# OF REPORT: AIRBORNE MAGNETIC SURVEY ON EAST BRECCIA, TRIBAG, MOUNTAIN BRECCIA AND BRETON BRECCIA CLAIMS 

TOTAL COST: \$150,000.00
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SIGNATURE(S): $\qquad$


NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S ): April 18, 2013
YEAR OF WORK: 2012
PROPERTY NAME: East Breccia
CLAIM NAME(S) (on which work was done): Norberg, Nicolet and Palmer Townships
COMMODITIES SOUGHT: Copper, Molybdenum,Silver
MINING DIVISION: Liard Sault Ste. Marie Mining Division, Ontario
N.T.S: 41N/01 \& 41N/2

Latitude $47^{\circ} 04^{\prime} 00^{\prime \prime} \mathrm{N}$, Longitude $84^{\circ} 30^{\prime} 00^{\prime \prime} \mathrm{W}$ (at centre of work)
UTM Zone: NAD 83, Zone 16
Easting: 690000 / Northing: 5215700

OWNER(S):(for certain mineral tenures listed as "East Breccia Area" in Table-1 in attached report)
Ken Fenwick, residing at 84 Velva Avenue, Thunder Bay ON, P7A 6N5
GEORGE LUCUIK, residing at 30 Carlbert St., Sault Ste. Marie ON, P6A 5S5
DANIEL SHELLY, mailing address of PO BOX 112, Batchawana Bay ON, P05 1A0

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REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, airborne magnetic survey).
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: None

# ASSESSMENT REPORT 

## AIRBORNE MAGNETIC SURVEY

## ON EAST BRECCIA, TRIBAG, MOUNTAIN BRECCIA AND BRETON BRECCIA CLAIMS

## EAST BRECCIA PROPERTY

Norberg, Nicolet and Palmer Townships
Sault Ste. Marie Mining Division, Ontario
District of Algoma
N.T.S: $41 \mathrm{~N} / 01 \& 41 \mathrm{~N} / 2$

Latitude $47^{\circ} 04^{\prime} 00 \mathrm{~N}$ N, Longitude $84^{\circ} 30^{\prime} 00^{\prime \prime} \mathrm{W}$ (at centre of work)
UTM Zone: NAD 83, Zone 16
Easting: 690000 / Northing: 5215700
for
BOXXER GOLD CORP.

Suite 650,340-12 Avenue S.W. Calgary, Alberta

T2R 1L5

By Elmer B. Stewart, P.Geol., MSc.
April 18 ${ }^{\text {th }}, 2013$

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### 1.0 INTRODUCTION \& SUMMARY

This report is prepared by Elmer B. Stewart, P. Geol., and describes the results of two airborne geophysical (total field magnetic and electromagnetic) surveys completed by Fugro Airborne Surveys for Boxxer Gold Corp. ("Boxxer") over the East Breccia, Tribag and Mountain Breccia claims (collectively the "East Breccia Project") in December 2012. The details of the airborne surveys are included in a report attached hereto entitled "GEOTEMO Airborne Electromagnetic Survey \& Airborne High Resolution Magnetic Survey Interpretation Report, East Breccia Property" dated March 2013. Boxxer is the owner and operator of the East Breccia property which hosts several large zones of copper-molybdenum-silver mineralization exposed in outcrop.

The East Breccia project is a copper-molybdenum-silver exploration property located in north-central Ontario, which includes 34 contiguous mineral claims covering approximately 4,541.5 ha. All mineral tenures comprising the East Breccia Project are subject to various Net Smelter Return royalties (see Section 3.0).

The property is located in the Sault Ste. Marie Mining Division, approximately 73 kilometers north of Sault Ste. Marie, north-central Ontario (Figure 1) and consists of 34 contiguous mineral claims covering approximately $4,541.3$ ha ( 11,222 acres) of land surrounding the former Tribag copper mine, a former producer. As of the date of this report, the East Breccia project covers the mineral tenures set out in Table1 below.

The airborne magnetic and electromagnetic surveys covered the East Breccia property. Based on the data generated by the 2011 exploration program, the exploration target for the East Breccia project is Iron Oxide Copper Gold ("IOCG") style copper-molybdenum-silver hosted within explosive breccia pipes similar to that mined at the former Tribag copper mine. To assess the potential of the project and to obtain a magnetic signature of the setting for the area around the East Breccia project, the airborne and electromagnetic surveys were completed. The total field magnetic and calculate vertical gradient maps generated from the total field magnetic data has identified a strong positive magnetic lineament. This positive magnetic lineament shows a strong association with the Tribag deposit and other breccias zones where previous sampling has indentified significant copper-molybdenum-silver mineralization on surface. The electromagnetic survey identified a large zone of conductivity that contains all known breccia hosted copper mineralization within the East Breccia project. Preliminary interpretation of the data has yielded the following highlights.

## Highlights of Surveys:

$\checkmark \quad$ The geophysical surveys has identified a 12 kilometer long by 6 kilometre wide area inside the East Breccia project within which all conductivity, magnetic and electromagnetic targets as well as all known mineralized breccias occur,
$\checkmark \quad$ The surveys suggests that the 9 breccias clustered around the former Tribag mine (4 of which are held by Boxxer and 4 of which are partially held by Boxxer due to claim line locations) is related to a conductive positive magnetic signature, possibly a buried intrusive,
$\checkmark \quad$ The electromagnetic survey has indicated 10 targets (4 of which coincide with areas of known copper mineralization) within Boxxer property, the largest of which measures 3.0 kilometres by 3.0 kilometres. This target was not previously known and has not been explored.

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$\checkmark \quad$ The magnetic survey has identified an interpreted intrusive that measures 3.0 kilometres by 3.0 kilometres that exhibits conductivity at several frequencies, the Mountain Breccia zone of coppermolybdenum mineralization is located on the flank of this interpreted intrusive, and
$\checkmark \quad$ The combined surveys outlined an area of positive topography that is interpreted to be bound by regional scale faults and contains all the known mineralized zones and exploration targets outlined by the magnetic and electromagnetic surveys.

### 2.0 PROPERTY GEOGRAPHY/PHYSIOGRAPHIC LOCATION

The East Breccia project is located on the boundary between Nicolet and Norberg Townships at approximately the centre of the township line. It is about 18 kilometers east of Lake Superior, and 73 kilometers north of the City of Sault Ste. Marie, in the District of Algoma, Province of Ontario (Figure 1).

Figure 1: $\quad$ East Breccia Property Location Map


The Property is located within National Topographic System (NTS) 1:50,000 scale topographic map sheets 104G/6 and 7. The East Breccia Property is located in the mining district of Sault Ste. Marie on NTS Maps $41 \mathrm{~N} / 1$ and $41 \mathrm{~N} / 2$. The Mining claims comprising the property are found on Norberg Plan G-3120 and Nicolet Plan G-3119.

