ALS verification results indicate the samples clearly contain gold and correlate with the Ultratrace results. The results independently verify that the Ruwa Ruwa Trend contains gold soil anomalism.

12.5.3 Umpire Samples

A suite of Umpire Samples were collected from ACME Analytical Laboratories (Vancouver) Ltd. and submitted to ALS Global (Vancouver) for assay. These samples represent pulp duplicates which are prepared at the primary laboratory and then set aside for later submission to a second laboratory for pulverization and assay. This approach provides a test of sample preparation and splitting procedure in the laboratory in addition to analytical variation. A total of 24 Umpire Samples were selected to cover a range of assay grades.

Scatterplot of the Umpire Sample results plotted against the original ACME assays for gold and copper are presented in Figures 12-1 and 12-2, respectively.

The Umpire Sample results show an excellent correlation (r^2= 0.996) with the ACME assay results up to the 8 ppm Au level. Similar correlations is seen for copper (r^2= 0.995), silver (r^2= 0.992), lead (r^2= 0.997) and zinc (r^2= 0.997). Above this concentration a tendency towards higher grades for the original ACME assay is observed.

The ALS results for the Umpire Samples confirm the presence of gold and base metals within the samples and the levels of correlation are consistent with other coarse crush duplicate datasets.

Figure 12-1: Scatterplot of Pulp Duplicate Sample Pairs (Au)

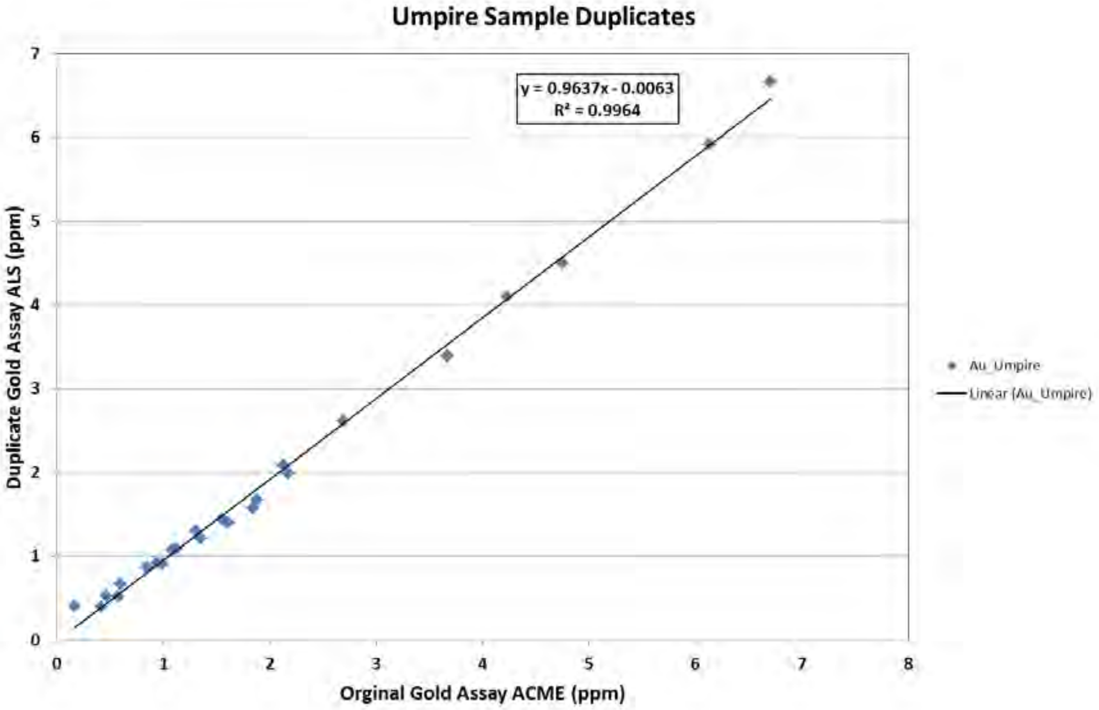
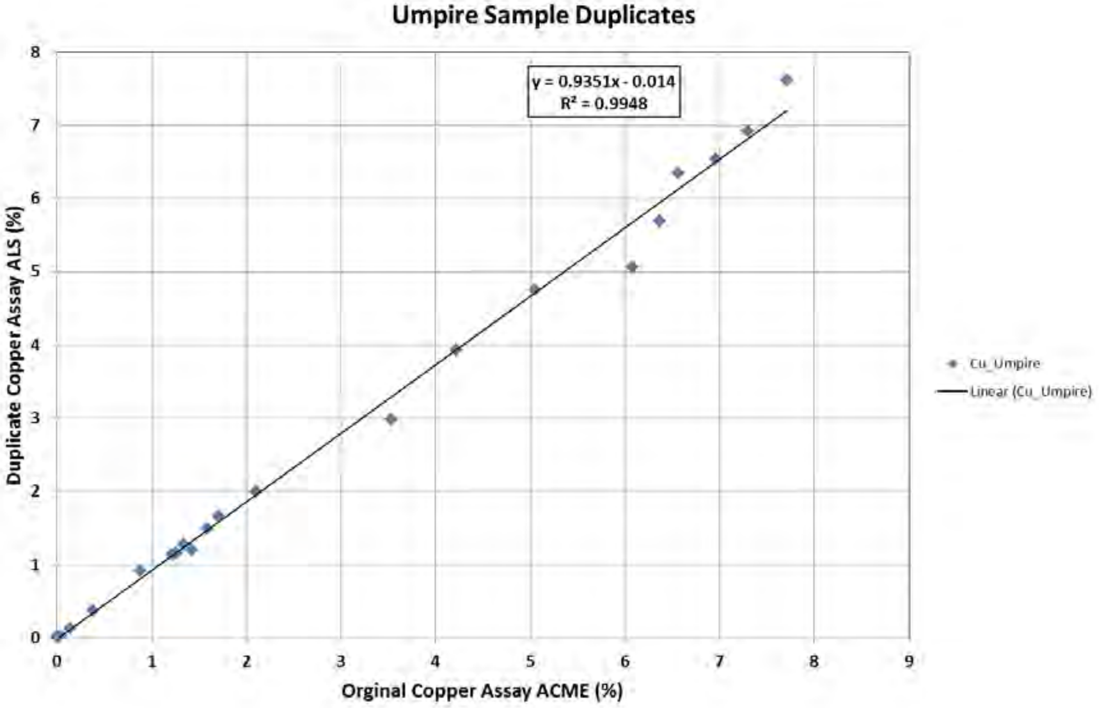


Figure 12-2: Scatterplot of Pulp Duplicate Sample Pairs (Cu)



12.6 QP Comments on Section 12

As a result of the data verification completed by Aurum and Fladgate, the QPs conclude that the drill hole data collected by Tigray is of sufficient quality to support mineral resource estimation.

Data verification on other geochemical (e.g., XRF and soil geochemistry) and geophysical surveys databases on the property was not conducted, since the resource estimate focused on the drillcore geochemistry.

13 MINERAL PROCESSING & METALLURGICAL TESTING

13.1 Metallurgical Samples

Samples consisting of 520 drill core intervals averaging 0.75m in length, from 28 separate drill holes, were shipped from the site to the Blue Coast Research metallurgical testing facility in Parksville BC. From these samples a total of 16 sub-composites were formed representing oxide and sulphide ore with good geographic coverage of the known mineralization.

The samples used for the 16 sub-composites are presented in Table 13.1.

***Table 13.1:** Terakimti Sub-Composites Formed for Mineralogical Analysis*

Sub-Composite	Ore Type	Hole ID	From	To	Interval	Wt (kg)
1	Sulphide	10HTD003	53.2	97.7	44.5	56.2
2	Sulphide	TD25	93.9	125.6	31.8	73.0
3	Sulphide	TD004	57.5	81.4	24.0	48.3
4	Sulphide	TD004	81.4	107.0	25.6	63.8
5	Sulphide	TD004	107.0	118.6	11.6	25.6
		TD014	65.0	82.0	17.0	22.2
		TD018	138.9	143.1	4.2	12.5
6	Sulphide	TD004	118.6	130.0	11.4	28.8
		TD014	82.0	94.0	12.0	12.0
		TD018	143.0	156.0	13.0	32.3
7	Sulphide	TD014	57.5	64.4	6.9	10.0
8	Sulphide	TD018	121.6	137.1	15.5	37.2
9	Sulphide	TD022	87.4	116.3	29.0	64.7
		TD001	90.2	95.8	5.6	11.7
		TD027	56.0	66.8	10.9	22.6
		TD040	83.6	98.5	14.9	28.1
10	Sulphide	09HTD002	77.0	90.9	13.9	9.5
11	Sulphide	TD008	38.8	59.6	20.9	14.1
12	Sulphide	TD011	181.8	197.0	15.2	12.0
13	Sulphide	TD037	53.2	69.9	16.7	11.5
14	Sulphide	TD039	86.2	105.9	19.8	17.0
15	Oxide	TD44	17.2	30.6	13.4	21.4
		TD49	38.9	58.0	19.1	25.7
		TD41	28.5	31.7	3.2	5.4
		TD30	7.2	17.7	10.5	10.7
		TD29	36.5	45.3	8.8	9.7
16	Oxide	TD007	0.0	22.5	22.5	48.0
		TD038	14.5	20.5	6.0	11.2

The associated grades of each of the sub-composites are presented in Table 13.2

Table 13.2: Head Grades of Sub-Composites

Sub-Composite	Grades				
	%Cu	%Zn	Au, g/t	Ag, g/t	Fe, %
1	4.77	0.16	1.59	21.01	33.53
2	2.01	7.61	0.83	16.34	25.64
3	2.61	0.18	0.92	12.50	21.19
4	6.68	0.57	1.87	20.59	33.92
5	4.77	3.47	4.98	24.77	31.82
6	2.55	0.14	1.11	7.78	32.14
7	5.95	0.77	2.22	43.29	27.87
8	0.90	0.10	0.66	3.33	28.21
9	2.21	3.30	0.51	19.98	24.90
10	0.17	1.39	0.29	3.45	10.94
11	6.59	0.93	1.61	20.46	32.55
12	2.60	6.53	2.74	47.85	30.64
13	1.52	8.90	2.41	35.03	26.14
14	1.51	1.83	1.63	13.04	30.57
15	0.05	0.03	3.41	30.30	9.55
16	0.06	0.05	2.26	7.17	13.06

13.2 Mineralogy

All 14 of the sulphide sub-composites were studied mineralogically using QEMSCAN technology, which provided the modal composition of each of the samples including the copper speciation. This data was used to guide the classification of the sulphide ores into secondary Cu enriched supergene ore, primary Cu-Zn ore and transition ore containing both secondary copper minerals and sphalerite. Typically, the flotation requirements differ for these 3 ore types hence the importance of the classification.

A simplified version of the modal distribution for each of the samples is presented in Table 13.3.

Table 13.3: Modal Distribution of Sub-Composites from QEMSCAN Analysis

Sub-Composite	Sphalerite	Chalcopyrite	Covellite	Chalcocite	Enargite/ Tennantite	Galena	Arsenopyrite	Pyrite	Pyrrhotite	Inert Silicates	Mica/ Kaolinite	Barite	Others
1	0.19	5.56	4.66	0.34	0.04	0.11	0.00	77.52	0.54	6.41	1.06	1.21	2.35
2	13.33	2.84	0.97	0.20	0.12	0.46	0.00	58.03	0.08	7.49	2.02	11.21	3.24
3	0.12	2.59	0.77	0.54	0.06	0.00	0.00	41.94	0.08	31.42	16.36	0.22	5.88
4	0.83	14.51	2.01	0.35	0.06	0.00	0.00	76.98	0.10	3.01	0.41	0.00	1.74
5	5.71	9.86	2.44	0.12	0.18	0.27	0.00	68.47	0.12	5.97	0.43	2.80	3.65
6	0.17	5.60	0.66	0.05	0.02	0.00	0.00	81.68	0.11	5.76	3.43	0.00	2.51
7	0.88	2.20	8.14	0.81	0.01	0.52	0.00	59.08	0.05	17.90	0.27	9.16	0.98
8	0.06	2.01	0.15	0.01	0.00	0.00	0.00	74.50	0.12	12.10	9.45	0.00	1.58
9	7.37	2.96	2.01	0.07	0.16	0.75	0.00	51.80	0.04	14.99	8.09	6.22	5.54
10	2.69	0.71	0.03	0.00	0.00	0.00	0.00	27.86	0.03	38.98	26.42	0.00	3.28
11	2.21	6.62	6.04	1.56	0.42	0.05	0.00	69.98	0.07	11.00	0.24	0.07	1.75
12	12.49	7.08	0.01	0.00	0.07	0.30	0.32	68.62	0.07	3.64	3.81	1.29	2.29
13	15.52	2.69	0.38	0.17	0.27	0.63	0.01	60.40	0.08	11.43	2.38	1.00	5.04
14	4.20	5.23	0.03	0.00	0.04	0.05	0.00	58.80	0.08	17.43	7.69	0.00	6.46

The samples all contain semi-massive to massive pyrite with modal contents ranging from 27.9% to 81.7%. Inert silicates (mostly quartz and feldspar) form the majority of the gangue balance after pyrite, although occasionally the abundance of micas and kaolinite are elevated. Barite is also found in large amounts in some south zone composites.

Copper is present as a variety of minerals. Chalcopyrite is the dominant primary copper mineral. Supergene enrichment was found in several samples with the presence of covellite, and to a much lesser extent chalcocite. Minor amounts of copper as enargite/tennantite were also found in most samples. Some areas of the south zone and shallow material in the north zone show transition material where-by secondary copper is present alongside zinc, which can be challenging for processing.

13.3 Composites for Testing

A master composite was formed with good representation of supergene mineralization in the south zone. This master composite consisted of four of the sub-composites all with elevated copper grades due to presence of significant covellite, and low Zn grades. The copper grade was 4.8% along with 1.5 g/t Au and 20 g/t Ag. The recipe is shown in Table 13.4.

Table 13.4: South Zone Supergene Master Composite Recipe

South Zone Supergene Master Composite							
Recipe				Grades			
Composite	Intercept Length, m	Comp Wt, kg	%	Cu	Zn	Au	Ag
1	44.5	35	43.75	4.77	0.16	1.59	21.0
3	23.95	20	25.00	2.61	0.18	0.92	12.5
4	25.6	20	25.00	6.68	0.57	1.87	20.6
7	6.9	5	6.25	5.95	0.77	2.22	43.3
Total		*80*	*100*	**4.78**	**0.30**	**1.53**	**20.2**

A single sub-composite of clean primary ore was tested, which for the purpose of this study can represent ores containing copper and zinc with minimal secondary copper. The composite used was composite 12, taken from drill hole TD 011 from the deeper mineralization in the North Zone. The grades are shown in Table 13.5.

Table 13.5: Sample of Primary Ore used for Testing

Primary Ore Composite							
Recipe				Grades			
Composite	Intercept Length, m	Comp Wt, kg	%	Cu	Zn	Au	Ag
12	15.2	12	100	2.60	6.53	2.74	47.9

13.4 Oxide Ore Cyanide Leach Testing

Composites 15 and 16 representing oxide ore from the South and North zones respectively were both subjected to bottle roll cyanide leach testing for 24 hours using industry-typical conditions (1g/L sodium cyanide and pH 10.5-11) and using grind size as the main variable. The test results and associated leach kinetic curves are presented in Figure 13.1 (Composite 15) and Figure 13.2 (Composite 16).

Figure 13.1: Gold and Silver Leach Results and Kinetic Curves for Composite 15

Test #:	Feed	Nominal P_{80} µm	Reagent consumption (kg/t of CN feed)		Calculated Head Grade g/t		Extraction %	
			NaCN	CaO	Au	Ag	Au	Ag
TRT CN-1	Comp-15 South Oxide	1700	0.57	1.00	3.98	32.7	75.2	35.3
TRT CN-2	Comp-15 South Oxide	200	0.41	0.98	3.86	33.9	79.3	39.6
TRT CN-3	Comp-15 South Oxide	100	0.55	0.96	4.00	34.0	81.9	44.6

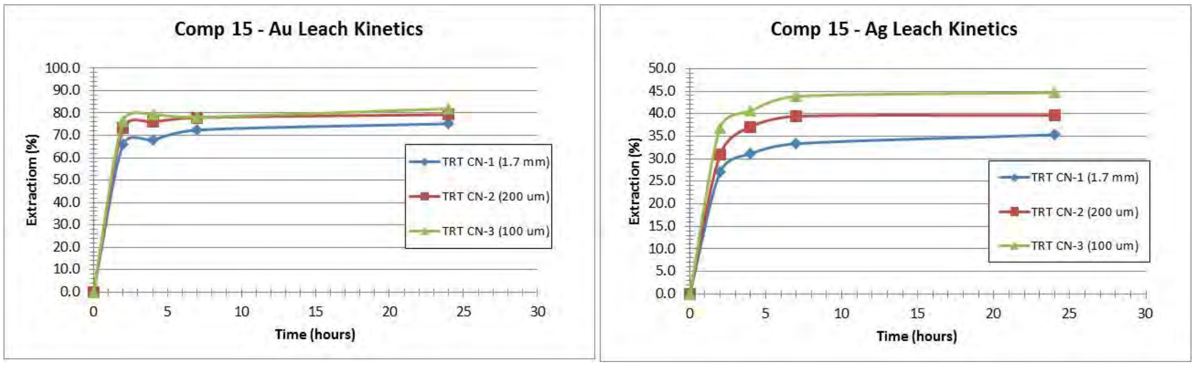
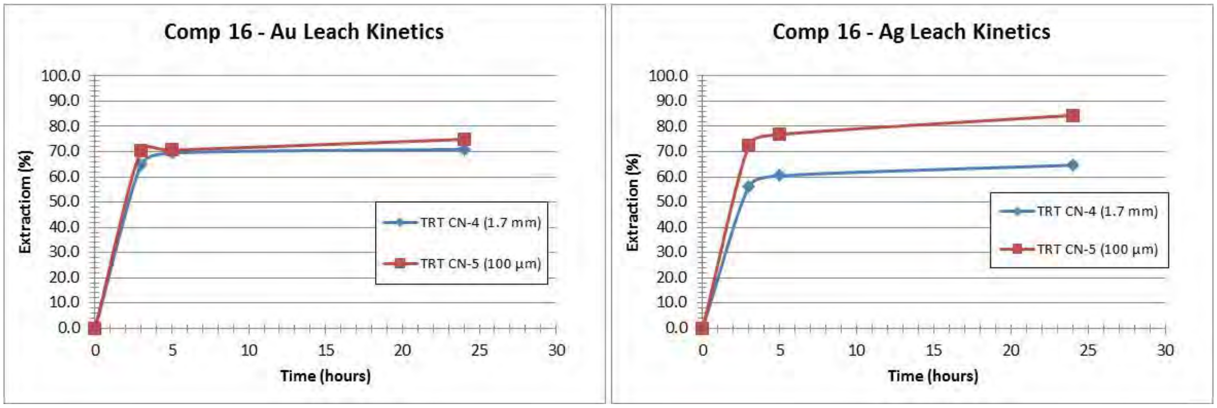


Figure 13.2: Gold and Silver Leach Results and Kinetic Curves for Composite 16

Test #:	Feed	Nominal P_{80} µm	Reagent consumption (kg/t of CN feed)		Calculated Head Grade g/t		Extraction %	
			NaCN	CaO	Au	Ag	Au	Ag
TRT CN-4	Comp-16 North Oxide	<1700	0.74	1.36	2.30	6.3	71.0	64.7
TRT CN-5	Comp-16 North Oxide	100	0.65	1.38	2.39	6.5	74.9	84.4



The testing focused on comparing 24 hour leach extractions at a fine crush size (1700 microns or 10 mesh), and at a standard tank leach grind of 100 microns. Composite 15 also included a test at 200 microns. Gold extractions for composite 15 were 75% at 10 mesh and 82% at 100 microns. Silver recoveries were lower at 35% and 45% at the respective sizes. The results at 200 microns were half way between the two with 79% gold recovery and 40% silver recovery.

