



**National Instrument 43-101 Technical Report**

**Broke Back and Riverbank Properties  
McFauld's Lake Area, Ontario, Canada  
Red Lake Mining Division,  
NTS 43C and 43D  
Geology  
Technical Report**

*Prepared For*

**Zara Resources Inc.**

*By*

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## 1. Summary

The Broke Back and Riverbank properties are located in the Kasabonika-McFauld's Greenstone belt, part of the Sachigo sub-province of the Precambrian Shield area of northern Ontario, and approximately 350 km north of Geraldton, Ontario. The Broke Back property consists of 18 unpatented mining claims covering an area of approximately 4096 ha and the Riverbank property consists of 8 unpatented mining claims covering approximately 1392 ha. Zara Resources Inc. owns an option on the properties with Melkior Resources Inc. whereby Zara can earn up to a 70% interest in the properties.

The properties are believed to be underlain in part by mafic to ultramafic rocks that potentially could host nickel –copper mineralization.

Prior to the acquisition of the option interest in the property by Zara Resources Inc. the previous property owners (Melkior Resources Inc. and Green Swan Capital Corp.) had completed an airborne VTEM survey and associated aeromagnetic survey. This was followed by three diamond drill holes totalling 416 m.

The work to date has not disproved that the properties are underlain by rocks that include ultramafic bodies. The geophysics done to date still indicates that the target model of mafic-ultramafic associated nickel bearing magmatic sulphides is still valid. It is recommended that further work be done consisting of ground geophysics followed by diamond drilling be done to confirm the presence of magmatic sulphides. The proposed program has a budgeted cost of \$682,000.

## 2. Introduction

Sibley Basin Group (SBG) was commissioned by Zara Resources Inc. (Zara), to prepare a Canadian National Instrument 43-101 compliant report summarising the geology and work done to date on the Broke Back and Riverbank properties. The properties are located 72km and 100km respectively west of the First Nation Community of Webequie in North-western Ontario, Canada. This report was prepared by SBG using publically available documents, and company supplied reports. The objective of this report is to summarise known information, determine an appropriate genetic model to help guide future exploration and to present recommendations for future work.

### 2.1. Terms of Reference

The scope of work entailed reviewing available information, and making recommendations for further work.

### 2.2. Sources of Information

The geotechnical reports and maps supporting the statements made in this report have been verified for accuracy and completeness by the Author. No meaningful errors or omissions were noted.

SBG has not made a site visit to the subject properties but has made site visits to the immediate area in 2009 and 2010 and can confirm the extensive boggy conditions and lack of outcrop.

SBG used various sources of information as references for this report. These include documents available from the Ontario Geological Survey (OGS) and the Geological Survey of Canada (GSC). In addition a search and review was completed of publicly available technical documents. These consisted primarily of work assessment reports filed by mining companies with the Ontario Ministry of Northern Development and Mines (“MNDM”), maps produced by the Ontario MNDM and the Geological Survey of Canada, and information obtained by visiting various mining and geotechnical web-sites.

### 2.3. Units and Currency

Units of measure are expressed in the International System of Units (metric), unless indicated otherwise. All currency values are in Canadian Dollars.

### 2.4. List of Abbreviations

ha	hectares	AEM	Airborne Electro-Magnetic
km	Kilometres	DFO	Department of Fisheries and Oceans
m	Metres	MNDM	Ministry of Northern Development and Mines
N	North	NAD	North American Datum
NE	North east	NTS	National Topographic System
NW	North west	TMI	Total Magnetic Intensity
W	West	UTM	Universal Transverse Mercator

### 3. Reliance on Other Experts

This report has been prepared using public documents, and documents supplied by Zara Resources Inc. While reasonable care has been taken in preparing this document there is no guarantee as to the accuracy or completeness of the supporting documentation used, all of which are listing in the References section.

### 4. Property Description and Location

#### 4.1. Property Description

Zara Resources Inc. holds an option on two properties in the McFauld’s Lake area, Porcupine Mining Division of North-western Ontario: the Broke Back property, consisting of 18 unpatented claims consisting of 256 claim units and covering an area of approximately 4096 ha, and the Riverbank Property, consisting of 8 unpatented claims consisting of 87 claim units and covering an area of approximately 1392 ha.. Figures 1 and 2 are claim sketches outlining the two properties.

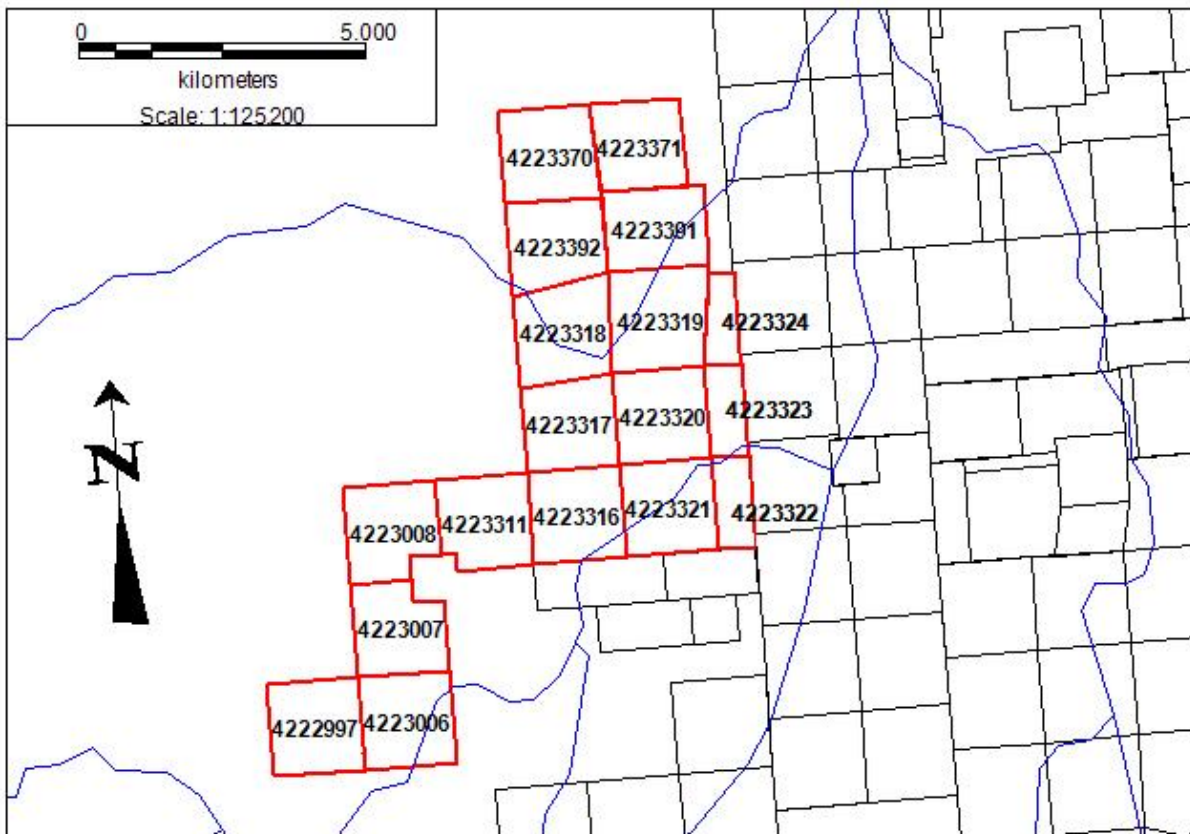
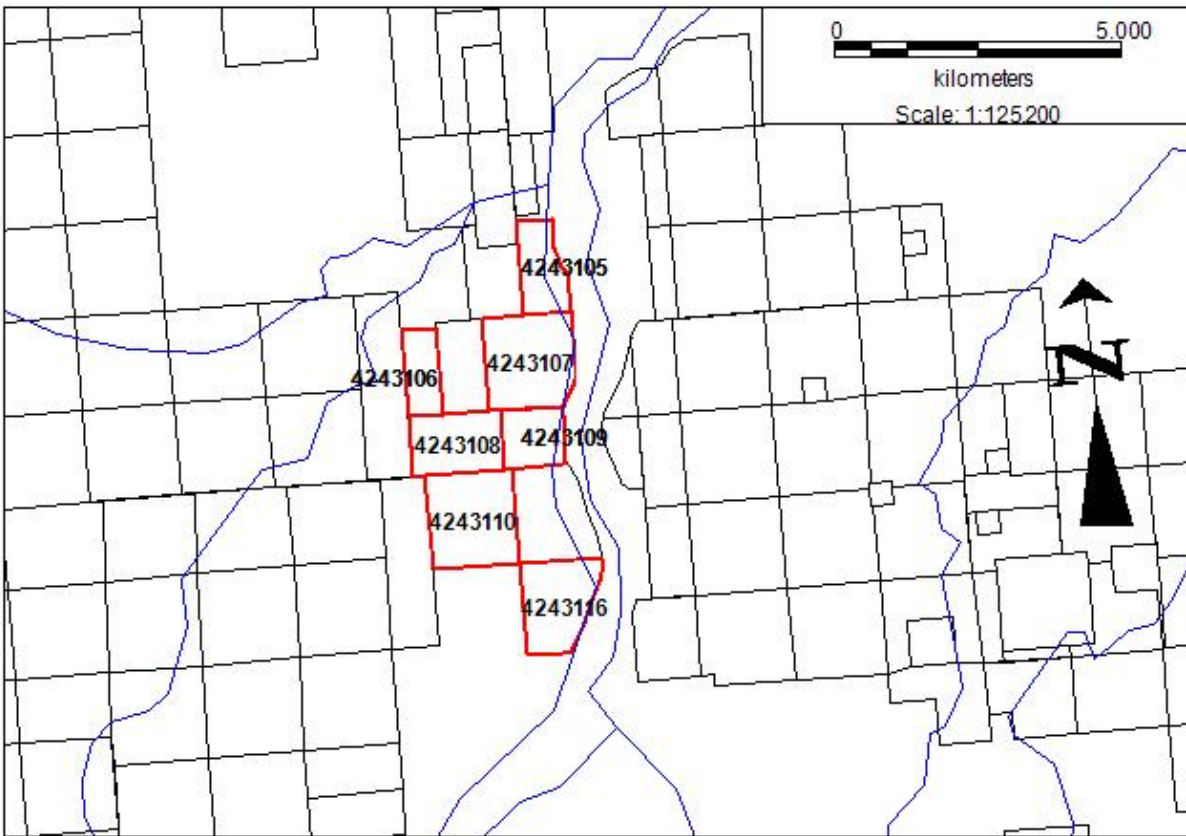


Figure 1 – Claims sketch for the Broke Back Property of Zara Resources Inc.

A summary of the claims making up the Brokeback and Riverbank properties are presented in Table 1. Ontario Mining Act regulations require expenditures of \$400 per year per unit, prior to expiry, to keep the claims in good standing for the following year. Assessment reports documenting the expenditures must be submitted by the expiry date.

The option on the claims was acquired by Zara Resources Inc. October 12, 2012. Zara can acquire an initial 51% undivided interest in the Properties by incurring a minimum of \$1,600,000 in work expenditures on the Properties by no later than December 31, 2014. Following that, Melkior has the right to elect to form a joint venture with Zara. Should Melkior not elect to form a joint venture on the Properties, Zara will have the option to acquire an additional 19% interest (for a total 70% undivided interest in the Properties) by incurring an additional \$1,000,000 in work expenditures on the Properties within twenty-four months.

The claims for both properties have not been legally surveyed.



**Figure 2 – Claims sketch for the Riverbank Property of Zara Resources Inc.**



## 4.2. Location

The properties are located in North-western Ontario, Canada, approximately 540 km north-north east of Thunder Bay, Ontario and 350 km north of Geraldton, Ontario (see Figure 3). They are located within NTS 43C and 43D in UTM zone 16 (NAD 83). The Brokeback property is centred at approximately 546980E and 5855320N, and the Riverbank property at approximately 575860E and 5863520N.

Claim_No	Performed	Approved	Applied	Required	Reserve	Units	DueDate
<u>Brokeback Property</u>							
<a href="#">4223311</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223318</a>	127,294	127,294	6,400	6,400	24,894	16	2013-Jan-31
<a href="#">4223321</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223324</a>	0	0	2,400	2400	0	6	2013-Jan-31
<a href="#">4222997</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223007</a>	0	0	6,000	6000	0	15	2013-Jan-31
<a href="#">4223008</a>	0	0	6,000	6000	0	15	2013-Jan-31
<a href="#">4223006</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223323</a>	0	0	2,400	2400	0	6	2013-Jan-31
<a href="#">4223392</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223371</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223319</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223316</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223320</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223317</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223322</a>	0	0	2,400	2400	0	6	2013-Jan-31
<a href="#">4223391</a>	0	0	6,400	6400	0	16	2013-Jan-31
<a href="#">4223370</a>	0	0	6,400	6400	0	16	2013-Jan-31
<u>Riverbank Property</u>							
<a href="#">4243106</a>	0	0	14,400	2,400	0	6	2016-Jun-20
<a href="#">4243116</a>	0	0	9,600	4,800	0	12	2013-Jun-20
<a href="#">4243110</a>	0	0	19,200	6,400	0	16	2014-Jun-20
<a href="#">4243105</a>	137,478	137,478	10,800	3,600	0	9	2014-Jun-20
<a href="#">4243107</a>	0	0	18,000	6,000	0	15	2014-Jun-20
<a href="#">4243109</a>	0	0	8,400	2,800	0	7	2014-Jun-20
<a href="#">4243108</a>	0	0	12,000	4,000	30,678	10	2014-Jun-20
<a href="#">4243111</a>	0	0	14,400	4,800	0	12	2014-Jun-20

**Table 1 – Zara Properties Claims Summary.**

## 5. Accessibility, Climate, Local Resources, Infrastructure and Physiography

### 5.1. Accessibility

The nearest community is Webequie First Nation which has regular scheduled air service from Thunder Bay, Ontario. There is no direct all-season road access to the property. In summer time the property is only accessible by air service (helicopter) from the Webequie First Nation Community.

Webequie First Nation Community uses winter roads (January to April) from Pickle Lake, Ontario to bring in major construction supplies, fuel, groceries and transportation items.

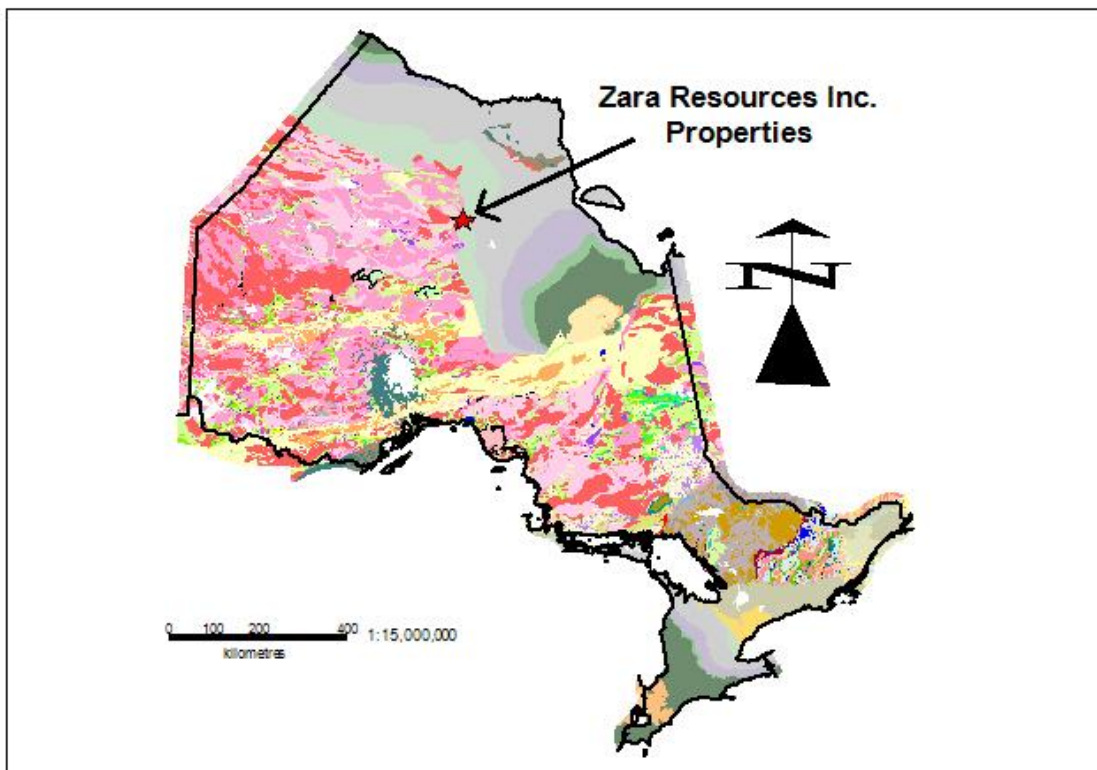


Figure 3 – Location Map (MNDM –Geology Map of Ontario, Wilson and Pelletier, 1981)

### 5.2. Climate

The climate of the James Bay Lowlands area is dominantly a typical continental climate with extreme temperature fluctuations from the winter to summer seasons. But during the summer months this can be moderated by the maritime effects of James and Hudson Bays. Environment Canada records ([http://climate.weatheroffice.gc.ca/climateData/canada\\_e.html](http://climate.weatheroffice.gc.ca/climateData/canada_e.html)) show that summer temperatures range between 10°C and 35°C, with a mean temperature of 13°C in July. Winter temperatures usually range between -10°C and -55°C with an average January temperature of -23°C. Lakes typically freeze-up in mid-October and break-up is usually in mid-April. The region usually receives approximately 610 mm of precipitation per year, with about 1/3

originating as snow during the winter months. On a yearly basis the area averages about 160 days of precipitation per year.

### **5.3. Local resources and Infrastructure**

Other than stands of timber there are no local resources available on or near the property.

All equipment and supplies have to be air-lifted and directed through the nearby native communities such as Webequie, Marten Falls, Lansdowne House and Attawapiskat. The nearest First Nation community is Webequie. It has a well maintained all season runway, a hospital, a public school, mail and telephone service, as well as a community store and a hotel. Webequie is also accessible during the winter months by a winter road.

Currently there is no infrastructure in the immediate project area. The closest all weather road is at Nakina, and there is a winter road system that services the nearby First Nation communities of Marten Falls, Webequie, Lansdowne House, Fort Albany, and Attawapiskat. It is possible that this system can be extended to provide access to the McFaulds Lake area. All of the local First Nation communities are serviced by air and have all weather air strips. Power to these First Nation communities is provided by diesel generators while Nakina is connected to the Ontario hydro-electric power grid. Nakina is also the closest terminal on the Canadian National Railway (CNR) system.

### **5.4. Physiography**

The project area is located along the western margin of the James Bay Lowlands of Northern Ontario within the Tundra Transition Zone consisting primarily of string bog and muskeg whereby the water table is very near the surface. Average elevation is approximately 170 m above mean sea level. The property area is predominantly flat muskeg with poor drainage due to the lack of relief. Glacial features are abundant in the area and consist of till deposits, eskers, and drumlins, all of which are typically overlain by marine clays from the Hudson Bay transgression. Currently, the region is still undergoing postglacial uplift at a rate of about 0.4 cm per year (Riley, 2003). The project areas are located within the drainage basins of the Attawapiskat and Muketei Rivers. The Muketei River is a tributary of the larger Attawapiskat River that flows eastward into James Bay

The bog areas consist primarily of sphagnum moss and sedge in various states of decomposition. Along the shores of the Muketei and Attawapiskat Rivers there are forested areas. Trees are primarily black and white spruce (*Picea glauca* and *mariana*), tamarack (*Larix laricina*), with minor amounts of trembling aspen (*Populus tremuloides*), balsam poplar (*Populus balsamifera*) and white birch (*Betula papyrifera*). Willows (*Salix*) and alders (*Alnus*) are present along creeks and in poorly drained areas (Tuchsherer et al, 2009).

## 6. History

The first geological investigation of the James Bay Lowlands and the McFaulds Lake area was by Robert Bell of the Geological Survey of Canada (GSC). He and his crew traversed and mapped the shores of the Attawapiskat River from James Bay and past the McFaulds Lake area (Bell, 1887). Subsequently, in 1906 and between 1940 and 1965, the GSC and the Ontario Department of Mines (ODM) initiated further regional geological programs aimed at determining the petroleum potential of the Hudson Bay and James Bay sedimentary basins, and determining the potential for hydrocarbons in the Moose River Basin area.

Prior to the 1990's, the James Bay lowlands were sparsely explored. The few companies doing exploration in the area included Consolidated African Selection Trust (Armstrong et al., 2008) and Monopros Ltd., the Canadian exploration division of Anglo-American DeBeers. Most of the active exploration at that time was restricted to the region near Nakina where access is facilitated by road and train.

Modern day exploration in the McFaulds Lake area only began in the early 1990's as a result of diamond exploration. In 1989 Monopros Ltd. began exploration near the Attawapiskat kimberlites, which resulted in the discovery of the Victor pipe. The Spider/KWG joint venture resulted in the discovery of the Good Friday and McFayden kimberlites in the Attawapiskat cluster, as well as the 5 Kyle kimberlites (Thomas, 2004). This activity led the way for other diamond exploration companies, i.e., Canabrava Diamond Corporation, Condor Diamond Corp., Dumont Nickel Inc., Dia Bras Exploration Inc., Greenstone Exploration Company Ltd., and Navigator Exploration Corp. (Tuchsher et al, 2009).

In the early 2000's copper mineralization was discovered by DeBeers Canada Inc. in the McFaulds Lake area. This discovery was subsequently drill defined by Spider/KWG and named the McFaulds No. 1 volcanogenic massive sulphides (VMS) deposit. Further copper mineralization was found at the McFaulds No. 3 VMS deposit (Gowans and Murahwi, 2009).

Richard Nemis arranged to have staked claims in the McFaulds Lake area. He optioned the claims to Freewest who then optioned the claims to Spider Resources and KWG Resources in 2005 who then discovered chromite mineralization in 2006 (Gowans et al., 2010).

The discovery of the Eagle One nickel massive sulphide deposit by Noront Resources in 2007 resulted in the most recent staking rush. Over the next two years the Black Bird, Black Creek, Black Thor and Black Label chromite deposits were found as well as the Thunderbird vanadium deposit (Gowans et al., 2010).

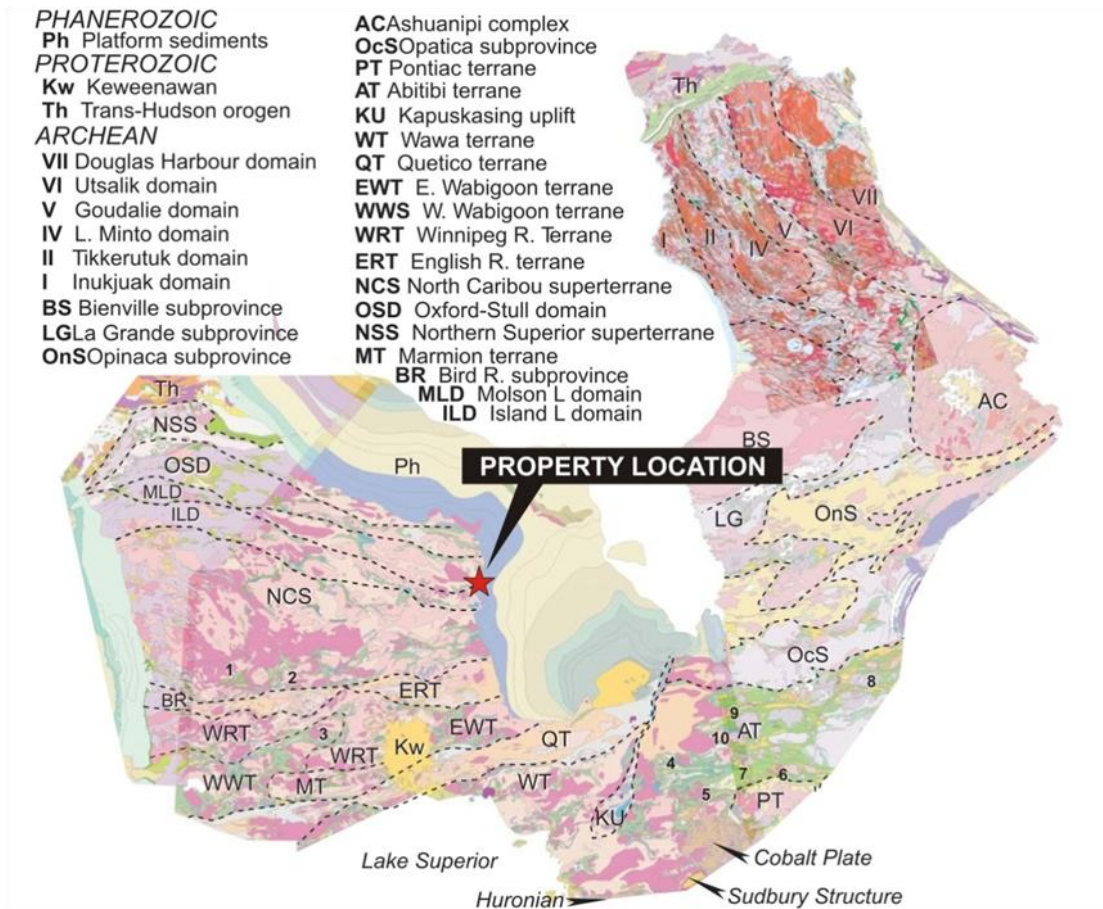


Figure 4 – Ontario Geology Map.

## 7. Geological Setting and Mineralization

### 7.1. Regional Geology

The James Bay Lowlands regional geology can be subdivided into the following domains: Precambrian Basement Complex, Paleozoic platform rocks, and Quaternary cover.

#### 7.1.1. Precambrian Basement Complex

The Zara properties are located within the Kasabonika-McFauld's Greenstone belt in the eastern portion of the Molson Lake Domain (MLD) that makes up a portion of the Sachigo Sub-province of the Western Superior Province of the Canadian Shield (see Figure 4). Age dating has shown that there are two distinct assemblages: the Hayes River assemblage with an age of about 2.8 Ga, and the Oxford Lake assemblage with dates of about 2.7 Ga. Numerous mafic intrusions have been documented in the domain, such as the Big Trout Lake intrusion (Percival, 2007).

The domain is also intruded by numerous plutons of tonalitic, granodioritic, and granitic compositions.