The center of the East Breccia Project is located at approximately $47^{\circ} 04^{\prime} 00^{\prime \prime} \mathrm{N}$ latitude and $84^{\circ} 30^{\prime} 00{ }^{\prime \prime} \mathrm{W}$ longitude (at centre of work), or approximate at Universal Transverse Mercator (UTM) coordinates of 690000 mE and 5215700 mN , North American Datum (NAD83), Zone 16 datum.

### 3.0 MINERAL CLAIMS

Boxxer, as of October 19, 2012, held a 100\% ownership of the mineral tenures designated Tribag Area and Mountain Breccia Area set out in Table-1. The mineral tenures designated East Breccia Area are held under an option to earn from Fenwick et. al. Tenure data for each area included in the East Breccia project is listed in Table 1.

Under the terms of the Option Agreement with Fenwick et. al., Boxxer has the right to earn a $100 \%$ interest in the 11 mineral tenures referred to as the East Breccia Area in Table-1, subject to an NSR payable to the vendors by making the following payments and exploration commitments:
a) An initial cash payment of $\$ 15,000$ and issuing 75,000 common shares of Boxxer on execution of the option agreement and receipt of regulatory approval (this has been completed,
b) Additional cash payments totaling $\$ 150,000$ and common share issuance totaling 450,000 over four years,
c) Exploration expenditures totaling $\$ 308,000$ over four years; $\$ 44,000$ of which is required in year one, $\$ 44,000$ in year $2, \$ 88,000$ in year three and $\$ 132,000$ in year four, and
d) A $3 \%$ NSR to the property vendors, of which Boxxer has the right to repurchase $1 \%$ of the NSR at any time for a cash payment of $\$ 1,000,000$.

In October 2012, Boxxer purchased a 100\% interest in the mineral tenures comprising the Mountain Breccia Area and the Tribag Area (see Table-1) subject to a $2 \%$ Net Smelter Return ("NSR") to the Vendors, of which Boxxer has the right to repurchase $1 \%$ of the NSR at any time for a cash payment to the Vendors of $\$ 1,200,000$.

The East Breccia zone of mineralization is located in the northern part of tenure number 4201405 and was the main area of focus for the 2011 exploration drilling program completed by Boxxer. The locations of the mineral tenures comprising the East Breccia project are shown in Figure 2a \& 2b. Due to the delay in receipt of the results of the airborne surveys completed in December 2012, Boxxer requested an extension to file the 2012 assessment work to maintain certain mineral tenures in good standing. The extension was granted with a filing date of April 24, 2013.

Table 1: $\quad$ Mineral Claims within the East Breccia Project (Apr. 20/13)

| Tenure \# | Claim Name | Owner | Good to Date | Status | Area (ha) | Units |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East Breccia Area |  |  |  |  |  |  |  |
| 4202433 | "EB-1" | Option | $10 / 9 / 2015$ | Good | 209.6 | 13 |  |
| 4202432 | "EB-2" | Option | $10 / 9 / 2015$ | Good | 105.1 | 7 |  |
| 4202431 | "EB-3" | Option | $10 / 9 / 2015$ | Good | 217.3 | 14 |  |
| 4202430 | "EB-4" | Option | $10 / 9 / 2015$ | Good | 232.7 | 15 |  |
| 4201407 | "EB-5" | Option | $10 / 9 / 2015$ | Good | 70.6 | 5 |  |
| 4201406 | "EB-6" | Option | $10 / 9 / 2015$ | Good | 161.9 | 10 |  |
| 4201405 | "EB-7" | Option | $10 / 9 / 2015$ | Good | 102.7 | 7 |  |
| 4201404 | "EB-8" | Option | $5 / 30 / 2016$ | Good | 225.8 | 15 |  |

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| 4201403 | "EB-9" | Option | 10/9/2015 | Good | 107.6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1192262 | "EB-10" | Option | 2/3/2016 | Good | 80.8 | 5 |
| 4201402 | "EB-11" | Option | 10/9/2015 | Good | 195.2 | 12 |
| Mountain Breccia Area |  |  |  |  |  |  |
| 1192317 | "MB-1" | Boxxer | 7/2/2013 | Good | 64.0 | 4 |
| 4219688 | "MB-2" | Boxxer | 2/25/2013 | Good | 64.0 | 4 |
| 4219689 | "MB-3" | Boxxer | 2/25/2013 | Good | 128.0 | 8 |
| 4249512 | "MB-4" | Boxxer | 2/25/2013 | Good | 128.0 | 8 |
| 4249525 | "MB-5" | Boxxer | 2/25/2013 | Good | 32.0 | 2 |
| 4250382 | "MB-6" | Boxxer | 7/2/2013 | Good | 160.0 | 10 |
| 4253383 | "MB-7" | Boxxer | 5/17/2013 | Good | 256.0 | 16 |
| 4253384 | "MB-8" | Boxxer | 5/17/2013 | Good | 256.0 | 16 |
| 4253385 | "MB-9" | Boxxer | 5/17/2013 | Good | 240.0 | 15 |
| 4253386 | "MB-10" | Boxxer | 5/19/2013 | Good | 176.0 | 11 |
| 4253387 | "MB-11" | Boxxer | 5/19/2013 | Good | 160.0 | 10 |
| 4250448 | "MB-12" | Boxxer | 2/25/2013 | Good | 64.0 | 4 |
| Tribag Area |  |  |  |  |  |  |
| 1234861 | "TB-1" | Boxxer | 7/2/2013 | Good | 256.0 | 16 |
| 4243489 | "TB-2" | Boxxer | 7/2/2013 | Good | 16.0 | 1 |
| 4243597 | "TB-3" | Boxxer | 7/2/2013 | Good | 16.0 | 1 |
| 4249519 | "TB-4" | Boxxer | 7/2/2013 | Good | 192.0 | 12 |
| 4249528 | "TB-5" | Boxxer | 6/8/2013 | Good | 16.0 | 1 |
| 4250357 | "TB-6" | Boxxer | 7/2/2013 | Good | 80.0 | 5 |
| 4250369 | "TB-7" | Boxxer | 7/2/2013 | Good | 48.0 | 3 |
| 4250378 | "TB-8" | Boxxer | 7/2/2013 | Good | 144.0 | 9 |
| 4250379 | "TB-9" | Boxxer | 7/2/2013 | Good | 96.0 | 6 |
| 4253388 | "TB-10" | Boxxer | 5/27/2013 | Good | 192.0 | 12 |
| 4253389 | "TB-11" | Boxxer | 5/27/2013 | Good | 48.0 | 3 |

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Figure 2a: East Breccia Google Mineral Claims Location Map


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### 4.0 LOCATION, ACCESS \& GEOGRAPHY

The East Breccia project totaling 34 contiguous mineral tenures covers parts of Nicolet and Norberg Townships. Figures $2 a$ and $2 b$ illustrates the location of the property.