Gold recoveries in composite 16 were 71% and 75% at 10 mesh and 100 microns respectively. Silver recoveries were notably higher than composite 15 at 65% and 84% for the two sizes.

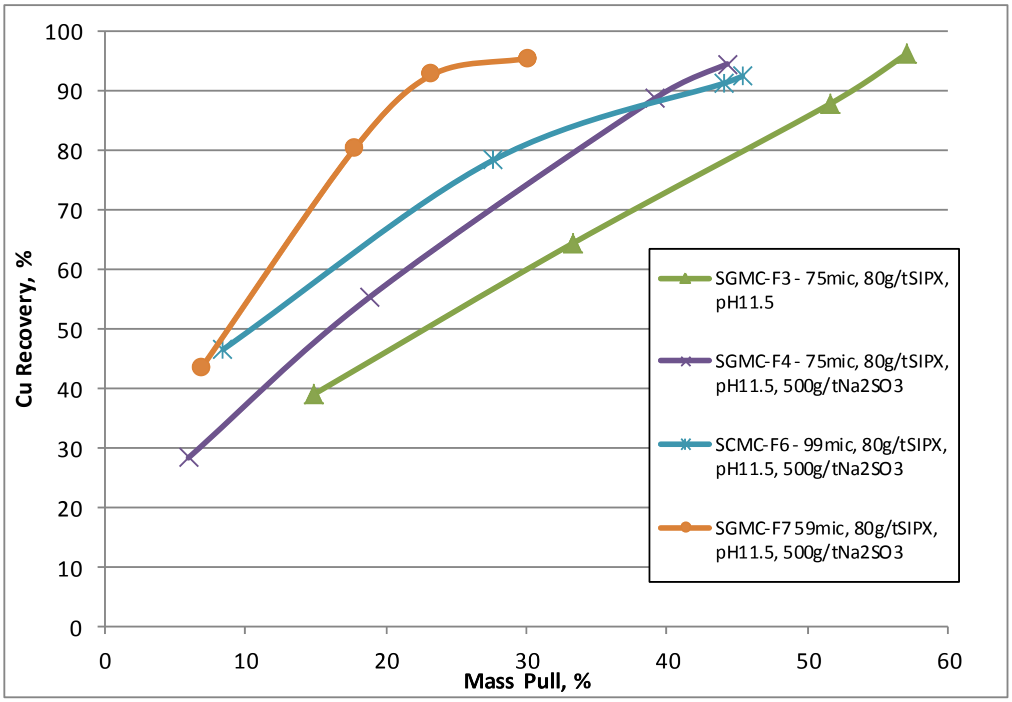
Further testing and subsequent trade-off studies will be required to determine the economic merits of heap leaching or tank leaching.

13.5 Flotation Testwork – Supergene Master Composite

A total of 6 rougher tests were performed on the supergene master composite, with base line conditions generally following those of other supergene treatment schemes from development and production projects in the area, characterised by high pH of 11.5 and SIPX as a collector. Initially a standard grind of 75 microns was employed.

The first 2 tests suffered low copper recovery, likely due to under dosing of collector. The results for the 4 most meaningful tests are presented as follows in Figure 13.3.

Figure 13.3: Supergene Master Composite Rougher Flotation Results

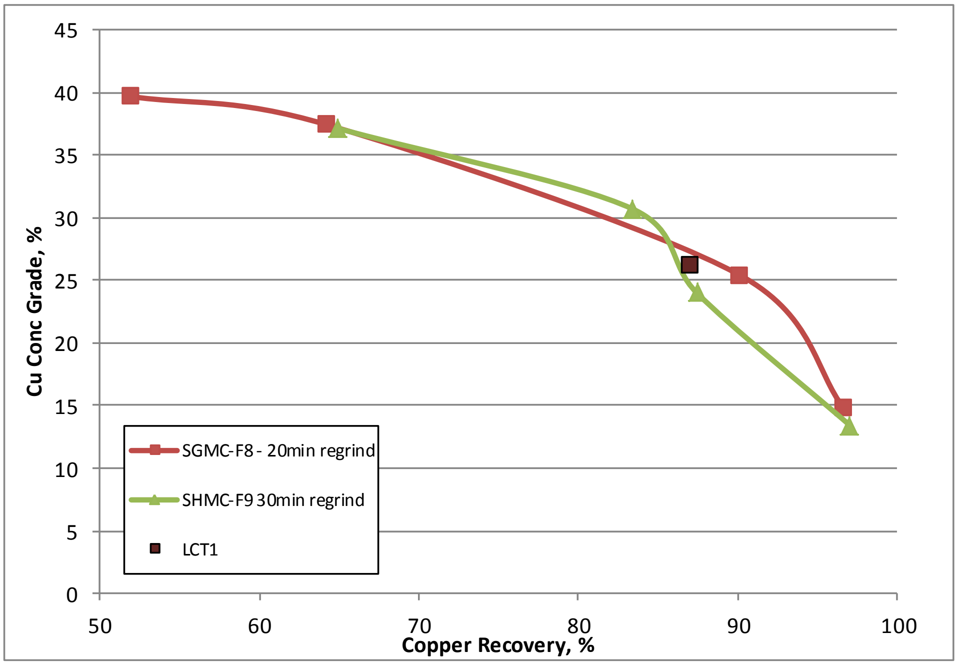


A dosage of 80 g/t SIPX at a 75 micron grind and pH 11.5 (Test F3) yielded good overall copper recovery of ~96% although at a high mass pull of ~55% due to significant quantities of pyrite floating. In order to further depress pyrite, 500g/t sodium sulphite was added to the grind in test 4 with otherwise the same conditions, and this test yielded the same recovery at a notably lower mass pull of ~45%. Tests F6 and F7 fixed the reagent additions as per F4 and modified the grind size both coarser to ~100 microns (F6) and finer to 59 microns (F7). The test at 100 microns gave a similar result to that of 75 microns, however the finer grind test gave a significant improvement measured by maintaining the copper recovery but further reducing the mass pull (and hence pyrite recovery) to ~30%.

Two cleaner tests and a locked cycle test were conducted using the finer grind F7 rougher conditions. Both cleaner tests were conducted at approximately pH12 with a further addition of SIPX, with the difference being test F8 used a 20 minute rougher concentrate regrind and test F9 using a 30 minute regrind. Size analysis on the 1st cleaner tails however only showed a small difference in size, F8 being 46 microns and F3 being 43 microns. The metallurgical results on a grade-recovery basis were quite similar, and so the finer regrind F9 conditions were selected for LCT testing.

Concentrate grade vs. recovery curves for the 2 tests along with the final LCT result are shown as follows in Figure 13.4.

Figure 13.4: Supergene Master Composite Cleaner and Flotation and LCT Results



The locked cycle test did not improve on the batch test curve with a final result of 87% copper recovery to a 26.1% Cu concentrate grade. This is deemed to be quite a good result after only limited testing and compares favourably with results from other supergene ores in the region. The final LCT mass balance is presented in Table 13.6.

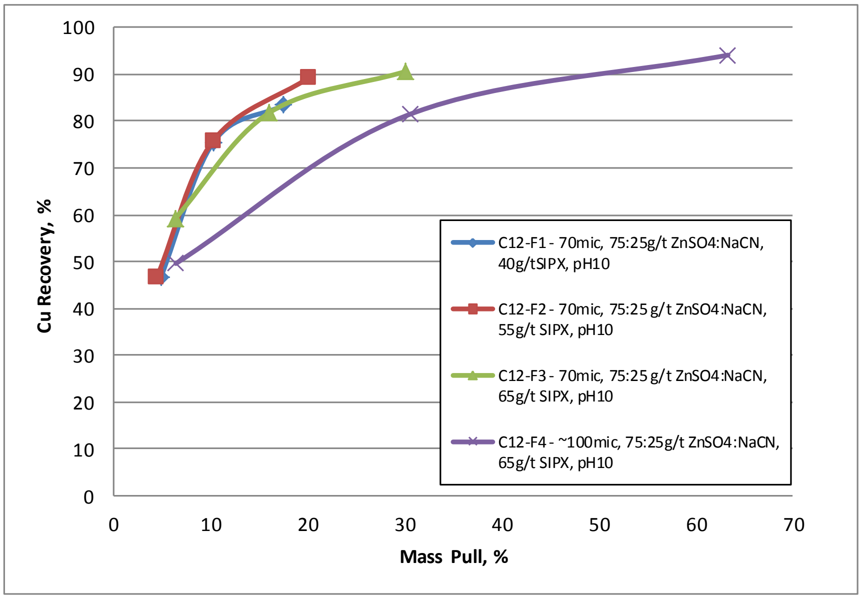
Table 13.6: LCT Mass Balance for Supergene Master Composite

Product	Weight	Assays %, g/t					% Distribution				
	%	Cu	Zn	Fe	Au	Ag	Cu	Zn	Fe	Au	Ag
Cu Clnr 3 Conc	**17**	**26.1**	**1.68**	**28.3**	**3.6**	**86.7**	**87**	**89**	**14**	**36**	**78**
Cu Clnr 1 Tail	18	1.92	0.06	42.7	2.0	9.1	7	4	24	22	9
Rougher Tail	65	0.446	0.04	31.9	1.1	3.8	6	8	62	42	13
Feed	**100**	**4.98**	**0.31**	**33.3**	**1.65**	**18.5**	**100**	**100**	**100**	**100**	**100**

13.6 Flotation Testwork – Primary Composite

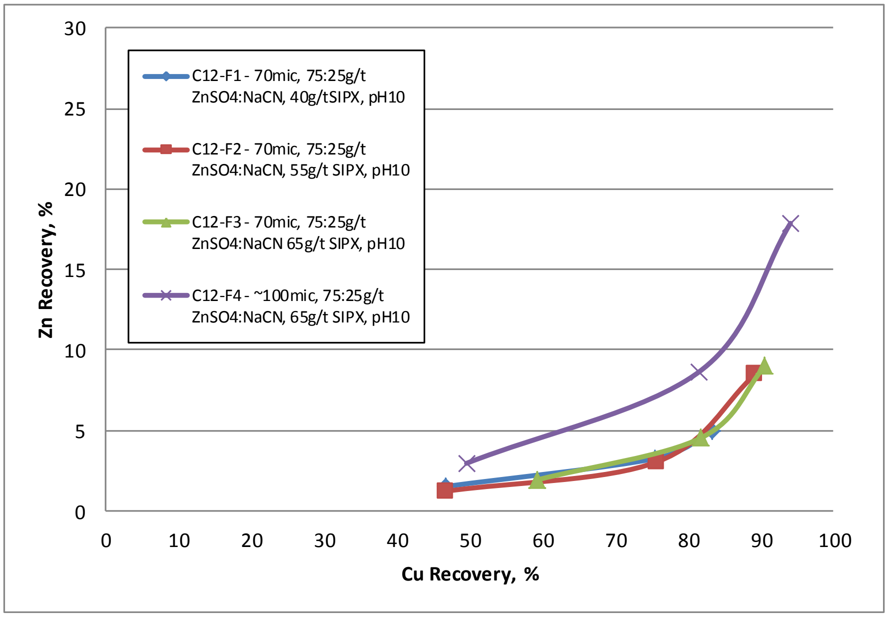
Four rougher flotation tests were performed on the primary ore composite. As only very minor secondary copper was present, a relatively low dosage of $ZnSO_4$ and NaCN was used for Zn depression in the copper circuit in all tests. Tests F1-F3 used a 70 micron k_{80} grind size and F4 tested a coarser k_{80} grind of ~100 microns. SIPX was used as a collector and was gradually increased along with residence time through the four tests driven by repeated evidence of incomplete flotation. Mass pull vs. Cu recovery is shown in Figure 13.5, which shows a consistent envelope for tests F1-F3 although at the coarser grind selectivity against pyrite and sphalerite was somewhat lost. Test F2 was used as the basis for subsequent cleaner and locked cycle tests.

Figure 13.5: Primary Composite Copper Rougher Flotation Results



Selectivity of copper flotation against zinc was excellent in tests F1-F3. Rougher copper recoveries of ~90% were achieved with less than 10% Zn misplacement to rougher concentrate, which demonstrates a very selective float and indicates ultimate zinc losses to final copper concentrates will be low. Copper vs zinc recovery curves for the rougher tests are presented in Figure 13.6.

Figure 13.6: Primary Composite Copper vs. Zinc Selectivity in Rougher



Three cleaner tests were conducted prior to locked cycle testing. All used the F2 rougher conditions followed by regrinding and cleaning in 3 stages. Test F5 suffered from poor froth conditions in the 1st cleaner stage and as a result significant recovery was lost. This was corrected in tests F6 and F7 which both produced steep grade-recovery curves. A slightly steeper curve in F7 despite a slightly inferior rougher justified the conditions of F7 for locked cycle testing. The locked cycle test produced a result significantly better than the batch test curve of 89% Cu recovery to a concentrate of 24.9% grade. The concentrate would also attract gold and silver credits although gold and silver recoveries were 45% and 39% respectively.

Due to the limited amount of testing, little focus was applied to zinc circuit optimisation, however testing generally suggested good zinc metallurgy can be expected. The locked cycle test yielded a Zn recovery ~86% to an excellent concentrate grade of 60.5%.

The copper circuit grade vs. recovery curves and the final locked cycle test mass balance are presented as follows in Figure 13.7 and Table 13.7.

Figure 13.7: Primary Composite Cu Cleaner Flotation and LCT Results

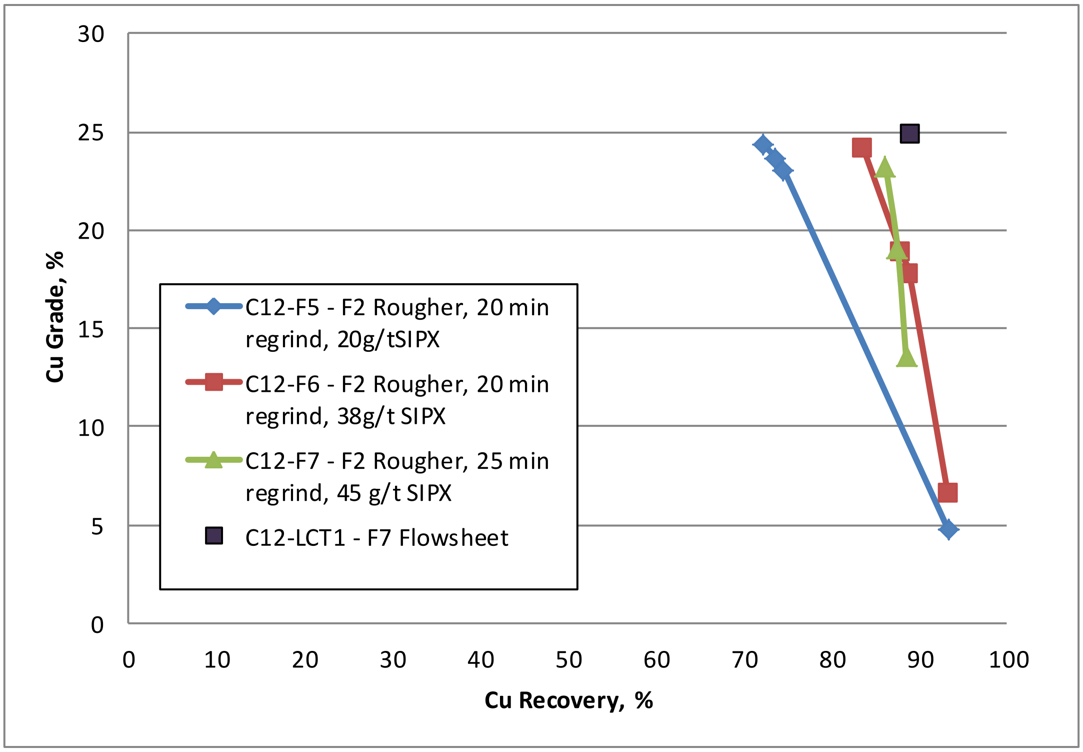


Table 13.7: LCT Mass Balance for Primary Composite

Product	Weight	Assays %, g/t					% Distribution				
	%	Cu	Zn	Au	Ag	Fe	Cu	Zn	Au	Ag	Fe
Cu Clnr 3 Conc	**10**	**24.9**	**3.88**	**10.9**	**167**	**31.8**	**89**	**6**	**45**	**39**	**9**
Zn Clnr 3 Conc	**9**	**0.85**	**60.5**	**1.45**	**47.5**	**4.64**	**3**	**86**	**6**	**10**	**1**
Zn Clnr 1 Tail	**10**	1.09	3.76	3.37	73.7	35.9	4	6	14	17	10
Rougher Tail	**71**	0.17	0.24	1.23	19.9	38.0	4	3	36	33	79
Feed	**100**	**2.78**	**6.54**	**2.42**	**42.5**	**34.1**	**100**	**100**	**100**	**100**	**100**

13.7 Flotation Testwork – Transition Ore

A limited amount of testwork was conducted on transition material containing significant secondary copper and zinc. Recoveries were relatively high to a bulk rougher concentrate but separation into separate copper and zinc concentrates was not achieved. It is likely this material will not respond to conventional copper/zinc flotation schemes (although some operations worldwide have had success following non-conventional approaches including reverse flotation). In the author’s experience, weathered VMS deposits invariably contain a certain amount of this sulphide transition material although often it represents a small tonnage and can be handled by blending with the other materials. Further testing is required following better definition of these zones to identify the best treatment approach for such materials moving forward.

13.8 Qualified Person's Comments on Section 13

In the opinion of the Qualified Person the metallurgical testwork conducted to date adds support to the declaration of the Indicated Mineral Resource based on the following:

- Metallurgical testwork completed to date, using standard metallurgical testing procedures has shown that oxide and most sulphide materials are amenable to conventional processing, using cyanide leaching for extraction of gold and silver from oxides, and flotation to recover copper and zinc from sulphides.

- Subject to ICP scans and supplemental assays to check for deleterious elements, concentrates produced from flotation testwork of both supergene and primary composites are considered highly marketable being of good grade and containing precious metal credits.