In the McFaulds Lake area of the James Bay lowlands (see Figure 5) there is very poor outcrop exposure. As a result an aeromagnetic compilation and geological interpretation map was completed by Stott in 2007. Important geological features observed by Stott (2007) are:

- West- and northwest-trending faults show evidence of right-lateral transcurrent displacement.
- Northeast-trending faults show left-lateral displacement.
- In the northern half of the Hudson Bay Lowlands area Archean rocks are overprinted by the Trans-Hudson Orogen (ca. 2.0 – 1.8 Ga).
- Greenstone belts of the Uchi domain and Oxford-Stull domain merge under the James Bay Lowlands.
- The Sachigo subprovince contains a core terrain, i.e., the North Caribou Terrain and “linear granite-greenstone” domains on the south and north flanks, that record outward growth throughout the Neoarchean.
- Major dextral transcurrent faults mark the boundary between the Island Lake and Molson Lake domains.
- Proterozoic (1.822 and 1.100 Ga) carbonatitic complexes intruded and reactivated these faults.
- The area has undergone a doming event. Uplifted lithologies include a regional scale granodioritic gneissic complex to the NW of the property.

### **7.1.2. Paleozoic Platform Rocks**

The Paleozoic Platform rocks of the James Bay Lowlands consist primarily of upper Ordovician age (450 Ma to 438 Ma) sedimentary rocks. The sedimentary pile thickens significantly to greater than 100 m to the east and north but is only intermittently present in the immediate property area. It is comprised mainly of poorly consolidated basal sandstone and mudstone overlain by muddy dolomites and limestones.

### **7.1.3. Quaternary Cover**

The area is mantled by a thin, but persistent, layer of glacial and periglacial till and clay deposits.

## 7.2. Local Geology

Because of the limited bedrock exposure not much can be directly inferred about the geology of the Zara properties.

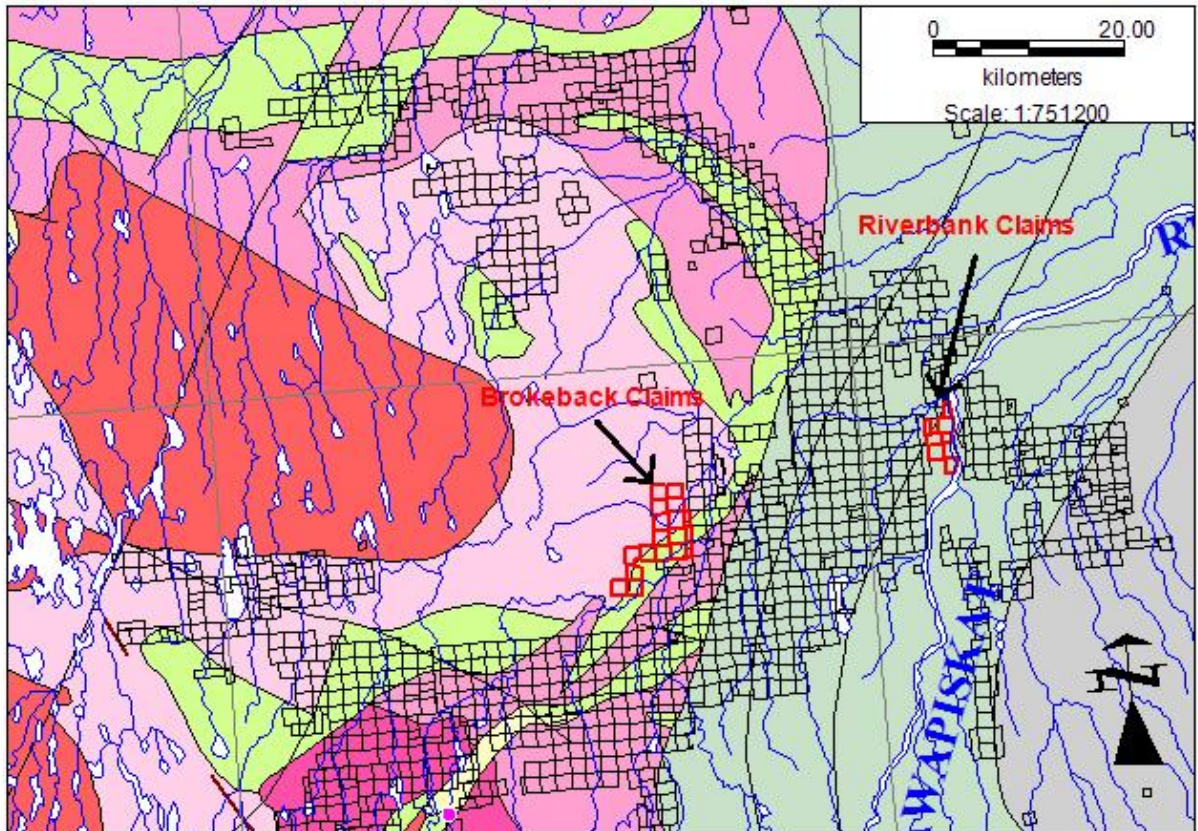


Figure 5 – Regional Geology Map.

## 7.3. Mineralisation

To date no mineralisation has been found on either of the Zara properties.

## 8. Deposit Types

As stated by Lawyer and Hebert (2011) the Zara properties were originally staked to cover perceived potential for nickel-copper sulphide mineralisation hosted by mafic to ultramafic rocks, similar to that found at the relatively nearby Noront Eagle's Nest Ni-Cu deposit. Details of this deposit model can be found in the Lawyer and Hebert report, attached as Appendix 1.

## **9. Exploration**

As detailed by Lawyer and Hebert (2011), exploration over the properties to date has consisted primarily of geophysics followed by limited diamond drilling. Regional government gravity and magnetic survey data was evaluated and used to locate the Broke Back and Riverbank properties, concentrating on significant regional gravity highs.

After staking, the properties were covered by an airborne VTEM and magnetic survey was flown by Geotech in 2010. No obvious targets were identified on the Broke Back property but a number of conductive trends are present on the Riverbank property.

Three diamond drill holes were completed in 2011.

There has been no further exploration done on the properties since the work detailed by Lawyer and Hebert (2011).

## **10. Drilling**

To date there have been 3 holes drilled totalling 416m; one on the Riverbank property and 2 on the Broke Back property by the previous property owners (Melkior Resources Inc. and Green Swan Capital Corp.). Details about this drilling can be found in the report by Lawyer and Hebert (2011) included as Appendix 1 of this report. No mineralisation of note was intersected.

## **11. Sample Preparation, Analyses and Security**

No sampling has been done subsequent to the work detailed by Lawyer and Hebert (2011).

## **12. Data Verification**

As no sampling was done in relation to the preparation of this report there was no need for data validation.

## **13. Mineral Processing and Metallurgical Testing**

There has not yet been any mineral processing or metallurgical testing done.

## **14. Mineral Resource Estimates**

There has not yet been any mineral resource estimation done.

## **15. Mineral Reserve Estimates**

There has not yet been any mineral reserve estimation done.

## **16. Mining Methods**

As no mining study has yet to be done on the property no mining method has been selected.



## **17. Recovery Methods**

As no metallurgical studies have been done no recovery method has been selected..

## **18. Project Infrastructure**

There is currently no project infrastructure in place.

## **19. Market Studies and Contracts**

There have been no market studies done and no sales contracts signed.

## **20. Environmental Studies, Permitting and Social or Community Impact**

As the project is at its infancy there as yet have been no environmental studies done. There have been no social or community impact studies done to date.

## **21. Capital and Operating Costs**

As no mining study has yet to be completed there is no estimate of capital and operating costs.

## **22. Economic Analysis**

There has not yet been any economic analysis done.

## **23. Adjacent Properties**

There has been no material change to the list of adjacent properties described in the attached report by Lawyer and Hebert (2011).

## **24. Other Relevant Data and Information**

There is no other data or information available that can make this report understandable.

## **25. Interpretation and Conclusions**

The work to date has not disproven the presence of ultramafics which may host associated nickel-copper sulphide mineralisation. There are still untested magnetic and electro-magnetic anomalies that need to be drill tested.

It is concluded that the property is indeed an excellent target for hosting potentially economic nickel mineralisation. Further work consisting of ground geophysics to better isolate targets, followed by diamond drilling is now required.

## **26. Recommendations**

It was recommended by Lawyer and Hebert (2011) that ground Crone large loop EM geophysical surveying be completed over the two properties, as well as a ground gravity survey over the Broke Back property to better focus future drilling. SBG concurs with these recommendations and presents a budget for this program in Table 2.

<b><i>Item</i></b>	<b><i>Description</i></b>	<b><i>Amount</i></b>
<b>Crone large Loop EM</b>	32 km	\$ 160,000
<b>Ground Gravity</b>	20 km	\$ 50,000
<b>Diamond Drilling</b>	800 m	\$ 280,000
<b>Support</b>	Assaying, project supervision, etc.	\$ 130,000
<b>Contingencies</b>	10%	\$ 62,000
<b>Total</b>		<u>\$ 682,000</u>

**Table 2 – Budget for recommended program.**

## 27. References

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- Bell R. 1887. Report on an exploration of portions of the Attawapiskat & Albany Rivers, Lonely Lake to James' Bay; Montreal, Dawson Brothers 1887, Separate report No 239, Geological Survey of Canada, Part G, Annual Report 1886, 38 p.
- Gowans R. and Murahwi C. 2009. NI 43-101 Technical Report on the Big Daddy chromite deposit and associated Ni-Cu-PGE, McFaulds Lake joint-venture property, James Bay Lowlands, Northern Ontario; Micon International Ltd., prepared for Spider Resources Inc., KWG Resources Inc., and Freewest Resources Inc., 79 p.
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## Certificate of Qualifications

I, Alan James Aubut, do hereby certify the following:

- I am the author of this National Instrument 43-101 technical document titled “*National Instrument 43-101 Technical Report, Broke Back and Riverbank Properties, McFauld’s Lake Area, Ontario, Canada, Porcupine Mining Division, NTS 43C and 43D, Geology Technical Report*”, dated October 27, 2012.
- I am a graduate of Lakehead University, in Thunder Bay, Ontario with the degree of Honours Bachelor of Science, Geology (1977).
- I am a graduate of the University of Alberta, in Edmonton, Alberta with the degree of Master of Science, Geology (1979).
- I have been actively practicing geology since 1979.
- Since 2009 I am a member in good standing of the Association of Professional Geoscientists of Ontario.
- From 2000 to 2009 I was a member in good standing of the Association of Professional Engineers and Geoscientists of Manitoba.
- I am a member of the Society of Economic Geologists.
- I operate under the business name of Sibley Basin Group Geological Consulting Services Ltd., a business independent of Zara Resources Inc. and do not expect to become an insider, associate or employee of the issuer.
- The business address of Sibley Basin Group Geological Consulting Services Ltd. is:

Sibley Basin Group  
PO Box 304  
300 First St. West  
Nipigon, ON  
P0T 2J0

While I have made two site visits to the immediate area in 2009 and 2010, I personally have not visited the properties subject of this report.



Alan Aubut  
October 27, 2012



## **Appendix 1 – Melkior Resources Qualifying Report**

**Qualifying Report**  
**on the**  
**Broke Back and Riverbank Properties.**  
**McFauld's Lake Area**  
**NTS 43C and 43D.**  
**Northern Ontario**  
**for**  
**Melkior Resources Inc.**  
**and**  
**Green Swan Capital Corp.**

**J. Ian Lawyer P.Geol**  
**Dr. Eric Hébert, P.Geol**  
**December 14, 2011**

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### 3.0 SUMMARY

At the request of Jens Hansen, President of Melkior Resources Inc., the authors conducted a data review of these exploration properties and completed personal inspections of the Broke Back property and Riverbank Property (“The Properties”) in the James Bay Lowlands. This Independent Technical Report is compliant with National Instrument 43-101 (“N43-101”), companion policy NI 43-101CP and Form 43-1010F1. The purpose of this report is to provide an independent review of the Properties and to provide a N43-101 report for Green Swan Capital Corporation, a Capital Pool Company.

This Report provides a summary of scientific data on and around the Properties, including the historic exploration work and makes recommendations concerning future exploration on the Properties. This report is based on exploration and property information from the public domain and from information obtained through field visits to the Properties between August 29 and September 1st, 2008, includes results from a **1659.5** line kilometres helicopter borne magnetic and Versatile Time Domain EM (V-TEM) survey flown over the Properties between May 18<sup>th</sup> and May 27<sup>th</sup>, 2010 and reported by Geotech Ltd. in August 2010. In August, 2011, Melkior Resources Inc. drilled two holes, each 100 metres in length on the Broke Back property and one hole totaling 216 metres at the Riverbank property (Hebert, 2011).

The Qualified Person for the Technical Report work is Mr. J. Ian Lawyer, P. Geo. The diamond drilling work was managed by Dr. Eric Hebert, P. Geo, under the supervision of Ian Lawyer.

The Properties were staked because they are underlain by anomalous gravity highs, as shown in regional data. These anomalous gravity highs are postulated to be due to mafic or ultramafic intrusions or to be layered mafic-ultramafic Igneous Complexes. (Other anomalous gravity highs in the general area are associated with layered mafic-ultramafic Igneous Complexes and include: Big Trout Lake Igneous Complex, Lansdowne House Igneous Complex, and Fishtrap Lake Igneous Complex). These anomalous gravity highs and their postulated large intrusions are proximal to known nickel-copper sulphide mineralization in ultramafic rocks at the Double Eagle discovery of Noront Resources Ltd. Mafic or ultramafic intrusions on the properties, if present, would thus be expected to have significant potential to host magmatic nickel-copper sulphide mineralization. The situation could be analogous to Sudbury and the Voisey's Bay deposit, with the Properties possibly covering a large mafic/ultramafic intrusion or intrusions, possibly with associated mineralization. Although the potential for nickel-copper PGE deposits is considered excellent, the Properties also have potential to host massive chromite, Volcanic Massive Sulfide deposits and diamond bearing kimberlite.

Green Swan optioned an initial 51% legal and beneficial interest, and a subsequent 19% legal and beneficial interest from Melkior, subject to a 2.5% Net Smelter Return royalty in and to the Properties, in consideration for the issuance to Melkior of 1,500,000 Common Shares, each Common Share having a half warrant attached, a cash payment of \$25,000 and by incurring a gross amount of \$1,000,000 in eligible exploration expenditures on the Properties before December 31, 2014.

The GeoTech V-TEM and magnetic survey has not defined obvious conductors for follow up on the Broke Back block, however the eastern edge of the lower third of the block has higher magnetization and isolated gravity responses, and regional geochemical sampling (Section 20) has shown the area to be anomalous in some elements. The presence of elevated magnetic responses along with coincident gravity highs may be an indication of mafic intrusives with possible massive chromitite mineralization

similar to the Black Bird chromitite discovery. Diamond drilling has shown the area to be underlain by magnetite rich intrusions.

Geophysical surveying of the Riverbank block has identified three conductors that warrant follow up ground electromagnetic surveying and diamond drilling. Drill hole RB-02-2011 intersected massive to near massive pyrrhotite units and a 10 m zone of ankerite and pyrite mineralization.

Given the scarcity of outcrop and the effectiveness of geophysical surveying as an exploration tool, the following exploration programs are recommended as a follow-up to the VTEM and airborne magnetic surveying over the Broke Back and Riverbank properties.

**Riverbank Property** - Airborne VTEM targets A and C (Hogg, 2010) will be surveyed via Crone ground electromagnetic to identify the exact location of the drill targets.

**Broke Back Property** - Two elevated gradient gravity responses are coincident with elevated first vertical derivative of the Total Magnetic Intensity anomalies. This is important because these coincident anomalies potentially may be an indication of mafic intrusives with possible massive chromitite mineralization similar to the Black Bird chromitite discovery. The targets warrant ground gravity and Crone ground geophysics to determine whether they should be drilled.

**Phase I** exploration would be ground geophysics. The cost is estimated to be **\$210,000**.

**Phase II** would be drilling to follow up the geophysical results. Two 200 m long holes are proposed for each property for a total of 800 m. It is recommended that a contingency amount of \$70,000 be in place in order to follow up positive drill intersections with an additional hole. The cost of this drilling would be **\$480,000**.

Drilling at Riverbank is not contingent on Phase I results-valid drill targets exist at present. Drilling at Broke Back is contingent on obtaining positive results from ground geophysics (isolated linear gravity high with a coincident EM low, flanked by elevated magnetics). The total recommended expenditures on these properties are **\$690,000**.

## **4.0 INTRODUCTION**

**Melkior Resources Inc. (Melkior)** acquired the Broke Back and Riverbank properties (the “Properties”) in the McFauld’s Lake area, James Bay Lowlands, northern Ontario (**Figures 1 and 2**). The Riverbank and Broke Back properties are owned 100% by Melkior Inc. The properties were acquired from North American Exploration Ltd. (\$40k) and Geotest Corporation (\$127,400). A 2% NSR was divided up as follows: Geovector Management Inc. 0.5%, Norman Farrell: 0.0625%, North American Exploration Ltd.: 0.365%, Wade Kornik: 0.05%, Nathalie Hansen: 0.05%, Geotest Corporation: 0.9725%.

The Properties represent very early stage, completely conceptual targets within and adjacent to the so-called “Ring of Fire” in northern Ontario, presently one of the most active exploration regions in Canada. The targets were developed by GeoVector Management Inc. (GeoVector), an Ottawa-based geo-consulting firm, in conjunction with Geotest Corporation (Geotest), a private exploration company. The targets were then staked by a consortium that included GeoVector, GeoTest and two directors of

Melkior.

This National Instrument 43-101– compliant technical report was prepared for the TSX Venture Exchange (the "Exchange") as a qualifying report. **The purpose of this report is to provide an independent review of the “Properties” and to provide a qualifying report as of part of the qualifying transaction for Green Swan Capital Corporation a Capital Pool Company.**

The senior author previously worked for several companies including Shell Canada Resources Ltd. and Noranda Inc. but pertinent to this report is the nickel exploration experience the author gained from employment at Western Mining Corporation, Darnely Bay Resources Limited, and Westminer Canada Limited. Much of this work involved the generation of conceptual magmatic nickel-copper and PGE targets, followed by evaluation of the targets after ground acquisition. The author has also gained experience exploring for volcanogenic massive sulfide deposits at Noranda Inc., Geco Division around the Geco mine in Northwestern Ontario and with Westminer Canada Limited exploring in the Bathurst camp in New Brunswick. By virtue of this relevant experience combined with his professional registration, the senior author is the Qualified Person for this Technical Report.

The junior author Dr. Eric Hebert, P.Geowas previously involved in several base metal exploration projects located in Northern Ontario, Northern Manitoba and Northern Quebec for mining and exploration companies including HudBay Minerals, Xstrata Copper, Vismand Exploration Inc. and Virginia Gold Mines. The Riverbank and Broke Back properties are geographically and geologically located in similar environments. Much of his work involved conductive targets in terrains ranging from relatively undeformed to highly deformed and metamorphosed. The author also acquired experience in metallogeny concerning the type of mineralization the conductors consist of and in developing the best exploration strategy based on geological insights.

Work on the properties was carried out **between August 29 and September 1, 2008**, which included a property fly over of the Riverbank Property to identify any areas of outcrop exposure or possible areas for sampling, no outcrops were identified (this is consistent with previous government surveys (Crabtree and Gleeson 2003), (Crabtree, 2003). On the Broke Back property, 3 outcrops (previously mapped by the Ontario Geological Survey (Crabtree and Gleeson, 2003) located in south west part of Back property (**Figure 22**) were sampled. Two samples were found to be hornblende quartz diorite and one was hornblende biotite quartz diorite (Hall, 2008) which is consistent with previous Ontario Geological Survey mapping. Between May 18<sup>th</sup> and May 27<sup>th</sup>, 2010 GeoTech Ltd. flew **1659.5** line kilometres of helicopter borne magnetic and Versatile Time Domain EM (V-TEM) surveys over the Properties.

In August, 2011, Melkior Resources Inc. drilled two holes, each 100 metres in length on the Broke Back property and one hole totaling 216 metres the Riverbank property.

In addition to personal knowledge, this report is based on examination of the following:

- geoscientific information from the Ontario Geological Survey and Geological Survey of Canada;
- information disseminated by other companies working in the region;
- assessment reports from previous workers;
- examination of scientific literature;
- GeoTech Ltd. - Report on Helicopter-Borne Versatile Time Domain Electromagnetic and Aeromagnetic Geophysical Survey Broke Back and Riverbank Properties. (Venter, 2010) which was provided by Melkior Resources Inc.

- Report for the Geotech VTEM and Magnetic Helicopter Geophysical Surveys of the Broke Back and Riverbank Blocks (Hogg, 2010) which was provided by Melkior Resources Inc.

Sources of information are cited in the report as the information is presented.

The 1983 North American Datum (NAD83) co-ordinate system is used in this report. The Properties are in Universal Transverse Mercator (UTM) Zone 16N (**Figure 3**). Assessment reports cited in the references are available on the website of the Ontario Ministry of Northern Development and Mines ([www.geologyontario.mndm.gov.on.ca](http://www.geologyontario.mndm.gov.on.ca)). The AFRI (Assessment File Research Imaging) number is provided for each assessment report. All monetary figures quoted in this report are in Canadian dollars.

## 5.0 RELIANCE ON OTHER EXPERTS

Government reports and maps referenced herein were prepared by a person(s) holding post-secondary geology or related university degrees and the information in those reports and maps is assumed to be accurate. Assessment reports written by other geologists are also assumed to be accurate based on a review conducted by the author. Although all assessment reports were accessed via MDMN website there is currently a backlog of 2-3 years before the released assessment reports are then made available on the MDMN website <http://www.geologyontario.mndm.gov.on.ca/>. Information on recent exploration results provided by other companies in news releases has been reviewed by Qualified Persons, and is assumed to be valid. This technical report is heavily reliant upon data produced by the federal and provincial governments, as well as recent exploration reports (Venter, 2010), (Hogg 2008) and (Hebert, 2011); the author is confident that these bodies of information are sufficiently accurate for the purposes of this report. Claim ownership data was obtained from Melkior Resources Inc. and the government website at [http://www.mndmf.gov.on.ca/mines/mining\\_claims\\_information\\_e.asp](http://www.mndmf.gov.on.ca/mines/mining_claims_information_e.asp)

## 6.0 PROPERTY DESCRIPTION AND LOCATION

The Properties occur in the James Bay Lowlands of northern Ontario (**Figure 1**), in the Porcupine Mining District (**Figure 2**) in National Topographic System (NTS) 1:250,000 map sheets 43C, 43D (**Figure 3**). The center of the Broke Back Property (**Figure 4**) ( $86^{\circ} 46'$  longitude and  $52^{\circ} 86'$  latitude), is located 70 km southeast of the First Nations community of Webequie (**Figure 2**) and consists of 61 claims totaling 837 claim units and covering 13,392 ha. (**Table 2**). The Broke Back Property consists of unpatented and unsurveyed claims and are owned by Melkior Resources Inc.

The center of the Riverbank Property (**Figure 5**) ( $85^{\circ} 87'$  longitude and  $52^{\circ} 90'$  latitude) is approximately 100 km east of the First Nations community of Webequie (**Figure 2**) (and consists of 8 claims totaling 87 claim units and cover 1392 ha. (**Table 3**) The Riverbank Property consists of unpatented and unsurveyed claims are owned by Melkior Resources Inc. The properties occur within Base Map Areas (BMA) 527862, 528862 and 527854.

The Riverbank and Broke Back properties are owned 100% by Melkior Inc. The properties were acquired from North American Exploration Ltd. (\$40,000) and Geotest Corporation (\$127,400). A 2% NSR was divided up as follows: GeoVector Management Inc. 0.5%, Norman Farrell: 0.0625%, North American Exploration Ltd.: 0.365%, Wade Kornik: 0.05%, Nathalie Hansen: 0.05%, Geotest Corporation: 0.9725%.

The mineral rights give the owners the right to explore for ore on the claims, subject to a 400' surface rights reservation around all lakes and rivers, and a 300' surface reservation around major roads (this may be waived by the Crown). Unpatented claims require work expenditures of at least \$400 per 16 hectare claim unit in the first two years, and \$400 per year thereafter (by the anniversary of their recording date). Permits will not be necessary for most exploration work, but it will be necessary to consult with local First Nations organizations regarding proposed exploration programs.

To the extent known, no significant factors or risks have been identified that may affect access, title or right or ability to perform work on the property. Work performed on the Riverbank claims in 2011 will be filed before the claim expiry date and applied to the claims keeping the claims in good standing until 2013. Work performed on the Broke Back claims in 2011 will be filed before the claim expiry date and applied to some claims to keep them in good standing until 2013. Some claims may be dropped or an extension to perform work will be requested from the Ministry.

At the time of the property visit in August and September 2008, the Properties did not contain any known mineral resources, mineral reserves, mine workings, tailing ponds, waste deposits or any environmental liabilities.

An option agreement has been executed whereby Green Swan will option from Melkior an initial 51% legal and beneficial interest, and a subsequent 19% legal and beneficial interest, subject to a 2.5% Net Smelter Return royalty in and to the Properties, in consideration for the issuance to Melkior of 1,500,000 Common Shares, each Common Share having a half warrant attached, a cash payment of \$25,000 and by incurring a gross amount of \$1,000,000 in eligible exploration expenditures on the Properties before December 31, 2014.

## **7.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

Vegetation in the area is typical for an area located along the fringe of the Boreal Forest, with tree cover being sparse and stunted except along rivers, creeks and ponds. The dominant species include black spruce, tamarack and lesser quantities of balsam, birch, jack pine and poplar. Caribou mosses occur on the rare outcrops and as soft hummocks. Small groves of poplar are also present in well-drained areas.

Plate 1 – Photo looking north towards Riverbank property



The Properties lie within the James Bay Lowlands of northern Ontario. The lowlands are characterized by a plain of low relief with virtually all the land having elevations between sea level and 200 m ASL. The land tilts slightly, and all drainages head north-northeast towards James Bay and Hudson Bay. The Properties occur some 250 km from James Bay (Figure 1), and have elevations in the 160 to 175 m ASL range. Drainage is very poor, and the Properties are dominated by wet muskeg/peat swamps and drunken forests (**Plate 1**). Peat swamps are largely treeless except around the very rare outcrops (as hillocks) and moraine ridges, and along the slopes beside the larger rivers where tree roots can be drained, allowing them to survive. Several small lakes occur on each property and the Attawapiskat River borders the Riverbank property.

The James Bay Lowlands are isolated and difficult to access. Exploration on the Properties would have to be conducted out of Webequie, or out of a camp built on site or from a cost-shared central camp. There is scheduled air access to Webequie on Wasaya Airways and North American Charters (NAC). The best supply towns are Nakina and Hearst; supplies can be trucked to these two towns and then flown out by aircraft to the project site or by wheeled aircraft to Webequie. Helicopters are necessary to access and travel around the property.

The climate is sub arctic in nature, with short cool summers and severely cold winters. Mean annual winter temperatures are approximately  $-18^{\circ}\text{C}$ , and average summer temperatures are  $11^{\circ}\text{C}$ . Annual precipitation is on the order of 800 mm. Typical winter snowfalls average 1 m. Winter whiteout conditions can develop without warning and may last for several days. A low ceiling of stratus clouds makes whiteout conditions general, and movement across the ground then becomes difficult. During the spring thaw, the area is almost completely flooded, resulting in shallow lakes, some of which are marked on government maps. At this time, there is a six to eight week period when surface work is virtually impossible.