Access to the property is by a seasonal, gravel forest road about 24 kilometers in length which joins Highway 17 (Trans-Canada) about 105 road kilometers north of Sault Ste. Marie. This road has been maintained by the Ministry of Natural Resources for forest access. A second seasonal gravel road accesses the property along the Batchawana River, leaving Highway 17 about 73 road kilometers north of Sault Ste. Marie. This road is unmaintained and easily rendered impassable by heavy rainfall. These seasonal roads extend past the property to Batchawana Station on the Algoma Central Railway about 24 kilometers to the north-east. Access to the East Breccia property is also by $4 \times 4$ off road vehicles by using the Tribag Mine Road. This road is located on the right side of Highway 17 after crossing the Batchawana River Bridge.

Telephone and power lines formerly extended to the property. The Batchawana River is a river with year round flow, capable of supplying large volumes of water.

The topography of the East Breccia property ranges from flat to rolling hills to steep cliffs. The elevation on the property varies from flat to steep. Elevations range from 230 metres above sea level ("masl") in the southern parts of the property to 570 masl in the higher area of the property. The area closer to the Batchawana River is composed mainly of sand plateaus and clay flats. Higher elevations consist of mainly outcropping hills or ground moraines and gravel covered slopes. Lower lying areas contain swamps, lakes and streams that drain into to Batchawana River to the east. Outcropping are found along the slopes of most steep hills, as well as in areas where topsoil has been eroded away.

The vegetation in the region consists of both primary forest cover on the sides of the hills, and secondary forests where past lumber companies have clear cut the forest. Softwood trees consist of mainly maples, birch and poplar, whereas softwood forests are hemlock, white pine, spruce and balsam fir. Low areas are vegetated by alder and cedar.

Climate in the area ranges from hot dry summer days from June through September. Winter begins in early November and runs till late April bringing with it heavy accumulations of snowfall.

### 5.0 REGIONAL GEOLOGY

The geology of the district is shown in Figure 3. The project area is located in the south-central part of the Superior geological province and contains the following five main rock sub-divisions:

1. A folded, greenschist facies Archean greenstone belt that is approximately $8-10 \mathrm{~km}$ wide and is traceable for over 75 km in an ENE directions - the Batchawana Greenstone Belt
2. Archean granitic and felsic gneissic rocks form large bodies within, or to the south, north and east of the greenstone belt.
3. Felsitic and felsophyric intrusions of Keweenawan age (c. 1055 Ma ) occurring as dikes, sills and small irregular bodies. These largely intrude the Archean greenstones, although some of the Tribag cluster cut Archean granitic rocks (Figure 3). These rocks are economically import as they are locally associated with explosive and collapse breccia pipes, some of which contain copper mineralization, as seen in the Tribag breccia cluster.
4. The Keweenawan series which unconformable overlie the Archean. This includes rift-related amygdaloidal basalt flows and clastic, conglomeratic sediments.
5. Minor remnants of flat-lying Paleozoic sediments.

Iron formation occurs as stringers in Batchawana series caught up in Archean rocks. The iron is mostly in the form of jasper associated with narrow bands of sediments and lavas surrounded by intrusive rocks. The iron occurs chiefly as magnetite in banded silica.

Structurally the area lies adjacent to an area of ancient rifting along the margins of Lake Superior and its possible extension eastward to the St. Lawrence valley. Blecha (1974) notes that the Batchewana area lies close to the north margin of abundant faulting probably represents an old rift structure. There are three predominant sets of faults that strike either north, NE or NW (Figures 3 and 4).

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Figure 3:
Batchawana Area Regional Geology (after Blecha, 1974)


### 6.0 PROPERTY GEOLOGY

The East Breccia property is underlain by granitic and metavolcanic rocks of Archean age (see Figure-4) intruded by a number of mineralized breccia systems interpreted to be related to a deep porphyritic mineral system. The mineralized breccias (primarily the Tribag cluster of breccias) have been the primary exploration target in the district since the 1960's.

The East Breccia area has been explored by numerous companies from the mid 1960's up to 2008. The largest zone of copper mineralization on the East Breccia project is the East Breccia zone and has been the subject of most of the exploration completed since the early 1970's. The East Breccia and other breccia zones were mapped by Tribag Mining Co in the early 1970's. Previous mapping by Tribag Geologists outlined the East Breccia zone as 700 meters long by 300 meters wide. Their work did not define any detailed relationships, alterations or structure. The East Breccia and other mineralized breccias were mapped as a single "breccia" units.

In 2007, Amador Gold Corporation carried out a detailed mapping and sampling program over the East Breccia zone and sub-divided this zone as follows:

B1= A weak and dry brecciation that involved very little clast movement and no hydrothermal activity (no quartz veining, sericite, and or sulphides) This type is generally clast supported and monomictic comprising virtually $100 \%$ volcanic and microgabbro clasts.

B2= Moderate to strong "dry" brecciation involving substantial clast movement but was not accompanied by any significant hydrothermal alteration or mineralization. Clast movement resulted in the development of large amounts of rock flour that commonly forms the matrix. This type of brecciation in mainly monomictic (volcanic-microgabbro) with occasional clasts of pink felsite.

B3= Strong to intense polymictic brecciation, accompanied by the injection of a crystalline quartz matrix and quartz veining that may be associated with pyrite and lesser chalcopyrite. The clasts include mafic volcanics and microgabbros as well as felsite, granite and rare quartz fragments.

Amador outlined 2 separate B3 zones separated by a 100 to 150 meter wide central zone of B1 and B2 breccias. On surface the highest grade mineralized zone lies on the western side of the East Breccia, where it has been extensively drilled; it is approximately 250 meters $\mathrm{N}-\mathrm{S}$ and 150 meters $\mathrm{E}-\mathrm{W}$. The other mineralized zone lies on the SE side of the body where it was partially explored via the East Breccia adit. It too is approximately 250 meters long $\mathrm{N}-\mathrm{S}$, by 100 meters wide.

On west and southwest of the East Breccia many other mineralized zones were outlined such as Breton Breccia, West Breccia, South Breccia and Mountain breccia (Figure 4). There appears to be a strong spatial relationship between B3 breccias, copper mineralization and the presence of abundant felsite clasts. The felsites (and the granite at the Breton) are believed to be related to the magmatic phase responsible for the mineralization and brecciation. At East Breccia, 3 types of felsite clast or dike are recognized, namely (1) fine grained, siliceous equigranular rocks, (2) feldspar-porphyritic felsites and, (3) felsite containing rounded glassy quartz phenocrysts.

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Figure 4: East Breccia Property Geology Map


### 7.0 EXPLORATION HISTORY

The East Breccia area adjacent to the old Tribag Mine has seen a considerable amount of work, beginning in 1954 when copper was first discovered.

The original claim holder, Aime Breton first staked the ground in 1954 and optioned it to Sylvanite Gold Mines. Sylvanite completed diamond drilling on the Tribag deposit and dropped the ground in 1956.