14 MINERAL RESOURCE ESTIMATES

14.1 Key Assumptions/Basis of Estimate

Fladgate undertook quality assurance and quality control studies on the mineral resource data for the Harvest project. Fladgate concludes that the collar, down hole survey, assay and lithology data are adequate to support resource estimation.

There are a total of 80 drill holes for a total of approximately 16,580 meters of drilling within the Terakimti database used to support mineral resource estimation. The drilling database comprises 12 core drill holes (1,573 m) from the 2009-2010 due diligence drill campaign and 68 core drill holes (15,007 m) from the 2013 drill campaign.

The drill database was provided by Tigray as a MS Access® database. The database cut-off date for Mineral Resource estimate purposes was 8 November, 2013.

Fladgate imported the collar, survey, lithology, alteration, and assay data into MineSight®, a commercial mining software program. Topographic contour limits were based on a surface supplied by Tigray. The topography is based upon gravity geophysical survey stations and ortho-rectified stereographic images. The topography has an accuracy of ±60 cm. Fladgate checked that the drillhole collars matched the topographic surface. All data used the local grid coordinate system.

14.2 Geological Models

Geological interpretations were completed by Tigray based on lithological, mineralogical and alteration features logged in drill core, and were digitized by Fladgate to form three-dimensional solids representing the VHMS mineralization and the post-mineralization quartz-feldspar porphyry dykes. Fladgate reviewed the wireframe model, minor adjustments were made to snap the wireframe boundary to drill hole intercepts. Fladgate coded each zone separately. The zone codes are show in Table 14-1.

Table 14-1: Terakimti Zone Domain Codes

Zone	Code
C1	5
S1	10
LZn	15
L Cu	20
U1	25
N1	30
N2	35

Two surfaces were constructed to represent the base of oxidation and the base of supergene enrichment which are significant controls on the grade of mineralization and are also significant for metallurgical processing and recovery. The surfaces were used to subdivide the VHMS mineralization into oxide, supergene and primary sulphide subdomains. The geological models used to constrain mineral resource estimation are shown below in Figure 14-1.

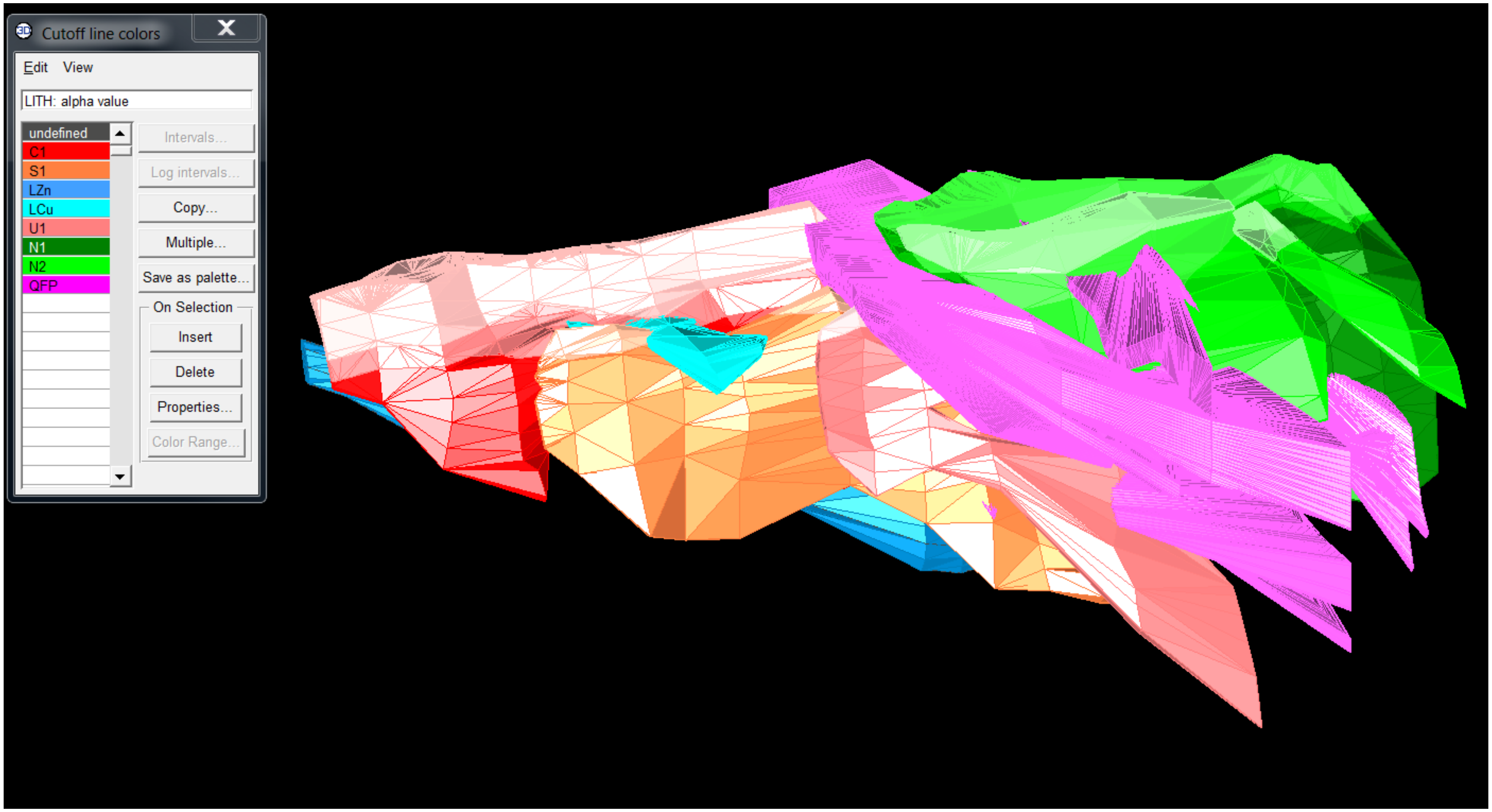
Locally there are areas of the mineralization which have a more moderate dip. Fladgate coded the more significant of these areas separately.

A list of oxidation and dip subdomain codes is shown in Table 14-2.

Table 14-2: Terakimti Oxidation and Orientation Subdomain Codes

Domains	Oxidation Code	Steep Dip Code	Moderate Dip Code
Oxide	5	10	5
Supergene	10	10	5
Primary	15	10	5

Figure 14-2: Three Dimensional View of VMS Wireframes and Quartz-Feldspar Porphyry



14.3 Exploratory Data Analysis (EDA)

Exploratory data analysis (EDA) comprised basic statistical evaluation of the assays and 5 m composites for copper, gold, lead, silver, sulphur and SG.

14.3.1 Assays

14.3.1.1 Histograms and Probability Plots

Log-scaled histograms and probability plots for gold within the oxide and supergene domains show evidence for two mixed populations, a low-grade population of values below 0.6 g/t and a mineralized higher grade population above 0.6 g/t Au.

Plots for gold in the primary sulphide zone show the presence of a single mineralized population.

Log-scaled histograms and probability plots for silver within the supergene domain show evidence for two mixed populations. There is a low-grade population of values below 8 g/t and a mineralized higher grade population above 8 g/t Ag.

Plots for silver in the primary sulphide zone show the presence of a single mineralized population.

Plots for copper in the primary sulphide domain show the presence of a background low grade population below 0.1% Cu. Fladgate inspected log-scaled histograms and probability plots for zinc within each individual mineralized zone. The plots show the presence of a low grade population below a threshold of 0.4% Zn.

14.3.1.2 Scatter Plots

Fladgate examined assay scatterplots between the elements within the oxide, supergene and primary zones of mineralization.

The scatter plots within the oxide zone show very little correlation between the elements. The correlation coefficients generally increase with depth moving from the oxide to the supergene-enriched and the primary sulphide domain. The correlation coefficients are shown below in Table 14-3.

The scatter plot of copper against sulphur in the supergene and primary sulphide domains (Figure 14-3) show evidence of a population with high sulphur (>30% S) and higher copper grades (semi-massive to massive sulphide).

Table 14-3: Assay Correlation Coefficients

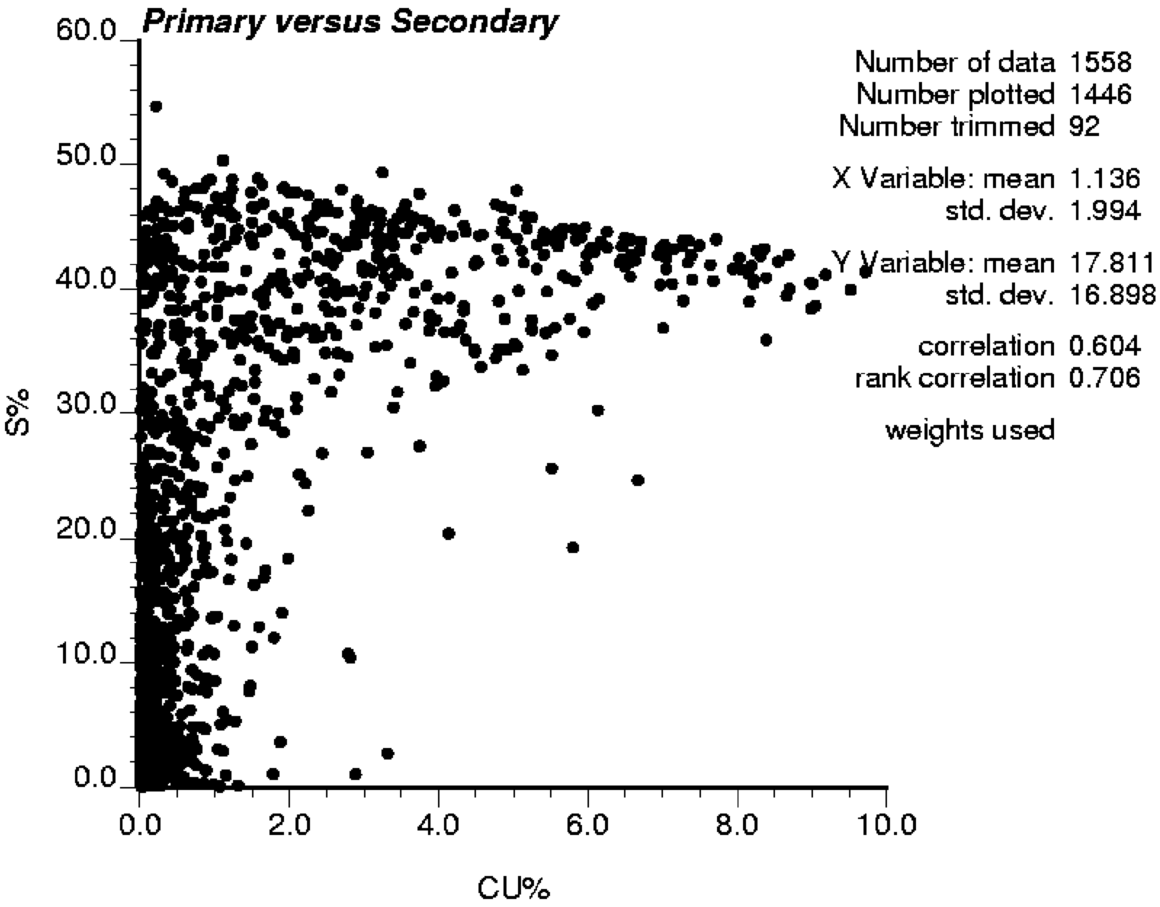
Oxide	Ag	Au	Cu	Pb	Zn	S
Ag	X	0.27	0.04	0.18	-0.11	-0.0
Au		X	0.00	0.25	0.00	-0.07
Cu			X	0.01	0.03	0.03
Pb				X	-0.06	-0.07
Zn					X	-0.12
S						X

Supergene	Ag	Au	Cu	Pb	Zn	S
Ag	X	0.37	-0.07	0.28	-0.07	-0.03
Au		X	0.03	0.18	-0.02	0.02
Cu			X	0.03	0.50	0.55
Pb				X	0.06	0.11
Zn					X	0.22
S						X

Primary	Ag	Au	Cu	Pb	Zn	S
Ag	X	0.71	0.59	0.46	0.47	0.59
Au		X	0.44	0.34	0.29	0.56
Cu			X	0.08	0.11	0.60
Pb				X	0.66	0.22
Zn					X	0.28
S						X

Note: Significant correlations >0.5 are highlighted in blue

Figure 14-3: Scatter plot of Copper Against Sulphur, Primary Domain



14.3.1.3 Grade Capping/Outlier Restrictions

Fladgate evaluated length weighted, normal-scaled and log-scaled histograms and probability plots of the assays to define grade outliers for copper, gold, lead, silver, zinc and sulphur within the oxide and supergene subdomains and within each of the mineralized primary sulphide domains separately.

The capping grade thresholds and the amount of metal removed within the oxide and supergene subdomains are shown below in Table 14-4. The capping thresholds within each primary sulphide mineralized domain are shown below in Table 14-5. The global mean grades and amount of metal removed from each of the primary sulphide mineralized domains are shown below in Table 14-6. No capping was considered necessary for sulphur.

Capping was completed on the assays prior to compositing.

Table 14-4: Oxide and Supergene Subdomain Cap Thresholds and Metal Removed

Silver

Subdomain	Mean (g/t)	Capping Threshold (g/t)	Capped Mean (g/t)	Number Assays	Number Capped	Metal Removed (%)
Oxide	9	70	8	271	5	14.0%
Supergene	41	340	40	257	2	2.4%

Gold

Subdomain	Mean (g/t)	Capping Threshold (g/t)	Capped Mean (g/t)	Number Assays	Number Capped	Metal Removed (%)
Oxide	2.61	33.0	2.24	271	2	14.2%
Supergene	1.26	12.0	1.11	257	2	11.5%

Copper

Subdomain	Mean (%)	Capping Threshold (%)	Capped Mean (%)	Number Assays	Number Capped	Metal Removed (%)
Oxide	0.14	0.6	0.10	271	2	31.0%
Supergene	0.63	None	0.63	257	0	0.0%

Lead

Subdomain	Mean (g/t)	Capping Threshold (g/t)	Capped Mean (g/t)	Number Assays	Number Capped	Metal Removed (%)
Oxide	0.22	2.0	0.22	271	1	0.6%
Supergene	0.16	0.9	0.12	257	12	-20.4%

Zinc

Subdomain	Mean (g/t)	Capping Threshold (g/t)	Capped Mean (g/t)	Number Assays	Number Capped	Metal Removed (%)
Oxide	0.07	0.6	0.07	271	1	0.3%
Supergene	0.28	2.5	0.19	257	8	32.5%

Table 14-5: Primary Sulphide Cap Thresholds

Mineralized Domain	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
C1	5.0	75	6.5	1.30	13.0
S1	4.5	None	None	1.30	20.0
LZN	1.0	23	1.2	1.30	13.0
LCU	1.3	20	2.0	0.20	1.0
U1	4.0	80	5.5	1.50	20.0
N1	4.0	25	4.0	0.25	3.0
N2	8.0	80	9.0	1.30	20.0

Table 14-6: Primary Sulphide Capping Mean Grades and Metal Removed

Metal	Number Assays	Mean Grade	Capped Mean Grade	Metal Removed (%)	Number Capped
Silver (g/t)	1,689	10	8	-14.0%	10
Gold (g/t)	1,689	0.72	0.69	-4.1%	24
Copper (%)	1,689	1.24	1.22	-1.5%	12
Lead (%)	1,689	0.11	0.10	-8.5%	23
Zinc (%)	1,689	1.48	1.42	-4.0%	26

14.3.2 Composites

In order to normalize the weight of influence of each sample, Fladgate regularized the assay intervals by compositing the drill hole data into 5 m lengths using the mineralization zone domain boundaries to break the composites. Capped and uncapped composites were calculated. Fladgate back-tagged the 5 m composites using the mineralization zone solids and the oxidation subdomain solids.

Within the oxide subdomain, the CV of the gold composites is moderate (1.52). Within the supergene subdomain, the CV of all of the metals is moderate to high. Within the primary subdomain, the CV of lead, copper and zinc are high. The high CV values indicate that further domaining is warranted for the metals of most economic interest (gold and silver in oxides; gold, silver and copper in the supergene sulphides; copper and zinc in the primary sulphides).

Summary statistics are shown below in Table 14-7, Table 14-8 and Table 14-9.

Table 14-7: Oxide Subdomain Capped Composite Statistics

Metal	Number	Minimum	Maximum	Mean (g/t)	Standard Deviation	CV
Silver (g/t)	47	0	40	7	10	1.30
Gold (g/t)	47	0.01	16.66	2.19	3.32	1.52
Copper (%)	47	0.00	0.45	0.10	0.09	0.93
Lead (%)	47	0.00	1.60	0.22	0.30	1.34
Zinc (%)	47	0.00	0.53	0.07	0.10	1.45
Sulphur (%)	45	0.00	20.99	1.02	2.66	2.61

Table 14-8: Supergene Subdomain Capped Composite Statistics

Metal	Number	Minimum	Maximum	Mean (g/t)	Standard Deviation	CV
Silver (g/t)	47	0	290	39	64	1.60
Gold (g/t)	47	0.01	9.81	1.19	1.66	1.39
Copper (%)	47	0.00	4.08	0.62	0.96	1.53
Lead (%)	47	0.00	0.90	0.12	0.17	1.35
Zinc (%)	47	0.00	2.50	0.19	0.38	2.04
Sulphur (%)	37	0.12	41.53	10.03	11.28	1.12

Table 14-9: Primary Subdomain Capped Composite Statistics

Metal	Number	Minimum	Maximum	Mean (g/t)	Standard Deviation	CV
Silver (g/t)	278	0	56	10	11	1.10
Gold (g/t)	278	0.00	4.40	0.69	0.72	1.04
Copper (%)	278	0.00	10.86	1.22	1.79	1.47
Lead (%)	278	0.00	1.37	0.10	0.17	1.70
Zinc (%)	278	0.00	15.73	1.42	2.29	1.61
Sulphur (%)	245	2.39	4.76	3.40	0.67	0.20

14.3.2.1 Histograms and Probability Plots

Log-scaled histograms and probability plots for gold within the oxide and supergene domains show evidence for two mixed populations, a low-grade population of values below 0.6 g/t and a mineralized higher grade population above 0.6 g/t Au.

Log-scaled histograms and probability plots for silver within the supergene domain show evidence for two mixed populations. There is a low-grade population of values below 8 g/t and a mineralized higher grade population above 8 g/t Ag.

Plots for silver and gold in the primary sulphide zone show the presence of a single mineralized population.

Plots for copper in the primary sulphide domain show the presence of a background low grade population below 0.1% Cu. Plots for zinc show the presence of a low grade population below a threshold of 0.4% Zn.

14.3.2.2 Scatter plots

Fladgate examined composite scatterplots between the elements within the oxide, supergene and primary zones of mineralization.

As expected, the scatterplots show the same patterns as the assay scatterplots.