The full range of equipment, supplies and services that are required for any exploration and mining work have to be flown in by aircraft. Local labor is available from First Nations towns in the district, but exploration and mining expertise has to be contracted from elsewhere.

Active exploration such as diamond drilling and ground geophysics is generally carried out in the winter, when peat swamps and lakes are frozen. Drilling during the summer requires the construction of drill pads on the peat swamps and/or small light drill equipment with limited depth penetration. There is very little surface outcrop, due to the greater than 6 m deep peat layer, thus exploration is almost entirely dependent on airborne geophysical target selection and prospecting along the major rivers. Suitable locations for tailings ponds, waste disposal areas and processing facilities are abundant on the Properties.

## **8.0 HISTORY**

The Assessment File Research Imaging (AFRI) system of the Ministry of Northern Development and Mines does not have documentation of any previous exploration work having been recorded on the Broke Back and Riverbank Properties.

## **9.0 GEOLOGICAL SETTING and MINERALIZATION**

Due to the remoteness of the properties and the paucity of outcrop the geological setting is poorly understood. In general the Properties are considered to lie within the eastern portion of the Sachigo Subprovince of northern Ontario (**Figure 6**; Thurston et al., 1991). The Sachigo Subprovince is overlain to the east by a sequence of Paleozoic sedimentary rocks (dolomite, shale, sandstone) which thickens gently to the east. The Sachigo Subprovince contains various greenstone belts sitting with granitic gneiss of the Berens River Gneiss complex (**Figure 6**). The greenstone in the area of the Properties may be an extension of the Big Trout greenstone belt; Rayner and Stott (2005) have introduced the term *Kasabonika-McFaulds* greenstone belt for these rocks.

The main government mapping in this region was a brief helicopter reconnaissance program conducted in 1971 (Thurston et al., 1979). Ontario Geological Survey regional maps based on this mapping show that the extreme south east of the Broke Back property are nominally underlain by Archean mafic to ultramafic rocks, with gneissic tonalite underlying the rest of the properties (Ontario Geological Survey, 2006; **Figure 7**). The mafic/ultramafic rocks are not present on the map of Thurston et al. (1979), and may be an interpretation added to the regional maps based on magnetic data. Regional geological data shows that the Riverbank property is underlain predominantly by the Upper Ordovician Red Head Rapids Formation and in the northwest by the Churchill River Group (**Figure 7**). There are no known mineral resources, mineral reserves, or mine workings on the Properties.

## **10.0 DEPOSIT TYPES**

The Properties were staked because of their perceived potential to host magmatic nickel-copper ± Platinum Group Element (PGE) deposits. These deposits occur as metal-bearing sulphide concentrations associated with a variety of mafic and ultramafic magmatic rocks (Eckstrand and Hulbert, 2007). Ore metals come from the magma, and some or all of the sulphur comes from country

rocks (Arndt et al., 2005). The sulphides form immiscible droplets within a magmatic plumbing system; these droplets sink to the base of the magma because of their greater density, in an ideal case forming ore grade deposits. The overall magmatic system may be quite complicated, with ore potentially forming in a variety of geologic environments (**Figure 8**; Perring et al., 2001). These environments include meteorite-impact generated mafic melt (i.e. Sudbury), rift or continental basalt-related mafic sills or dikes, komatiitic flows or intrusions, or other mid-crustal mafic/ultramafic intrusions (Eckstrand and Hulbert, 2007). Ore may be associated with the remnant magma chambers or may occur in smaller horizontal to vertical conduits (dikes, sills or offshoots). Sulphide concentrations formed by the gravity-induced settling of sulphide droplets tend to be semi-massive to massive in nature; concentrations formed by fractional crystallization of the magma tend to be disseminated and lower grade. It is common for magmatic nickel-copper sulphide deposits to occur in large districts which contain a number of deposits (Eckstrand and Hulbert, 2007).

The first objective of exploration for magmatic nickel-copper deposits is to identify regions that host mafic/ultramafic bodies (Eckstrand and Hulbert, 2007). This may be possible from examination of geological maps. Mafic/ultramafic bodies are invariably denser than their host rocks, and so if they are of sufficient size they are likely to produce gravity anomalies. The bodies may also contain enough primary magnetite to cause magnetic anomalies, but alteration may easily affect the magnetic signature. In a mature exploration district, a detailed understanding of the magmatic plumbing system is helpful, but in an immature exploration district such an understanding is not likely to be present. Ore may be present in magmatic bodies that are localized by structures, or ore may have been remobilized into structures, so an understanding of the structural scenario is desirable and this can typically be aided by regional magnetic data. Direct detection of the ore by geophysical means may be possible. If the orebodies contain sufficient pyrrhotite or magnetite, they may be magnetic. If the sulphides are interconnected (semi-massive to massive ore), they will likely form conductors that can be detected with electromagnetic (EM) techniques-thus EM is a useful exploration tool. If the sulphides are not interconnected (disseminated ore), they may still exist in sufficient abundance to respond to Induced Polarization (IP) techniques. It is on the basis of the above geological and geophysical characteristics that the exploration program is planned (Section 11.0 Exploration).

## **11.0 EXPLORATION**

GeoVector/Geotest developed the concepts which underpin acquisition of the Properties; these concepts are highly relevant to this report and so are discussed herein. Regional geological maps of the McFauld's Lake area contain little in the way of well documented mafic/ultramafic bodies, so until recently this area had not been explored for its nickel potential. However in September 2007, Noront Resources Ltd. announced its Double Eagle discovery, which contains massive sulphides (chalcopyrite-pyrrhotite-pentlandite) within a peridotite body (Section 17). This discovery showed that i) ultramafic bodies occur in the McFauld's Lake area; and ii) that the processes which result in the concentration of significant amounts of nickel-copper sulphide were operative. This discovery, with the very real possibility that Double Eagle would be the first deposit to be found within a new nickel district, led to a major staking rush. In addition to the Double Eagle discovery, major drill intersections of massive chromite have also been discovered.

During initial targeting of the McFauld's Lake area, GeoVector/Geotest concentrated on the gravity data, on the assumption that major mafic/ultramafic bodies would produce significant positive gravity anomalies. Gravity data was initially collected by the Geological Survey of Canada, but reprocessed by the Ontario Geological Survey (Ontario Geological Survey, 1999). Survey points in the area are at



approximately 12 km spacing-not ideal, but sufficient for regional evaluation. On a gravity map of Ontario, it is clear that there are major positive gravity anomalies in the McFauld's Lake area (**Figure 9**). Furthermore, the Noront discovery is not associated with a known gravity anomaly, and adjacent staking had concentrated on extensions of the Double Eagle stratigraphy based on magnetic data. Two aerially extensive gravity signatures were targeted for staking the Broke Back and Riverbank properties cover the bulk of the western part of these signatures (**Figure 10**). Based on available magnetic data (Ontario Geological Survey, 2003), the Broke Back property contains significant magnetic signatures, whereas the Riverbank property contains only minor magnetic signatures (**Figure 11**).

Based on the gravity signatures (**Figure 10**), GeoVector/Geotest believes that there is a strong possibility that the Properties are at least partially underlain by significant volumes of dense, mafic or ultramafic rocks. The southeastern part of the Broke Back property is interpreted by the Ontario Geological Survey to be underlain by a mafic or ultramafic body, and the magnetic data supports this interpretation. Based on the geophysical data and what is presently known about the size of the ultramafic body at Double Eagle, it is possible that a Sudbury analogy might apply in this area (**Figure 12**; cf. Ames and Farrow, 2007). In this scenario, the Double Eagle mineralization would occur within an ultramafic body that is an offshoot from a much larger mafic/ultramafic complex that is reflected by one or both of the positive gravity signatures that underlie the Properties. These postulated large complexes have the potential to host major nickel-copper, PGE and chromite deposits, particularly as the McFauld's Lake area has already proven its potential to host concentrations of nickel-copper, PGE and chromite.

The positive gravity signatures which underlie the Broke Back and Riverbank Properties resemble other positive gravity signatures located in and around the Noront Eagle One deposit. These gravity signatures (**Figure 13**) stretch from the Big Trout Lake Igneous Complex located 225km northwest of the West Rim Property and continue in a roughly southeast trend along a major fault and include the Lansdowne House Igneous Complex, Fishtrap Lake Igneous Complex. Several of these complexes host layered mafic and ultramafic sequences which host Ni-Cu, PGE, vanadium and chromite rich horizons. Many of the complexes are comprised of intrusives and associated volcanic sequences with several being overturned and folded. This structural deformation, uplift and later erosion leaves variations in the magnetic signatures of each of the complexes as can be seen in the government airborne magnetic data. Horizons rich in oxides and ultramafic intrusives provide a strong magnetic response, however away from the magnetite rich horizons the magnetic signatures are diminished even though the Igneous Complex is still present. One common geophysical signature over all of these Igneous Complexes is their striking gravity high signatures which are an indication of the difference in density related to the presence of a thick package of ultramafic and mafic intrusives or the presence of a Large Igneous Complex.

Note: Green Swan Capital Corp. has not completed this exploration work but Melkior Resources Inc., GeoVector/Geotest and various contractors completed this exploration work.

### **GeoTech Ltd. Airborne Magnetic and V-TEM Survey over the Broke Back and Riverbank Properties.**

"During May 18<sup>th</sup> to May 27<sup>th</sup>, 2010 Geotech Ltd. carried out a helicopter-borne geophysical survey for Melkior Resources Inc. over the Broke Back and Riverbank properties situated near McFaulds Lake, Ontario, Canada. (**Figure 15**). Principal geophysical sensors included a versatile time domain electromagnetic (VTEM) system and a caesium magnetometer. Ancillary equipment included a GPS

navigation system and a radar altimeter. A total of 1659.5 line-kilometres were planned to be flown. The survey operations were based in McFaulds Lake camp, near the survey area. In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The Broke Back and Riverbank properties were flown in an east to west (N 90° E / N 270°E) direction, with traverse line spacings of 100 metres wherever possible. Tie lines were flown perpendicular to the traverse lines at spacings of 1000 metres in a north to south (N0° E / N 180° E) flight direction.” (Venter, 2010).

A total of 1659.5 line-kilometres of geophysical data were acquired over the Melkior properties with 1508.4 line-kilometres flown at Broke Back, and 151.1line-kilometres at Riverbank. (**Figure 16**; Venter, 2010 and **Figure 17**; Venter, 2010).

### **Interpretation of the GeoTech VTEM and Magnetic Surveys**

The following is taken from “Interpretation Report for the Geotech VTEM and Magnetic Helicopter Geophysical Surveys of the Broke Back and Riverbank Blocks McFauld's Lake Area Ontario, Canada on behalf of Melkior Resources Inc. Scott Hogg & Associates August, 2010” (Hogg, 2010).

#### **Broke Back Block**

“The Broke Back survey area lies within a geological unit mapped by the Ontario Geological Survey as tonalite to granodiorite. The magnetic apparent susceptibility map” (**Figure 18**) “shows considerable variability within the unit with some higher magnetization toward the southeast. It is suspected that the variations of magnetite content reflect gradational changes of lithology within the general geologic formation as opposed to indicating younger intrusive rocks. Areas of low susceptibility follow some of the interpreted faults and may be due to magnetite depletion in the vicinity of these structures. The underlying magnetic macro fabric is aligned generally N-S. Superimposed there is evidence of faulting on both a NNW-SSE and NW-SE axis. Dykes have been interpreted in the same structural direction.”

“The conductance map derived from the VTEM response” (**Figure 19**) “displays some broad zones of increased conductivity. The maximum value in the southern region of the block is less than 1 siemen, considerably below the level normally associated with sulphide mineralization. The pattern of conductance does not correlate with that of the magnetic map and it is likely that electrolytic conduction in overburden, clays or weathered basement surface, is the source of the conductance variations.

The location of the survey block lies within a region of both sulphide and kimberlite discoveries. The magnetic and electromagnetic anomalies identified by this survey, in comparison to those associated with these known discoveries, do not provide obvious targets for sulphide or kimberlite investigation.”(Hogg, 2010)

#### **Riverbank Block**

“The magnetic map” (**Figure 20**) “and the apparent susceptibility map in particular, present threedomains indicated as M0, M1 and M3, from west to east, with increasing magnetite content. The low magnetization M0 domain may reflect metasedimentary rock, the M1 domain felsic volcanics and the M3 domain intermediate volcanic rock. In the northern part of the block are several pronounced magnetic anomalies, within and on the margin of the M3 unit and these anomalies may reflect mafic to

ultramafic volcanic rocks.” “The VTEM response (**Figure 21**) shows a number of conductors of potential exploration interest. These have been labeled A through D for reference purposes with no significance attached to the order.” (Hogg, 2010)

**A:** “This conductor axis, about 2 km in length, lies along the eastern margin of the block, and is coincident with one of the interpreted mafic to ultramafic magnetic formations. The shape of the VTEM response suggests a thin source dipping steeply to the east. The calculated conductance reaches a maximum of about 5 siemen on line 4250. This level of conductivity suggests that minor sulphide mineralization may be the anomaly source.” (Hogg, 2010)

**C:** “This conductor axis, about 0.3 km in length, enters survey the block from the south. The shape of the VTEM response suggests a thin source dipping steeply to the west toward a weakly magnetic anomaly. The calculated conductance is less than 2 siemen. It is possible that minor sulphide mineralization is present but electrolytic conduction along a contact could also produce such a response.” (Hogg, 2010)

**D:** “This conductor axis, about 0.5 km in length, lies at the south end of the block. There is no associated magnetic response; however, the strike of the conductor is generally aligned with the local magnetic fabric. The shape of the VTEM response suggests a wider source that could be simply a relatively thin horizontal layer. The calculated conductance is less than 2 siemen. It is possible that minor sulphide mineralization is present but electrolytic conduction in the overburden or weathered basement surface is a more likely source.” (Hogg, 2010)

The total cost of the exploration described in this section was \$327,364.

## **12.0 DRILLING**

A total of three holes were drilled on the Riverbank and Broke Back properties using diamond core. The holes were drilled to test geophysical targets and satisfy assessment requirements. Drilling of these three holes was done by a sub-contractor, Orbit Drilling Inc.; logging and program management was by GeoVector Management Inc. The camp facility was managed by Billiken and transportation was provided by Expedition Helicopter and Leuenberger Air service (for charter and supplies).

Access to the drill sites was via helicopter and adequate pads were cut using chain saws for the drill site and the helicopter landing site. The drilling procedures include a NW casing through the overburden and the use of NQ bits where hard rock was encountered. The two Broke Back holes were collared in a large swamp area which made it quite difficult to access solid ground to set-up the drill and equipment without sinking. The holes' position, length, orientation and inclination are described below.

The core was delivered daily from the drill site to the Billiken camp, transported by helicopter. All the preparation work and logging were done at the Billiken camp, where a core logging facility, core saw and storage for the core and the technical personnel were provided. The core was systematically photographed, technically prepared and logged, including core rotation, rock quality description (RQD), recovery measurement, continuous measurements of magnetic susceptibility and conductivity. For each core run (i.e. 3 metres), a rock quality description (RQD) and recovery were measured; the overall recovery was excellent with the exception of one of the Broke Back holes which was poorly recovered.

All drill holes were surveyed down-hole for derivation and deflection by Oribit Drilling Inc. using a Reflex instrument at a 50 metre interval.

Three holes were drilled by Melkior Resources (one on the Riverbank property and two on the Broke Back property) for a total of 416 metres, completed from August 1<sup>st</sup> to August 9<sup>th</sup> 2011.

For the Riverbank property, the drill hole was designed to intersect a conductor revealed by a VTEM survey. The drill hole intersected conductive mineralization between 172.65 and 181.90 metres which consists of argillite with semi-massive sulphide beds of pyrrhotite and pyrite. The drill hole intersected the mineralization at 60 degrees to core axis, therefore the true thickness is approximately 87% of the drill hole intersection distance (i.e. ~ 8 metres).

*Hole details for Riverbank:*

Name of hole: RB-02-2011

Reason for drilling: VTEM target; hole was designed to intersect a basement conductor dipping 70-80° East with a depth to top of about 145 metres.

Length: 216 m

Azimuth: 270°

Dip: -60°

Collar: UTM NAD83 (Zone 16): 576910E; 5864815N (Figure 28).

For the Broke Back property, a fence of four drill holes was designed to test a strong magnetic anomaly. Only two of these holes were actually drilled. The two holes encountered strongly magnetic tonalite to quartz diorite, which could easily explain the strong magnetic anomaly that was targeted.

Details of the Broke Back holes:

Name of holes: BB-01-2011 and BB-04-2011

Reason for drilling: TMI target; possible mafic intrusion. The two holes were designed to fence the magnetic anomaly and possible geologic contact.

BB-01-2011

Length: 100 m

Azimuth: 140°

Dip: -60°

Collar: UTM NAD83 (Zone 16): 545562E; 5855484N (Figure 29).

BB-04-2011

Length: 100 m

Azimuth: 140°

Dip: -60°

Collar: UTM NAD 83 (Zone 16): 545661E; 5855370N (Figure 29).

For the Broke Back drill holes, no significant mineralized zones were encountered. However, a routine sampling for whole rock was taken at a 50 metre interval, for a total of two for the first hole (#BB-01-2011). The second hole (#BB-04-2011) consists of heavily broken core which encountered strong weathering. The quality of the rock was not suitable for whole rock analyses which usually required a representative sample of the rock unit with no or very few veins or fractures, and no weathering.

The Riverbank hole was an exploration one, based on a conductive and magnetic anomaly. Being an exploration hole, intervals beyond the conductive and magnetic target were also considered for assay. Such intervals include an approximate 10 metre interval of volcanic rock with a strong ankerite alteration with 2 or 3 % of disseminated pyrite which were assayed for the 60 element exploration package offered by Activation Laboratories Ltd, which also includes gold.

The total cost of the 2011 drilling was \$139,129.

It is the opinion of the authors that the drilling operation was done by competent professionals; the core was handled, logged and sampled according to professional standards by qualified geologists and the results are suitable for support of a NI 43-101 report.

## **13.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY**

### **Rock Sampling**

In 2008, the senior author collected three selective rock samples from outcrops in a river on the Broke Back property (**Figure 22**) for independent petrographic study (Hall, 2008) to verify that the geology of the sparse outcropping was consistent with the geology documented in Ontario Geological Survey Open File Report 6097. Independent petrographic review of these samples (Hall, 2008) indicates the exposed geology in these outcrops is consistent with the geology reported in Open File Report 6097 (Crabtree and Gleeson, 2003). Independent petrographic study was completed on 3 samples (Hall, 2008) and no analytical analyses were completed on these samples.

### **Diamond Drilling Sampling Method and Approach at Riverbank and Broke Back**

#### *Sample method*

For the drill core, sample intervals of the relevant zones were marked and numbered in advance by the geologists. The sample lengths were between 0.50 and 1.00 metres and there is no overlapping from one rock unit to another within an individual sample interval. The choice of sample interval is based as much as possible on the geological contacts and features, such as mineralization, alteration and density of veins. Shoulders of one or two samples were taken on both sides of relevant mineralized zones. The core was sawn in half by Billiken technical personnel following the geologist's instructions. The cut samples were bagged and labelled at the camp and the bags were sent to the laboratory in sealed plastic buckets. The other half of the core remains as witness in their original core boxes and stored on site for future reference. Systematic blanks, standards and duplicates were inserted at regular intervals into the sequence of samples as a quality control. The duplicates were quarter core from the half core already set apart for sampling; that way the witness half would not be affected and could remain intact in the original box. Multi-element assays were performed at Activation Laboratories Ltd in Thunder Bay,

Ontario (see below). Whole rock assays were also taken in some units where they were relevant. The whole rock samples were submitted for analysis using Inductively Coupled Plasma for 50 major and minor elements. For the Riverbank drill hole, 42 assays were taken, including two duplicates, one blank sample, one standard and one whole rock analysis. The standard was prepared by Duncan and Sanderson, B.Sc and licensed assayer of British Columbia. The blank was provided by Billiken and came from an existing core of granite with no visible sulphide.

A total of 42 samples were taken for analyses on the 216 metre long hole on the Riverbank property. These samples represent a total length of 44 metres.

For the Broke Back drill holes, no significant mineralized zones were encountered. However, a routine sampling for whole rock was taken at a 50 metre interval, for a total of two for the first hole (#BB-01-2011). The second hole (#BB-04-2011) consists of heavily broken core which encountered strong weathering. The quality of the rock was not suitable for whole rock analyses which usually required a representative sample of the rock unit with no or very few veins or fractures, and no weathering.

#### *Factors Impacting Accuracy of Results*

From the drill site to the lab, several factors affect the sample accuracy: the core run length and tagging by drillers, marking and numbering of samples by the geologists, the sample preparation (bagging and labeling) by the technical personnel and the recording of sample numbers and intervals. Through all the process, the geologists double-checked and supervised the preparation, tagging and shipping of the samples. The junior author concludes that every step was done properly and professionally.

#### *Sample Quality*

For the Riverbank hole, the recovery is generally excellent and on average exceeds 95%. For the Broke Back holes, the recovery and quality of the core vary between holes. For the first one (BB-01-2011), the recovery of core exceeds 95%; the quality of the core of second one (BB-04-2011) is really poor, with an average recovery of 83%. As discussed above, the sampling of the latter could not be done because the original rock was strongly affected by weathering.

The Riverbank hole was an exploration one, based on a conductive and magnetic anomaly. Being an exploration hole, intervals beyond the conductive and magnetic target were also considered for assay. Such intervals include an approximate 10 metre interval of volcanic rock with a strong ankerite alteration with 2 or 3 % of disseminated pyrite which were assayed for the 60 element exploration package offered by Activation Laboratories Ltd, which also includes gold.

For the three holes drilled for Melkior Resources all of the geophysical targets were intersected and explained for Riverbank and Broke Back respectively by concentration of pyrrhotite in argillite and disseminated magnetite in intrusive rock.

The diamond drill core samples collected at Riverbank and Broke Back during the August 2011 drilling campaign were sent to Activation Laboratories Ltd facility in Thunder Bay, Ontario. Sample preparation includes crushing of the entire sample to a nominal minus 10 mesh (1.7 millimetre), followed by mechanical splitting (riffle) to obtain a representative sub-sample. The sub-sample is pulverized to at least 95% minus 150 mesh (105 microns) and then sent for assay by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS) on a representative 30 gram sub-sample for 60 elements

common in exploration (including gold). Laboratory protocol ensures that the instruments for crushing and pulverization are cleaned between each sample using sterile sand. Activation Laboratories Ltd is accredited by international standards, the ISO 17025 standard for specific registered tests. Activation Laboratories Ltd is also accredited by CAN-P-1579, specific to mineral analysis laboratories.

To the authors' knowledge, the sample handling and preparation, from the logging facility to the shipping to the laboratory, was conducted by qualified technicians from Billiken, sub-contracted by Melkior Resources, under the supervision of GeoVector Management Inc. The shipment of samples from camp to the Activation Laboratories Ltd in Thunder Bay, Ontario was conducted by Leuenberger Air service.

Pulps and crushed rejects will be sent back to Melkior Resources and stored at their Timmins facility for future reference. The standard, blank and duplicates inserted systematically into the sample sequence and used to ensure and control the quality of the analyses, will be verified once the assay results and certificates have been issued. The standard sent to analyze was certified and prepared by Duncan and Sanderson, licensed assayer and contain the following specifications:

Standard # CDN-ME-17:	Gold	0.452 g/t $\pm$ 0.058 g/t
	Silver	38.2 g/t $\pm$ 3.1 g/t
	Copper	1.36 % $\pm$ 0.10 %
	Lead	0.676 % $\pm$ 0.054 %
	Zinc	7.34 % $\pm$ 0.37 %

It is the junior author's opinion that the sample preparation and assay analysis for the Riverbank and Broke Back samples were carried out using professional standards usually accepted by the industry.

## 14.0 DATA VERIFICATION

The senior author reviewed the claim data on the government web site with regards to status and ownership to exhibit the location of the claims covered by the report and competitors' ground. The author conducted property site inspections between August 29 and September 1<sup>st</sup>, 2008. Although outcrop is almost nonexistent on the properties, Crabtree and Gleeson (2003) indicated locations of outcrops in streams and rivers near and on the Broke Back property. The author did locate the outcrops previously mapped by Crabtree and Gleeson (2003) within the south west part of the Broke Back property as indicated in Open File Report 6097 (**Figure 22**). Examination of these outcrops supported the previous mapping of Crabtree and Gleeson with Hornblende Quartz Diorite being sampled on the Broke Back property, (Hall, 2008).

No previous exploration has been done on the Riverbank and Broke Back properties so no historical data were available to verify. In order to verify the new geophysical data, the senior author reviewed the contractor's reports and discussed the data with a geophysicist. In order to verify the drilling data generated by the junior author, the senior author carefully reviewed the logs. The drill core descriptions are consistent with the documented and observed geology on the Properties.

The senior author also visited the Properties on August 1, 2011.

## 15.0 ADJACENT PROPERTIES

The Properties occur proximal to the greenstone belt containing the Double Eagle nickel-copper-PGE deposit owned by Noront Resources Ltd. (As previously announced on July 4, 2008, <http://www.norontresources.com/News/PressReleaseDetails/77> the Eagle One Deposit currently hosts an indicated resource of 1.83 million tonnes averaging 1.96% nickel, 1.18% copper, 1.12 g/t Pt, 3.91 g/t Pd, as well as an inferred resource of 1.09 million tonnes averaging 2.39% nickel, 1.27% copper, 1.37 g/t Pt and 4.5 g/t Pd,. (The authors have been unable to verify this information and the information is not necessarily indicative of the same mineralization occurring on the Properties); the AT2 nickel-copper and Eagle 2 nickel-copper occurrences, numerous volcanogenic massive sulfide (VMS) occurrences and the Blackbird One, Big Daddy and Black Thor chromite occurrences.