Tribag Mining Company acquired the ground in 1961 and began exploration work including geological mapping, IP geophysical survey, diamond drilling, and shaft sinking, mainly on and around the main breccia zone (Breton Breccia) though drilling and mapping did cover the East Breccia area. Between 1967 and 1975, the Tribag mine was developed to the 1200 foot level with 6 mine levels and fed a 400 ton/day mill located on site. Production from the Tribag mine was carried out until 1974 and is reported to have milled 1.25 million tons at a grade of $1.67 \%$ copper.

Exploration efforts carried out in the East Breccia area from 1956 through 2012 are summarized below.
Table 2: Summary of previous work on East Breccia Area

| Year | Company | Work Description |
| :---: | :---: | :--- |
| 1956 | Inglis, M.O. | 14 diamond drill holes totaling 680.32 feet. |
| $1961-1965$ | Tribag Mining Co | East Breccia Adit (300 ft), AX diamond drilling, geological <br> mapping, SP survey, Cu assaying |
| 1965 | Tribag Mining Co. Ltd | developed a 294 foot adit for underground sampling |
| 1969 | New Senator-Rouyn <br> Ltd., | 3 diamond drill holes totaling 1207 feet. |
| $1969-1971$ | Tribag Mining Co | AQ diamond drilling, magnetic surveys, assaying (Cu, Mo, Ag), <br> surface geochemistry |
| $1980-1982$ | Dekalb Mining | Diamond drilling, percussion drilling, Cu assaying |
| $1984-1986$ | Jonpol Exploration | Airborne and ground EM/mag, diamond drilling, Cu assaying |
| 1998 | Falconbridge Ltd | Ground mag |
| 2007 | Amador Gold Corp. | MMI survey and IP Survey to test the area of known <br> mineralization over the east breccia. Geological mapping. |
| 2009 | Amador Gold Corp. | Diamond drilling, Cu assaying |
| 2012 | Boxxer Gold Corp. | Diamond drilling, Cu-Mo-Ag assaying |

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### 8.0 AIRBORNE GEOPHYSICAL SURVEY

### 8.1 INTRODUCTION

Fugro Airborne Surveys conducted two airborne surveys of the East Breccia Property on behalf of Boxxer Gold Corp. The GEOTEM® electromagnetic survey was flown on December 9th, 2012, and the high resolution magnetic survey between December 10th and 12th, 2012. Using Sault Ste. Marie, Ontario as the base of operations, a total of 540 line kilometers of data were collected using a Casa 212 modified aircraft for the EM survey, and a Cessna 208B for the high resolution magnetic survey (Photo 1 and Photo 2).

A total of 60 traverse lines ( 8 km in length with a spacing of 200 m ); and 5 tie lines ( 1980 m spacing) were flown.

The interpretation is presented in color on paper and as GEOSOFT digital map files. The details on the surveying and system specifications as well as appendices and information on the data processing and final products are summarized in this report.

Photo 1: Specially modified Casa 212 aircraft


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Photo 2: Cessna 208B aircraft (right) used by Fugro Airborne Surveys.


The regional magnetic map of western Ontario within which the East Breccia property is located is shown in Figure 5. The area is located in the south-central part of the Superior geological province in western Ontario and is underlain by folded greenschist facies Archean greenstone (essentially volcanic) of the Batchawana Greenstone Belt, which is $8-10 \mathrm{~km}$ wide and extends for over 75 km in an ENE direction. The following series of Figures show the results of the total field magnetic and electromagnetic surveys completed over the East Breccia project.

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Figure 5: Regional magnetic data showing the survey location.


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Figure 6: Mapped geology of the survey area: granite / granodiorite - pink, mafic / intermediate metavolcanics - green, breccia - black, faults - dark green, dykes - orange, gabbro - pale yellow. The claim outlines are shown in white.


### 8.2 GENERAL MAGNETIC THEORY

The Earth's magnetic field, which changes from over 60,000 gammas in a vertical direction at the poles to about 30,000 gammas in a horizontal direction at the equator, induces a secondary magnetic field in rock bodies containing ferromagnetic minerals. It is this property to become magnetized by an external field that is described as the susceptibility of a rock. A more detailed discussion of the magnetic properties of the earth and interpretation of the survey data is contained in the completed report contained in the disc attached to this report.

### 8.3 MAGNETIC INTERPRETATION PROCEDURES

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The magnetic data within this survey appears quite disrupted and complex. Numerous potential faults are suggested by the magnetic data, but due to its complexity, the delineation of faults is ambiguous (both in placement and direction) and therefore should be considered with caution.

Those faults that strike in directions of already mapped faults, where the placement and direction are obvious, or have some expression either in the terrain or the EM data have been identified on the Interpretation Map.

### 8.4 OVERVIEW OF THE MAGNETIC RESPONSE

The magnetic data of the survey is highly variable. Three zones of very strong magnetic signature lie at the western survey boundary, at the northeastern boundary and just west of the center of the survey (labeled IF in Figure 7). These are attributed to Iron Formation (IF), as the western most body is mapped as IF and IF occurrences/deposits are mapped in close proximity to the other two anomalies. The central Iron Formation zone is associated with a large scale circular intrusive.

Multiple lineaments which can be attributed to diabase dykes trend NW-SE throughout the survey area. Please note that the dykes lay sub parallel to the survey flight line direction rendering the delineation of these difficult, and the identification of any small anomalies along these dykes extremely difficult. Although the area is covered by glacial debris, magnetic anomalies associated with glacial debris are normally in the order of 1-2 nT , and these signatures would be hidden within the generally stronger amplitudes of the bedrock material.

An obvious lithologic boundary can be identified by the subdued magnetic signature in the north and west of the survey area - likely the granite/granodiorite, than the east and south - likely the mafic metavolcanics. However the magnetic data suggests that the boundary lies further south than what is currently mapped (see Figure 8). There is significant evidence of correlation with the terrain (see the white outline in Figure 8), which suggests most of the magnetic signature is either due to glacial debris cover (which is unlikely given the amplitude of the magnetic anomalies), or in the absence of overburden, is due to bedrock material.

This perhaps indicates this section has been uplifted? Or the amplitudes of the dykes are reduced in the low lying areas, which suggest that glacial debris may be limited to these areas. The correlation between possible lineaments in the magnetic data and the DTM (Figure-10) suggests that the erosional profile of the ground is, in places, structurally controlled by these basement rocks.

Figure 9 shows an obvious NE-SW fault passing through the central intrusive which is not obvious in the terrain, suggesting this is a basement structure.

Given the exploration model, the best chance of finding mineralization is along faults, at the junction of faults / dykes, as increased amplitudes within or shoulders along the dykes, as small isolated bodies, and around the margins of the intrusive rocks (the known mineralization from current drilling also supports a more southern boundary between the felsic intrusive and meta-volcanic rocks - see Figure 11).