The composite scatter plots of copper against sulphur in the supergene and primary sulphide domains show evidence of a population with high sulphur (>24% S) and higher copper grades (semi-massive to massive sulphide).

14.3.3 Indicator Probabilistic Models

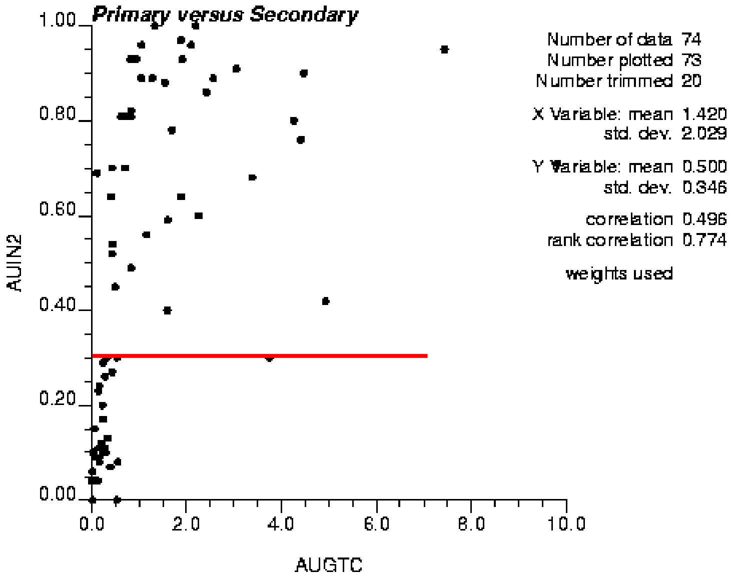
14.3.3.1 Gold Model

As a result of the multiple gold composite populations and high CV within the oxide and supergene mineralized zones identified by EDA, Fladgate created a probabilistic indicator model within the oxide and supergene mineralization subdomains using a nominal threshold of 0.6 g/t gold. The threshold was chosen to separate the low-grade composite values (with a maxima at 0.25 g/t Au on the log-scaled histogram) from the higher grade values. The 0.6 g/t threshold is marginally higher than the median of the oxide gold assays (0.48 g/t Au).

Fladgate inspected the probabilistic gold indicator model in section and on plan. The model adequately reflects the input composite indicator data. The probabilistic indicator model was further validated by comparing the mean of a nearest neighbour model (NN) of the gold grade indicator with the mean of the interpolated indicator. Swath plots of the models were inspected to check for local bias. Fladgate found no evidence of significant global or local bias in the interpolated indicator probabilities.

Fladgate used the gold indicator probabilities in the blocks to control the composite and block matching during the gold estimation process. An indicator threshold of 0.5 was first chosen to give an unbiased volume estimate of the number of blocks above the 0.6 g/t Au threshold (by comparison with the NN model). A second indicator threshold was selected to form a mixed or transition grade zone between the low grade and higher grade zones. The choice of indicator threshold for the transition zone was based on a scatterplot of the back-tagged interpolated indicator block values against the capped gold grades of the composites (Figure 14-4). At indicator thresholds below 0.3, the grades of the composites are mostly below 0.6 g/t Au.

Figure 14-4: Scatterplot of Back-tagged Gold Indicators and Original Indicators



Gold subdomains were coded and flagged to blocks and back-flagged to composites.

The final grade estimation domain and gold subdomain codes are shown below in**Error! Reference ource not found.**

Table 14-10: Gold Estimation Sub-Domains and Indicator Probability Thresholds

Subdomain	**Code**	**Probability Threshold**
Low Grade	5	< 0.3
Medium Grade	7	0.3 – 0.5
High Grade	10	> 0.5

14.3.3.2 Silver Model

As a result of the multiple silver composite populations and high CV within the supergene mineralized zones identified by EDA, Fladgate created a probabilistic indicator model within the oxide and supergene mineralization subdomains using a nominal threshold of 8 g/t silver. The threshold was chosen to separate the low-grade composite values (with a maxima at 3 g/t Ag on the log-scaled histogram) from the higher grade values.

Fladgate inspected the probabilistic silver indicator model in section and on plan. The model adequately reflects the input composite indicator data. The probabilistic indicator model was further validated by comparing the mean of a nearest neighbour model (NN) of the silver grade indicator with the mean of the interpolated indicator. Swath plots of the models were inspected to check for local bias. Fladgate found no evidence of significant global or local bias in the interpolated indicator probabilities.

Fladgate used the silver indicator probabilities in the blocks to control the composite and block matching during the silver estimation process. An indicator threshold of 0.55 was first chosen to give an unbiased volume estimate of the number of blocks above the 8 g/t Ag threshold (by comparison with the NN model).

Silver subdomains were coded and flagged to blocks and back-flagged to composites.

The final grade estimation domain and silver subdomain codes are shown below in Table 14-11.

Table 14-11: Silver Estimation Sub-Domains and Indicator Probability Thresholds

Subdomain	Code	Probability Threshold
Low Grade	5	< 0.55
High Grade	10	> 0.55

14.3.3.3 Sulphur Model

As a result of the correlation between copper and sulphur and high CV of copper composites within the supergene and primary mineralized sudomains, Fladgate created a sulphur probabilistic indicator model within the supergene and primary mineralization subdomains using a nominal threshold of 24% sulphur. The threshold was chosen to separate the low-grade copper composite values from the higher grade values and to model semi-massive to massive sulphide mineralization.

Fladgate inspected the probabilistic sulphur indicator model in section and on plan. The model adequately reflects the input composite indicator data. The probabilistic indicator model was further validated by comparing the mean of a nearest neighbour model (NN) of the sulphur grade indicator with the mean of the interpolated indicator. Swath plots of the models were inspected to check for local bias. Fladgate found no evidence of significant global or local bias in the interpolated indicator probabilities.

Fladgate used the sulphur indicator probabilities in the blocks to control the composite and block matching during the sulphur and copper grade estimation process. An indicator threshold of 0.45 was first chosen to give an unbiased volume estimate of the number of blocks above the 24% S threshold (by comparison with the NN model). A second indicator threshold was selected to constrain copper grade estimation. This choice of indicator threshold was based on a scatterplot of the back-tagged interpolated sulphur indicator block values against the capped copper grades of the composites (Figure 14-5). At indicator thresholds below 0.6, the grades of the composites are mostly below 1% Cu.

Copper and sulphur subdomains were coded and flagged to blocks and back-flagged to composites. The subdomain codes are shown below in Table 14-12.

Figure 14-5: Scatterplot of Back-tagged Sulphur Indicators and Original Indicators

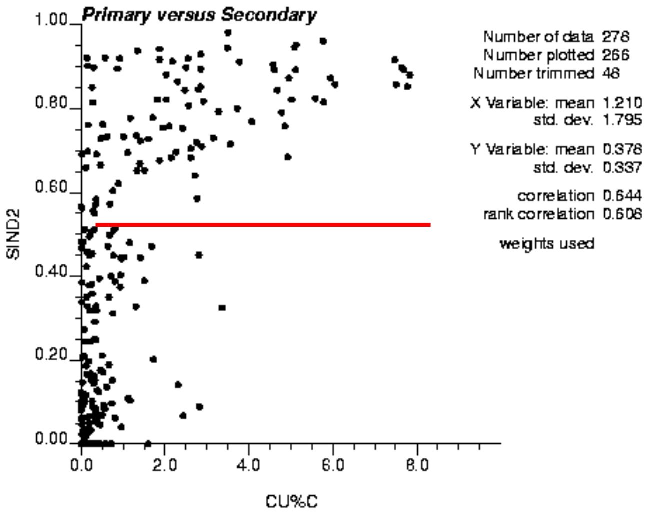


Table 14-12: Sulphur Estimation Sub-Domains and Indicator Probability Thresholds

Subdomain	**Code**	**Probability Threshold**
Low Grade	5	< 0.45
Medium Grade	7	0.45 – 0.60
High Grade	10	> 0.60

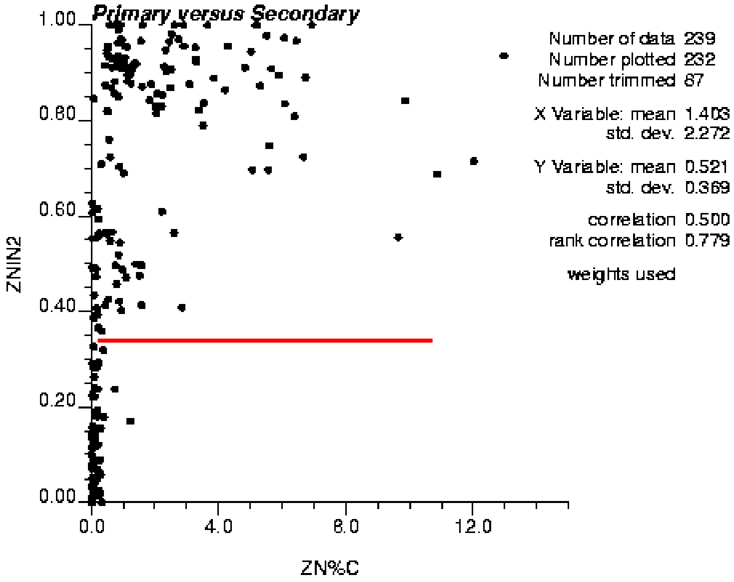
14.3.3.4 Zinc Model

As a result of the multiple zinc composite populations and high CV within the supergene and primary mineralized zones identified by EDA, Fladgate created a probabilistic indicator model within the supergene and primary mineralization subdomains using a nominal threshold of 0.4% zinc. The threshold was chosen to separate the low-grade composite from the higher grade values.

Fladgate inspected the probabilistic zinc indicator model in section and on plan. The model adequately reflects the input composite indicator data. The probabilistic indicator model was further validated by comparing the mean of a nearest neighbour model (NN) of the zinc grade indicator with the mean of the interpolated indicator. Swath plots of the models were inspected to check for local bias. Fladgate found no evidence of significant global or local bias in the interpolated indicator probabilities.

Fladgate used the zinc indicator probabilities in the blocks to control the composite and block matching during the zinc grade estimation process. An indicator threshold of 0.55 was first chosen to give an unbiased volume estimate of the number of blocks above the 0.4% Zn threshold (by comparison with the NN model). A second indicator threshold was selected to form a mixed or transition grade zone between the low grade and higher grade zones. The choice of indicator threshold was based on a scatterplot of the back-tagged interpolated indicator block values against the capped zinc grades of the composites (Figure 14-6). At indicator thresholds below 0.35, the grades of the composites are mostly below 0.4% Zn.

Figure 14-6: Scatterplot of Back-tagged Zinc Indicators and Original Indicators



Zinc subdomains were coded and flagged to blocks and back-flagged to composites. The sub-domain codes and probability thresholds are shown below in Table 14-13.

Table 14-13: Zinc Estimation Sub-Domains and Indicator Probability Thresholds

Subdomain	Code	Probability Threshold
Low Grade	5	< 0.35
Medium Grade	7	0.35 – 0.55
High Grade	10	> 0.55

14.3.4 Variography

Fladgate constructed down-hole and directional correlograms for the metals of economic interest and for sulphur within the mineralized subdomains. Indicator correlograms were modelled for gold using a 0.6 g/t threshold, for silver using a 8 g/t threshold and for sulphur using a 24% threshold. The indicator correlograms were used to interpolate the respective indicator probabilities for each respective element.

Fladgate plotted variogram maps of the data and checked that the selected anisotropy directions matched by plotting and comparing variogram maps of the variogram models. An example is shown in Figure 14-7.

Fladgate used a single spherical model and a nested exponential model and a nugget effect to fit the experimental correlograms. Table 14-14 shows the correlogram models.

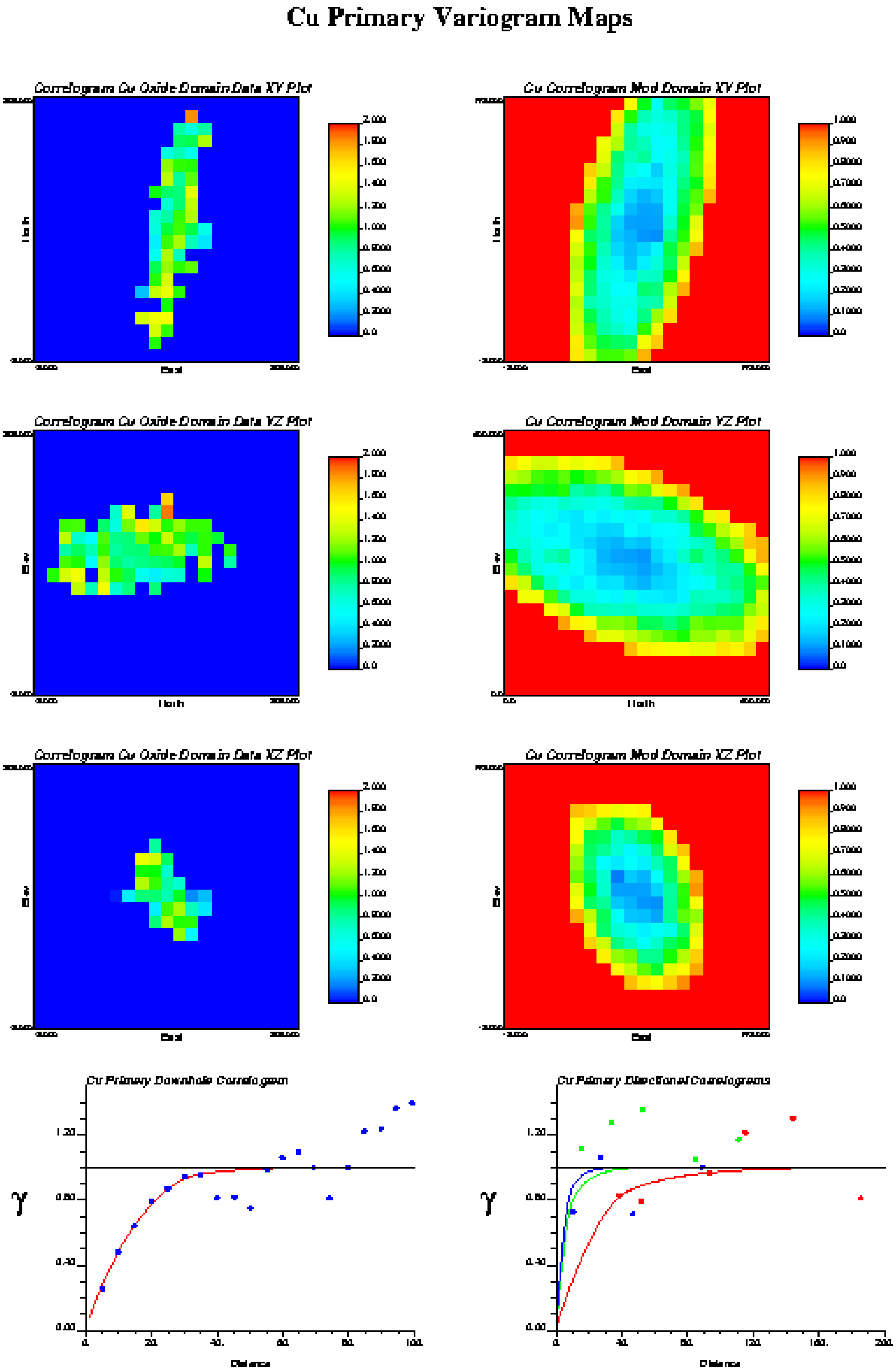
The same correlogram model was applied to the areas of the mineralized domains with a more moderate dip angle. The final rotation angle was changed by 20° to rotate the variogram into the plane of the mineralization.

In the Supergene and Primary domains, Fladgate prevented smearing of the correlogram across the different mineralized zones by offsetting each zone from one another.

Table 14-14: Grade and Indicator Variogram Models

Variogram Metal/Domain	Nugget	Sills		Ranges 1st Structure			Ranges 2nd Structure			Rotations		
		1st Structure	2nd Structure	Y (m)	X (m)	Z (m)	Y (m)	X (m)	Z (m)	Z	X	Y
Ag Indicator	0.2	0.4	0.4	50	15	10	100	30	20	20	0	60
Au Indicator	0.2	0.4	0.4	50	15	10	150	30	20	20	0	60
S Indicator	0.35	0.4	0.25	150	60	60	200	140	70	20	-25	70
Zn Indicator	0.2	0.25	0.55	50	50	50	200	100	50	20	-25	70
Ag Oxide	0.1	0.5	0.4	50	20	10	100	30	15	20	0	60
Au Oxide	0.2	0.4	0.4	30	15	10	70	20	15	20	0	60
Au Primary/Supergene	0.2	0.4	0.4	120	60	10	150	75	20	20	-25	70
Ag Primary/Supergene	0.2	0.25	0.55	75	60	12	300	100	20	20	-25	70
Cu Primary/Supergene	0.02	0.45	0.53	45	10	10	100	30	20	20	-25	70
Pb Primary/Supergene	0.45	0.2	0.35	90	30	30	140	40	35	20	-25	70
Zn Primary/Supergene	0.4	0.25	0.35	80	40	30	120	45	40	20	-25	70
S Primary/Supergene	0.3	0.35	0.35	60	40	40	120	60	60	20	-25	70

Figure 14-7: Copper Variogram Maps and Model Fits



14.4 Estimation/Interpolation Methods

The block model consists of regular blocks (5 m along strike x 5 m across strike x 5 m vertically). The block size was chosen such that geological contacts are reasonably well reflected and to support an open pit mining scenario.

Fladgate checked that the volume resulting from coding of blocks from the wireframes matched the original volume of the wireframes. The results are shown below in Table 14-15.

Table 14-15: Triangulation and Block Volume Checks

Domain	Triangulations (m3)	Block Volume (m3)	Difference (%)
Oxide	347,669	346,750	-0.3%
Supergene	324,086	315,500	-2.7%
Primary	1,976,808	1,989,625	0.6%
Combined	2,648,563	2,651,875	0.1%

Fladgate used a combination of ordinary kriging and inverse distance weighted to the power of two (IDW2) grade interpolation methods.

For passes one and two, a minimum of three and a maximum of 12 composites were used for grade interpolations. In all passes, a maximum of two composites per hole was used. Table 14-16, Table 14-17 and Table 14-18 show the search distances and search ellipse orientations for the estimation domains.

Grade estimation used a composite and block matching scheme based on the oxide, supergene and primary mineralization type domain codes and based on the respective indicator subdomain codes of the indicator models. Grade interpolation In the primary and supergene domains also used matching of blocks and composites by the zone codes shown in Table 14-1. The block and composite sharing scheme is shown in Table 14-19, Table 14-20, Table 14-21, Table 14-22 and **Error! Reference source not found.**.