The following paragraph is taken from the Noront Resources website:

[http://www.norontresources.com/Projects/Ring\\_Of\\_Fire/Blackbird\\_One/Mineralization/](http://www.norontresources.com/Projects/Ring_Of_Fire/Blackbird_One/Mineralization/)

*“In the winter of 2008, Noront encountered massive chromitite mineralization in boreholes drilled to test airborne anomaly AT2 on the Double Eagle Property. Drill holes encountered extensive Ni-rich sulphide mineralization hosted by shear zones parallel to the contact between the ultramafic rocks and their felsic plutonic (granodiorite, sensulato) host rocks. The sulphide deposit at the AT2 anomaly area was named the Eagle Two deposit. Below the Eagle Two shear-hosted sulphide deposit the drilling unexpectedly intersected chromite mineralization. The chromite mineralization has been named the Blackbird One Deposit. Blackbird One mineralization consists of massive chromitite layers interbedded with chromite-rich meta-dunite, now entirely replaced by talc carbonate minerals, chromite, and minor ferrochrome overgrowths. Several drill holes intersected massive chromitite mineralization. The layers vary widely in thickness, from centimetres on the margins of the Blackbird One deposit to continuous massive chromitite intersections approaching true thicknesses of 30 metres at its central axis.*

*The chromitite mineralization does not have a notably strong magnetic susceptibility, compared with serpentinized dunite and peridotite which are both common in the area around Eagle One, Eagle Two, and the Blackbird One Deposits. Chromite is an electrical insulator hence there is no EM expression from the chromite deposit despite the presence of traces of interstitial sulfide minerals in the massive chromitite. A useful characteristic of chromite is its high density, around 4.5, which is similar to that of magnetite and pyrrhotite. Massive chromite therefore has an anomalously high density compared even with ultramafic rocks and is detectable by gravity survey when it exists in sufficient tonnages.”* The authors have been unable to verify this information and the information is not necessarily indicative of the same mineralization occurring on the Properties that are the subject of this technical report;

The area also contains the seven closely spaced McFauld’s Lake copper-zinc volcanogenic massive sulphide (VMS) occurrences owned in a joint venture by Spider Resources Inc. and KWG Resources Inc. (Figure 23). Assays from drill holes testing these occurrences include 18.0 m @ 5.88% Zn and 0.61% Cu (News Release dated October 28, 2003) and 4.63 m @ 10.4% Cu and 0.86% Zn (Burns, 2004). The authors have been unable to verify this information and the information is not necessarily indicative of the mineralization on the properties that is the subject of the technical report.

In addition to the major discoveries by Noront and KWG/Spider, there have been several other notable occurrences found by drilling, including VMS style Zn-Cu mineralization found by Macdonald on its McNugget property in the far southwest of the belt; the Probe Mines Ltd/Mantis Mineral Corp/Tamarack Cu-Zn VMS discovery north of the McFauld’s Lake VMS; the WSR/Metalex/Arctic



Star Cu-Zn VMS discovery on the north limb of the belt; and the Kyle Lake kimberlite pipe discoveries by Spider/KWG/Renforth east and northeast of the greenstone belt. Several gravity high signatures associated with Large Igneous Complexes and are located in the area (**Figure 13**) and most of these Large Igneous complexes are being actively explored for both Ni-Cu and or PGE.

The greenstone belt that hosts the Noront discovery and the McFauld's Lake VMS occurrences is identifiable on regional geology and airborne magnetic maps, and forms an almost completely circular feature, the so-called Ring of Fire. Virtually all of this belt of rocks, and most of the adjacent magnetic and gravity high signatures associated with it, have been staked recently by numerous mining companies. Staking defines an incomplete ring up to 25 km across, with a collective strike length of 150 km (**Figure 14**).

The Broke Back property is directly west of and adjacent to the northeast-trending strike of the greenstone belt near McFauld's Lake, in the center of the Ring of Fire. The center of the Broke Back property is 15km northwest from Eagle One deposit and 20 km west of the McFauld's Lake VMS occurrences and the southeast corner of the Broke Back claims are less than 6 km west of a belt of chromite occurrences.

The Riverbank property lies just 9 km east northeast of the McFauld's Lake VMS occurrences and 9 kilometres east of Probe Mines Ltd. recently discovered Tamarack property VMS occurrence.

**Note:** The author has been unable to verify this information and the information is not necessarily indicative of the mineralization on the Broke Back and Riverbank properties.

## **16.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

No mineral processing or metallurgical testing was carried out.

## **17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

There are no mineral reserve or mineral resource estimates for the Properties.

## **18.0 OTHER RELEVANT DATA AND INFORMATION**

In 1996, KWG Resources Inc. carried out a helicopter supported heavy mineral-geochemical survey over a 1300 km<sup>2</sup> region of northern Ontario and located between latitudes 52<sup>0</sup> N and 54<sup>0</sup>N and longitudes 85<sup>0</sup>W and 87<sup>0</sup>W. The Survey was named "Spider 3" and covered the upper parts of the Winiskisis Channel and the Ekwon, Muketei and Attawapiskat rivers. 626 samples were collected from modern alluvium, till, and glaciofluvial materials. The resulting data was purchased by the Ontario Geological Survey and was published in 2003 as Open file Report 6097 by (Crabtree and Gleeson 2003). During the summer of 2001 the Ontario Geological Survey collected modern alluvium samples in the James Bay Lowlands from south of the Albany river to as far as the Sutton Inlier and stretching westward to Attawapiskat Lake. The results were released in OGS Open File Report 6108 (Crabtree, 2003).

A review of the data from Open File Report 6097 indicated that 26 Areas of interest were identified in the survey area based on results from both the -80 mesh bulk sample and the -60 mesh nonmagnetic tabled concentrate. Two areas of interest, (Area 6 and 9) were identified near the Broke Back Property,

(**Figure 22**) Area 6 located east of the Broke Back property and Area 9 located approximately 10 km west of the Broke Back property. In **Area 6** along the Muketei River the -80 mesh bulk sample found elevated Ti, Ni, Cu, REE and the -60 mesh nonmagnetic tabled concentrate found elevated Fe, Ti, REE, Co, Y and U and elevated magnetite. While along the Ekwan River in **Area 9** the -80 mesh bulk sample found elevated Zn, As, Au, P and the -60 mesh nonmagnetic tabled concentrate found elevated Na, K, Co, Cu and Au values. (**Figure 22**). Note that the Areas of interest may be an indication of provenance and not necessarily the presence mineralization.

The discovery of Jurassic kimberlites in the Attawapiskat River Area in the 1980s lead to speculation the area could host other diamond bearing kimberlites and a stream sediment sampling program was designed to sample all of the major rivers in the James Bay Lowlands Region in the summer of 2001. 1083 samples were collected over an area of approximately 100,000 km<sup>2</sup> and Open File Report 6108 (Crabtree, 2003) released the preliminary data from this survey. As part of the stream sediment sampling program for kimberlite indicator minerals (KIMS) samples were also examined for Metamorphic Magmatic Massive Sulphide Indicators (MMSIMs). Metamorphic/Magmatic Massive Sulphide Indicators (MMSIMs) are stable heavy minerals that occur in alteration haloes associated with volcanogenic massive sulfide deposits in high grade terrains, in magmatic Ni-Cu deposits and in skarn and greisen deposits (Averill, 1999). Five location areas of interest areas were identified in the survey including **Area 4** which is located along the Muketei River to the east of the Broke Back property. Area 4 contains elevated Chromite, Gahnite, Chalcopyrite, Spinel, Corundum and Rutile. Note: Parts of the Area 4 anomaly from Open file 6108 is coincident with Area 6 of Open File Report 6097(**Figure 22**).

## 19.0 INTERPRETATION AND CONCLUSIONS

The Broke Back and Riverbank properties of the McFauld's Lake were staked because they are underlain by anomalous gravity highs, as shown in regional data. These gravity highs are postulated to be mafic or ultramafic intrusions. These postulated intrusions are proximal to known nickel-copper sulphide mineralization and massive chromitite mineralization in ultramafic rocks at the Double Eagle and Black Bird discoveries of Noront.

The intrusions interpreted to exist on the Properties, would thus be expected to have significant potential to host magmatic nickel-copper-PGE or massive chromitite mineralization. The situation could be analogous to Sudbury, with one or all of the subject properties hosting a large mafic/ultramafic intrusion, possibly with associated mineralization, and the Double Eagle discovery occurring in an offshoot position with respect to this intrusion.

The GeoTech V-TEM and magnetic survey has not defined obvious conductors for follow up on the Broke Back block however the eastern edge of the lower third of the block has higher magnetization and isolated gravity responses and regional geochemical sampling (Section 20) has shown the area to be anomalous in some elements. The presence of elevated magnetic responses along with coincident gravity highs may be an indication of mafic intrusives with possible massive chromitite mineralization similar to the Black Bird chromitite discovery. Diamond drilling has shown the area to be underlain by magnetite rich intrusions.

Geophysical surveying of the Riverbank block has identified three conductors that warrant follow up ground electromagnetic surveying and diamond drilling. RB-02-2011 intersected massive to near massive pyrrhotite units and a 10m zone of ankerite and pyrite mineralization.

## 20.0 RECOMMENDATIONS

Given the scarcity of outcrop and the effectiveness of geophysical surveying as an exploration tool, the following exploration programs are recommended as a follow-up to the VTEM and airborne magnetic surveying over the Broke Back and Riverbank properties.

**Riverbank Property** - Airborne VTEM targets A and C (Hogg, 2010) will be surveyed via Crone ground electromagnetic to identify the exact location of the drill targets. The location of this work is shown on **Figure 25**.

**Broke Back Property** - Two elevated gradient gravity responses are coincident with elevated first vertical derivative of the Total Magnetic Intensity anomalies. This is important because these coincident anomalies potentially may be an indication of mafic intrusives with possible massive chromitite mineralization similar to the Black Bird chromitite discovery. The targets warrant ground gravity and Crone ground geophysics to determine whether they should be drilled. The location of this work is shown on **Figures 26 and 27**.

Costs for Crone ground EM are approximately \$5,000 per line km. This is based on production rates averaging 1 km per day, and daily costs as follows: equipment rental- \$1,000; helicopter (1 hour)- \$1375; camp manager-\$425; camp costs at 4 people x \$250/day-\$1,000; operator + helper-\$900; portion of mobilization/demobilization-\$300. Daily costs for ground gravity are similar, but the production rate should be on the order of 2 km/day, thus the overall cost is \$2,500 per line km. The 2011 drilling cost was \$139,000 to drill 416 m, for a drilling cost of \$334/m, including logistics. This has been adjusted to \$350 m for the proposed program.

**Phase I** exploration would be ground geophysics. The cost is estimated to be **\$210,000** (Table 1).

**Phase II** would be drilling to follow up the geophysical results. Two 200 m long holes are proposed for each property for a total of 800 m. It is recommended that a contingency amount of \$70,000 be in place in order to follow up positive drill intersections with an additional hole. The cost of this drilling would be **\$480,000**.

Drilling at Riverbank is not contingent on Phase I results-valid drill targets exist at present. Drilling at Broke Back is contingent on obtaining positive results from ground geophysics (isolated linear gravity high with a coincident EM low, flanked by elevated magnetics). The total recommended expenditures on these properties are **\$690,000** (Table 1).

**Table 1: Budget for Exploration on the Properties**

<b>PHASE</b>	<b>ACTION</b>	<b>COST</b>
<b>I</b>	Riverbank Crone ground EM (20 line km @ \$5000/line km)	\$100,000
	Broke Back Crone ground EM (12 line km @ \$5000/line km)	\$60,000
	Broke Back ground gravity (20 line km @ \$2500/line km)	\$50,000
	<b>Subtotal</b>	<b>\$210,000</b>
<b>II</b>	Riverbank Drilling (400 m @ \$350 m including logistics)	\$140,000
	Riverbank drill supervision, analyses and interpretation	\$30,000
	Broke Back Drilling (400 m @ \$350 m including logistics)	\$140,000
	Broke Back drill supervision, analyses and interpretation	\$30,000
	Drill mobilization/demobilization	\$70,000
	Contingency-one 200 drill hole @ \$100,000	\$70,000
	<b>Subtotal</b>	<b>\$480,000</b>
	<b>Total Budget</b>	<b>\$690,000.00</b>

## 21.0 REFERENCES

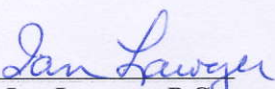
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## 22.0 DATE AND SIGNATURE PAGE

This report entitled "Qualifying Report on the Broke Back and Riverbank Properties, McFauld's Lake Area, NTS 43C and 43D, Northern Ontario for Melkior Resources Inc. and Green Swan Capital Corporation" is dated December 14, 2011.

This report is based solely on exploration and property information collected from the public domain and from information obtained through field visits to the Properties between August 29 and September 1st, 2008 and includes results from a helicopter borne EM survey (VTEM) carried out between May 18<sup>th</sup> and May 27<sup>th</sup>, 2010 and reported by Geotech Ltd. and interpreted by Scott Hogg and Associates Ltd. in August 2010. It also includes observations made during the drilling of three holes on the Properties in August, 2011.

  
J. Ian Lawyer, P.Geol.



  
E. Hebert, PhD, P.Geol.

## Certificate of Qualifications

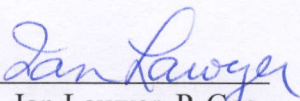
1. I, J. Ian Lawyer, P. Geo. With a business address 126 Sweeny Lane, Bridgewater, Nova Scotia, Canada, B4V4A7 do hereby certify that:
2. I graduated with a BSc. degree in Geology from Acadia University in 1982.
3. I am a member of the Association of Professional Engineers and Geoscientists of Saskatchewan (membership #10783).
4. I have worked as a geologist for over 25 years.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“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.
6. I am responsible for the Technical Report titled “Qualifying Report on the Broke Back and Riverbank Properties, McFauld's Lake Area, NTS 43C and 43D, Northern Ontario for Melkior Resources and Green Swan Capital Corporation.”and dated December 14, 2011 (the “Technical Report”). I wrote sections 1 to 3, 5 to 11 and 15 to 21, and jointly co-wrote section 4 of the Technical Report. I inspected the Broke Back and Riverbank properties between August 29, and September 1, 2008 and again on August 1, 2011. I have collaborated closely with Eric Hebert and have carefully reviewed the protocols for the drilling program and the observations made from the core drill core.
7. I have had no prior involvement with the property that is the subject of the Technical Report.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of Melkior Resources and Green Swan Capital Corporation using the definition in Section 1.5 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.
12. The author has previously worked for several companies including Shell Canada Resources Ltd., Billiton Canada Limited and Nornada Inc. but pertinent to this report is the nickel exploration experience the author gained from employment at Western Mining Corporation, Darnely Bay Resources Limited and Westminer Canada Limited. Much of this work involved the generation of conceptual magmatic nickel-copper and PGE targets, followed by evaluation of the targets after ground acquisition. The author has also gained experience exploring for volcanogenic massive sulfide deposits at Noranda Inc.-Geco Division around the Geco mine in Northwestern Ontario and with Westminer Canada Limited exploring in the Bathurst camp in New Brunswick. By virtue of this relevant experience combined with his professional registration, the author is a Qualified Person for this project.



13. As of the effective date of this 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.

By virtue of this relevant experience combined with his professional registration, the author is a Qualified Person for this project.

Report dated on this 14<sup>th</sup> Day of December, 2011.

  
J. Ian Lawyer, P. Geo.

## Certificate of Qualifications

I, Eric Hebert, PhD, P.Geo. do hereby certify that:

1. I am a Senior Geologist with GeoVector Management Inc.  
Suite 312, 10 Green Street,  
Ottawa, Ontario, K2J 3Z6
2. I graduated with a BSc degree in Geology from Université du Québec à Montréal (UQAM) in 2003. In addition, I have obtained a PhD in “Ressources Minérales” (Economic Geology) from the Université du Québec à Chicoutimi (UQAC) in 2007.
3. I am a member of the “Ordre des Géologues du Québec” (membership #0842) and a temporary member of the Association of Professional Geoscientists of Ontario (#1801).
4. I have worked as a geologist for a total of 9 years since my graduation from university.
5. I read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that based on my professional experience in geosciences, my degree in geology and my affiliation with a professional associated (as defined in NI 43-101), I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. I managed the drill program on the Riverbank and Brokeback properties from July 30<sup>th</sup> to August 9<sup>th</sup> 2011 under the supervision of Ian Lawyer. I co-wrote section 4 and wrote sections 12 (Drilling and Sampling Method and Approach), - 13 (Sample Preparation, Analyses and Security) and -14 (Data Verification) of the Technical Report titled “Qualifying Report on the Broke Back and Riverbank Properties, McFauld's Lake Area, NTS 43C and 43D, Northern Ontario for Melkior Resources and Green Swan Capital Corporation.” and dated December 14, 2011 (the “Technical Report”).
7. I have had no prior involvement with the property that is the subject of the Technical Report.
8. According to the definition in Section 1.5 of National Instrument 43-101 I am not independent because I hold shares of Melkior Resources. The total position I own represents less than 0.034% of Melkior's capital.
9. I have read National Instrument 43-101 and Form 43-101F1, and sections 12, 13 and 14 and part of section 4 of the Technical Report were prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

11. The author was previously involved in several base metal exploration projects located in Northern Ontario, Northern Manitoba and Northern Quebec for mining and exploration companies including HudBay Minerals, Xstrata Copper, Vismand Exploration Inc. and Virginia Gold Mines. The Riverbank and Brokeback properties are geographically and geologically located in similar environment. Much of his work involved conductive targets in terrains ranging from relatively undeformed to highly deformed and metamorphosed. The author also acquired experience in metallogeny concerning the type of mineralization the conductors consist of and in developing the best exploration strategy based on geological insights. By virtue of this relevant experience combined with his professional registration, the author is a Qualified Person for this report.
  
12. As of the effective date of this 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.

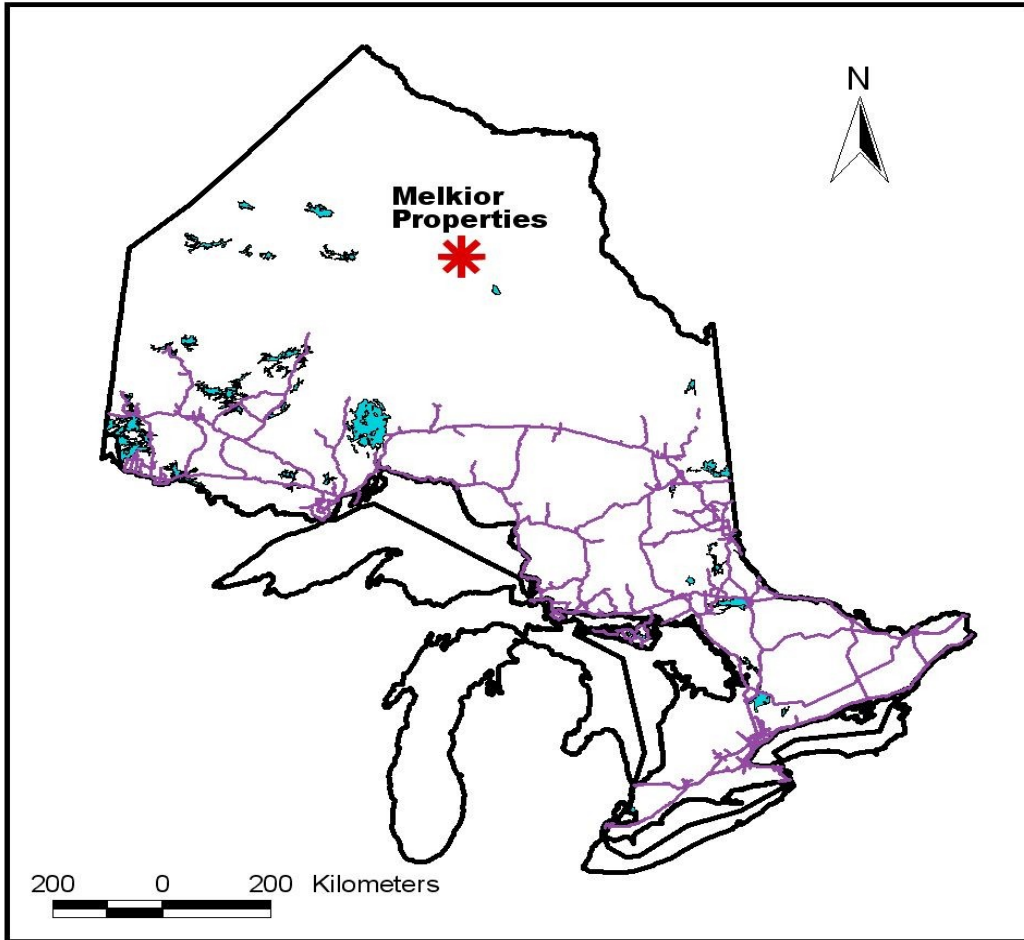
Report dated on this 14<sup>th</sup> Day of December, 2011



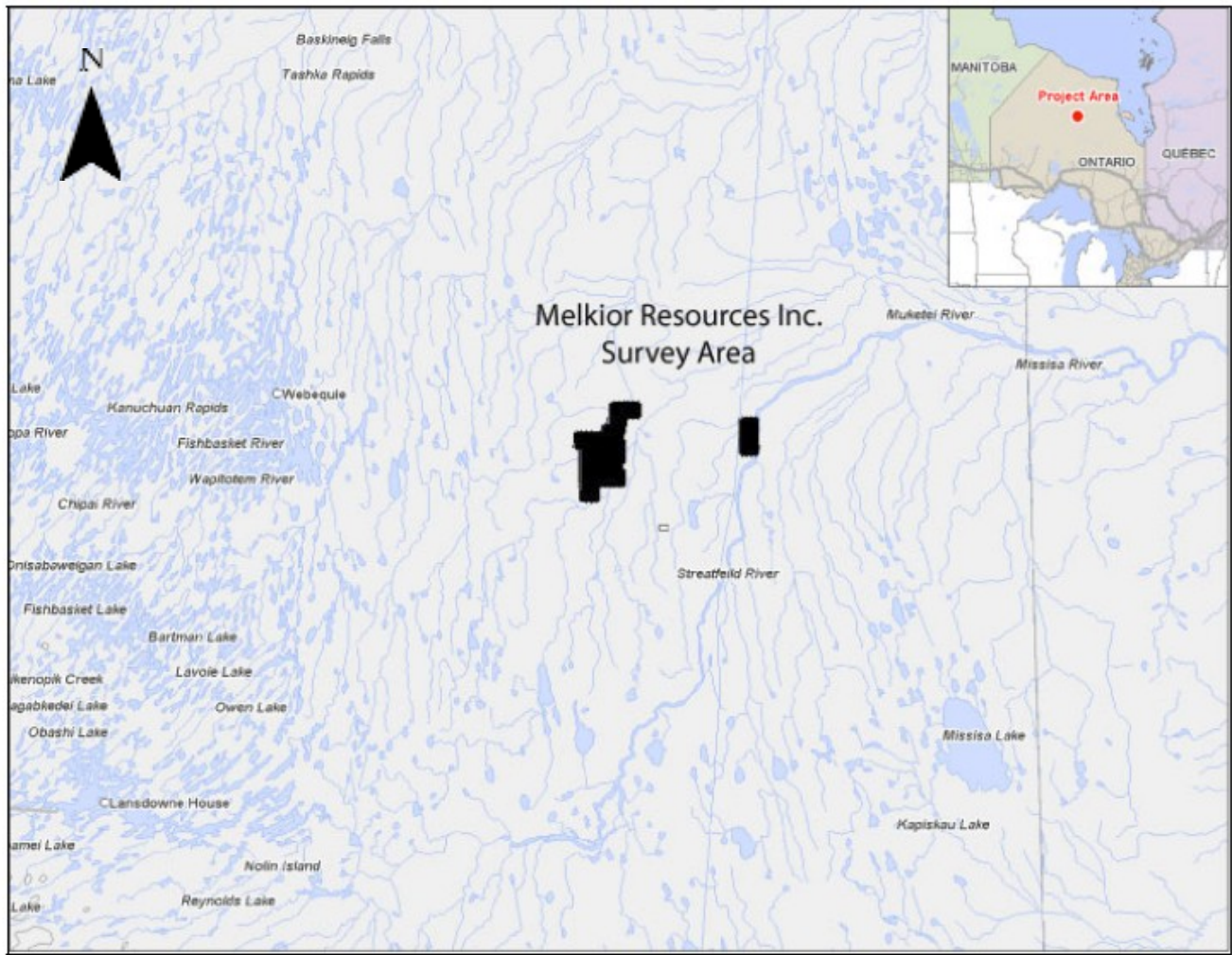
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Dr. Eric Hébert, P.Geol.