It should be noted that a reduction in flight altitude could falsely amplify the response so caution should be exercised when considering the anomalies as follow-up targets.

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Figure 7: Total Magnetic Intensity (TMI) superimposed over the 1st Vertical Derivative of the TMI


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Figure 8: TMI reduced to the pole (RTP) superimposed over the 1st Vertical Derivative - RTP. The mapped boundary between the felsic intrusive (to the north) and the meta-volcanic rocks is indicated by the black dashed line.


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Figure 9: 1st Vertical Derivative of the TMI


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Figure 10: Digital Terrain Model (DTM)


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Figure 11: TMI - RTP with the mapped felsic intrusive / meta-volcanic boundary - black dashed line, drill holes in the survey area containing mineralisation (dots) and the general outline of the proposed geologic boundary - orange.


### 8.5 MAGNETIC INTERPRETATION DISCUSSION

Those targets only identified by a magnetic signature will be listed in the Magnetic Anomalies in the Survey Area section. Targets with an EM only response or an EM and magnetic response will be listed in the Conductors in the Survey Area section.

Single points indicate either isolated anomalies; good responses along a dyke; responses on the other side of a fault or a good response in a magnetically active area, wherever direction cannot be determined or is ambiguous.

There are numerous dykes, those striking essentially NW-SE have been color coded differently to what is believed to be country rock. Some of these where narrow are labeled shown as a linear, others as a zone where either the response is broader or the amplitude higher.

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The magnetic responses over areas already known to contain mineralization seem to be characterized by short wavelength, low amplitude anomalies. These may be cultural in origin.

There are many faults outlined on the Interpretation Map The majority of these strike ENE, NNE and NW. As mentioned earlier the granite / granodiorite - meta-volcanic boundary seems to lie further south than previously mapped.

A series of possible magnetic basement highs have been labeled on the map as well as the outline of the large scale intrusive.

### 8.6 MAGNETIC ANOMALIES IN THE SURVEY AREA

Many magnetic features are outlined on the Interpretation Map but only some of these are selected as priority targets. All features along faults, elevated responses along dykes etc are of interest but out of logistics cannot be discussed in detail within this report. So any "ground truthing" or other information will aid in whether the anomalies not included in this report should be upgraded to targets.

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Table 3: The fiducials listed below correspond to the fiducial channel in the 12712 final magnetic GEOSOFT database.

| Selection | Line/s | X(NAD83) | Y(NAD83) | Fiducial | Observations |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $\begin{aligned} & 10500, \\ & 10540 \end{aligned}$ | 691233 | 5219156 | $\begin{aligned} & \hline 4112 ; \\ & 2869 \end{aligned}$ | These selections lie within a magnetic body 700 m north of the East Breccia. It is bound and offset by ENE and NE faults. It also corresponds with weak surficial EM responses. A possible extension lies 500 m directly to the north. |
| 2 | 10500 | 690979 | 5218660 | 4105 | This lineament lies within the East Breccia. The best response lies on line 10500, but it may be amplified by low altitude. |
| 3 | $\begin{aligned} & 10490- \\ & 10520 \end{aligned}$ | 691193 | 5218486 | $\begin{aligned} & 3598 ; \\ & 1948 \end{aligned}$ | This is the magnetic anomaly associated with the East Breccia. Like 1 and 2 this area corresponds to weak surficial EM responses, and a small area of IP effect where the faults cross. |
| 4 | 10520 | 691783 | 5217588 | 1930 | This is an approximately 400 m NNE-SSW magnetic anomaly |
| 5 | 10430 | 690014 | 5217320 | 2137 | This weak magnetic anomaly lies along a N-S dyke. Near the junction of several faults. It also lies approximately 300 m west of a good conductor. Lies within surficial EM zone. |
| 6 | 10480 | 691542 | 5216141 | 4439 | Slightly better response along a NW-SE dyke. |
| 7 | 10460 | 692158 | 5213514 | 3559 | Slightly better response along a NW-SE dyke, near the intersection with a possible fault. |
| 8 | 10410 | 689210 | 5218177 | 4305 | Broad anomaly associated with the Breton Breccia and the Tribag Mine area. |
| 9 | 10380 | 688915 | 5217347 | 2825 | Single point sharp anomaly along a NW-SE dyke. This lies in proximity ( 200 m north) from a known mineral occurrence, Tribag West Mine? |
| 10 | 10390 | 689826 | 5215739 | 3353 | Strong magnetic anomaly at the junction of several faults, and a dyke. Lies close to a drill hole containing mineralisation. |
| 11 | 10400 | 690657 | 5214117 | 3879 | Stronger response along a NE-SW striking magnetic linear. |
| 12 | $\begin{aligned} & \text { 10350; } \\ & \text { T18020 } \end{aligned}$ | 689759 | 5213890 | $\begin{aligned} & \hline 6684 ; \\ & 6485 \\ & \hline \end{aligned}$ | Strong anomaly lies adjacent to a fault and dyke. |
| 13 | 10260 | 688004 | 5212952 | 1527 | Magnetic anomaly lies at the junction of a dyke and possible fault. A questionable EM anomaly lies immediately to the south. |
| 14 | 10200 | 687079 | 5212161 | 3928 | Very weak magnetic feature lying at the junction of several proposed faults. A drill hole containing mineralisation lies to the north. |
| 15 | 10330 | 687910 | 5217199 | 5742 | This is a strong anomaly lying between two faults and along a dyke. |
| 16 | $\begin{gathered} 10320 \\ \text { and } \\ 10360 \end{gathered}$ | 688808 | 5216811 | $\begin{gathered} 5298 \& \\ 1810 \end{gathered}$ | This is two separate magnetic bodies both striking ENE-WSW. The southern body is stronger in amplitude and lies adjacent to several faults and dykes. The weaker body lies on strike to the northeast and is associated with the West Breccia |
| 17 | 10310 | 687280 | 5217494 | 4819 | Strong magnetic feature striking ENE along a fault. Lies at the junction with a mapped fault. This lies along a surficial axis which is also a selection. |