The orientation of the search ellipse was adjusted to a dip 20° flatter where the wireframe also had a flatter

Table 14-16: Grade Model Search Distances, Pass 1

		Block	Interpolation	Search Ellipse Dimensions			Composites			Rotations			
Metal	Domain	Domain Code	Method	Y (Major)	X (Semi-Major	Z (Minor)	Minimum	Maximum	Maximum Per Hole	Z	X	Y	Flat Subdomain Y
Ag	Oxide	5	OK	100	30	30	3	12	2	20	0	60	40
Au	Oxide	5	OK	100	30	20	3	12	2	20	0	60	40
Cu	Oxide	5	IDW2	100	30	20	3	12	2	20	0	60	40
Pb	Oxide	5	IDW2	100	30	20	3	12	2	20	0	60	40
Zn	Oxide	5	IDW2	100	30	30	3	12	2	20	0	60	40
S	Oxide	5	IDW2	100	30	20	3	12	2	20	0	60	40
SG	Oxide	5	IDW2	100	30	20	1	24	4	20	0	60	40
Ag	Supergene	10	OK	100	30	20	3	12	2	20	0	60	40
Au	Supergene	10	OK	100	30	20	3	12	2	20	0	60	40
Cu	Supergene	10	OK	100	30	20	3	12	2	20	0	60	40
Pb	Supergene	10	IDW2	100	30	15	3	12	2	20	0	60	40
Zn	Supergene	10	OK	100	30	30	3	12	2	20	0	60	40
S	Supergene	10	OK	100	50	50	3	12	2	20	0	60	40
SG	Supergene	10	IDW2	100	30	20	1	24	4	20	-25	70	50
Ag	Primary	15	OK	100	30	20	3	12	2	20	-25	70	50
Au	Primary	15	OK	100	50	30	3	12	2	20	-25	70	50
Cu	Primary	15	OK	100	30	20	3	12	2	20	-25	70	50
Pb	Primary	15	OK	100	30	20	3	12	2	20	-25	70	50
Zn	Primary	15	OK	100	30	30	3	12	2	20	-25	70	50
S	Primary	15	OK	100	50	50	3	12	2	20	-25	70	50
SG	Primary	15	IDW2	100	30	20	4	24	4	20	-25	70	50

Table 14-17: Grade Model Search Distances, Pass 2

Metal	Domain	Blocks	Intepolation	Search Ellipse Dimensions			Composites			Rotations			
		Domain Code	Method	Y (Major)	X Semi-Major	Z (Minor)	Minimum	Maximum	Maximum Per Hole	Z	X	Y	Flat Subdomain Y
Ag	Oxide	5	OK	150	50	25	3	12	2	20	0	60	40
Au	Oxide	5	OK	150	30	20	3	12	2	20	0	60	40
Cu	Oxide	5	IDW2	150	50	25	3	12	2	20	0	60	40
Pb	Oxide	5	IDW2	150	50	25	3	12	2	20	0	60	40
Zn	Oxide	5	IDW2	150	50	50	3	12	2	20	0	60	40
S	Oxide	5	IDW2	150	50	25	3	12	2	20	0	60	40
SG	Oxide	5	IDW2	150	50	25	1	24	4	20	0	60	40
Ag	Supergene	10	OK	150	50	25	3	12	2	20	0	60	40
Au	Supergene	10	OK	150	30	20	3	12	2	20	0	60	40
Cu	Supergene	10	OK	150	50	25	3	12	2	20	0	60	40
Pb	Supergene	10	IDW2	150	50	25	3	12	2	20	0	60	40
Zn	Supergene	10	OK	150	50	50	3	12	2	20	0	60	40
S	Supergene	10	OK	150	75	75	3	12	2	20	0	60	40
SG	Supergene	10	IDW2	150	50	25	1	24	4	20	-25	70	50
Ag	Primary	15	OK	150	50	25	3	12	2	20	-25	70	50
Au	Primary	15	OK	150	75	30	3	12	2	20	-25	70	50
Cu	Primary	15	OK	150	50	30	3	12	2	20	-25	70	50
Pb	Primary	15	OK	150	50	25	3	12	2	20	-25	70	50
Zn	Primary	15	OK	150	50	50	3	12	2	20	-25	70	50
S	Primary	15	OK	150	75	75	3	12	2	20	-25	70	50
SG	Primary	15	IDW2	150	50	25	4	24	4	20	-25	70	50

Table 14-18: Grade Model Search Distances, Pass 3

Metal	Domain	Domain Code	Interpolation Method	Search Ellipse Dimensions			Composites			Rotations			
				Y (Major)	X Semi-Major	Z (Minor)	Minimum	Maximum	Maximum Per Hole	Z	X	Y	Flat Subdomain Y
Ag	Oxide	5	OK	200	65	40	2	12	2	20	0	60	40
Au	Oxide	5	OK	200	50	40	1	12	2	20	0	60	40
Cu	Oxide	5	IDW2	200	65	40	2	12	2	20	0	60	40
Pb	Oxide	5	IDW2	200	65	40	2	12	2	20	0	60	40
Zn	Oxide	5	IDW2	200	65	65	1	12	2	20	0	60	40
S	Oxide	5	IDW2	200	65	40	2	12	2	20	0	60	40
SG	Oxide	5	IDW2	200	65	40	1	24	4	20	0	60	40
Ag	Supergene	10	OK	200	65	40	2	12	2	20	0	60	40
Au	Supergene	10	OK	200	50	40	1	12	2	20	0	60	40
Cu	Supergene	10	OK	250	80	60	2	12	2	20	0	60	40
Pb	Supergene	10	IDW2	200	65	40	2	12	2	20	0	60	40
Zn	Supergene	10	OK	200	65	65	1	12	2	20	0	60	40
S	Supergene	10	OK	200	100	100	1	12	2	20	0	60	40
SG	Supergene	10	IDW2	200	65	40	1	24	4	20	-25	70	50
Ag	Primary	15	OK	200	65	40	2	12	2	20	-25	70	50
Au	Primary	15	OK	200	100	30	2	12	2	20	-25	70	50
Cu	Primary	15	OK	200	60	40	1	12	2	20	-25	70	50
Pb	Primary	15	OK	200	65	40	2	12	2	20	-25	70	50
Zn	Primary	15	OK	200	65	65	2	12	2	20	-25	70	50
S	Primary	15	OK	200	100	100	1	12	2	20	-25	70	50
SG	Primary	15	IDW2	200	65	40	4	24	4	20	-25	70	50

Table 14-19: Gold Grade Estimation Block and Composite Sharing

	Blocks		Composites					
			Pass 1		Pass 2		Pass 3	
Mineralization Type	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain
Oxide	5	5	5, 10	5	5, 10	5	5, 10	5
Oxide	5	7	5, 10	7	5, 10	7	5, 10	5, 7, 10
Oxide	5	10	5, 10	10	5, 10	10	5, 10	7, 10
Supergene	10	5	5, 10	5	5, 10	5	5, 10	5
Supergene	10	7	5, 10	7	5, 10	7	5, 10	5, 7, 10
Supergene	10	10	5, 10	10	5, 10	10	5, 10	7, 10
Primary	15	N/A	15	N/A	15	N/A	15	N/A

Table 14-20: Silver Grade Estimation Block and Composite Sharing

	Blocks		Composites					
			Pass 1		Pass 2		Pass 3	
Mineralization Type	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain
Oxide	5	N/A	5	N/A	5	N/A	5	N/A
Oxide	5	N/A	5	N/A	5	N/A	5	N/A
Oxide	5	N/A	5	N/A	5	N/A	5	N/A
Supergene	10	5	10	5	10	5	10	5
Supergene	10	7	10	7	10	7	10	7
Supergene	10	10	10	10	10	10	10	10
Primary	15	N/A	15	N/A	15	N/A	15	N/A

Table 14-21: Copper Grade Estimation Block and Composite Sharing

Mineralization Type	Blocks		Composites					
			Pass 1		Pass 2		Pass 3	
	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain
Oxide	5	N/A	5	N/A	5	N/A	5	N/A
Oxide	5	N/A	5	N/A	5	N/A	5	N/A
Oxide	5	N/A	5	N/A	5	N/A	5	N/A
Supergene	10	5	10	5	10	5	10	5
Supergene	10	7	10	7	10	7	10	7
Supergene	10	10	10	10	10	10	10	10
Primary	15	N/A	15	N/A	15	N/A	15	N/A

Table 14-22: Zinc Grade Estimation Block and Composite Sharing

Mineralization Type	Blocks		Composites					
			Pass 1		Pass 2		Pass 3	
	Domain (Mineralization Type)	Sulphur Probability Sub-Domain	Domain (Mineralization)	Sulphur Probability Sub-Domain	Domain (Mineralization)	Sulphur Probability Sub-Domain	Domain (Mineralization)	Sulphur Probability Sub-Domain
Supergene	10	5	10	5	10	5	10	5
Supergene	10	7	10	7	10	7	10	7
Supergene	10	10	10	10	10	10	10	10
Primary	15	5	15	5	15	5	15	5
Primary	15	7	15	5, 7, 10	15	5, 7, 10	15	5, 7, 10
Primary	15	10	15	10	15	10	15	10

Table 14-23: Sulphur Grade Estimation Block and Composite Sharing

Mineralization Type	Blocks		Composites					
			Pass 1		Pass 2		Pass 3	
	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain	Domain (Mineralization Type)	Probability Sub-Domain
Supergene	10	N/A	10	N/A	10	N/A	10	N/A
Supergene	10	N/A	10	N/A	10	N/A	10	N/A
Supergene	10	N/A	10	N/A	10	N/A	10	N/A
Primary	15	5	15	5	15	5	15	5
Primary	15	7	15	5, 7, 10	15	5, 7, 10	15	5, 7, 10
Primary	15	10	15	10	15	10	15	10

14.5 Density Assignment

14.5.1 Mineralized Zones

Fladgate used 1,818 specific gravity (SG) determinations (high outliers were capped, low outliers were removed from the measurements) performed on drill core samples collected from material within the mineralized zones. The determinations were performed by Tigray personnel using unsealed immersion techniques to measure the weight of each sample in air and in water.

Summary SG statistics are shown in **Table 14-24**.

Table 14-24: Summary Specific Gravity Statistics

Subdomain	Mean (g/cm^3)	Outlier Thresholds (g/cm^3)	Re-Calculated Mean (g/cm^3)	Number Measurements	Number Capped/Removed	Change in Mean (%)
Oxide	2.53	<1.8 – >3.4	2.55	167	17	0.9%
Supergene	2.93	<2.2 – >5.0	3.04	160	19	3.6%
Primary	3.40	<2.0	3.41	1,491	5	0.2%

Fladgate interpolated the SG values using an IDW2 interpolation method in three passes. The interpolation plan for SG used the sulphur indicator model as a hard boundary to reflect the expected sharp density contrast between massive to semi-massive sulphide and the surrounding stringer or disseminated sulphide mineralization.

The SG interpolation parameters are shown in **Table 14-16**, **Table 14-17** and **Table 14-18**.

Fladgate created a second SG model by linear regression of sulphur block values. Fladgate compared the IDW2 and sulphur regression SG models by back flagging SG values from the block models to the composites and compared the estimated block values with the original SG measurements. The statistical comparison is shown below in **Table 14-25**. The results show that the IDW model results in a significant reduction in the errors of the estimated values.

Fladgate used the IDW2 SG model to report the tonnage estimates of the mineral resources.

Table 14-25: Comparison Statistics IDW and Sulphur Regression SG Models

	IDW2 Model	Sulphur Regression Model
Mean Error	0.0003	0.0161
Sum Error	0.0662	3.2924
Mean Squared Error	0.0611	0.1018
Standard Deviation of the Errors	0.2477	0.3194
Mean	3.4358	3.4200
Difference in Mean Relative to Mean of Measurements	-0.01%	-0.047%

14.5.2 Waste Density Assignment

Fladgate grouped together measurements of waste SG into two groups of rock types intrusives which cross-cut mineralization and the volcano-sedimentary package, which hosts mineralization at Terakimti. Fladgate sub-divided the SG measurements using the wireframes representing the oxides, supergene and the primary. Summary statistics for the intrusives and volcano-sedimentary package are shown in below in Table 14-26 and Table 14-27 respectively.

Table 14-26: SG Summary Statistics, Intrusives

Weathering	Number of Measurements	Average SG (g/cm^3)	Minimum SG (g/cm^3)	Maximum SG (g/cm^3)
Oxide	45	2.29	1.72	3.27
Supergene	74	2.47	2.05	2.78
Primary	190	2.66	2.30	3.69
Combined	309	2.56	1.72	3.69

Table 14-27: SG Summary Statistics, Volcano-Sedimentary host rocks

Weathering	Number of Measurements	Average SG (g/cm^3)	Minimum SG (g/cm^3)	Maximum SG (g/cm^3)
Oxide	366	2.44	1.74	3.04
Supergene	176	2.63	1.84	3.05
Primary	2,190	2.81	1.84	4.27
Combined	2,732	2.75	1.74	4.27

14.6 Block Model Validation

Fladgate validated the Terakimti block model to ensure appropriate honoring of the input data. Nearest-neighbour (NN) grade models were created to validate the OK grade models.

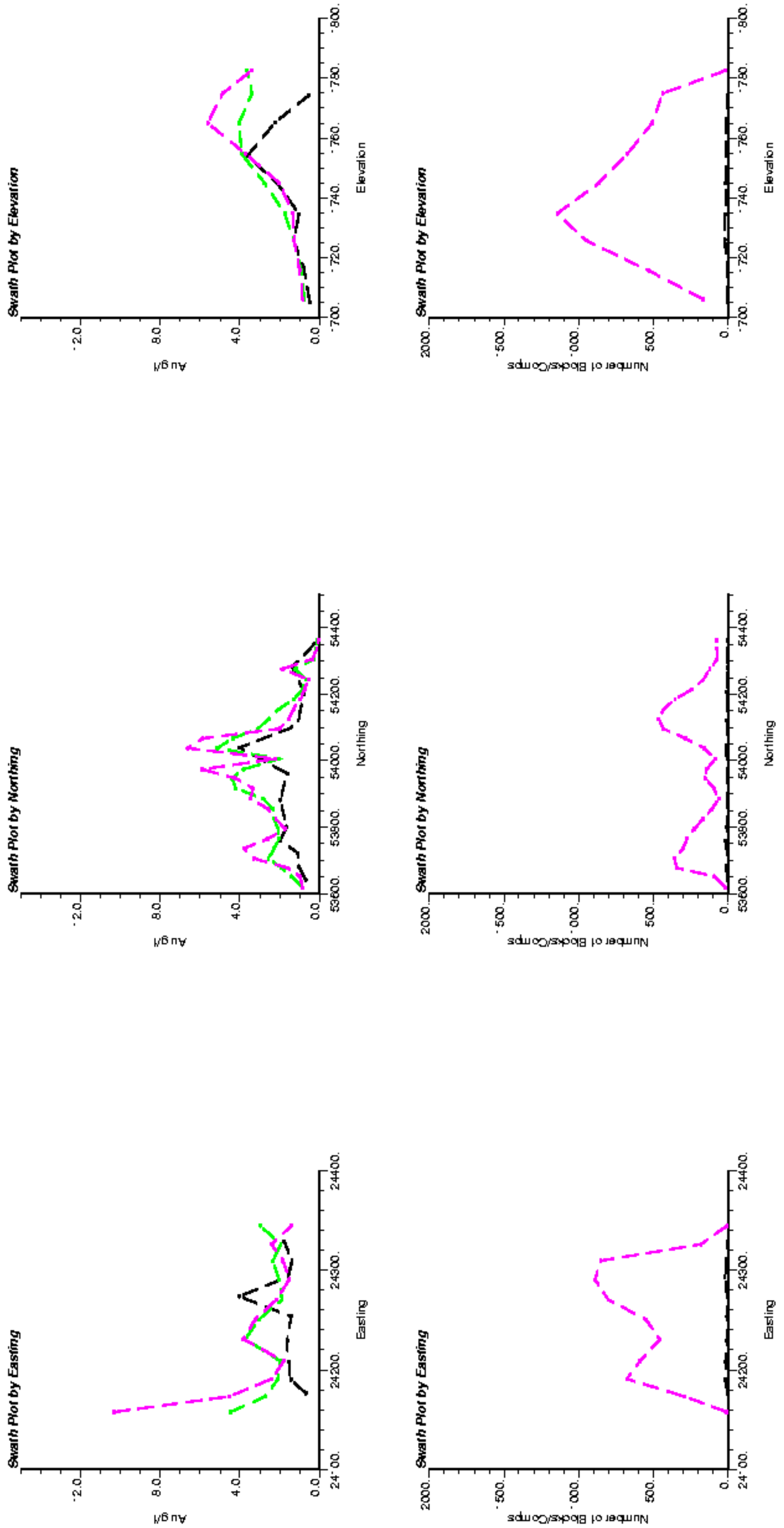
The validation comprised:

- Detailed visual inspection of block grade versus composited data in section and plan view. The visual inspection of block grade versus composited data showed a good reproduction of the data by the model
- A comparison between the OK and NN estimates was completed to check for global bias in the grade estimates. Differences were within acceptable levels (<10%)
- Swath plot validation compared average grades from OK and NN models along different directions. Except in areas where there is currently limited drilling, the swath plots indicated good agreement for all variables. The swath plots are shown below in **Figure 14-8** to **Figure 14-11**.
- A check on grade smoothing (model selectivity) for potential open pit mining using a global change-of-support correction (a discrete Gaussian model) to the NN model. The check was completed for gold in the oxide domain and for gold, copper and zinc in the primary domain. The results show that the amount of smoothing is acceptable around the cut-off grades of interest and are generally less than 5%.