## **FIGURES**



**Figure 1: Location of the Properties in Northern Ontario (2010)**



**Figure 2: Property Locations.** (2010)

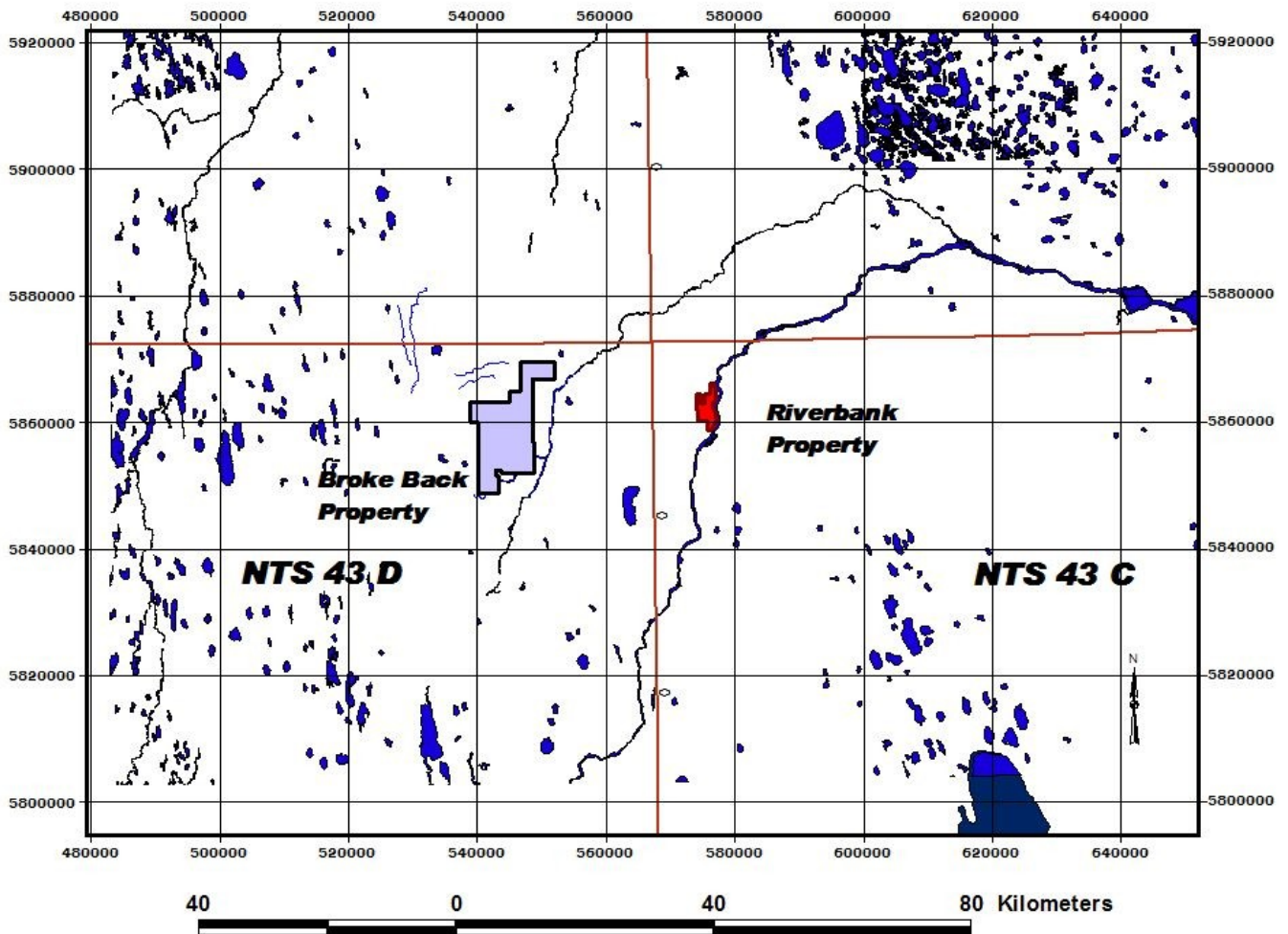


Figure 3: Detailed Property Locations. (NAD83 Zone 16 Co-ordinates) (2010)

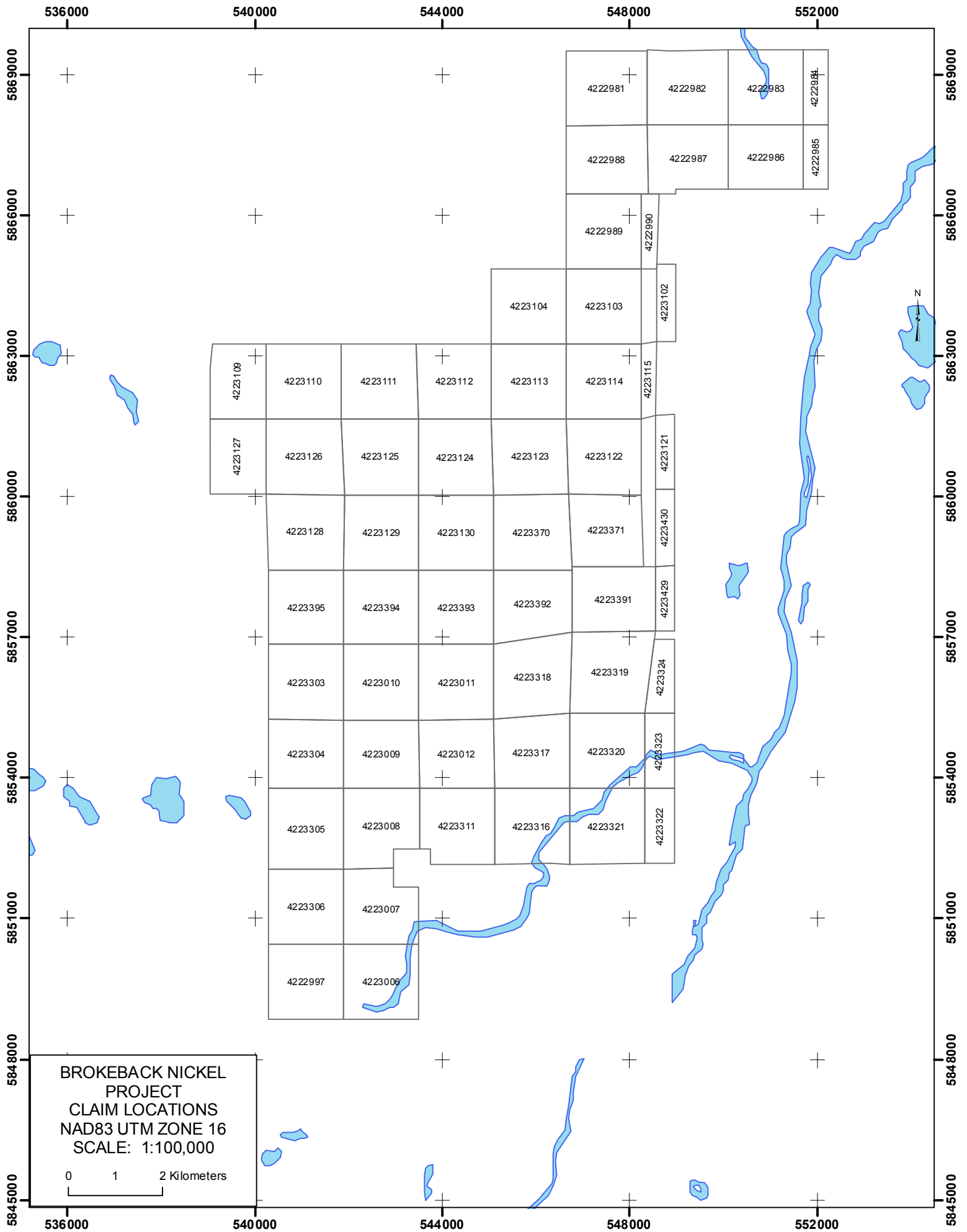


FIGURE #4 Broke Back Property (2010)



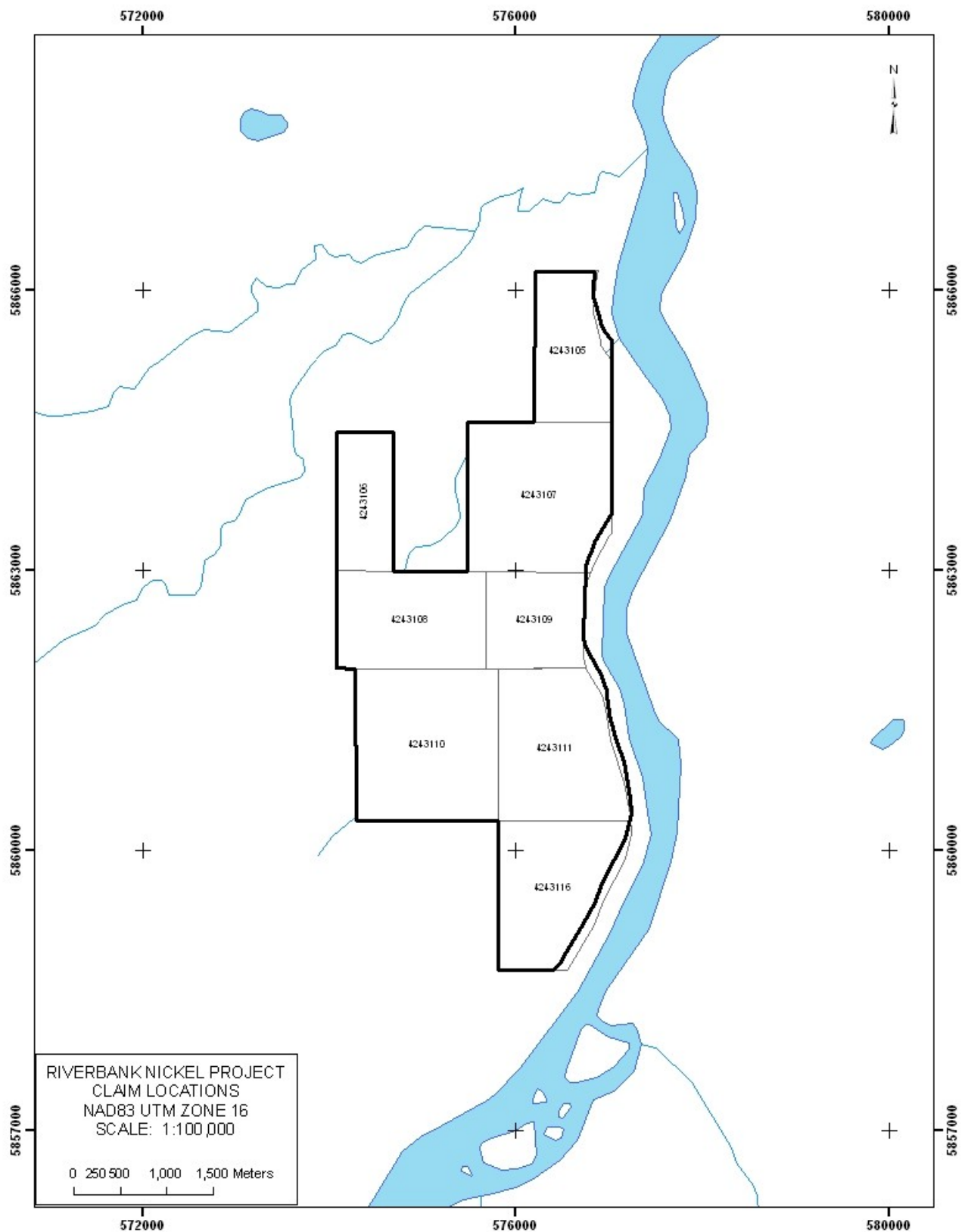


FIGURE #5

Figure 5: Riverbank Property. (2010)

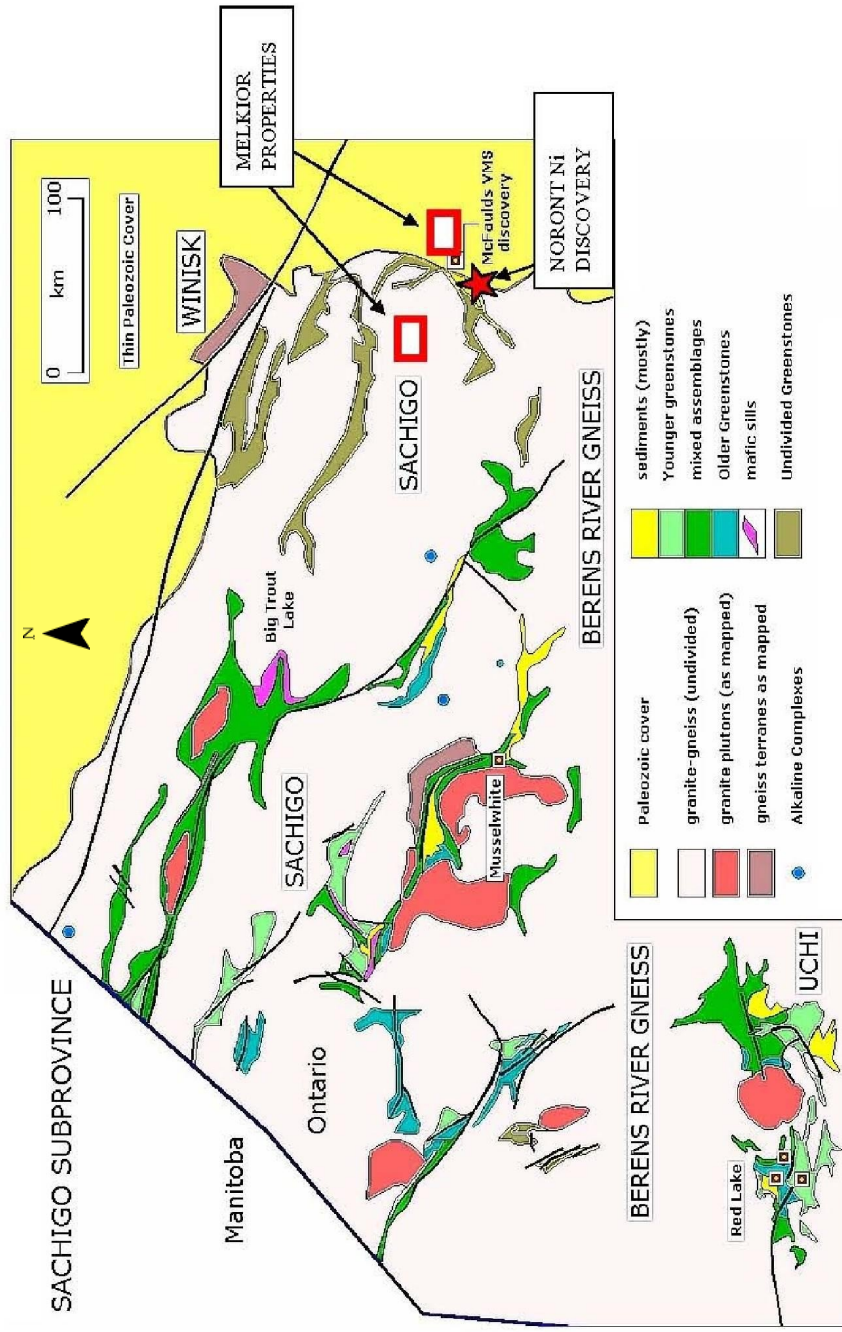


Figure 6: Geology of Northern Ontario. Modified After Thurston et al. (1991).

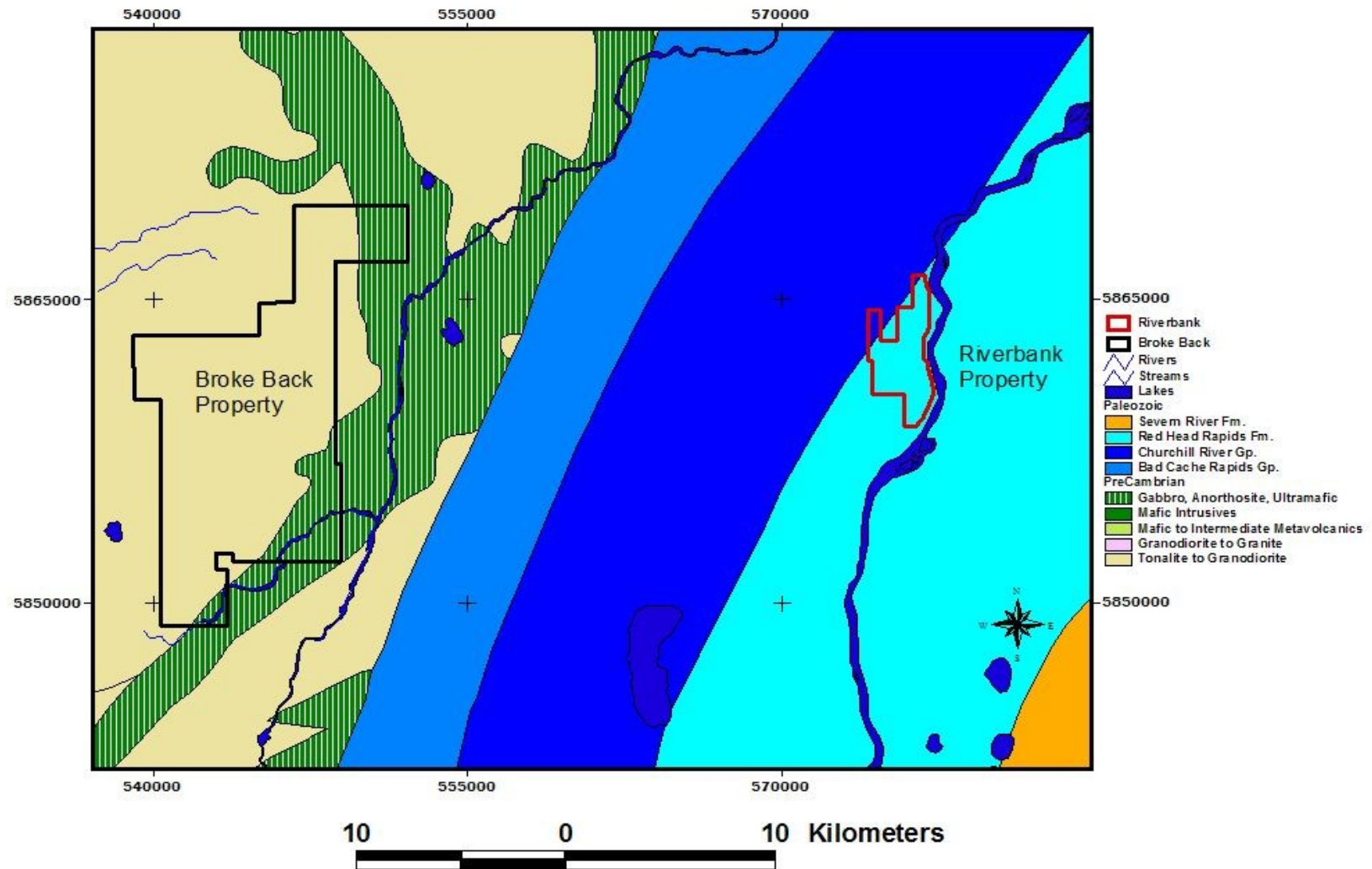
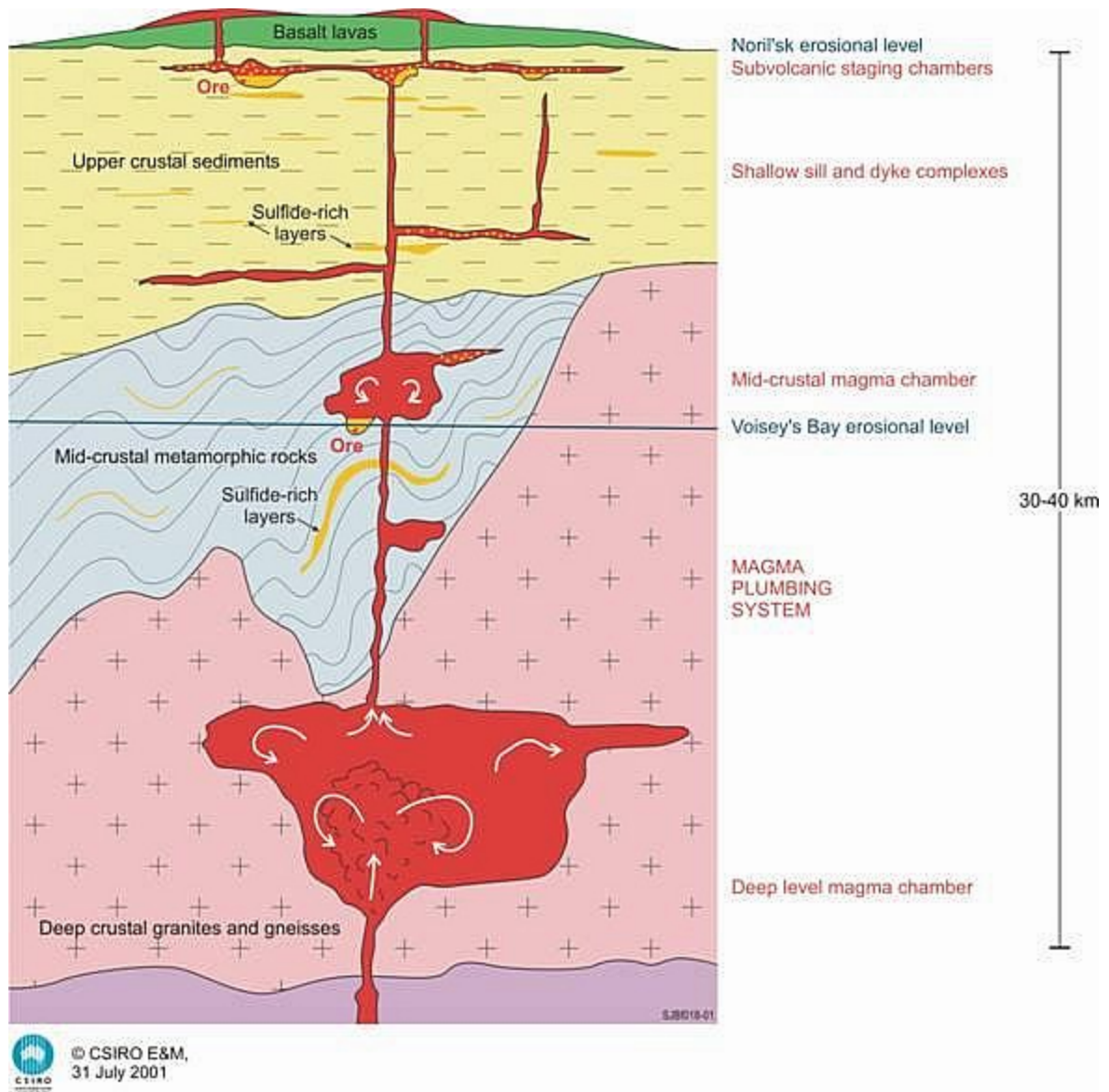
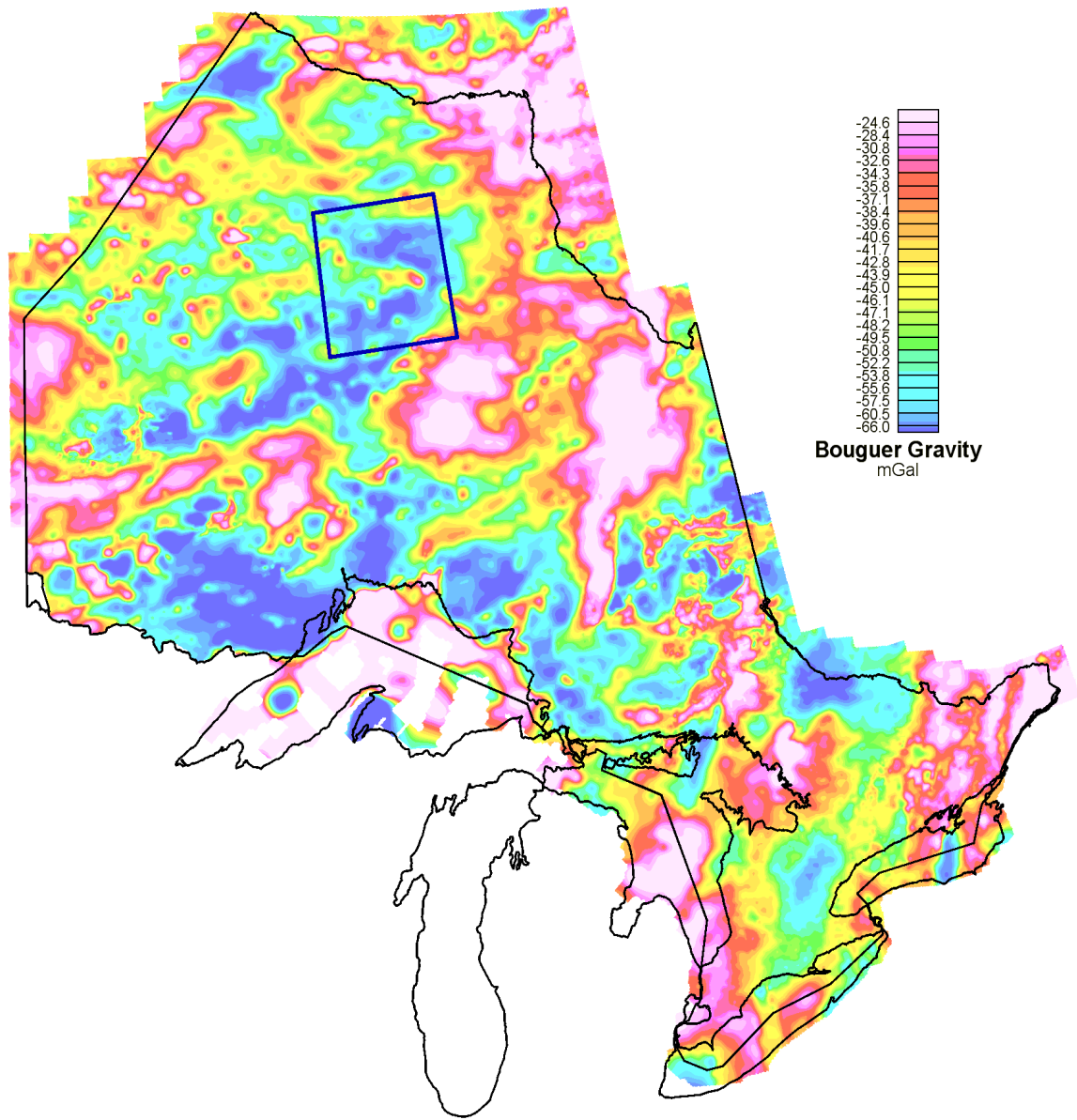


Figure 7: Geology of the Properties. Modified after Ontario Geological survey (2009).



**Figure 8: Potential Geologic Settings for Magmatic Ni-Cu Sulphide Deposits. From Perring et al. (2001).**



**Figure 9: Bouguer Gravity Map of Ontario, Showing Location of McFauld's Lake Area (Box). Data from Ontario Geological Survey (1999).**

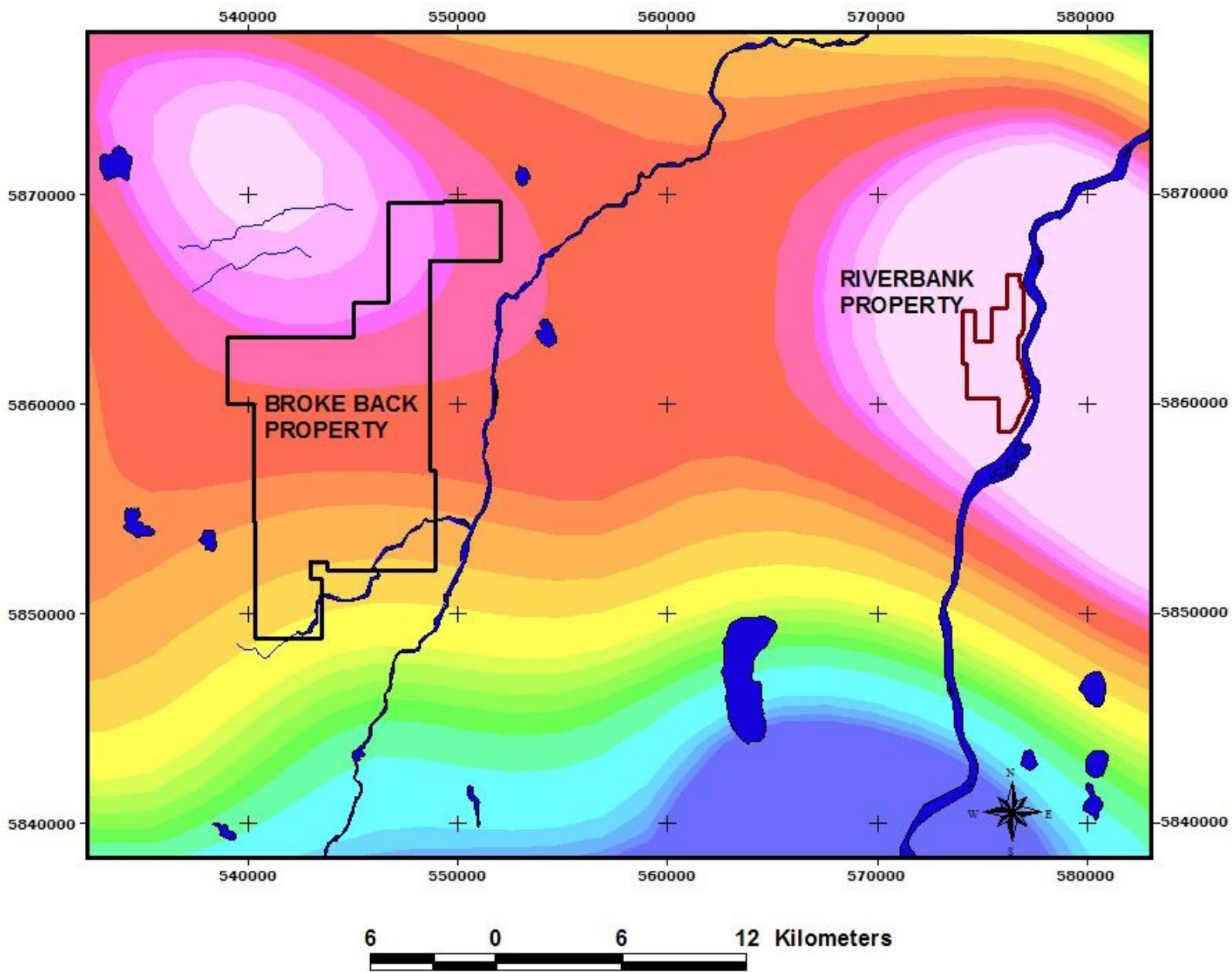


Figure 10: Bouguer Gravity Map of the McFauld's Lake Area. Data from Ontario Geological Survey (1999).