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| 18 | 10290 | 686825 | 5217896 | 3120 | This is a strong narrow anomaly lying at the junction of several faults and a dyke. |
| :---: | :---: | :---: | :---: | :---: | :--- |
| 19 | 10260 | 686101 | 5217695 | 1598 | Lies along a dyke near a NE-SW fault. Like 17 this also lies along a surficial axis. |
| 20 | T18040 | 685204 | 5216449 |  <br> 5814 | Two weak anomalies adjacent to faults, at the edge of the large intrusive body. |
| 21 | 10260 | 686678 | 5216529 | 1581 | Weak anomaly at junction of several faults, lying at the boundary of the intrusive. A drill hole <br> containing mineralisation essentially coincides with this location. On edge of conductive <br> overburden. |
| 22 | 10220 | 687106 | 5213273 | 5070 | A weak magnetic feature at the junction of several faults, lying on the edge of the intrusive. <br> On edge of conductive overburden. |
| 23 | 10110 | 685619 | 5210995 | 4079 | Weak magnetic shoulder at the junction of several faults. |
| 24 | $10130 ;$ | 685874 | 5211826 | 769, <br> 1695 <br> and <br> 10950 | This selection encompasses several anomalies. The two to the west lie along a possible fault <br> striking ENE-WSW. The anomaly on line 10150 is stronger, and coincides with the junction <br> of a second fault. The third body lies to the south and is surrounded by drill holes which <br> contain mineralisation. |
| 25 | 10150 | 685780 | 5212764 | 1708 | This is a slightly stronger response within an already strong magnetic zone. It lies <br> approximately 500 m south of the intrusive. |
| 26 | 10160 | 684976 | 5215283 | 2206 | Isolated strong magnetic anomaly lying adjacent to a NNE-SSW fault. It lies on the line just <br> north of a weak EM signature. |
| 27 | 10100 | 683877 | 5214828 | 3734 | A sharp weak magnetic anomaly which lies at the junction of an ESE dyke and a NE fault. |

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### 8.7 ELECTROMAGNETIC ANOMALY SELECTION

The current routine for the selection and fitting of EM anomalies is still based on the University of Toronto plate program, which fits the response (at the anomaly peak) from the X-coil channels to a vertical plate nomogram. Given that the current GEOTEM and MEGATEM system have evolved to offer the response from coils of 3 different orientations ( $\mathrm{X}, \mathrm{Y}$ and Z ) and from $\mathrm{dB} / \mathrm{dt}$ and B -Field, this approach to the classification of the anomalies is limited and no longer fully reflects all the information being measured by the system.

Some responses may not be visible on the regular channels of the $\mathrm{dB} / \mathrm{dt} \mathrm{X}$-coil data, but will be identified on either the B-Field response or the Z-coil response. The initial selection of the anomalies is still being derived from the X -coil channels of the $\mathrm{dB} / \mathrm{dt}$ or B -field data, but at the "review" stage (via a graphic screen editor), the response from all components ( X and $\mathrm{Z}, \mathrm{dB} / \mathrm{dt}$ and B -Field) is examined. All significant responses from any of the components are inserted in the anomaly field. Since all anomaly edits are still being updated by the same routine, again only fitting the X -coil response from the $\mathrm{dB} / \mathrm{dt}$ or B -field data, many of these "other" responses (from Z-coil), which have no measurable signature on the X-coil data, will only be flagged as an anomaly location with no measurable response suitable for fitting to the reference nomogram. Although improperly represented, these "other" anomalies, at the very least, are identified by their location in the TDEM anomaly listing (Appendix 1 in this report), and on the Interpretation Map.

For this project the anomaly selection was produced from the $\mathrm{dB} / \mathrm{dt} \mathrm{X}$-coil data with supplemental picks from all components. These anomalies are for the most part very weak and surficial. Again like any weak magnetic anomalies, these should be considered against altitude, as well as checked against primary field fluctuations.

Refer to Appendix 1 for a full listing of the anomaly selections, which provides the particulars of each selected anomaly, including the conductivity-thickness-product (CTP) and the depth of the conductor below surface. It is important to note that the derived values of CTP and depth associated with the anomaly selections are only valid if the geometry of the conductive source can be well approximated by a vertical plate of 300 by 600 m . A note is also included in the Appendix 1 to guide the correct evaluation of the anomaly information.

### 8.8 ELECTROMAGNETIC INTERPRETATION PROCEDURES

The general approach to EM interpretation is two-fold. One is to work from the data in plan form (maps), correlating back to the data in profile form; the other is to work from the profiles back to the maps. Some anomalies will stand out on the maps as somewhat isolated features along (hopefully) favourable structural intercepts. Conversely, some localized changes in conductivity may only be apparent in profile form and may not stand out on the maps due to surrounding conductivity. So, a general review of the EM anomalies in profile form is done to search for well-defined symmetrical shape, moderate amplitude, slow decay, etc., then checked on the maps for strike length, structural (magnetic/geologic) support and overall conductivity pattern.

Two levels of correlation with magnetic/geologic basement were noted:

- $\quad$ Structurally favorable (along contacts, intersected by faults, near intrusives, etc);


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- $\quad$ Coincidence of EM and magnetic bodies of similar dimensions.

At the end of this process, the EM selections will normally fall into six groups, which will be:

## Based on the EM signature

A. Anomalous on the maps and having good anomaly characteristics in profile form;
B. Non-distinct on the maps but having good anomaly characteristics in profile form;
C. Anomalous on the maps but lacking good anomaly characteristics in profile form;

## Based on the Magnetic signature

1. With a magnetic coincidence suggesting a common source;
2. Showing evidence of structural control from the magnetic signature;
3. Showing no support from the magnetic signature.

These six groups were recombined into nine categories, ordered in terms of their potential of mineralization, $\mathrm{A}-1$ having the greatest potential to $\mathrm{C}-3$ having the least potential.

CATEGORIES: A-1, A-2, A-3, B-1, B-2, B-3, C-1, C-2 and c-3
The EM responses discussed in the following section identify those anomalies, which generally met the criteria associated with possible mineralization. The category assigned to each selection is based on the criteria outlined above which can be summarized by the table below:

Table 4: Classification of EM Selections

| CATERGORY | Response in plan <br> View (from maps) | Profile expression | Magnetic signature |
| :---: | :---: | :---: | :---: |
| A-1 | Anomalous | Good | Coincident anomaly |
| A-2 | Anomalous | Good | Structural support |
| A-3 | Anomalous | Good | No support |
| B-1 | Non-distinct | Good | Coincident anomaly |
| B-2 | Non-distinct | Good | Structural support |
| B-3 | Non-distinct | Good | No support |
| C-1 | Anomalous | Poor | Coincident anomaly |
| C-2 | Anomalous | Poor | Structural support |
| C-3 | Anomalous | Poor | No support |

A reminder that category A-1 identifies the greatest potential for mineralization with the priority dropping to category C-3 having the least potential.

### 8.9 OVERVIEW OF THE ELECTROMAGNETIC RESPONSE

Several products were selected and generated from the EM data, these products are:
$\checkmark \quad$ Apparent conductivity

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$\checkmark \quad$ Decay Constant (Tau) derived from dB/dt Z-Coil Channels 08-30
$\checkmark \quad$ Decay Constant (Tau) derived from B-Field Z-Coil Channels 16-30
The grids generated from these products as well as channel amplitude and moment grids were used to aid in the interpretation, and where applicable are displayed in the Figures to the report.

Figure 12 shows the conductivity superimposed over the two Decay Constants. A brighter colour in the image implies that the causative bodies of these anomalies have some depth component to them. For the most part these are small and isolated features; however there is a large central anomalous feature in the general vicinity of the strong magnetic response believed to be associated with iron formation and the large central intrusive. This large anomaly although strong in amplitude, decays quite quickly, so it seems to be near surface and flat lying in origin.