Fladgate evaluated the impact of capping by estimating uncapped and capped grade models. Generally the amounts of metal removed by capping in the models are consistent with the amounts calculated during the grade capping study on the composites. The amount of metal removed by capping is calculated by the following formula:

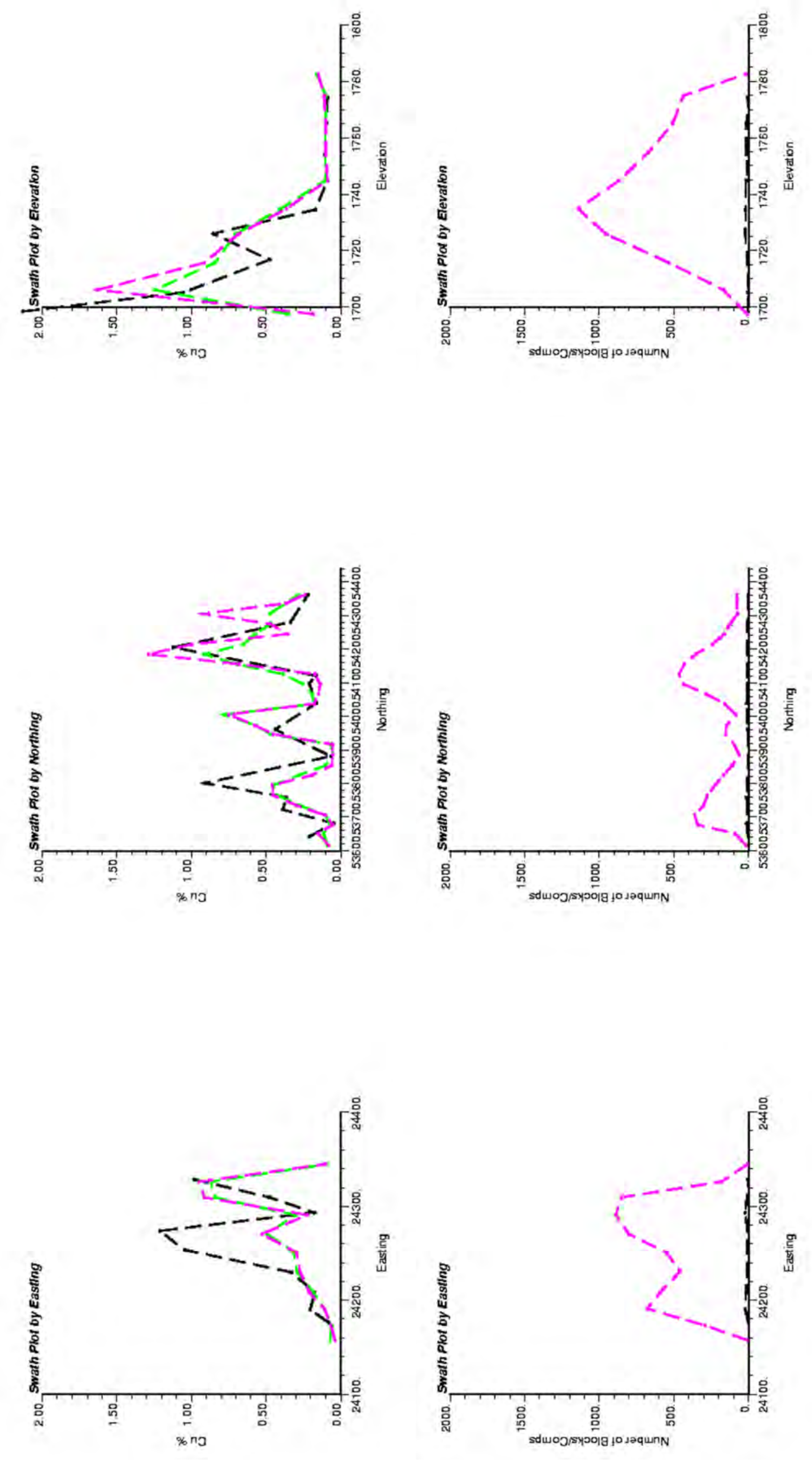
$$\% \text{ Metal} = \frac{(\text{Mean Uncapped} - \text{Mean Capped})}{\text{Mean Uncapped}}$$

Figure 14-8: Swath Plots by Northing and By Elevation for Gold, Oxide and Supergene Domains



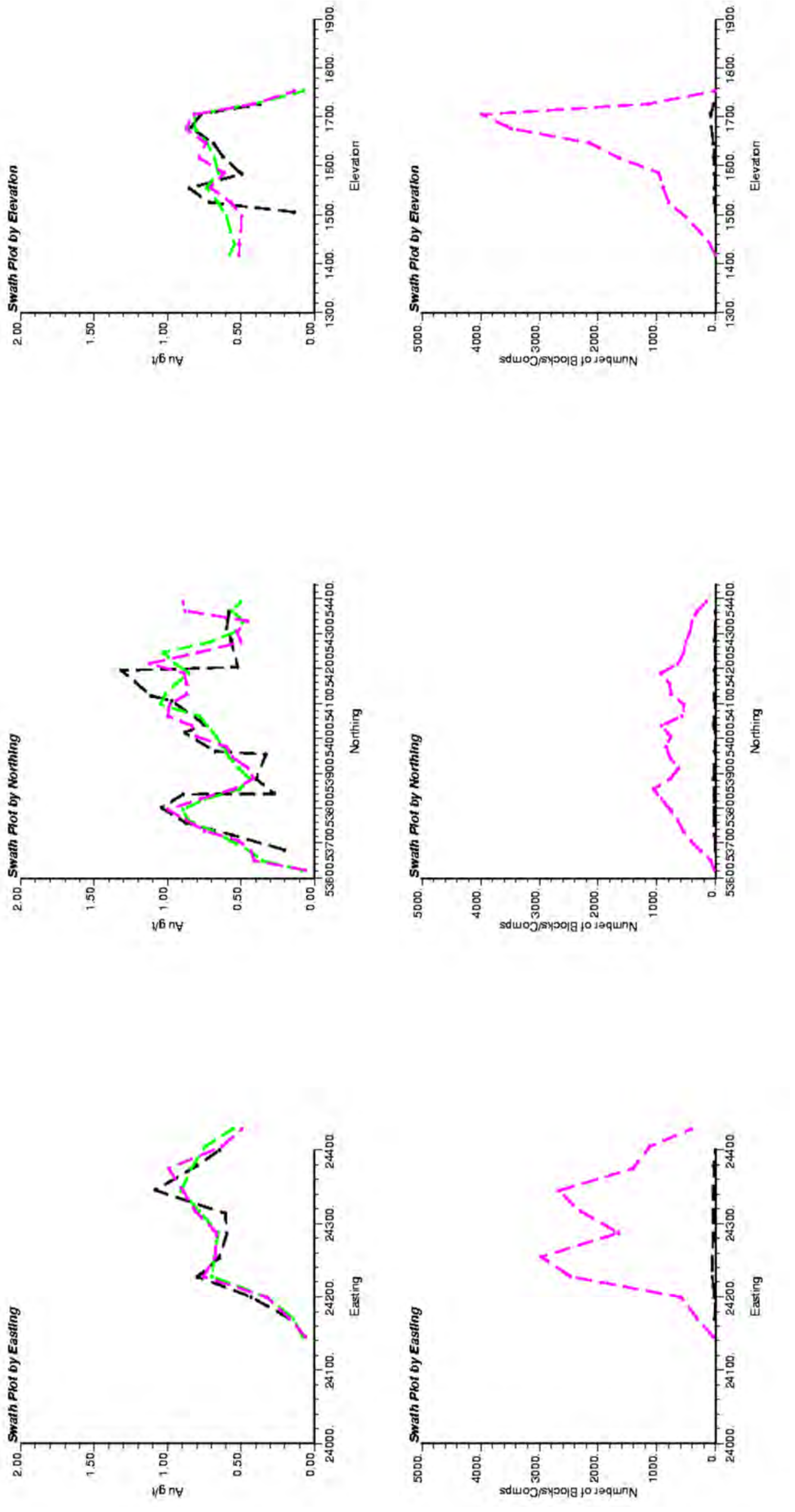
Note: Upper Swath plots show the gold grades, lower swath plots show number of blocks or composites. Green line represents OK model. Magenta line represents NN model. Black line reporesents Composites. Red line shows approximate elevation of the oxide supergene contact.

Figure 14-9: Swath Plots by Northing and By Elevation for Copper, Oxide and Supergene Domains



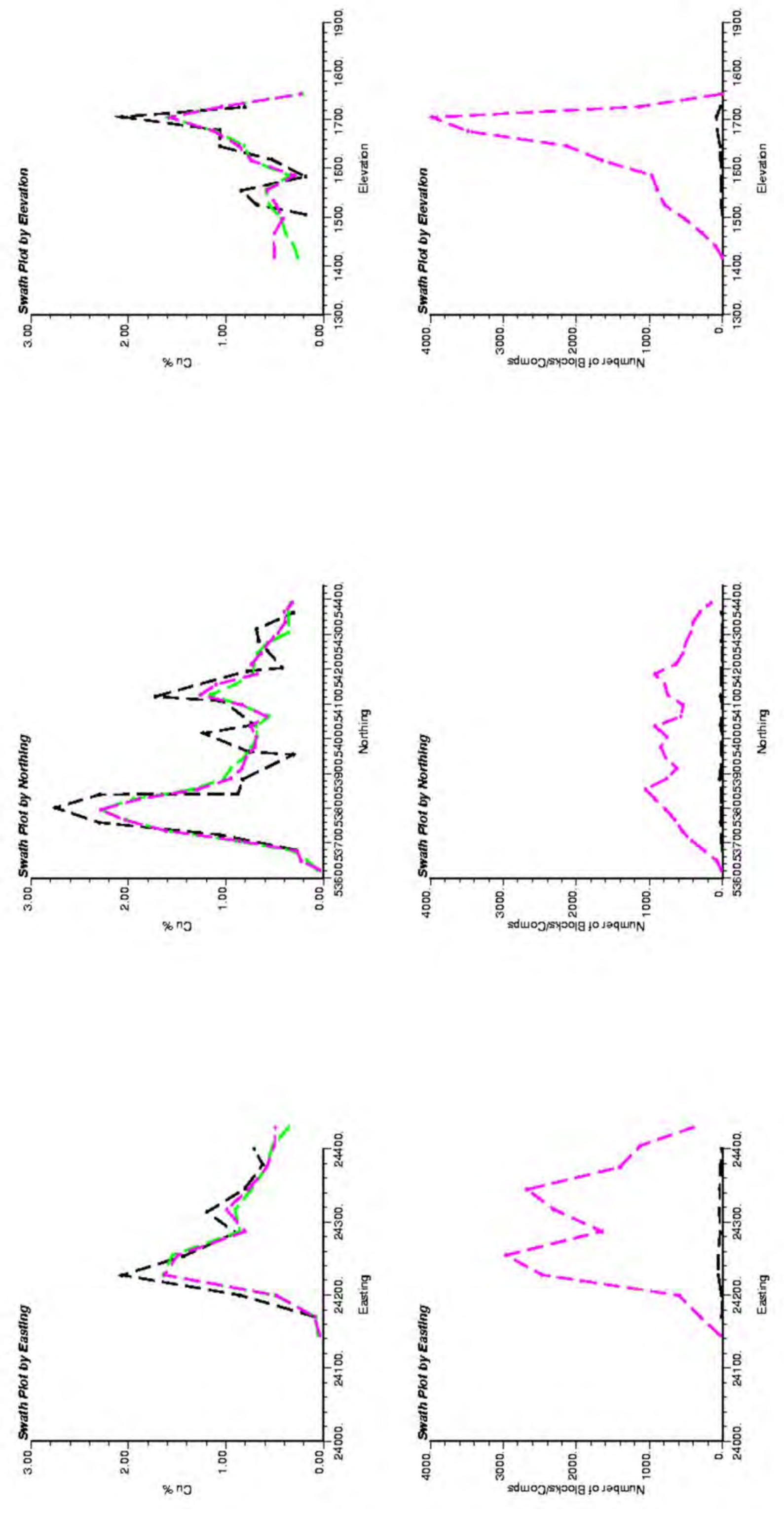
Note: Upper Swath plots show the copper grades, lower swath plots show number of blocks or composites. Green line represents OK model. Magenta line represents NN model. Black line reporesents Composites.Red line shows approximate elevation of the oxide supergene contact.

Figure 14-10: Swath Plots by Northing and By Elevation for Gold, Primary Domain



Note: Upper Swath plots show the gold grades, lower swath plots show number of blocks or composites. Green line represents OK model. Magenta line represents NN model. Black line reporesents Composites.

Figure 14-11: Swath Plots by Northing and By Elevation for Copper, Primary Domain



Note: Upper Swath plots show the copper grades, lower swath plots show number of blocks or composites. Green line represents OK model. Magenta line represents NN model. Black line reporesents Composites.

14.7 Classification of Mineral Resources

Fladgate conducted an analysis of confidence limits using monthly panels of production for a 5,000 t/day open pit mine operation. The accuracy of grade estimates was then scaled to quarterly and annual production. Accuracy of ±15% or better at a 90% confidence limit was used as the criteria to select a drill hole spacing to be used to classify Indicated resources. The results show that a spacing of 40 meters x 40 meters meets this criteria.

Fladgate is of the opinion that the geological model, data quality, geological continuity and metallurgical characteristics are also sufficiently well known to allow classification of Indicated mineral resources.

Fladgate classified blocks with two holes falling within 40 meters and the closest hole within 30 meters (i.e. with a 40 x 40 m spacing) to the Indicated category. Fladgate manually modified the classification to remove areas drilled with a spacing of 40 m (on section) x 80 m (between sections).

Fladgate classified blocks within the mineralization wireframe into the Inferred mineral resource category where samples fell within a 120 m distance from the block centroid.

The mineralization solids represent the limit at which grade continuity can reasonably be assumed. A 120 m maximum distance permits a reasonable local estimate of grades (as demonstrated by model validation).

14.8 Reasonable Prospects of Economic Extraction

Fladgate assessed the classified blocks of oxide, supergene and primary mineralization and for reasonable prospects of economic extraction by applying preliminary economics for potential open pit mining methods. Metallurgical test-work has been completed for the oxide, supergene and primary VHMS mineralization.

For the purpose, Fladgate used input process and operating costs, metal prices, metallurgical recovery and a 45° slope angle to optimise a pit shell using a Lerchs-Grossman algorithm.

The assessment does not represent an economic analysis of the deposit, but was used to determine reasonable economic assumptions for the purpose of estimating the mineral resource. The assumed long term metal prices used by Fladgate for reporting mineral resources are shown below in Table 14-28. Although the long-term metal prices are optimistic, the prices are suitable for an initial mineral resource estimate.

Table 14-28: Fladgate Long-term Metal Price Assumptions

Metal Prices	Price
Gold ($/oz)	1,400
Silver ($/oz)	25.0
Copper ($/lb)	3.5
Zinc ($/lb)	0.9

14.8.1 Marginal Cut-off Grade Calculation

Fladgate estimated marginal NSR cut-off values of 25.9 $/t for oxide material and 23.9 $/t for supergene and primary material based on the total costs shown in Table 14-29. The marginal cut-off is based on the generally accepted practice that a decision is made at the pit rim if mined material above the marginal cut-off grade will lose less money if it is sent to the mill rather than if it is sent to the waste dump. It is considered for further processing if it contains a value that is greater than the costs to process it. The assumed metallurgical recoveries are shown in

Table **14-30**.

Based upon the marginal NSR, Fladgate have chosen a cut-off grade of 25.9 $/t for reporting oxide and a cut-off grade of 23.9 $/t for reporting supergene and primary Mineral Resources potentially amenable to an open pit mining method.

An additional underground mining cost of 40.0 $/t has been assumed for reporting potentially underground mineable primary material. The total cut-off is therefore 63.9 $/t for the underground portion of the Mineral Resource.

Table 14-29: Mining Costs and Ore-Based Costs Used for NSR Calculations

Mining Costs	**Unit**	**Value (US$)**
Waste Mining Reference Cost	$/t mined	1.75
Total Reference Mining Costs	$/t mined	1.75
Ore Based Costs		
Process Cost (Carbon-In-Leach)	$/t ore	17.9
Process Cost (Floatation)	$/t ore	17.9
G&A Cost (Carbon-In-Leach)	$/t ore	8.0
G&A (Floatation)	$/t ore	6.0
Total Ore Based Costs Oxide	$/t milled	25.9
Total Ore Based Costs Supergene/Primary	$/t milled	23.9

Table 14-30: Gold Metallurgical Recovery for Pit Optimisation

	Metallurgical Recoveries			
	Gold (%)	Silver (%)	Copper (%)	Zinc (%)
Oxide	73	50	N/A	N/A
Supergene	36	78	87	89
Primary (Cu Concentrate)	45	39	89	6
Primary (Zinc Concentrate)	6	10	3	86

14.9 Mineral Resource Statement

Mineral Resources for the Project were classified under the 2010 CIM Definition Standards for Mineral Resources and Mineral Reserves by application of a cut-off grade that incorporated mining and metallurgical recovery parameters. Open pit Mineral Resources are constrained to a pit shell based on commodity prices, metallurgical recoveries and operating costs.

Underground Mineral Resources are constrained to blocks with a value above an NSR cut-off grade incorporating an underground mining cost. Isolated blocks were removed.

Mineral resources are tabulated in Table 14-31. The Qualified Person for the Mineral Resource estimate is David G. Thomas, P.Geo. Mineral resources are reported using the long-term metal prices shown in Table 14-28 and have an effective date of 17 January 2014.

Table 14-31: Terakimti Mineral Resource Estimate David Thomas, P. Geo. (Effective Date: January 17, 2014)

	Ore Type	NSR Cut-Off ($/t)		Contained Metal							
			Tonnes ('000s)	Cu (%)	Zn (%)	Au (g/t)	Ag (g/t)	Cu ('000 lb)	Zn ('000 lb)	Au ('000 oz)	Ag ('000 oz)
Indicated											
	Oxide	25.9	290	0.06	0.02	2.55	10.5	-	-	24	98
	Sulphide	23.9	1,841	2.20	1.65	1.06	17.5	89,477	66,871	63	1,033
	Sub-Total Indicated							89,477	66,871	86	1,130
Inferred											
	Oxide	25.9	398	0.13	0.07	4.77	7.2	-	-	61	92
	Sulphide	23.9	2,583	1.09	1.42	0.96	20.6	62,187	77,101	80	1,712
	Underground Primary	63.9	939	0.69	2.92	0.84	15.2	14,198	60,358	25	459
	Sub-Total Inferred							76,385	137,459	166	2,264

Footnotes to mineral resource statement:

Fladgate undertook data verification, and reviewed Tigray's quality assurance and quality control programs on the mineral resources data. Fladgate concluded that the collar, survey, assay, and lithology data were adequate to support mineral resources estimation.

Domains were modelled in 3D to separate oxide, supergene and primary sulphide rock types from surrounding waste rock. The domains conformed to lithological contacts logged in diamond drill core. Sub-domaining was further warranted to separate different grade populations and zones with differing strike and dip orientation within domains.

Raw drill hole assays were composited to 5 m lengths broken at domain boundaries.

High grade assays were capped prior to compositing. Capping thresholds were assessed within each domain independently.

Block grades for copper, zinc, gold, and silver and lead were estimated from the composites using a combination of ordinary kriging (OK) and inverse distance weighted to the third power (ID3) into 5 x 5 x 5 m blocks coded by domain.

Dry bulk density of the oxide, supergene and primary sulphide was estimated by ID3 interpolation of SG measurements.

Blocks were classified as indicated and inferred in accordance with CIM Definition Standards.

NSR was estimated using undiluted grades, metal prices, recoveries, smelter treatment and refining costs.

Metal Prices used for copper, zinc, gold and silver were $3.50/lb, $0.9/lb, $1,400/oz, and $25/oz respectively.

Metallurgical recoveries, supported by metallurgical test work were applied as follows:

Oxide zone: a recovery of 78.4% was applied for gold and 64.5% for silver. Copper and zinc are not recovered during the oxide phase and therefore are not considered a part of the oxide mineral resources.

Supergene zone: recoveries to copper concentrate of 87%, 36%, and 78% were applied for copper, gold and silver. Zero recovery of zinc from the supergene zone has been assumed. The supergene zinc metal content has not been included in the mineral resource tabulation.

Primary zone: recoveries to copper concentrate of 89%, 45%, and 39%, were applied for copper, gold, and silver respectively. Recoveries to zinc concentrate of 85% and 10% were applied for zinc and silver.

A Lerchs-Grossman pit shell was generated from the NSR and using open pit mining costs of $1.75/t. The total ore based costs (process and G&A) are $25.9/t for oxide, and $23.9/t for the supergene and primary rock types. A constant pit slope of 45° was used in the pit optimization.