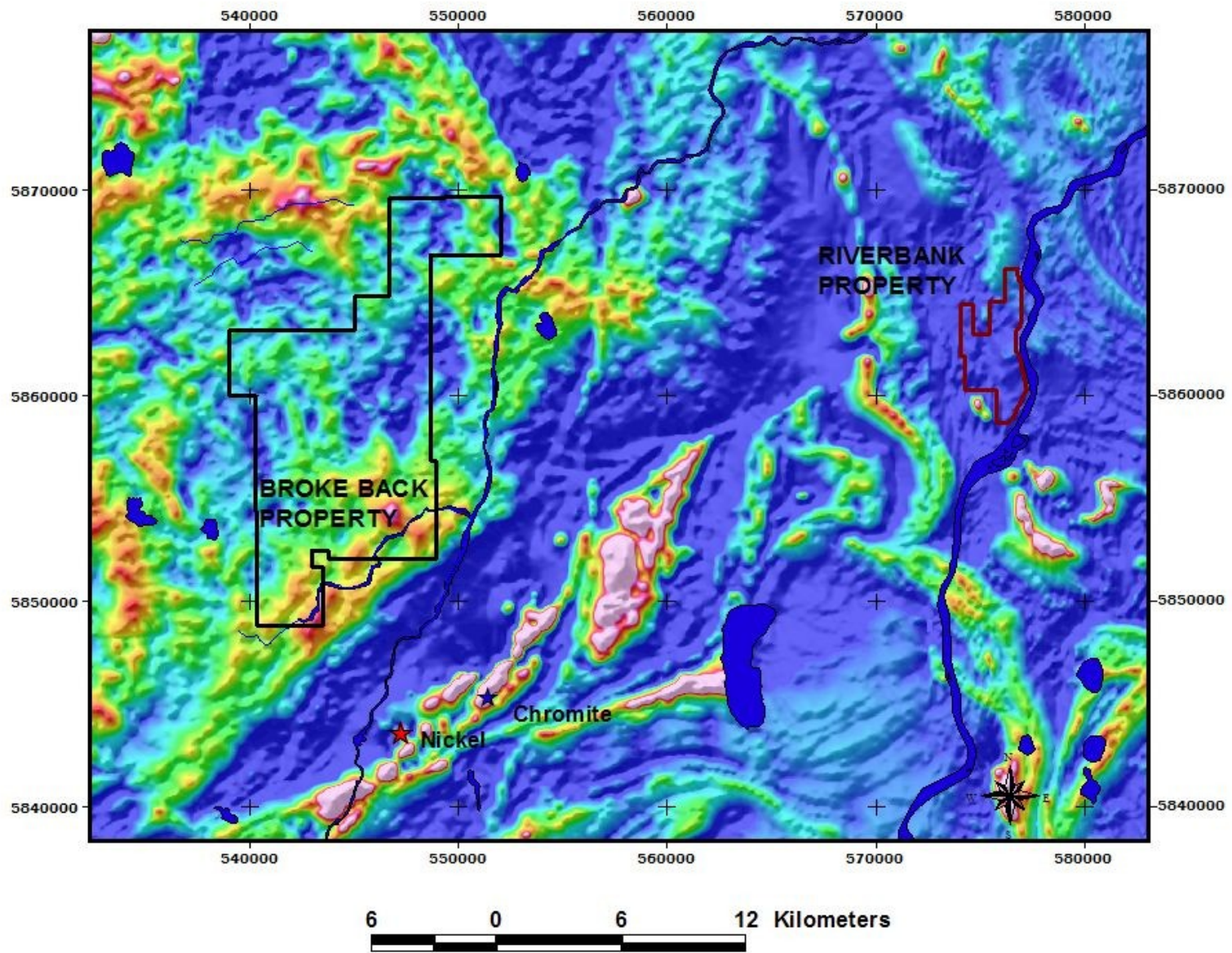
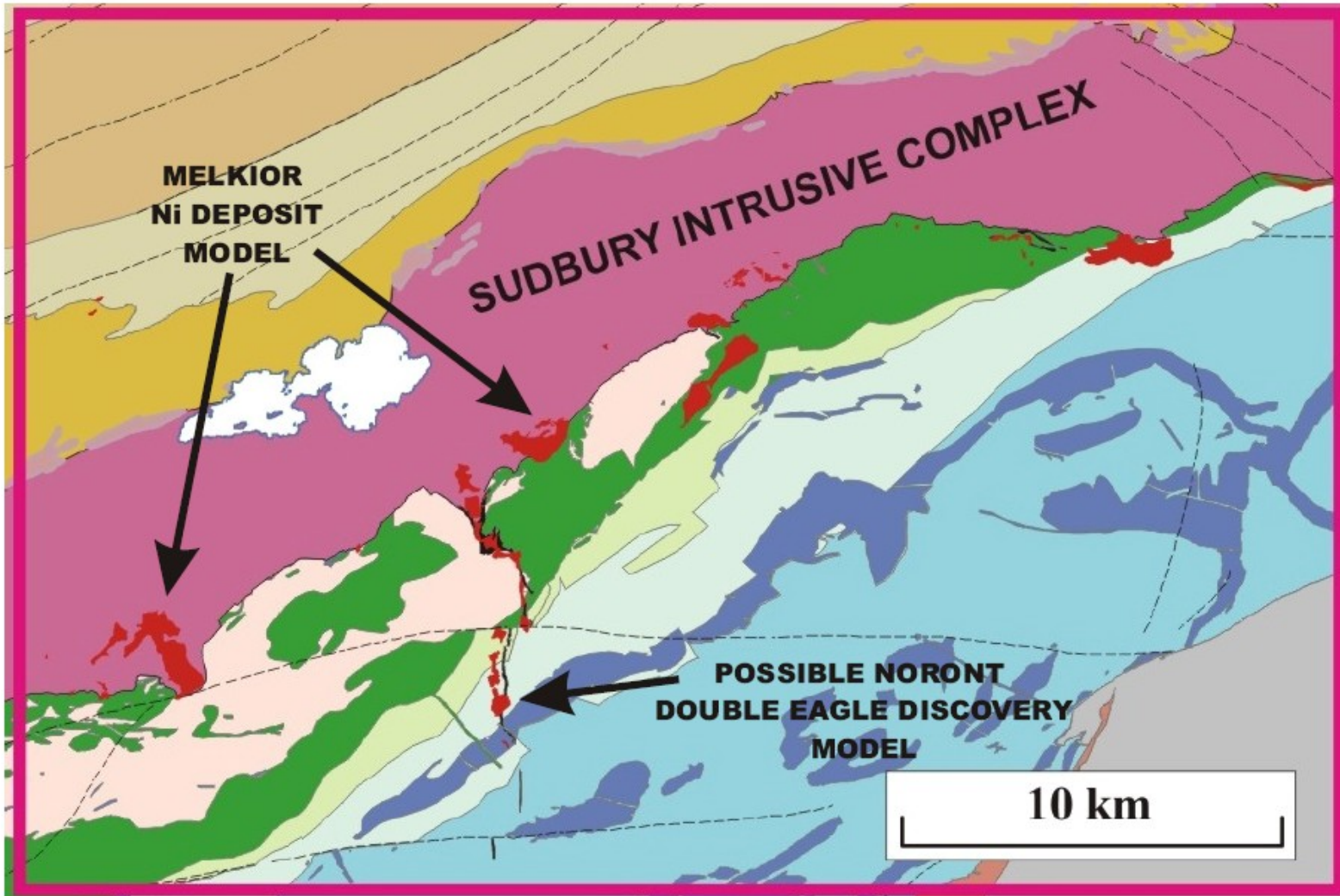
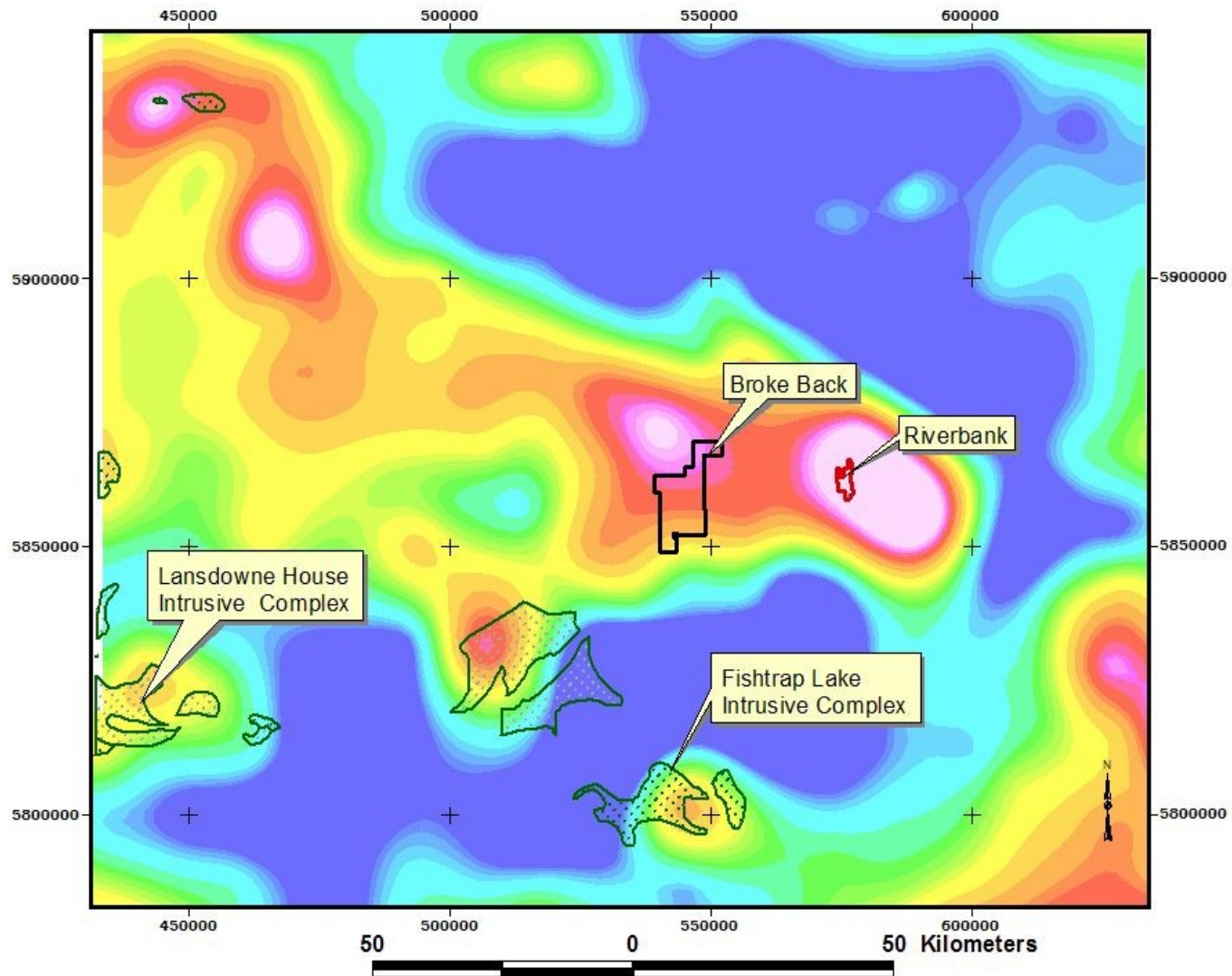


Figure 11: Magnetic Map of the McFauld's Lake Area: Data from Ontario Geological survey (2003).

**Figure 12: Geology of the Southern Sudbury District**







**Figure 13: GSC Bouguer Gravity with property locations and OGS mafic-ultramafic intrusive complexes. (1999)**

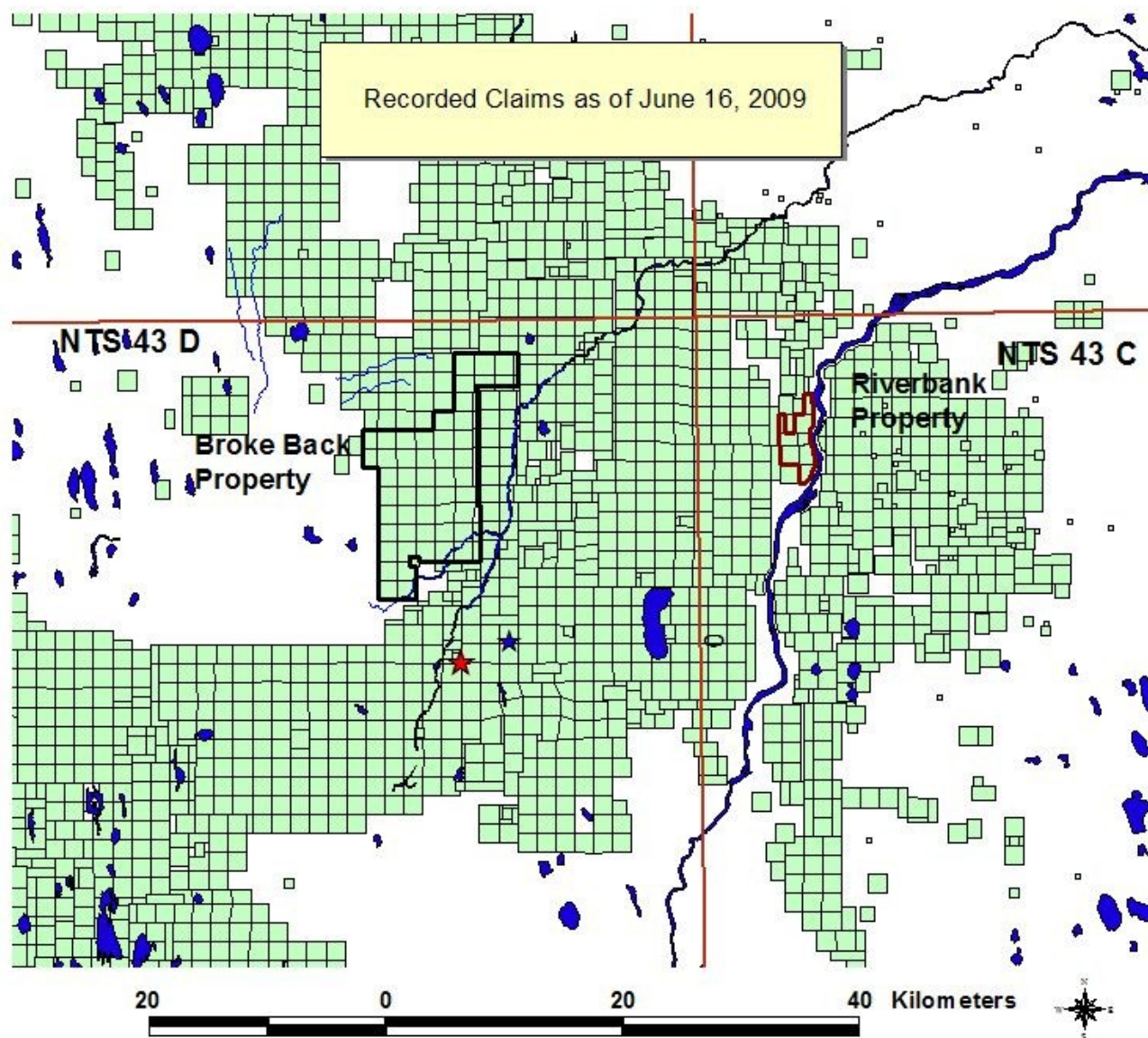
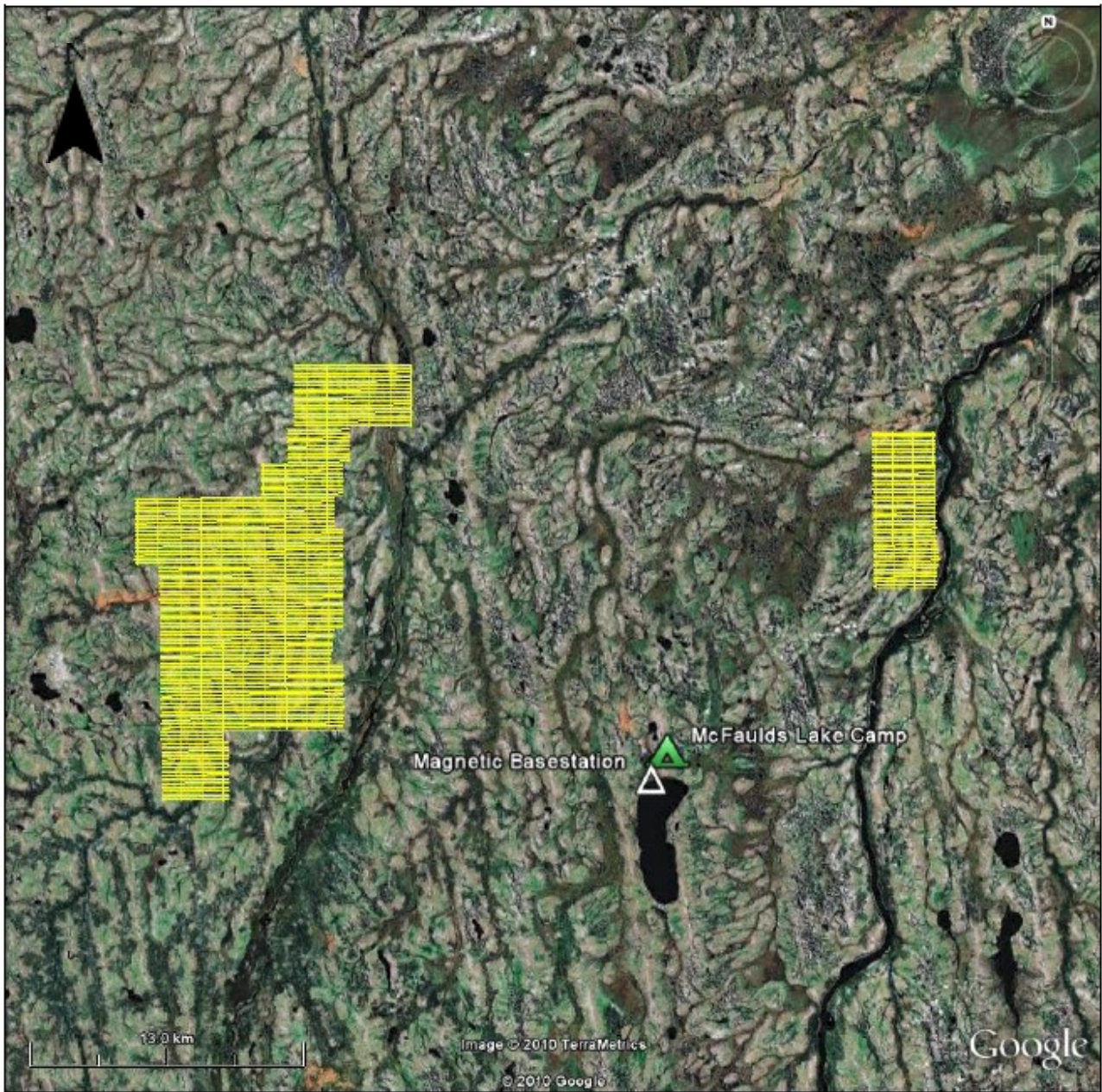
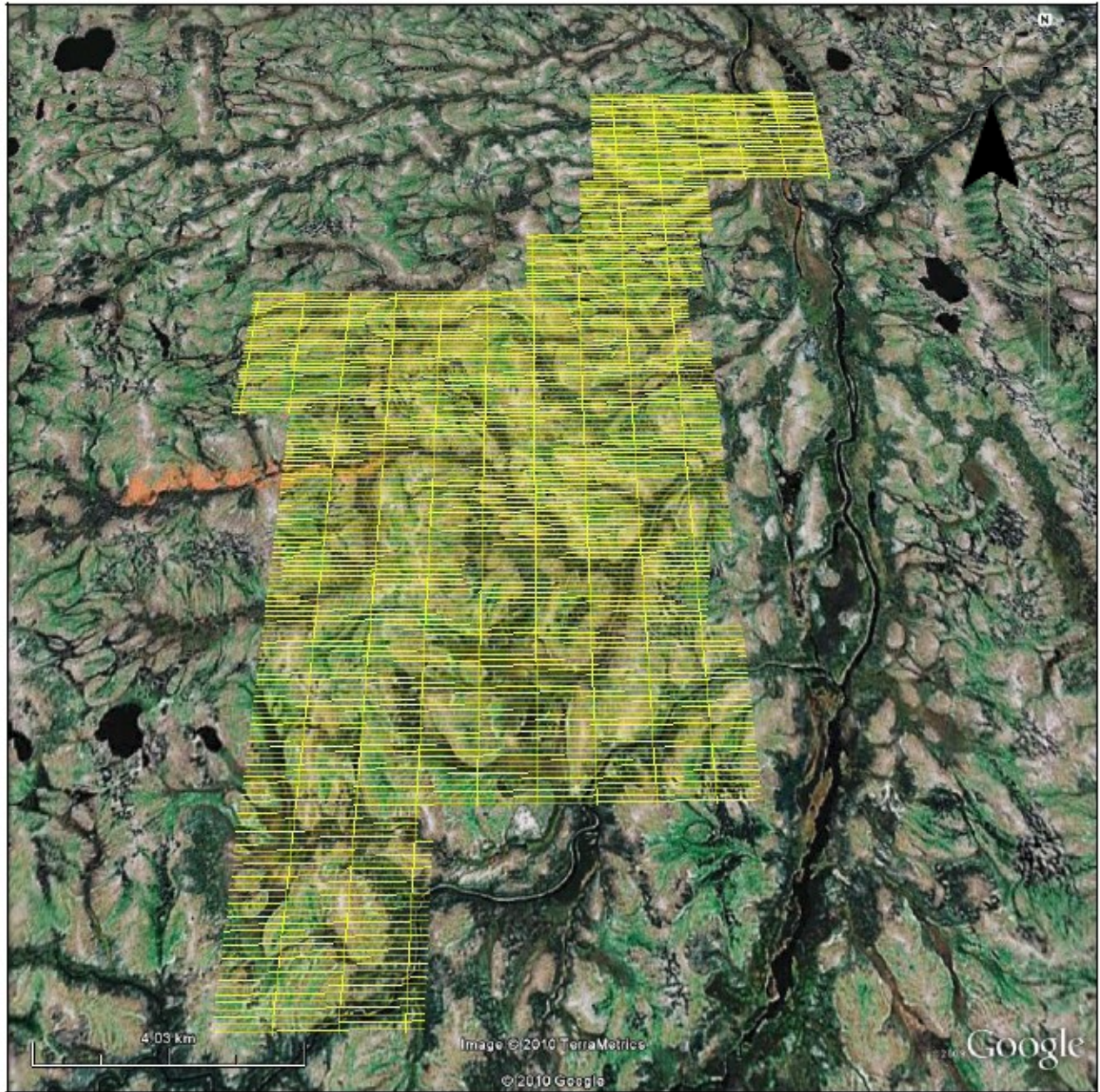


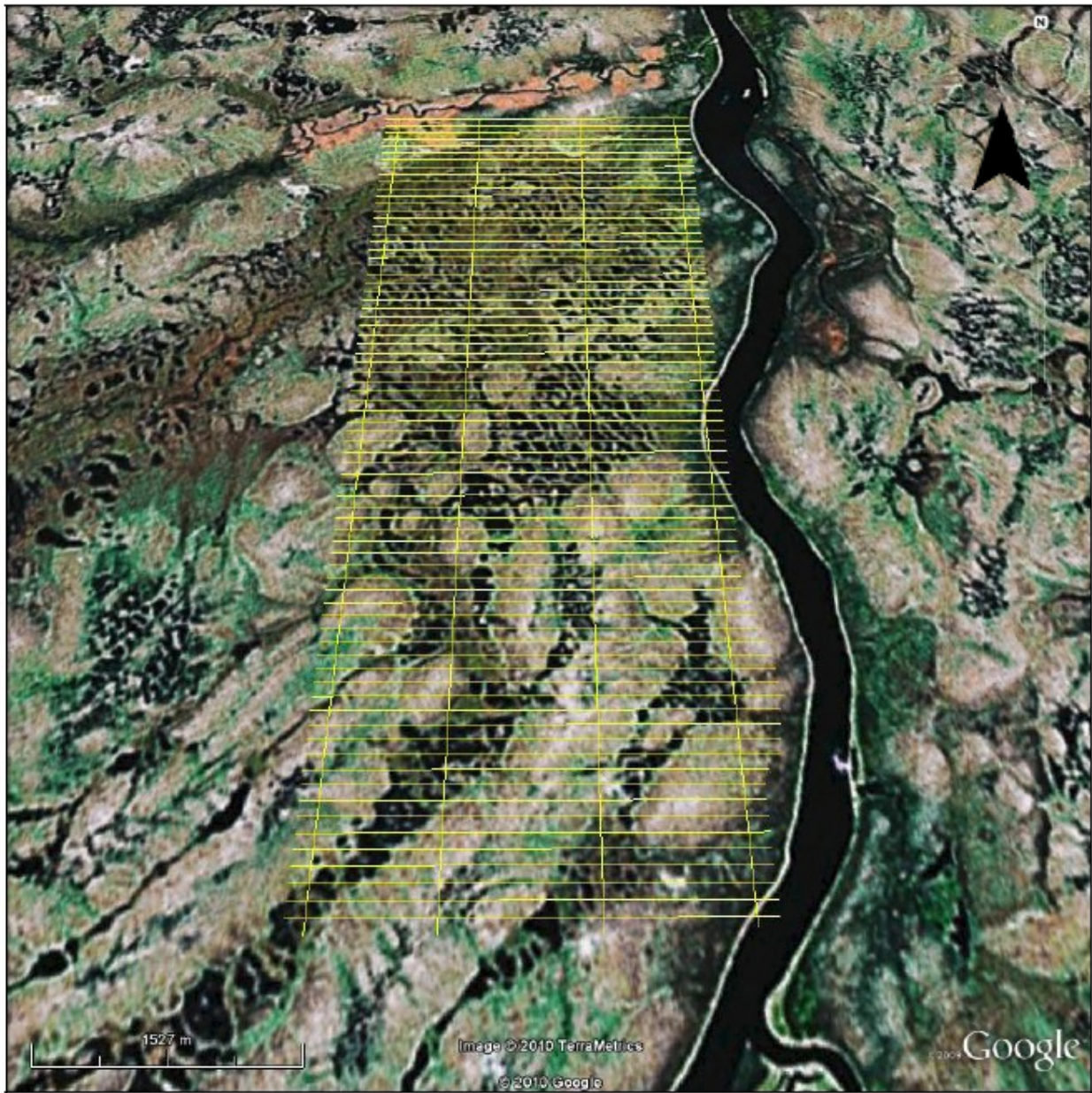
Figure 14: Land Tenure in the Ring of Fire (from MNDM website, June 16, 2009, (NAD83 Zone 16 Co-ordinates). (2010)