The slightly stronger isolated responses form an arc trending from NE to SW and essentially follow the southern boundary of the elevated terrain. Other weaker responses lie on strike to the SW of this arc, strike WSW to the west of the larger anomalous feature, and others surround the highly magnetic and conductive area. A single isolated response lies at the eastern edge of the survey.

For the most part the area is quite resistive with the majority of the response restricted to the early time. These early time responses correlate with low lying areas (see Figure 13 and 14), likely indicative of recent conductive sediments. Much of these anomalous regions also exhibit IP effect (a positive on-time response and negative decays in the early off-time channels). This effect is often associated with permafrost, erosion of the crystalline basement and faulting. Although this effect is interesting it does not appear to be associated with the mineralization, but the drill hole information is limited in these regions.

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Figure 12: Conductivity superimposed over the Decay Constant (TAU) grids.


The mineralisation may present itself (depending on the mineralisation, size shape etc of the causative body) as a dipping feature with a relatively good decay, or as a very weak anomaly associated with surface alteration. Again, like the magnetic data, it should be noted that a reduction in flight altitude could falsely amplify the response so caution should be exercised when considering the anomalies.

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Figure 13: Conductivity with contours


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Figure 14: Digital Terrain Model with the conductivity contours


### 8.10 EM INTERPRETATION DISCUSSION

Significant conductors within the survey areas have been outlined on the interpretation map and are described below. The conductors are classified as conductive zones, points and axes. An axis describes a conductor that displays a relatively narrow, linear feature with defined profile response, often with indication of vertical extent. Dip directions are shown where the profiles shapes allow for a confident determination of the conductor's geometry. Single point anomalies are generally notable responses seen only on one line, and depending on their strength and the survey line spacing, can often be considered good exploration targets. Areas interpreted as conductive zones are generally broad conductors displaying a well-defined boundary on at least one of the EM grids. In some cases, axes or single point anomalies are displayed within a conductive zone where there is a well defined, isolated response or linear feature within a broad conductive response.

These conductor targets include anomalies with either an EM only response or an EM response and magnetic target.

Conductors in the Survey Area

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Only anomalies that don't correlate with altitude deviations or primary field fluctuations are considered in this report.

## Surficial and Near Surface Conductive Zones

Most of the EM conductive responses relate to low-lying areas, it is also obvious that some of the magnetic contact features offset or truncate the EM anomalies/zones. There are also areas of weak responses within the more elevated terrain, which may be structurally controlled and therefore potentially of interest as possible alteration. Therefore some of these have been included as possible targets, because of the correlation with the magnetic data or they show some indication (albeit weakly) of vertical extent.

| Selection | X(NAD83) | Y(NAD83) | Observations |
| :--- | :--- | :--- | :--- |
| i | 687239 | 5217567 | This selection is a 2500 m long weakly conductor axis which <br> follows a fault in its eastern part. It strikes ESE in the west and <br> ENE in the east. It lies close to several magnetic selections. |
| ii | 685488 | 5216339 | A weak EM early on time anomaly which corresponds with on of <br> the strongest magnetic responses over the intrusive. |
| iii | 686105 | 5216215 | A weak EM early on time anomaly which corresponds with on of <br> the strongest magnetic responses over the intrusive. <br> A weak EM early on time anomaly which from the shape on the <br> X and Z components seems to have some vertical extent. It lies <br> on a diabase dyke. |
| iv | 682179 | 5216456 |  |
| v 685940 | 5210780 | A weak EM early time anomaly which from the shape on the X <br> and $Z$ components seems to have some vertical extent. It lies on <br> a magnetic linear at the junction with a dyke. |  |

## Well-defined / early off / mid-time Conductors

A series of potentially deeper conductors, are shown on the Interpretation Map. These bodies were selected based on early off-time / mid-time responses on the grid and profile data.

The moment data was generated to model some of the anomalies (see Appendix 2 of attached Fugro report), The early moment grids show some weak and rather questionable trends as do the early time channels of the $\mathrm{dB} / \mathrm{dt}$ and B field X coil. These are shown in Figure 15 \& 16 below. The eastern moment trend essentially follows the boundary between granite/granodiorite and the meta-volcanics, as does the NE-SW trend in the channel amplitude image. Both figures show weak lineaments indentified in the data.

Figure 15: The 2nd order moment of the B field X coil.
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Figure 16: The channel amplitude for $B$ field $X$ coil channel 07 .


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| Selection | Line/s | X (NAD83) | Y(NAD83) | Category | Fiducial | Observations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 20500 | 690695 | 5219389 | C2 | 71638 | Questionable weak response seen in early time. Seems to lie on a dyke, which may be associated with a fault given that it seems that the larger stronger magnetic feature (just north of the East Breccia) is offset. |
| B | 20470 | 690495 | 5218294 | A2 | 70895 | Two near parallel features lying along faults. The strongest lies to the northwest. The best anomaly lies on 20470 and coincides with the junction of the fault with a diabase dyke. It suggests a flat lying conductor. EMQ modeling was done on this anomaly and this suggests a feature at nearly 300 m depth. |
| C | 20440 | 690283 | 5217152 | A2 | 60809 | Weak anomaly identified from the early channels. Lies at the junction of several faults, proposed and mapped. |
| D | 20580 | 694782 | 5213312 | A2 | 73780 | This selection lies at the very south eastern edge of the survey. |
| E | 20390 | 689446 | 5216339 | C2 | 59526 | Very weak and questionable. Coincides with known mineralization from drillholes. |
| F | 20360 | 689128 | 5215856 | A1 | 58793 | Relatively strong EM zone, which seems to dip to the south. EMQ modeling was done on the best response of this feature (line 20360) and confirms the strike of approximately $60^{\circ}$ and a dip to the south. The depth to body is estimated at 160 m . This also coincides with known mineralization from drilling. |
| G | $\begin{aligned} & 20330 ; \\ & 20340 \end{aligned}$ | 688646 | 5215373 | A2 | $\begin{aligned} & 61409 ; \\ & 58295 \end{aligned}$ | On strike to the target of line 20360. EMQ modeling was also done (line 20330) on this anomaly and yielded very similar results. The selection is truncation at either end by mapped and proposed faults. |
| H | 20320 | 688551 | 5214902 | A1 | 58034 | This short strike length feature corresponds with a weak magnetic signature. It is dextrally offset from selection G. Like selections A-C, and E-G it also lies close to the proposed lithologic boundary. |
| I | $\begin{aligned} & 20380 \text { to } \\ & 20300 \end{aligned}$ | 688398 | 5214336 | A1/A2 | $\begin{array}{\|l\|} \hline 57009 \text { to } \\ 57535 \end{array}$ | This line represents the best anomaly on the $070^{\circ}$ striking lineament. From the responses it seems to be near vertical. It corresponds with a small magnetic anomaly and known mineralization. |
| J | 20250 | 686907 | 5215426 | B2 | 56250 | This is a shoulder on the edge of the flat lying feature associated with the large intrusive body. From its response it seems to dip to the south east. It is truncated in the east by an almost N -S fault. |
| K | $\begin{aligned} & 20200 ; \\ & 20210 \end{aligned}$ | 686059 | 5215121 | B1 | $\begin{aligned} & 54957 ; \\ & 55229 \end{aligned}$ | This anomaly corresponds with the strongest magnetic anomaly on the survey block. It lies at the junction of several faults, and decays quite quickly. |