Open Pit Mineral Resources were reported within the Lerchs-Grossman pit shell above an NSR cut-off equivalent to the total ore based costs stated above.

Underground Mineral Resources were reported within a grade shell generated at an NSR cut-off of $63.9/t, assuming a $40/t underground mining cost in addition to the ore based costs stated above. Isolated blocks were removed prior to tabulation.

The contained metal figures shown are in situ. No assurance can be given that the estimated quantities will be produced. All figures have been rounded to reflect accuracy and to comply with securities regulatory requirements. Summations within the tables may not agree due to rounding. The sulphide summation for contained zinc does not agree due to exclusion from the mineral resource of the contained zinc metal within the supergene zone.

14.10 Sensitivity of the Mineral Resource

Fladgate assessed the sensitivity of the mineral resource to changes in metal price. Two alternative metal price cases were assessed using lower metal prices and higher 3 year trailing average metal prices. Fladgate estimated NSR values and generated L-G optimized pit shells for each case. Potentially underground mineable mineralization was constrained using a grade shell with a 63.9 $/t NSR cut-off. The total tonnage and metal content of potentially mineable mineralization by open pit and underground methods was tabulated and compared to the stated mineral resource. The results of the comparisons (shown below in Table 14-32 and Table 14-33) demonstrate that the tonnage and metal reported do not change significantly and Fladgate therefore concludes that the Mineral Resource is robust with respect to the choice of long-term metal price used for reporting.

Table 14-32: Open Pit Total Tonnage and Metal Sensitivity to Metal Price

Metal Price Assumption	% Difference Tonnes	% Difference Ag Metal	% Difference Au Metal	% Difference Cu Metal	% Difference Zn Metal
Low Case	-2.9%	-0.8%	-0.9%	-0.7%	-1.4%
Base Case	0.0%	0.0%	0.0%	0.0%	0.0%
Optimistic	16.4%	11.3%	9.5%	7.1%	21.6%

Note: Low Case – Au $1,250/oz, Cu $3.20/lb, Ag $20/oz, Zn $0.8/lb
Base Case – Au $1,400/oz, Cu $3.50/lb, Ag $25/oz, Zn $0.9/lb
Optimistic– Au $1,548/oz, Cu $3.60/lb, Ag $29.90/oz, Zn $0.9/lb

Table 14-33: Open Pit and Underground Mineable Tonnage and Metal Sensitivity to Metal Price

Metal Price Assumption	% Difference Tonnes	% Difference Ag Metal	% Difference Au Metal	% Difference Cu Metal	% Difference Zn Metal
Low Case	-8.2%	-4.5%	-3.7%	-2.7%	-10.1%
Base Case	0.0%	0.0%	0.0%	0.0%	0.0%
Optimistic	7.8%	3.2%	3.7%	2.1%	4.3%

Note: Low Case – Au $1,250/oz, Cu $3.20/lb, Ag $20/oz, Zn $0.8/lb
Base Case – Au $1,400/oz, Cu $3.50/lb, Ag $25/oz, Zn $0.9/lb
Optimistic– Au $1,548/oz, Cu $3.60/lb, Ag $29.90/oz, Zn $0.9/lb

14.11 Exploration Targets

The Mayshehagne prospect is at an early stage of data collection, and is lacking metallurgical recovery information to support mineral resource estimation. However, the number of drill holes, and the dimensions of the mineralized area are sufficient to permit estimation of an Exploration Target.

The mineralized zone has dimensions of approximately 120 meters in length (along strike), varies in width from 40 meters to 60 meters (the down-dip distance) and varies in thickness from less than 1 meter to 21 meters. The average grades (weighted by the down hole length of the intercept) of the mineralization are 3.0% copper, 4.5% zinc, 19 g/t silver and 0.8 g/t gold.

Using this information an Exploration Target would be in the range of: 100,000 to 400,000 Tonnes with grades ranging from 0.2% to 5.0% copper, 0.2 to 2.1 g/t gold, 3 g/t to 31 g/t silver and 0.4% to 8.2% zinc.

Fladgate cautions that the potential quantity and grade are conceptual in nature, that there has been insufficient exploration to define the exploration target as a Mineral Resource, and that it is uncertain if further exploration will result in the targets being delineated as a Mineral Resource.

14.12 Factors That May Affect the Mineral Resource Estimate

Areas of uncertainty that may materially impact the Mineral Resource estimates include:

- Long-term commodity price assumptions
- Long-term exchange rate assumptions
- Ore-based cost assumptions used
- Metal recovery assumptions used
- Changes to the tonnage and grade estimates as a result of new assay and bulk density information, in particular oxide copper assays
- Future tonnage and grade estimates may vary significantly as more drilling is completed.
- Changes to the metallurgical recovery assumptions as a result of new metallurgical test-work
- Any changes to the slope angle of the pit wall as a result of geotechnical information would affect the pit shell used to constrain the mineral resources.

14.13 Comments on Section 14

The QPs are of the opinion that the Mineral Resources for the Project, which have been estimated using core drilling, have been performed to industry practices, and conform to the requirements of CIM Definition Standards (2010).

15 MINERAL RESERVE ESTIMATES

This section is not applicable at this time.

16 MINING METHODS

As this report relates to the description of an initial mineral resource estimate, mining methods have not been evaluated or established and this section is not applicable at this time.

17 RECOVERY METHODS

As this report relates to description of an initial mineral resource estimate, recovery methods have not been evaluated and this section is not applicable at this time.

18 PROJECT INFRASTRUCTURE

This section is not applicable at this time.

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19 MARKET STUDIES & CONTRACTS

This section is not applicable at this time.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Studies

Tigray has reviewed projected baseline environmental and socio-economic studies with the aim of initiating an Environmental Impact Assessment (“EIA”) for the project if a resource calculation is undertaken. If the study goes ahead it will include initial work to establish field conditions and baseline determination in the following areas:

- meteorology
- hydrology
- hydrogeology
- water quality
- vegetation
- wildlife
- socio-economic conditions

20.2 Waste & Tailings Impoundment & Water Management

As this report relates to a description of initial exploration, planning, design and other specific factors related to the impoundment of tailing and waste materials, as well as management of water resources, have not yet been evaluated. Further development of the project should include early consideration to the environmental and other impacts associated with these important facilities and aspects of the project.

20.3 Project Permitting

Project permitting activities will be planned if a resource calculation is performed.

20.4 Social & Community Requirements

Tigray has been working with local communities to establish a relationship based on open communication and cooperation since 2011. To this end, Tigray has engaged local leaders, and has initiated several community development projects including road building.

21 CAPITAL & OPERATING COSTS

This section is not applicable at this time.

22 ECONOMIC ANALYSIS

As this report relates to the description of initial exploration, an economic analysis of the project has not been undertaken and this section is not applicable at this time.

23 ADJACENT PROPERTIES

Additional information is not available to report and this section is not applicable.

24 OTHER RELEVANT DATA & INFORMATION

Additional information is not available to report and this section is not applicable.

25 INTERPRETATIONS & CONCLUSIONS

The Harvest property has undergone extensive exploration using traditional and modern exploration techniques since the concessions were granted in 1999 and 2001. During Tigray Resources' involvement at the property (2011 onwards) the volume and quality of the data has grown considerably. Detailed mapping combined with traditional gold soil geochemistry and portable XRF soil sampling is particularly successful in identifying anomalous areas with respect to gold and base metals in all of the concessions.

An airborne EM geophysical survey carried out in 2012 identified VTEM anomalies and magnetic lineaments that, when interpreted using geological mapping information, resulted in the production of a more accurate geology map, and most importantly the identification of new exploration targets. These targets are focus of the company's grassroots activities while the more advanced projects at Terakimti, Adi Angoda and Mayshehagne see exploration in the form of core drilling and ground geophysics.

The majority of expenditure at the Harvest property related to the drilling of 101 diamond drillholes at the VMS prospects of Terakimti (80 holes), Adi Angoda (10 holes), Mayshehagne (10 holes) and VTEM09 (1 hole) for a total of 19,851.18 m. The Mayshehagne and VTEM09 prospects appear to be isolated VMS lenses of limited surface extent, although both structures remain open at depth. Adi Agoda mineralization is sporadic over a strike length of 1.6 km and has elevated gold and copper grades associated with zones of massive sulphide and sulphidic porphyry bodies. The most substantial copper-gold-lead-zinc mineralization on the property is located at Terakimti, where four massive sulphide lenses are present. Typical primary sulphide grades are 0.5-3 % copper, 0.5-2 g/t gold, 15-30 g/t silver, and 0.5-4 % zinc (see Table 10.3 for precise grades). Oxide zone grades are much higher and can attain grades up to 27.2 g/t gold and 157 g/t Au. Drilling indicates that the mineralization is open down-plunge, although later northwest-trending quartz-feldspar porphyry intrusions have cut through several of the lenses in one part of the system.

In addition to the VMS mineralization, a major zone of gold mineralization was identified approximately 1.5 km west of Terakimti at Ruwa Ruwa. The Ruwa-Ruwa Trend contains several bedrock gold prospects and abundant artisanal eluvial and alluvial working over a distance of 7 km. These include Ruwa Ruwa, Adi Goshu, and Lihamat and are all classified as orogenic lode gold mineralization. To date none of the Ruwa Ruwa Trend occurrences have been drilled.

The author concludes that the Harvest Property hosts a VMS system at Terakimti that has not been fully delineated. The discovery of VMS mineralization on the same scale as Terakimti is likely since VMS systems generally occur in clusters. However, to date, the prospects on other gossanous trends have not produced similar grades and widths. Orogenic lode-gold occurrences on the Ruwa Ruwa Trend indicate the potential for economic gold mineralization on the property. Additional work is required to meet these aims.

The geologic understanding of the deposit settings, lithologies, and structural and alteration controls on mineralization is sufficient to support estimation of Mineral Resources. The mineralization style and setting is well understood and is sufficient to support Mineral Resource estimation. The exploration programs completed to date are appropriate to the style of mineralization found in the deposit.

Sampling methods are acceptable, meet industry-standard practice, and are acceptable for Mineral Resource estimation purposes. The quality of the Tigray drill core, and channel analytical data is reliable and sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards

The Terakimti Mineral Resource has reasonable prospects of economic extraction and therefore further exploration is warranted. Mineral Resources, which were estimated using core drilling have been performed to industry practices, and conform to the requirements of CIM Definition Standards (2010).

Metallurgical recovery assumptions used to support reasonable prospects of economic extraction were based on the recoveries estimated from material collected from the Terakimti deposit. These were based on a small program of tests conducted on 16 sub-composites, two being oxide and fourteen being sulphide:

- The oxide samples, assaying 2-4 g/t leached moderately well, with gold extractions in the range of 70-80% achieved even at a fine crush of 1.7mm. This is not in itself coarse enough for heap leaching but the loss in recovery from 100 microns to 1.7 mm was sufficiently modest to suggest that there is a reasonable probability that some amenability to heap leaching will be demonstrated with more testing. The leach was extremely fast, being essentially complete in less than 5 hours.

The sulphide samples were combined to form supergene, primary and sulphide transition composites.

- The supergene composite, assaying 5% copper, yielded a concentrate assaying 26% copper, 3.6 g/t Au and 87 g/t Ag in locked cycle testing, at a copper recovery of 87%. The flowsheet employed is conventional for such materials.
- The primary composite yielded good copper and zinc metallurgy. In locked cycle testing copper flotation yielded a 25% copper concentrate at 89% recovery, and a 60% zinc concentrate at 86% recovery. Total precious metal recoveries were 50% for both gold and silver, and good pay should be realised from the bulk of this metal from copper smelters.
- Little testing was conducted on the sulphide transition material. This yielded poor metallurgy and a workable flowsheet was not developed. The extent of this material needs to be established and further metallurgical testing needed to develop a philosophy for treating it.

An exploration target at the Mayshehagne prospect exists which (depending on the results of further exploration and metallurgical testwork) may allow reporting of a Mineral Resource. Potential for additional mineralization also exists at the VTEM09 prospect, and additional drilling could define a Mineral Resource.

26 RECOMMENDATIONS

It is recommended that the path forward for the Harvest property should include the following main activities during the next two phases of the project. These contingent phases are:

Phase I

Large parts of the property remain to be fully investigated and exploration work should continue to try and identify additional orogenic gold and VMS mineralization. Supplementary work is required at the known VMS prospects to realize the potential of the existing mineralization, by performing trenching, targeted RC drilling, and metallurgical work. Specifically the recommended work program will include:

- Continuation of portable XRF and shallow soil sampling, chip sampling, trenching and mapping in underexplored parts of the property
- Perform detailed sequential leach analyses on existing drill samples
- Conducting a targeted RC program and minor trenching to address gaps in metal/mineral zoning, improved oxide delineation, and assist in further resource definition at Terakimti
- Performing a second phase of drilling at VTEM09
- Conducting trenching at defined Au zones on the property that require further testing to warrant additional assessment for drill testing
- Complete additional metallurgical testwork to include coarser leaching to establish the potential for a low capex start-up heap leach option.
- Further flotation testing on the transition materials to find a process to treat them.

Phase II

If positive results are achieved in Phase I, a second phase of work should be undertaken to further refine the current mineral resource using geophysics and drilling. This program will include:

- An update to the current mineral resource estimate at Terakimti

  Downhole EM geophysics at Terakimti and Mayshehagne
- Further metallurgical testing on a broader suite of oxide and sulphide samples, including grindability testing at Terakimti.
- Conduct preliminary metallurgical testing at Mayshehagne and VTEM09.

In total, the cost of this work is expected to be up to approximately $1,602,000. A summary of the expenditure break-down is presented in Table 26-1.

Table 26.1: Summary of Expenditure

Phase	Description of work	Cost
1	Sequential Cu leach analyses	22,000
1	Trenching program (improve oxide characterization at Terakimti)	20,000
1	Limited diamond drilling at VTEM09	150,000
	Sub-total	**192,000**
2	Trenching at Igub, Lihamat, Adi Goshu to determine drilling suitability	10,000
2	RC drilling at Adi Million, Lihamat, Adi Goshi, Mayshehagne, and Hagre Salam	225,000
2	RC drilling to determine oxide-supergene contact characterization	700,000
2	Geochemical sampling of RC drilling programs	300,000
2	Detailed metallurgy on Terakimti oxide and sulphide zones	60,000
2	Metallurgy on Mayshehagne and VTEM09 oxide and sulphide zones	40,000
2	Update to current resource estimation	25,000
2	Downhole EM geophysics on VMS systems	50,000
	Total	**1,602,000**

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Nyota Minerals Limited http://www.nyotaminerals.com
Sunridge Gold Corp. http://www.sunridgegold.com
Tigray Resources Inc. http://www.tigray.ca

Appendix A

Legal Opinion (September 2013)

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የህግ ጉዳዮች አማካሪና በማናቸውም ፍ/ቤት ጠበቃ
Worku Fantahun Shumiye
Legal Affairs Consultant & Attorney At Law

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Date Oct. 7, 2013

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Ref. № W/F/S/L/0/012/13

To Whom It May Concern

Based on the letter which has been written by Harvest Mining Private Limited Company(Herein after **"The Company"**) that requesting Our Law Office under Reference No.768/10/747/2013; dated Oct. 7, 2013 to deliver the following Title Opinion in connection with the Company's Licenses and all other by its Laws Validity and Legitimacy.

Specially; For the Company's Exploration Licenses.

Such as; 1st Its License No. MoM /326-354/99 that will be expired on Jan. 10,2014,
2nd Its License No. MoM/0246-0250/2001 that will be expired on Dec.18,2013 ,
3rd All other the by Laws of the Company; and
4th The Moratorium on issuance of new licenses by the Ministry Of Mines Of The Federal Democratic Republic Of Ethiopia which was in effect
since November 2011 has been lifted in March 2013 and it does not affect the Company's Licenses too.

Accordingly; I, Mr. Worku Fantahun Shumiye, who is currently working as Legal Affairs Consultant and Attorney At Law at the Federal Democratic Republic Of Ethiopia under Federal Level, examined, ascertained and witnessed that all the above noted pertinent Licenses and the By Laws of the Company are still valid and legitimate in accordance the appropriate Laws of the Country.

IN WITNESS THERE OF; I sworn in for the validity and legitimacy of the above mentioned Licenses and The By Laws of the Company in accordance with Articles 205 and 92 of the Ethiopian Civil Procedure Code.

Sincerely yours.

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የህግ ጉዳዮች አማካሪና በማናቸውም
ፍ/ቤት ጠበቃ
Worku Fantahun Shumiye
Legal Consultant & Attorney at Law

0911 198082
0924 039774

+251 91 119 8082
+251 92 403 9774
P.O.Box 122860
Addis Ababa,Ethiopia
E-Mail:- Shufawo2004@gmail.com
Wofashu2012@yahoo.com
Address:-Helen Building 3rd Floor,Office №03 Opposite to Federal High Court

Appendix B

Independent Sample & Assay Validation Certificates (October 2013)

NX25802: Soil sample from Ruwa Ruwa Trend
NX25854: Soil sample from Ruwa Ruwa Trend
69429: HD002 (40.05 – 40.75 m)
69430: TD002 (75.40 – 76.25 m)
69431: TD040 (239.90 – 240.60 m)
69432: TD57 (141.60 – 142.30 m)
69433: TVD001 (29.30 – 29.85)
69434: Base metal CRM (GBM310-3), 14,443±597 ppm Cu, 30,935±1475 ppm Zn, 19.4±1.6 ppm Ag
69435: Base metal CRM (GBM998-9), 22±5 ppm Cu, 27±10 ppm Zn, 101.2±4.8 ppm Ag
AX9801: Gold CRM (Rocklabs SH35), 1.323 ± 0.017 ppm Au

OMAC Laboratories Limited
IDA Business Park
Dublin Road
Loughrea, Co. Galway
Phone: +353 (0)91 841 741 Fax: +353 (0)91 842 146
www.alsglobal.com

To: AURUM EXPLORATION SERVICES
UNIT S/C
KELLS BUSINESS PARK
KELLS MEATH

Page: 1
Finalized Date: 9- OCT- 2013
Account: AUEXLT

CERTIFICATE LR13174572

Project: Tigray
P.O. No.: Tigray DD
This report is for 8 Drill Core samples submitted to our lab in Loughrea, Ireland on 25- SEP- 2013.