**Figure 15: Broke Back and Riverbank Survey Lines and base station location superimposed on Google Earth image. Venter (2010)**



**Figure 16: Broke Back property flight path superimposed on Google Earth image. Venter (2010)**



**Figure 17: Riverbank property flight path superimposed on Google Earth image. Venter (2010)**

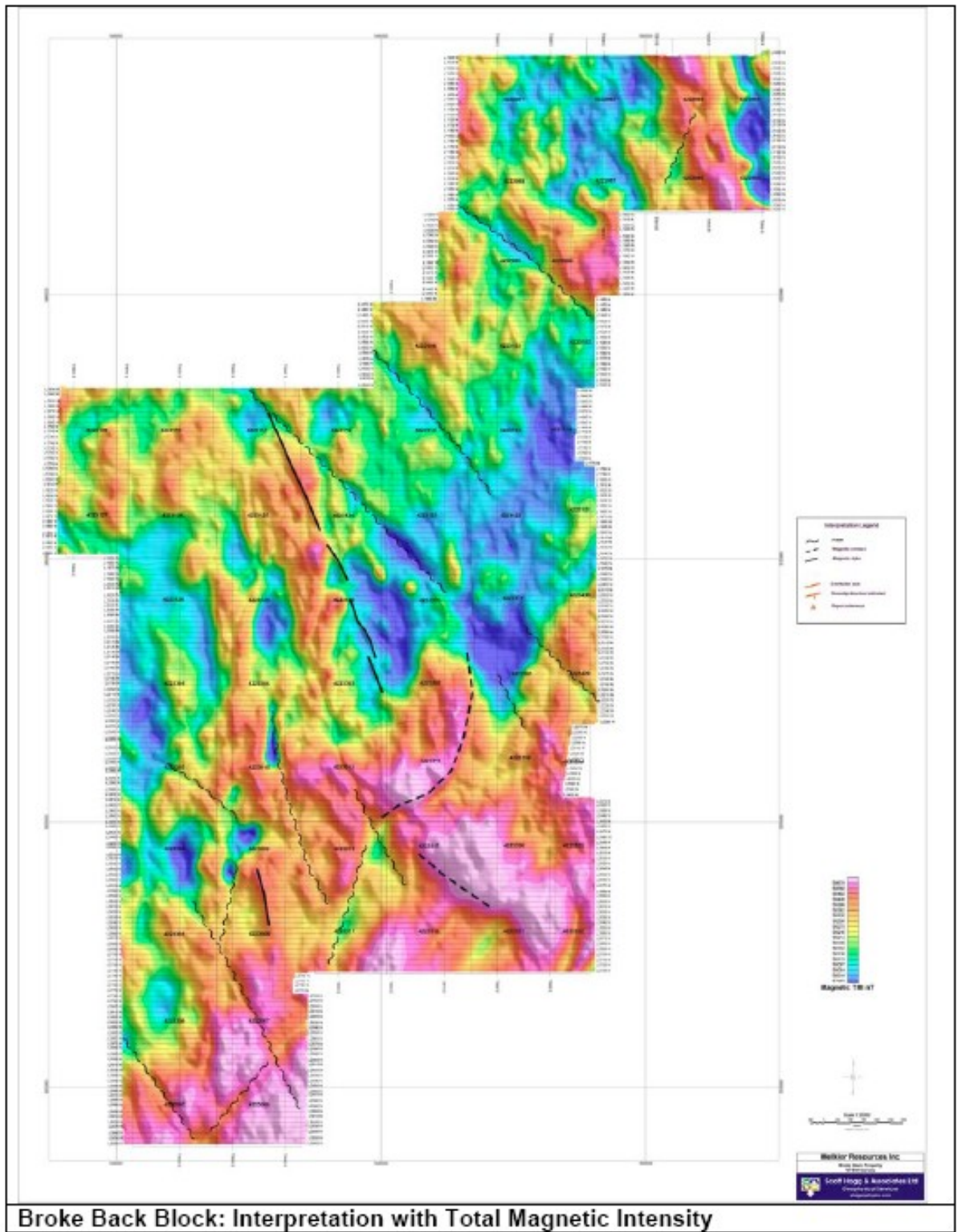


Figure 18: Broke Back Interpretation with Total Magnetic Intensity. (Hogg, 2010)

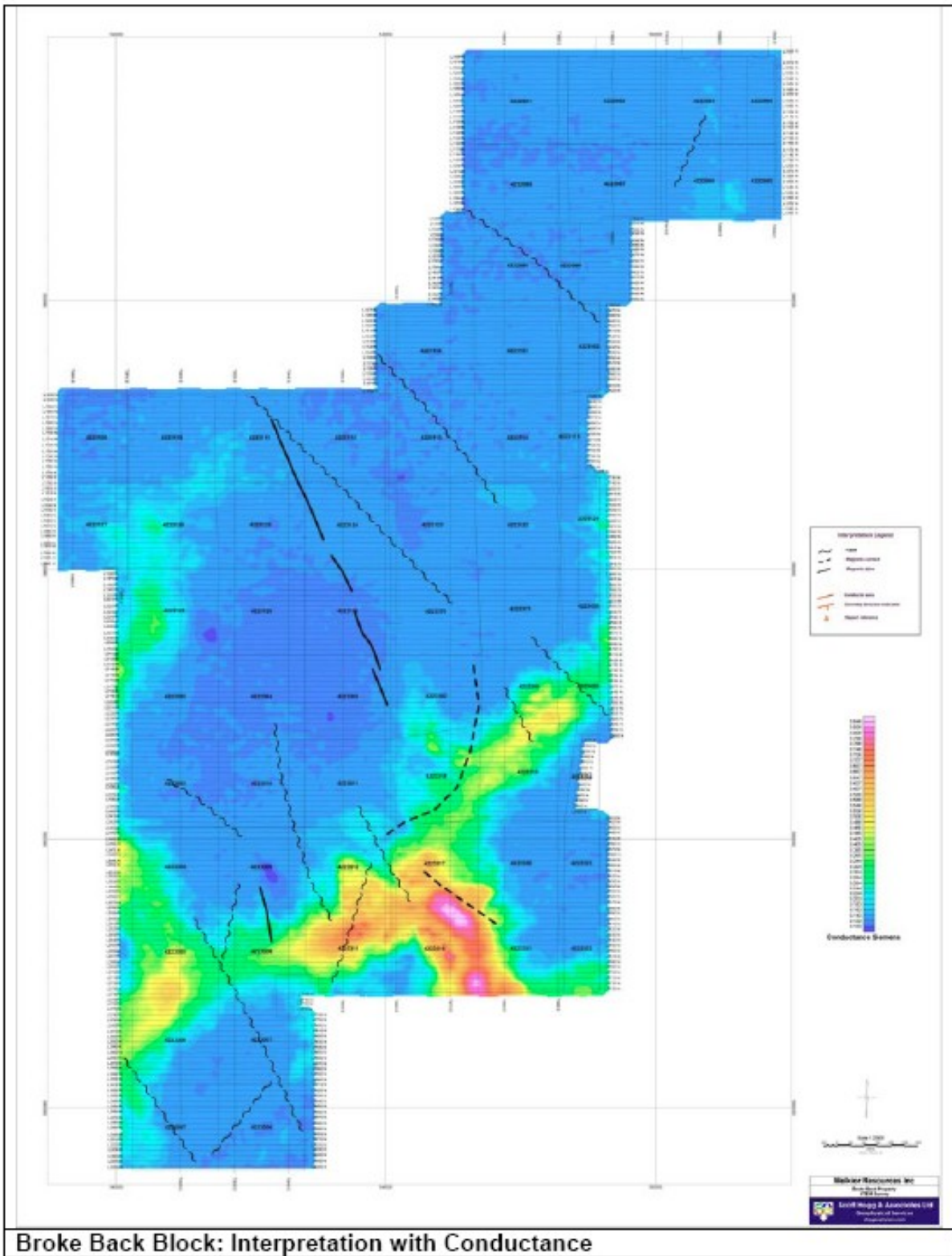


Figure 19: Broke Back Block: Interpretation with Conductance. (Hogg, 2010)

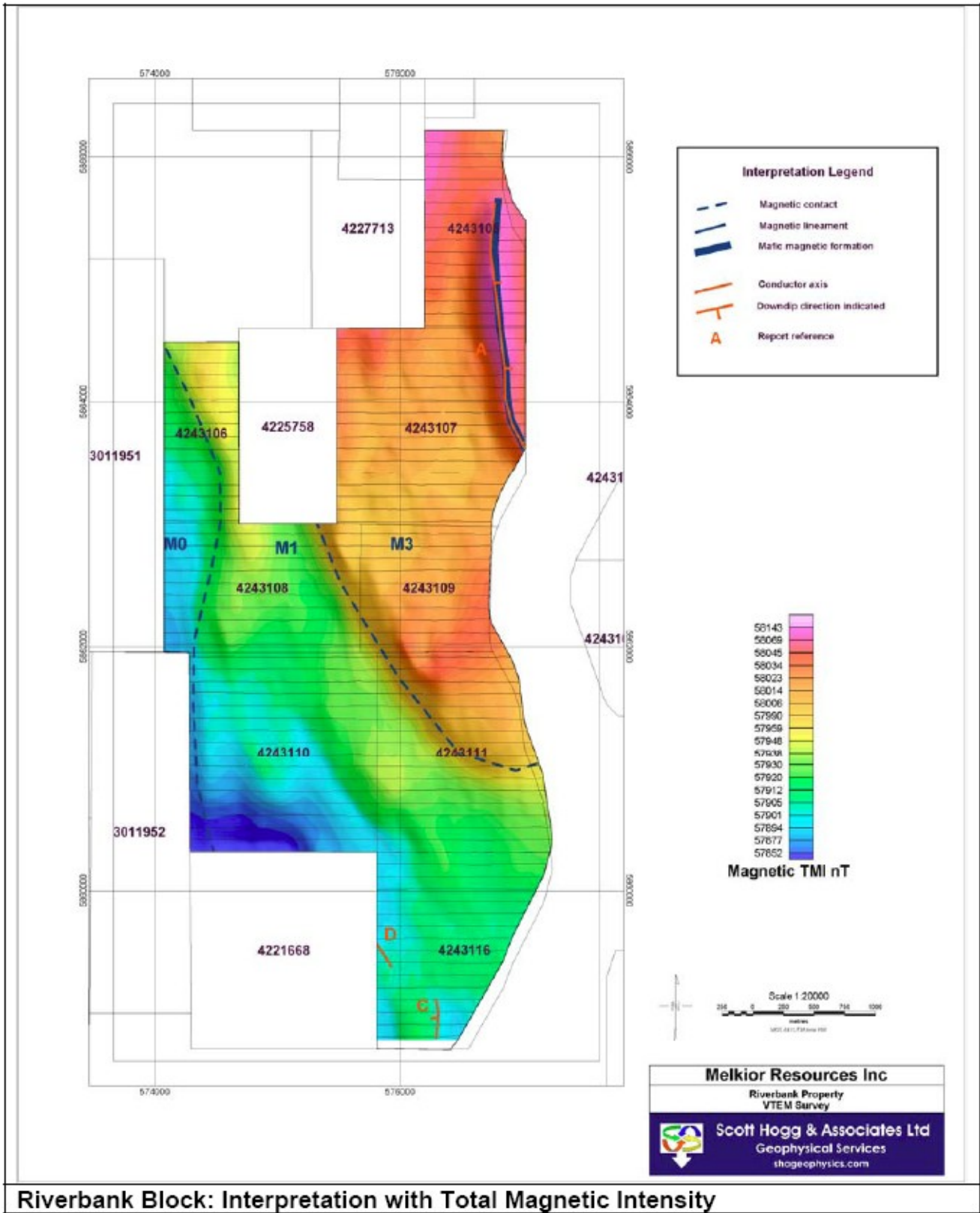


Figure 20: Riverbank Block: Interpretation with Total Magnetic Intensity. (Hogg, 2010)



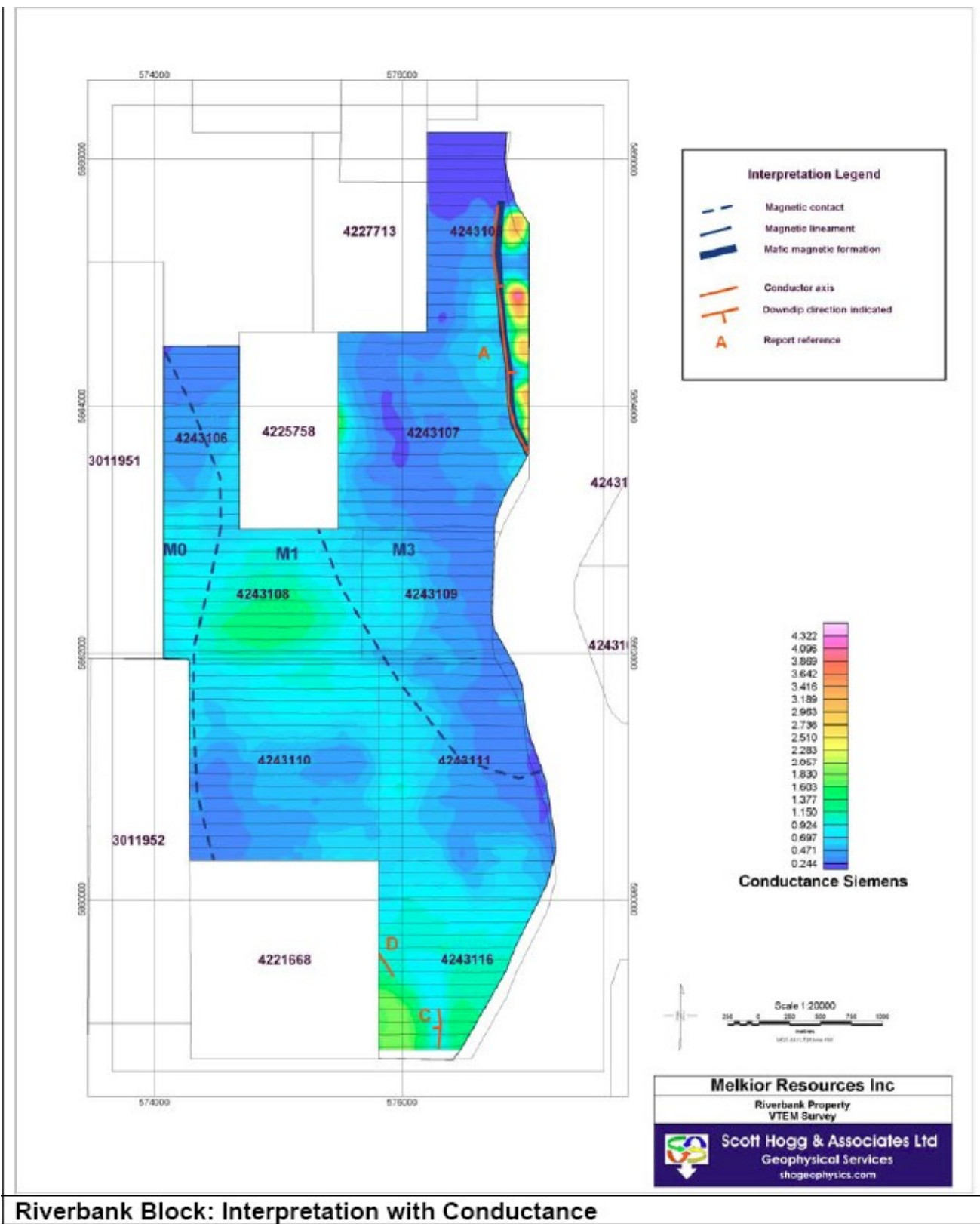


Figure 21: Riverbank Block: Interpretation with Conductance (Hogg, 2010)

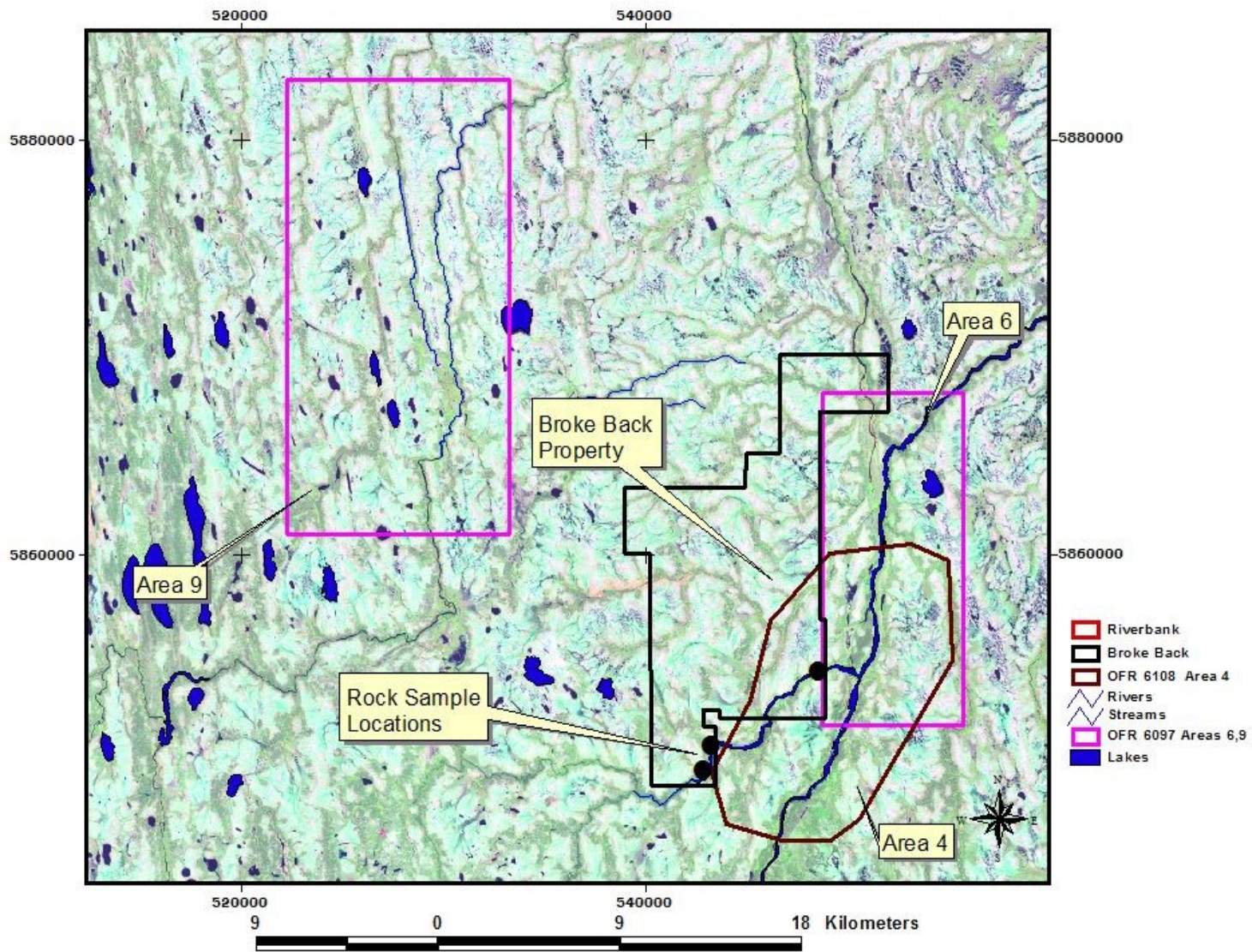
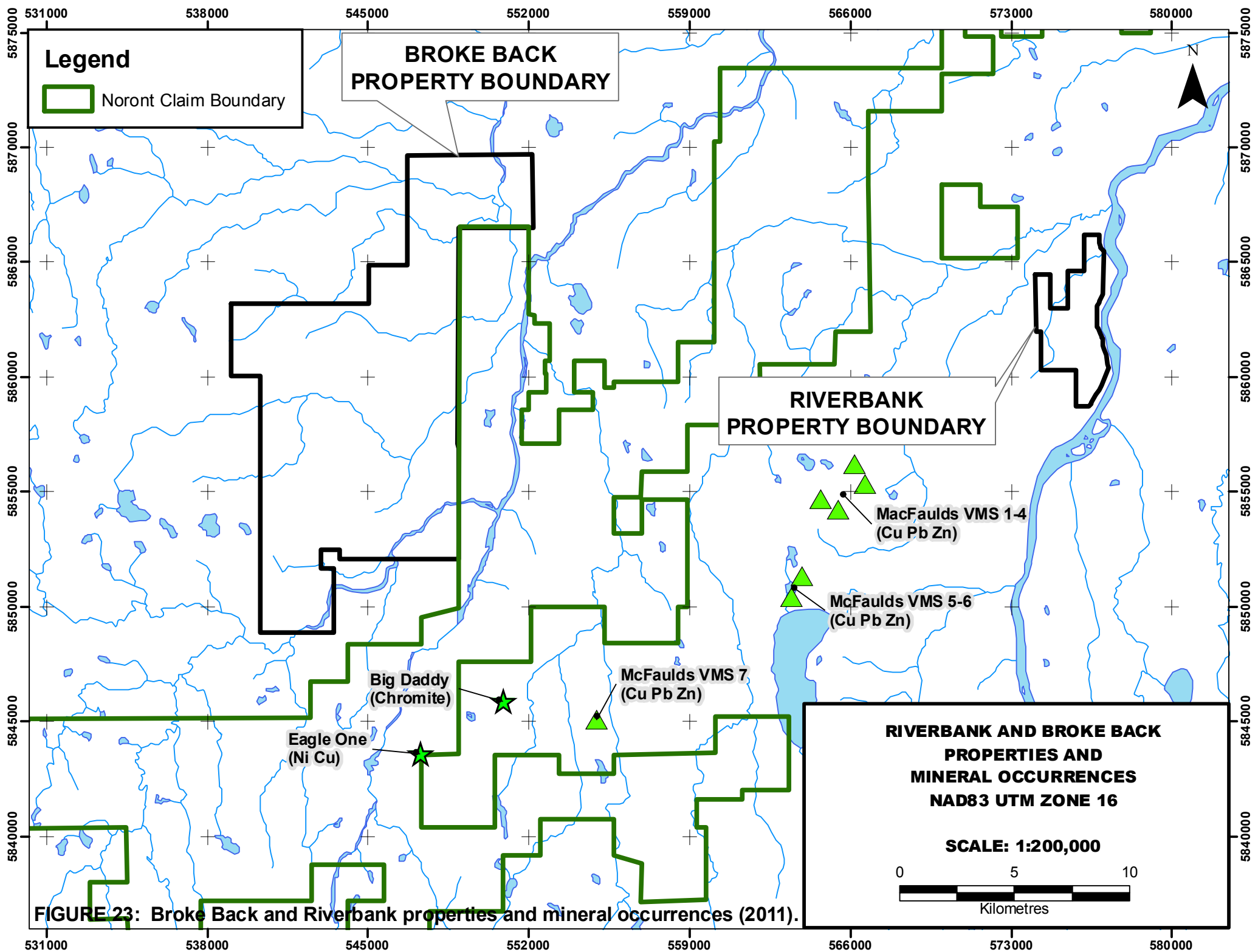
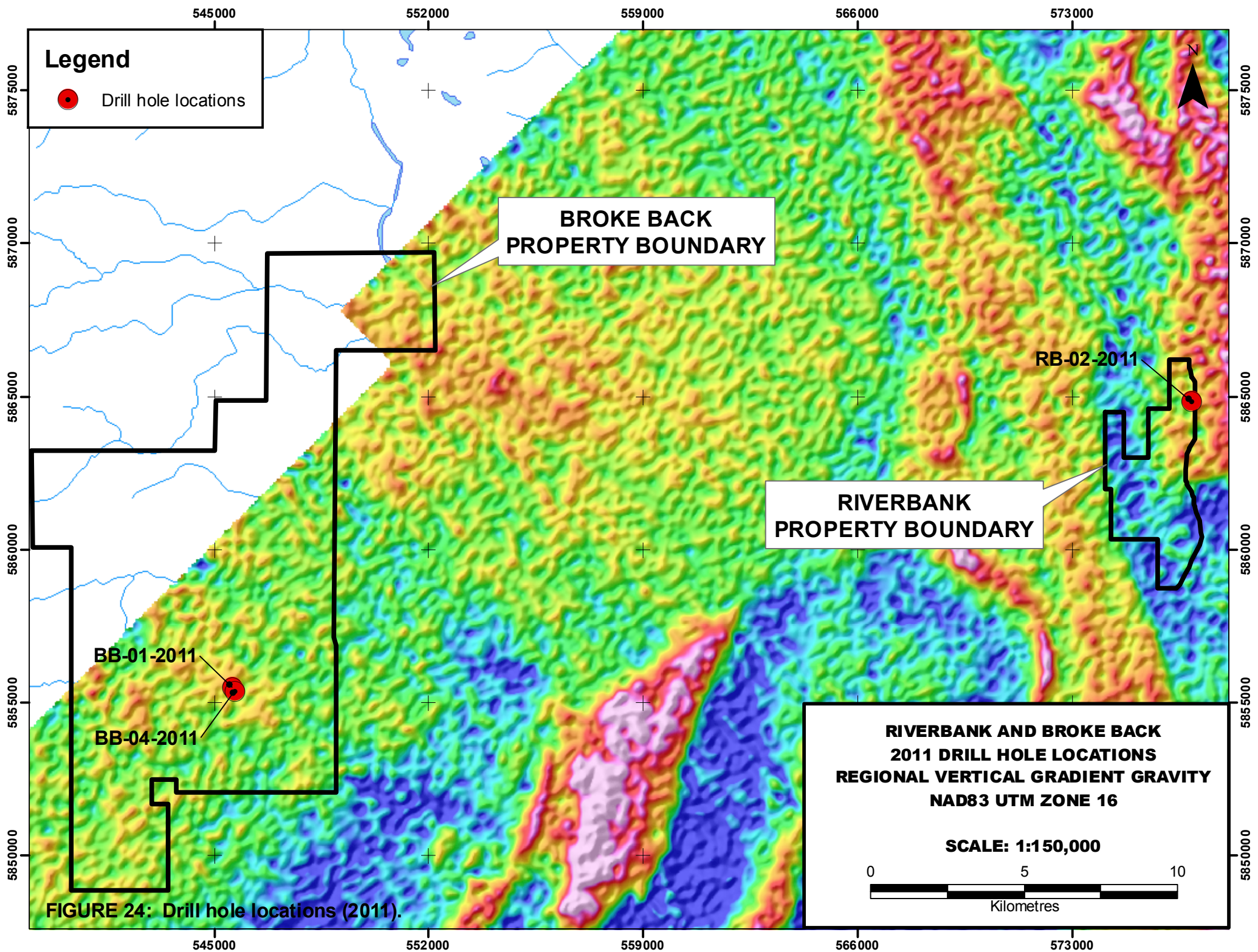