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|  |  |  |  |  |  | It lies within the zone of the large intrusive. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L | $\begin{aligned} & \hline 20180 ; \\ & 20190 \end{aligned}$ | 685500 | 5215597 | A2 | $\begin{aligned} & 54419 ; \\ & 54670 \end{aligned}$ | Relatively weak anomaly bound by two proposed faults. Lies within the zone of the large intrusive body. |
| M | 20150 | 684841 | 5215067 | C1 | 53602 | Very weak, questionable single point response, lies within the intrusive zone, along a NNE-SSW proposed fault. Magnetic selection 26 lies directly to the north (approximately 200 m ) along the same fault. |
| N | $\begin{array}{\|ll\|} \hline 20130 ~ \& ~ \\ 20150 & \\ \hline \end{array}$ | 685228 | 5213645 | C2 | $\begin{array}{ll} 53080 \\ 53636 \end{array}$ | Weak responses at the intrusive boundary. These are located adjacent to mapped and proposed faults. |
| 0 | $\begin{aligned} & 20080 \text { to } \\ & 20150 \end{aligned}$ | 685045 | 5213187 | A2 | $\begin{array}{\|l\|} \hline 51724 \text { to } \\ 53636 \end{array}$ | This selection is an extensive lineament striking $065^{\circ}$ for approximately 1.4 km . It seems to dip to the south. It is dextrally offset at a essentially N -S fault. Selections $L$ and N lie on this same fault to the north. |
| P | 20120 | 685149 | 5212736 | C3 | 52770 | Weak shoulder to selection P. |
| Q | $\begin{aligned} & 20150 \\ & 20160 \end{aligned}$ | 686383 | 5211454 | C2 | $\begin{aligned} & 53667 ; \\ & 53831 \end{aligned}$ | Weak, questionable response, seen on two lines. It corresponds with a magnetic shoulder. Another questionable response is located approximately 500 m to the West (line 20130 fiducial 53117). Both lie close to known mineralization and magnetic selection 24 . |
| R | $\begin{aligned} & 20010 ; \\ & 20020 \end{aligned}$ | 682390 | 5214255 | A2 | $\begin{aligned} & 49939 ; \\ & 50227 \end{aligned}$ | This anomaly is associated with mapped iron formation. A weaker questionable axis (lines 20050-20060 fiducials 50976 and 51254 respectively) and strikes along the NE-SW fault approximately 700 m to the east. |
| S | 20050 | 683281 | 5213598 | C2 | 50991 | This is a weak feature, lying along a fault. |
| T | $\begin{aligned} & \text { T28010; } \\ & 2030 \end{aligned}$ | 684366 | 5209659 | C2 | $\begin{aligned} & 68817 ; \\ & 50555 \end{aligned}$ | This weak selection lies along a ENE magnetic lineament. A response is identified on both the line and tie-line. |
| U | $\begin{aligned} & 20540 ; \\ & 20550 \\ & \hline \end{aligned}$ | 692526 | 5217290 | C2 | $\begin{aligned} & 72675 ; \\ & 72929 \end{aligned}$ | Questionable weak trend lying adjacent to a NW-SE fault. |
| V | 20490 | 691274 | 5217457 | C1 | 71429 | Weak questionable anomaly corresponding with a small magnetic shoulder. A drill hole to the NE (approximately 300 m ) contains mineralization. |
| W | 20470 | 690014 | 5219534 | C3 | 70924 | Weak questionable anomaly. |
| X |  | 694054 | 5214081 | C2 |  | Weak questionable anomaly, lying along a NE-SW striking magnetic lineament. |
| Y | 20500 | 692366 | 5215126 | C1 | 71711 | Weak questionable anomaly lying along a fault, corresponding with a small magnetic shoulder. |

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### 8.11 PRIORITY OF TARGETS AND CONCLUSIONS

Priority is given to EM targets categorized at the higher end of the ABC-123 scale. Based on this classification system:
$\checkmark \quad$ First Priority - A1 conductors - Selections F, H and I. Selection K is also considered a priority target based on the coincidence with the very strong magnetic anomaly.
$\checkmark \quad$ Second Priority - A2 conductors - Selections B, C, D, G, L, O and R.
The remaining B and C type conductors are considered to be lower priority.
Magnetic Targets selected for further consideration are as follows:

## $\checkmark \quad$ First Priority - Selections 1, 5, 9, 10, 11, 12, 13, 15, 16 (western portion), 23

$\checkmark \quad$ Second Priority - Selections 4, 17, 18, 19, 26, 27
$\checkmark \quad$ Selections which lie close to known mineralisation - 2, 3, 8, 14, 16 (eastern portion), 21, 24, etc have already been identified.

The priority of the targets when considering follow up work must also be based on any additional geophysical and geological data, or other information available.

### 9.0 STATEMENT OF QUALIFICATION

I, ELMER B STEWART, MSc., P. Geol, certify that:

1. I am President and CEO for Boxxer Gold Corp. with a business address located at: 650, 340-12 Avenue SW, Calgary, AB T2R 1L5
2. I am a member in good standing of the Association of Professional Engineers and Geoscientists of Alberta (Member Number 34563).
3. I graduated from Acadia University in Wolfville, Nova Scotia in 1974 and from Acadia University with a Master of Science degree in 1977.
4. Since 1977 I have been continuously employed in exploration for base and precious metals in North America, Central America, South America, Africa, Central Europe and Central Asia.
5. I supervised the 2012 airborne geophysical surveys completed over the East Breccia project in December 2012 on behalf of Boxxer Gold Corp. I have prepared all sections of this report.

Dated this $18{ }^{\text {th }}$ day of April 2013

Signature
Elmer B Stewart, MSc., P. Geol

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## APPENDIX 1

## tDem anomaly selection for the east breccia property current approach to TDEM ANOMALY SELECTION

For a more in-depth discussion for the modelling, selection and fitting of EM anomalies from the data collected over the East Breccia project please refer to the appendices section of the Fugro report )disc) attached to this report.

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## APPENDIX 2

## EMQ MODELING OF ANOMALIES FROM THE EAST BRECCIA PROPERTY

For a more in depth discussion of the EMQ modelling of the data from the East Breccia project please refer to the appendix section of the detailed Fugro report attached to this report.