The following have access to data associated with this certificate:
SANDY ARCHIBALD

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
BOL- 21	Manual Sheet Rolling
BAG- 01	Bulk Master for Storage
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 32	Pulverize 1000g to 85% < 75 um
SCR- 41	Screen to -180um and save both
LOG- 22d	Sample login - Rcd w/o BarCode dup
LOG- 24	Pulp Login - Rcd w/o Barcode

ANALYTICAL PROCEDURES

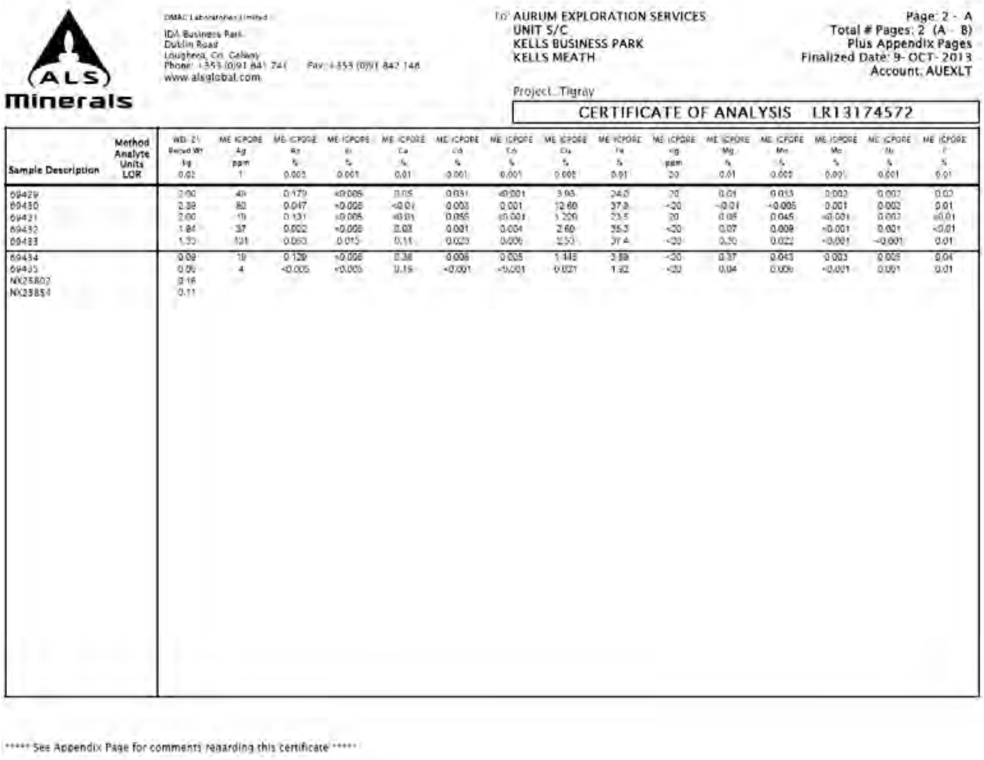
ALS CODE	DESCRIPTION	INSTRUMENT
ME- ICPORE	Oxidizing Digestion w/ ICP- AES Finish	ICP- AES
Au- GRA22	Au 50 g FA- GRAV finish	WST- SIM
Au- OG44	Ore Grade Au - 50g AR	ICP- MS

To: AURUM EXPLORATION SERVICES
ATTN. SANDY ARCHIBALD
UNIT S/C
KELLS BUSINESS PARK
KELLS MEATH

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: Tairov
Andrey Tairov, Technical Manager, Ireland



OMAC Laboratories Limited
IDA Business Park
Dublin Road
Loughrea, Co. Galway
Phone: +353 (0)91 841 741 Fax: +353 (0)91 842 146
www.alsglobal.com

To: AURUM EXPLORATION SERVICES
UNIT S/C
KELLS BUSINESS PARK
KELLS MEATH

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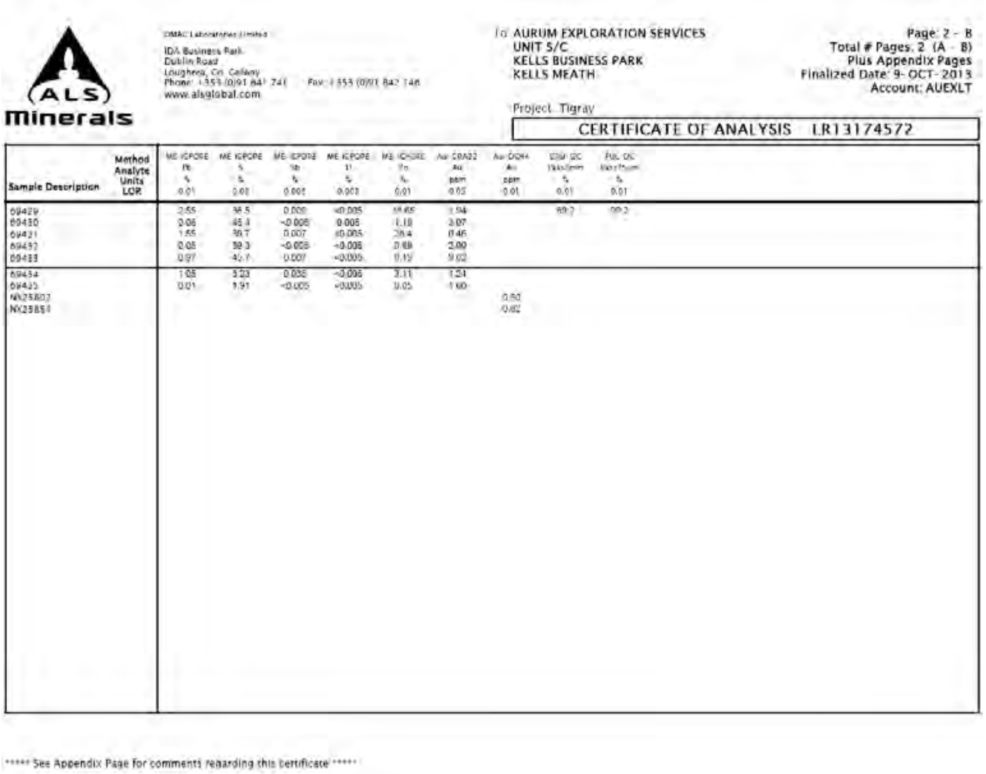
Finalized Date: 9- OCT- 2013
Account: AUEXLT

Project: Tigray

CERTIFICATE OF ANALYSIS LR13174572

Sample Description / Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	ME- ICPORE Ag ppm 1	ME- ICPORE As % 0.005	ME- ICPORE Bi % 0.001	ME- ICPORE Ca % 0.01	ME- ICPORE Cd % 0.001	ME- ICPORE Co % 0.001	ME- ICPORE Cu % 0.005	ME- ICPORE Fe % 0.01	ME- ICPORE Hg ppm 20	ME- ICPORE Mg % 0.01	ME- ICPORE Mn % 0.005	ME- ICPORE Mo % 0.001	ME- ICPORE Ni % 0.001	ME- ICPORE P % 0.01
69429	2.00	40	0.179	<0.005	0.05	0.031	<0.001	3.93	24.0	20	0.01	0.013	0.002	0.002	0.02
69430	2.38	80	0.047	<0.005	<0.01	0.003	0.001	12.60	37.8	<20	<0.01	<0.005	0.001	0.002	0.01
69431	2.00	19	0.131	<0.005	<0.01	0.055	<0.001	1.220	23.5	20	0.08	0.045	<0.001	0.002	<0.01
69432	1.84	37	0.002	<0.005	0.03	0.001	0.004	2.60	35.3	<20	0.07	0.009	<0.001	0.001	<0.01
69433	1.35	131	0.063	0.015	0.11	0.023	0.006	2.53	37.4	<20	0.30	0.022	<0.001	<0.001	0.01
69434	0.09	19	0.129	<0.005	0.38	0.006	0.005	1.445	3.89	<20	0.37	0.043	0.003	0.005	0.04
69435	0.06	4	<0.005	<0.005	0.15	<0.001	<0.001	0.021	1.82	<20	0.04	0.006	<0.001	0.001	0.01
NX25802	0.16														
NX25854	0.11														

***** See Appendix Page for comments regarding this certificate *****



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OMAC Laboratories Limited
IDA Business Park
Dublin Road
Loughrea, Co. Galway
Phone: +353 (0)91 841 741 Fax: +353 (0)91 842 146
www.alsglobal.com

To: AURUM EXPLORATION SERVICES
UNIT 5/C
KELLS BUSINESS PARK
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Finalized Date: 9- OCT- 2013
Account: AUEXLT

Project: Tigray

CERTIFICATE OF ANALYSIS LR13174572

Sample Description	Method Analyte Units LOR	ME-ICPORE Pb % 0.01	ME-ICPORE S % 0.01	ME-ICPORE Sb % 0.005	ME-ICPORE Tl % 0.005	ME-ICPORE Zn % 0.01	Au-GRA22 Au ppm 0.05	Au-OG44 Au ppm 0.01	CRU-QC Pass2mm % 0.01	PUL-QC Pass75um % 0.01
69429		2.55	36.5	0.009	<0.005	18.65	1.94		89.2	99.2
69430		0.06	45.4	<0.005	0.005	1.19	3.07			
69431		1.55	30.7	0.007	<0.005	28.4	0.46			
69432		0.05	39.3	<0.005	<0.005	0.69	2.00			
69433		0.97	45.7	0.007	<0.005	0.19	9.02			
69434		1.05	5.23	0.036	<0.005	3.11	1.24			
69435		0.01	1.91	<0.005	<0.005	0.05	1.60			
NX25802								0.90		
NX25854								0.82		

***** See Appendix Page for comments regarding this certificate *****

OMAC Laboratories Limited
IDA Business Park
Dublin Road
Loughrea, Co. Galway
Phone: +353 (0)91 841 741 Fax: +353 (0)91 842 146
www.alsglobal.com

To: AURUM EXPLORATION SERVICES
UNIT S/C
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KELLS MEATH

Page: 1
Finalized Date: 21- OCT- 2013
Account: AUEXLT

CERTIFICATE LR13180793

Project: Tigray Au

P.O. No.: Tigray Au

This report is for 6 Pulp samples submitted to our lab in Loughrea, Ireland on 14- OCT- 2013.

The following have access to data associated with this certificate:

SANDY ARCHIBALD

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au- GRA22	Au 50 g FA- GRAV finish	WST- SIM
Au- AA25	Ore Grade Au 30g FA AA finish	AAS
Au- AA25D	Ore Grade Au 30g FA AA Dup	AAS

To: AURUM EXPLORATION SERVICES
ATTN: SANDY ARCHIBALD
UNIT S/C
KELLS BUSINESS PARK
KELLS MEATH

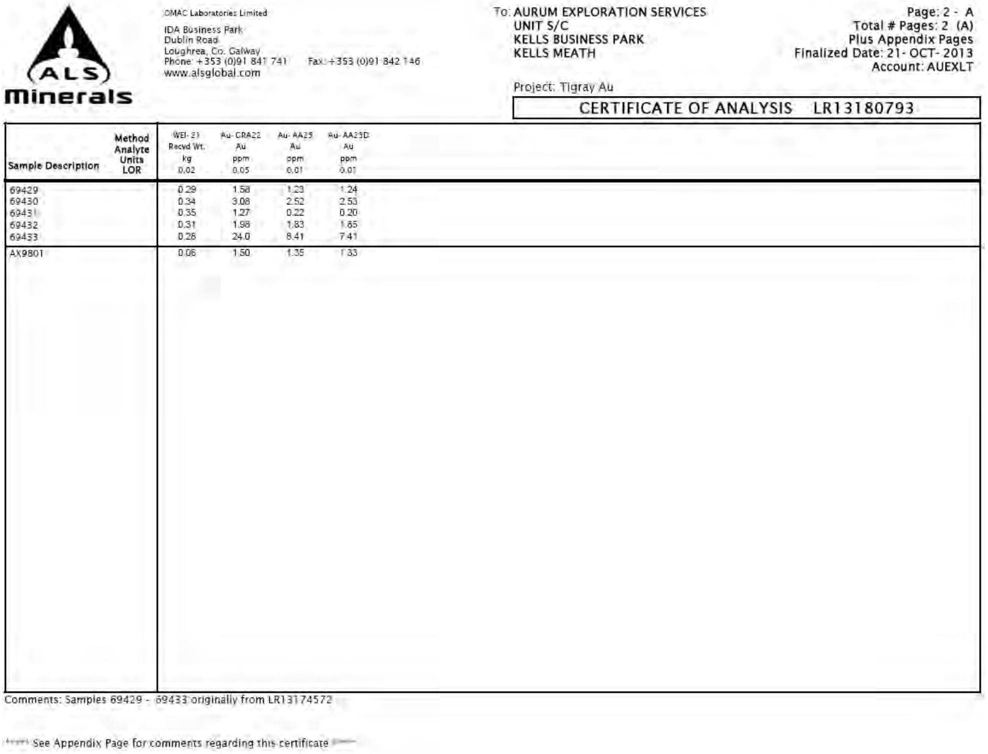
This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: Samples 69429 - 69433 originally from LR13174572

Signature: ATairov

Andrey Tairov, Technical Manager, Ireland



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Finalized Date: 21- OCT- 2013
Account: AUEXLT

Project: Tigray Au

CERTIFICATE OF ANALYSIS LR13180793

Method	WEI- 21	Au- GRA22	Au- AA25	Au- AA25D
Analyte	Recvd Wt.	Au	Au	Au
Units	kg	ppm	ppm	ppm
Sample Description / LOR	0.02	0.05	0.01	0.01
69429	0.29	1.58	1.23	1.24
69430	0.34	3.08	2.52	2.53
69431	0.35	1.27	0.22	0.20
69432	0.31	1.98	1.83	1.85
69433	0.28	24.0	8.41	7.41
AX9801	0.06	1.50	1.35	1.33

Comments: Samples 69429 - 69433 originally from LR13174572

***** See Appendix Page for comments regarding this certificate *****

I, Sandy M. Archibald, P. Geo., of 10 Sunray Street, Whitby, Ontario, Canada, as an author of this report entitled “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” dated effective February 14, 2014 prepared for Tigray Resources Inc. (the “Issuer”), do hereby certify that:

1. I am a Principal Consultant Geologist with Aurum Exploration Services.
2. I graduated with a B.Sc. (Hons) degree in Geology from University of Glasgow in 1992, was awarded an M.Sc. degree in Geology from Memorial University of Newfoundland in 1995, and a Ph.D. in Economic Geology from McGill University, Montreal, Canada in 2002.
3. This certificate applies to the technical report entitled “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” dated effective February 14, 2014 (“Technical Report”) prepared for the Issuer.
4. I have been employed in my profession by Aurum Exploration Services since completing my final postgraduate degree in 2002. My relevant experience includes designing and implementing mineral exploration programmes for a variety of commodities and deposit types, including orogenic lode-gold and volcanogenic massive sulphide exploration (UK, Ireland, Sweden, Ethiopia, Sudan, Tanzania, Mali, Ghana, Mauritania, and Canada).
5. I am a member of the European Federation of Geologists (Title No. 873), and I am a Professional Geologist (Title No. 193) associated with the Institute of Geologists of Ireland. I am also a Fellow of the Society of Economic Geologists and a Member of the Society for Geology Applied to Mineral Deposits.
6. I have read the definition of “Qualified Person” set out in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
7. I most recently visited the subject property from September 21 to 23, 2013.
8. I am responsible for preparation of all sections of the Technical Report, with the exception of sections 13 and 14.
9. I am independent of the Issuer applying all the tests in Section 1.5 of NI 43-101.
10. I have had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement was as the author of the report entitled "Summary Geological NI43-101 Technical Report for the Harvest Property, Tigray National Region, Ethiopia” (April, 2011).
11. I have read NI 43-101 and NI 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
12. As of the effective date of the Technical Report, 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.

“Signed Sandy M. Archibald”

EurGeol Dr. Sandy M. Archibald, P.Geo.

DATED at Whitby, Canada, this 12th day of March, 2014.

I, Christopher John Martin, C.Eng., of 3573 Shelby Lane, Nanoose Bay, British Columbia, Canada, as an author of this report entitled "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" dated effective February 14, 2014 prepared for Tigray Resources Inc. (the "Issuer"), do hereby certify that:

1. I am President and Principal Metallurgist for both Blue Coast Metallurgy Limited and Blue Coast Research Ltd.
2. I graduated with a B.Sc (Hons) degree in Mineral Processing Technology from the Camborne School of Mines in 1984, and was awarded an M.Eng degree in Metallurgical Engineering from McGill University in 1988.
3. This certificate applies to the technical report entitled "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" dated effective February 14, 2014 ("Technical Report") prepared for the Issuer.
4. I have practiced in my profession for over 25 years. My relevant experience includes designing and implementing metallurgy test programs for a variety of commodities and deposit types, including twenty volcanogenic massive sulphide deposits (Canada, China, Dominican Republic, Eritrea, Ethiopia, Mexico, Peru, and Sudan) that ranged in age from Archean to Mesozoic.
5. I am a licensed Chartered Engineer in good standing with the IMMM since 1990. I am also a member of the Canadian Institute of Mining, Metallurgy and Petroleum.
6. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
7. I have not visited the subject property.
8. I am responsible for preparation of section 13, and parts of sections 25 and 26 related to metallurgy of the Technical Report.
9. I am independent of the Issuer applying all the tests in Section 1.5 of NI 43-101.
10. I have had no prior involvement with the property that is the subject of the Technical Report.
11. I have read NI 43-101 and NI 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
12. As of the effective date of the Technical Report, 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.

"Signed and Sealed"

Christopher J. Martin, C.Eng.

DATED at Parksville, Canada, this 12th day of March, 2014.

I, David G. Thomas, PGeo, of 1051 Homer Street, Vancouver, British Columbia, Canada, as an author of this report entitled "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" dated effective February 14, 2014 prepared for Tigray Resources Inc. (the "Issuer"), do hereby certify that:

1. I am an Associate Geologist with the geological consulting firm of Fladgate Exploration Consulting Corporation.
2. I am a graduate of Durham University, in the United Kingdom with a Bachelor of Science degree in Geology and am a graduate of Imperial College, University of London, in the United Kingdom with a Master of Science degree in Mineral Exploration.
3. This certificate applies to the technical report entitled "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" dated effective February 14, 2014 ("Technical Report") prepared for the Issuer.
4. I have practiced my profession for over 17 years. In that time I have been directly involved in review of exploration programs, geological models, exploration data, sampling, sample preparation, quality assurance-quality control, databases, and mineral resource estimates for a variety of mineral deposits, including VMS deposits and orogenic lode-gold mineral deposits (Ghana, Canada, Eritrea and Ethiopia)
5. I am a member in good standing of the Association of Professional Geoscientists of British Columbia (APEGBC NRL # 149114). I am also a member of the Australasian Institute of Mining and Metallurgy (MAusIMM # 225250).
6. I have read the definition of "Qualified Person" set out in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
7. I most recently visited the subject property from November 13 to November 16, 2013.
8. I am responsible for portions of Section 1 related to Mineral Resource estimation, Section 11.4.1.3, Section 12.1 to Section 12.4, Section 14 and portions of Section 25 and Section 26 related to Mineral Resource estimation in the Technical Report.
9. I am independent of the Issuer applying all the tests in Section 1.5 of NI 43-101.
10. I have had no prior involvement with the property that is the subject of the Technical Report.
11. I have read NI 43-101 and NI 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
12. As of the effective date of the Technical Report, 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.

"Signed and Sealed"

David G. Thomas, P.Geo.

DATED at Vancouver, Canada, this 12th day of March, 2014.