Figure 22: Rock sample locations and Areas of Interest from Open File Reports 6097 and 6108. (2003)



**FIGURE 23: Broke Back and Riverbank properties and mineral occurrences (2011).**



**FIGURE 24: Drill hole locations (2011).**

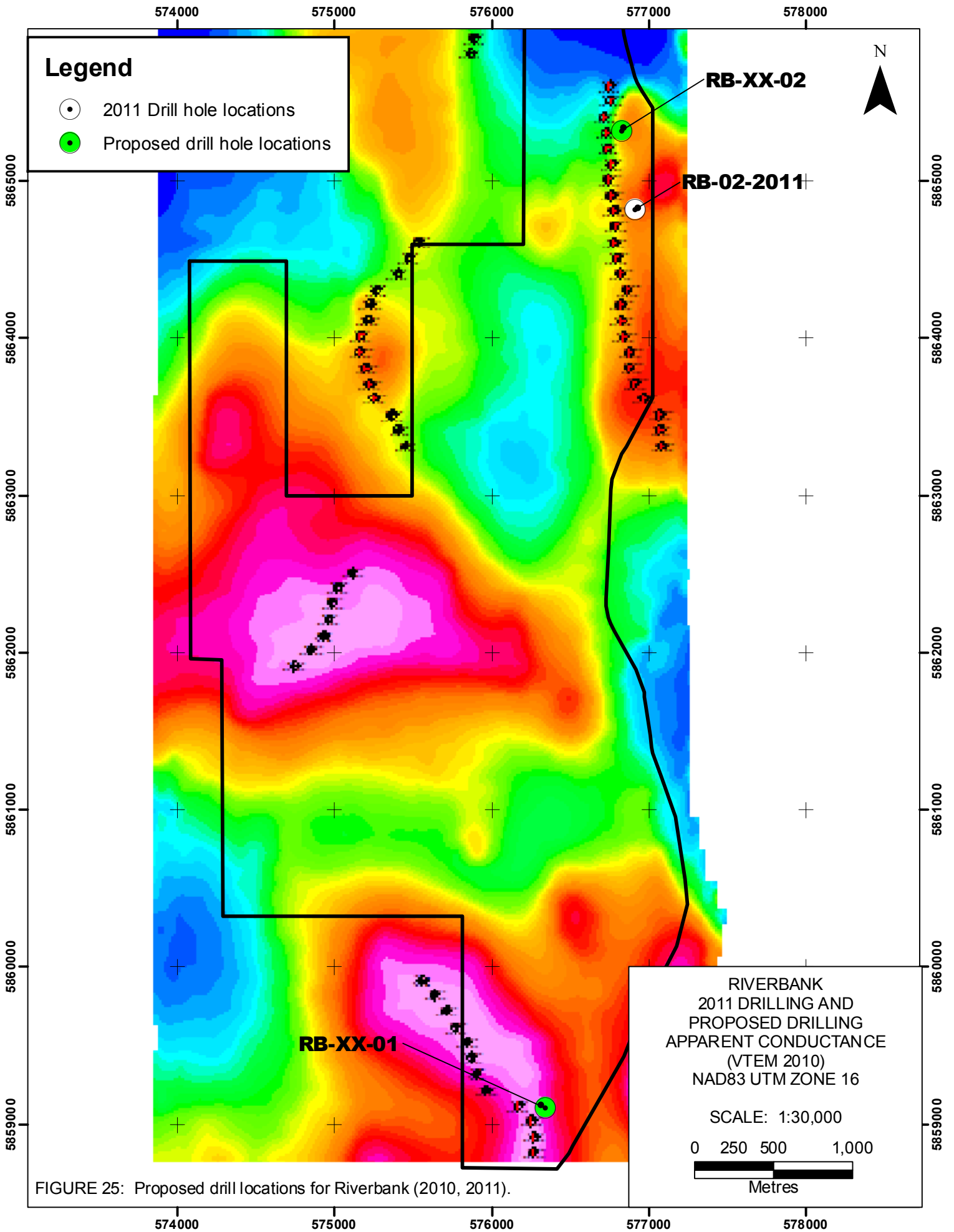
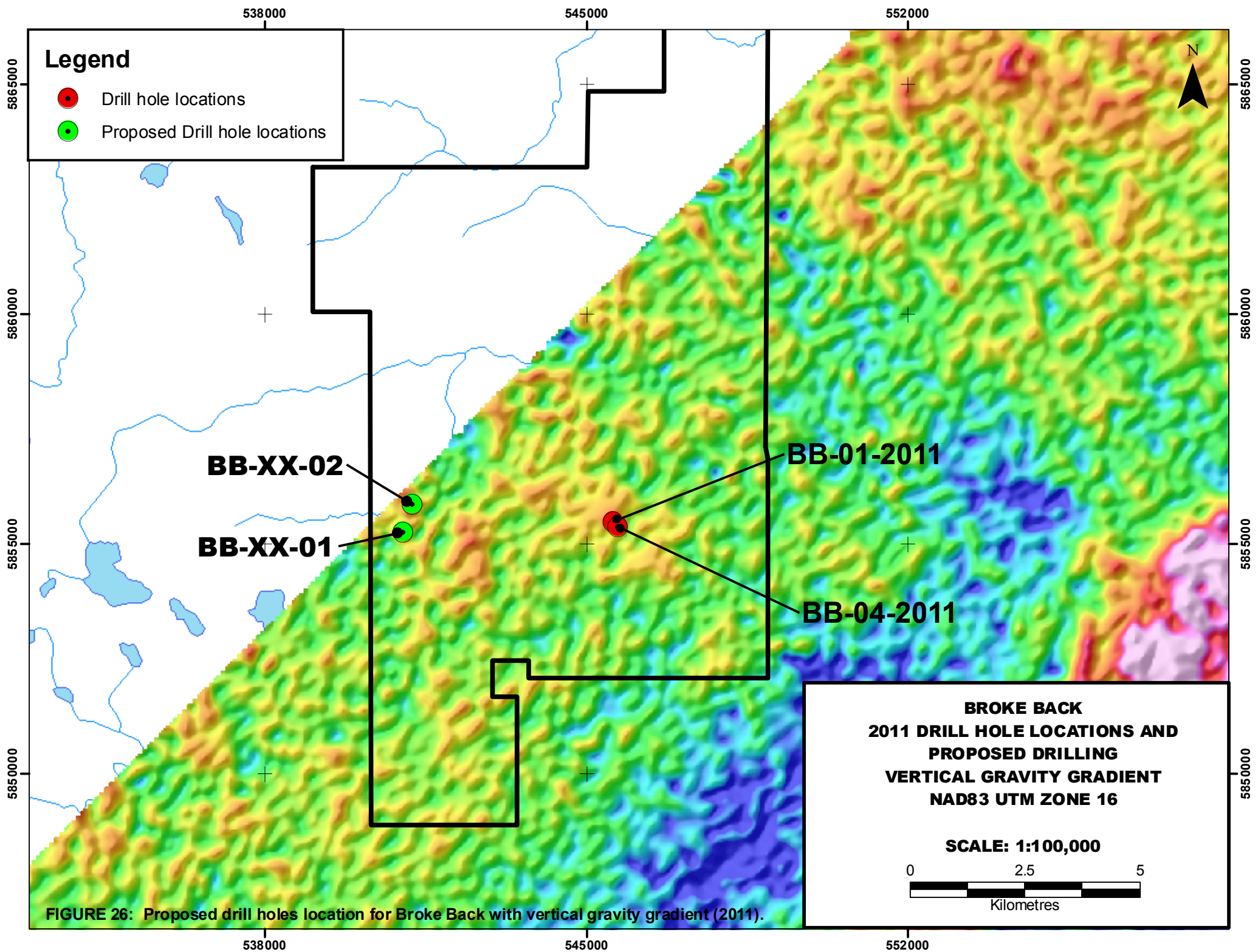
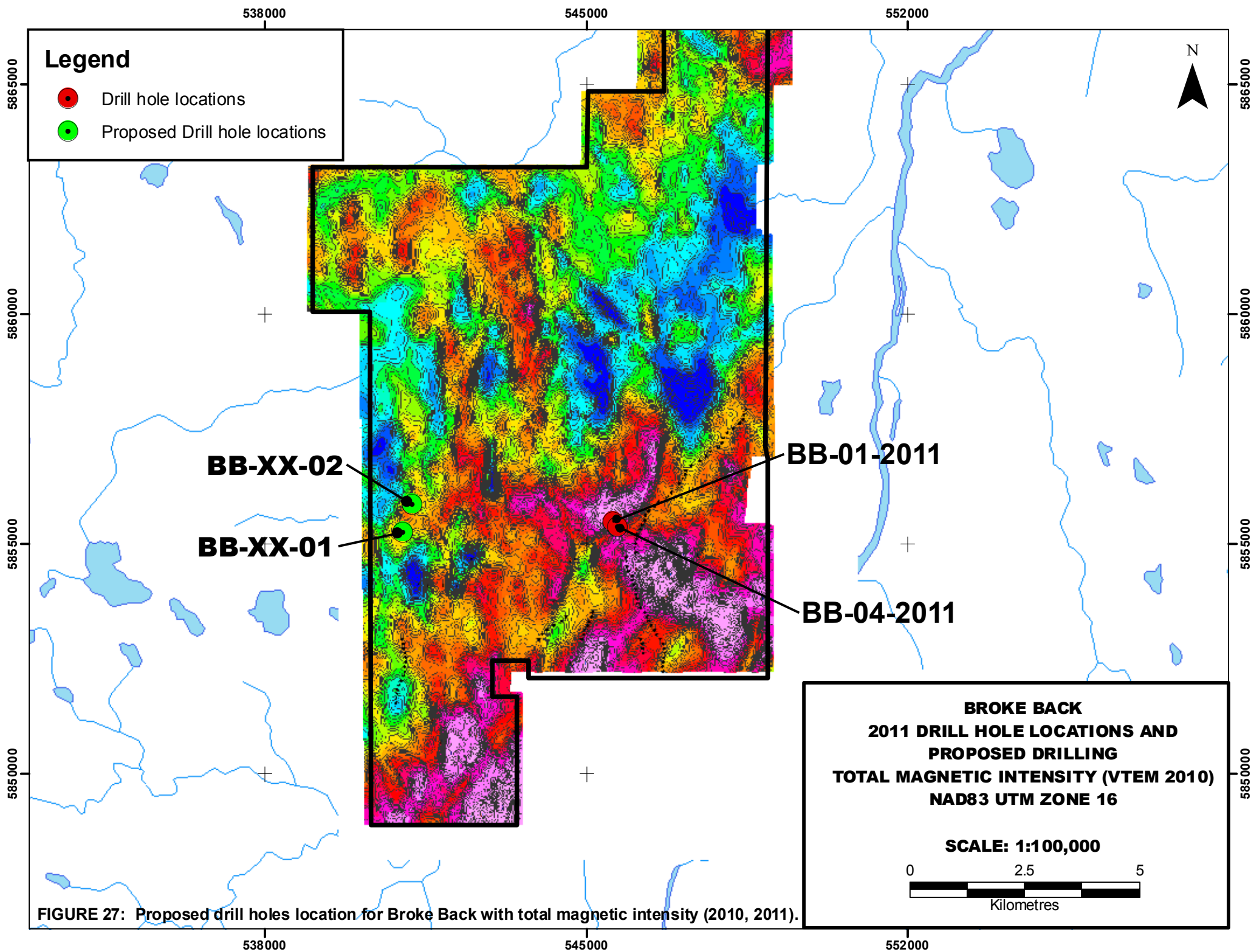


FIGURE 25: Proposed drill locations for Riverbank (2010, 2011).



**FIGURE 26: Proposed drill holes location for Broke Back with vertical gravity gradient (2011).**



**Legend**

- Drill hole locations
- Proposed Drill hole locations



**BB-XX-02**

**BB-XX-01**

**BB-01-2011**

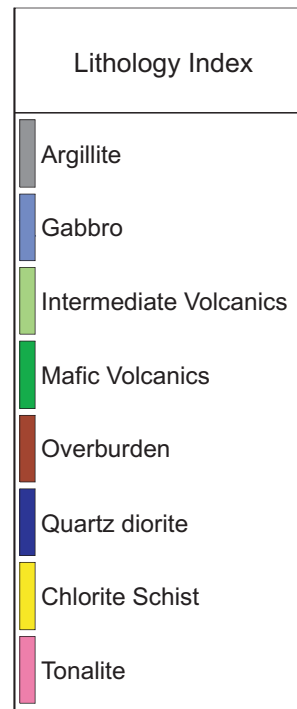
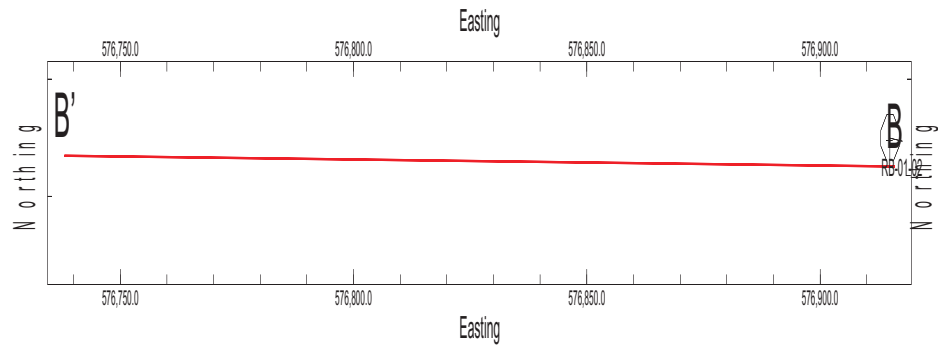
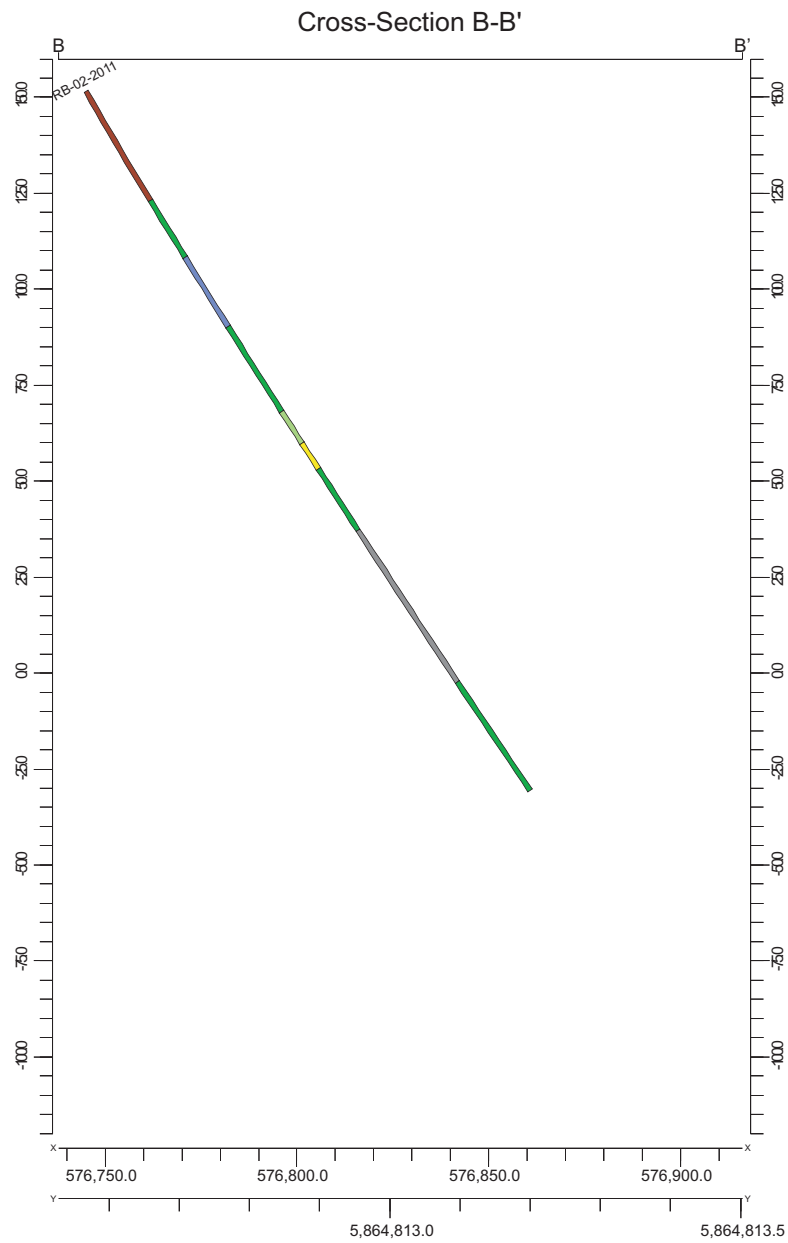
**BB-04-2011**

**BROKE BACK**  
**2011 DRILL HOLE LOCATIONS AND**  
**PROPOSED DRILLING**  
**TOTAL MAGNETIC INTENSITY (VTEM 2010)**  
**NAD83 UTM ZONE 16**

**SCALE: 1:100,000**

0                      2.5                      5  
Kilometres

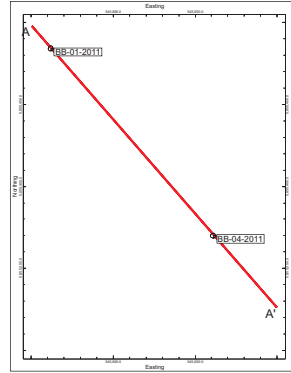
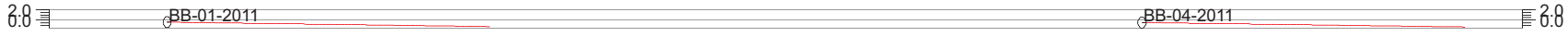
**FIGURE 27: Proposed drill holes location for Broke Back with total magnetic intensity (2010, 2011).**



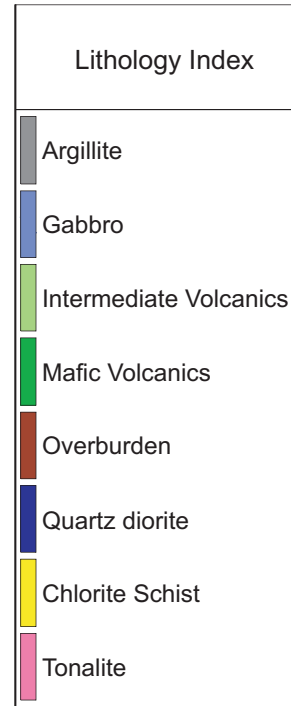
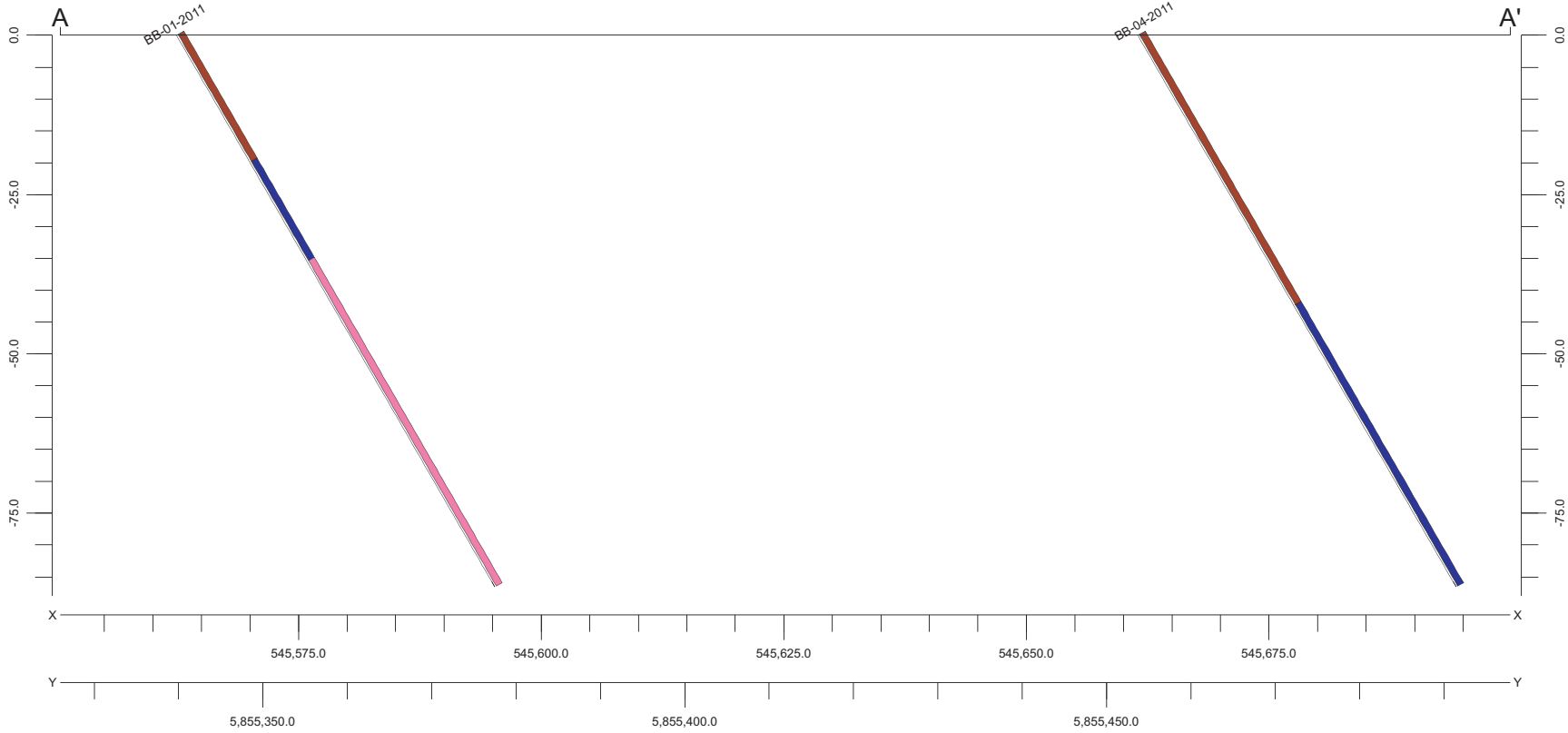
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Drafted by:	HH	
Scale:	1:100	

Figure 28: Riverbank cross section (2011).





### Cross-Section A-A'



Date:	14/12/11
Drafted by:	HH
Scale:	
<b>Broke Back</b> <b>A-A'</b> BB-01-2011 and BB-04-2011 UTM NAD83, Zone16U	

Figure 29: Broke Back cross section (2011).

# **TABLES**

TABLE 2: CLAIMS COMPRISING THE BROKE BACK PROPERTY

Township Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
BMA 527 862	4223324	2008-Apr-08	2012-Jan-31	A	1	2400	2400	0	0
BMA 527 862	4222997	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223110	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223115	2008-Apr-08	2012-Jan-31	A	1	1600	1600	0	0
BMA 528 862	4223430	2008-Apr-08	2012-Jan-31	A	1	1600	1600	0	0
BMA 528 862	4223123	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223394	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223128	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223395	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223322	2008-Apr-08	2012-Jan-31	A	1	2400	2400	0	0
BMA 528 862	4223122	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223012	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223121	2008-Apr-08	2012-Jan-31	A	1	1600	1600	0	0
BMA 528 862	4222984	2008-Apr-08	2012-Jan-31	A	1	4800	0	0	0
BMA 527 862	4223305	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223306	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223392	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223318	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223370	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223114	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223124	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223007	2008-Apr-14	2012-Apr-14	A	1	12000	6000	0	0
BMA 527 862	4223008	2008-Apr-08	2012-Jan-31	A	1	6000	6000	0	0
BMA 528 862	4223371	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4222989	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223319	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223103	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223304	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223127	2008-Apr-08	2012-Jan-31	A	1	4800	4800	0	0
BMA 527 862	4223009	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223320	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4222985	2008-Apr-08	2012-Jan-31	A	1	2400	2400	0	0
BMA 528 861	4222986	2008-Apr-08	2012-Jan-31	A	1	4800	4800	0	0
BMA 528 862	4223112	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223111	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223393	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223323	2008-Apr-08	2012-Jan-31	A	1	2400	2400	0	0
BMA 527 862	4223391	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223321	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223316	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223011	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223104	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 861	4222983	2008-Apr-08	2012-Jan-31	A	1	12800	0	2315	0
BMA 528 862	4222982	2008-Apr-08	2012-Jan-31	A	1	12800	0	0	0

TABLE 2: CLAIMS COMPRISING THE BROKE BACK PROPERTY

Township Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
BMA 528 862	4223126	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223109	2008-Apr-08	2012-Jan-31	A	1	4800	4800	0	0
BMA 527 862	4223006	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223317	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223125	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4223102	2008-Apr-08	2012-Jan-31	A	1	1600	1600	0	0
BMA 528 862	4223130	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4222987	2008-Apr-08	2012-Jan-31	A	1	5200	5200	0	0
BMA 528 862	4222981	2008-Apr-08	2012-Jan-31	A	1	12800	0	0	0
BMA 527 862	4223303	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4222988	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 528 862	4222990	2008-Apr-08	2012-Jan-31	A	1	1600	1600	0	0
BMA 528 862	4223129	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223010	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223311	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0
BMA 527 862	4223429	2008-Apr-08	2012-Jan-31	A	1	1600	1600	0	0
BMA 528 862	4223113	2008-Apr-08	2012-Jan-31	A	1	6400	6400	0	0

TABLE 3: CLAIMS COMPRISING THE RIVERBANK PROPERTY

Township Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
BMA 528 854	4243106	2008-Jun-20	2012-Jan-31	A	1	4800	0	365	0
BMA 528 854	4243105	2008-Jun-20	2012-Mar-20	A	1	3600	3600	0	0
BMA 528 854	4243107	2008-Jun-20	2012-Mar-20	A	1	6000	6000	0	0
BMA 528 854	4243111	2008-Jun-20	2012-Mar-20	A	1	4800	4800	0	0
BMA 528 854	4243110	2008-Jun-20	2012-Mar-20	A	1	6400	6400	0	0
BMA 528 854	4243108	2008-Jun-20	2012-Mar-20	A	1	4000	4000	0	0
BMA 528 854	4243116	2008-Jun-20	2012-Mar-20	A	1	4800	4800	0	0
BMA 528 854	4243109	2008-Jun-20	2012-Mar-20	A	1	2800	2800	0	0