

MAR 20040005: CROWSNEST PASS

Received date: Jun 03, 2004

Public release date: Nov 01, 2006

DISCLAIMER

By accessing and using the Alberta Energy website to download or otherwise obtain a scanned mineral assessment report, you ("User") agree to be bound by the following terms and conditions:

- a) Each scanned mineral assessment report that is downloaded or otherwise obtained from Alberta Energy is provided "AS IS", with no warranties or representations of any kind whatsoever from Her Majesty the Queen in Right of Alberta, as represented by the Minister of Energy ("Minister"), expressed or implied, including, but not limited to, no warranties or other representations from the Minister, regarding the content, accuracy, reliability, use or results from the use of or the integrity, completeness, quality or legibility of each such scanned mineral assessment report;
- b) To the fullest extent permitted by applicable laws, the Minister hereby expressly disclaims, and is released from, liability and responsibility for all warranties and conditions, expressed or implied, in relation to each scanned mineral assessment report shown or displayed on the Alberta Energy website including but not limited to warranties as to the satisfactory quality of or the fitness of the scanned mineral assessment report for a particular purpose and warranties as to the non-infringement or other non-violation of the proprietary rights held by any third party in respect of the scanned mineral assessment report;
- c) To the fullest extent permitted by applicable law, the Minister, and the Minister's employees and agents, exclude and disclaim liability to the User for losses and damages of whatsoever nature and howsoever arising including, without limitation, any direct, indirect, special, consequential, punitive or incidental damages, loss of use, loss of data, loss caused by a virus, loss of income or profit, claims of third parties, even if Alberta Energy have been advised of the possibility of such damages or losses, arising out of or in connection with the use of the Alberta Energy website, including the accessing or downloading of the scanned mineral assessment report and the use for any purpose of the scanned mineral assessment report so downloaded or retrieved.
- d) User agrees to indemnify and hold harmless the Minister, and the Minister's employees and agents against and from any and all third party claims, losses, liabilities, demands, actions or proceedings related to the downloading, distribution, transmissions, storage, redistribution, reproduction or exploitation of each scanned mineral assessment report obtained by the User from Alberta Energy.

**2003 TECHNICAL REPORT BURMIS MAGNETITE DEPOSITS,
CROWSNEST PASS, SOUTHWEST ALBERTA
MINERAL PERMITS 9302020061, 9389050002 and 9499120001**

Prepared For:
Micrex Development Corp.
156 Laurier Drive
Edmonton, Alberta, Canada
T5R 5P9

Prepared By:
APEX Geoscience Ltd.
Suite 200, 9797 – 45th Avenue
Edmonton, Alberta, Canada
T6E 5V8

December 11, 2003

M.B. Dufresne,
M.Sc., P.Geol.

**2003 TECHNICAL REPORT BURMIS MAGNETITE DEPOSITS,
CROWSNEST PASS, SOUTHWEST ALBERTA
MINERAL PERMITS 9302020061, 9389050002 and 9499120001**

TABLE OF CONTENTS

	<u>PAGE</u>
SUMMARY	1
INTRODUCTION AND TERMS OF REFERENCE	3
DISCLAIMER	3
PROPERTY DESCRIPTION AND LOCATION	4
ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY	4
HISTORY	7
GEOLOGICAL SETTING	8
DEPOSIT TYPES	10
MINERALIZATION	12
2001 – 2003 EXPLORATION	15
DRILLING	29
SAMPLING METHOD AND APPROACH	32
SAMPLE PREPARATION, ANALYSES AND SECURITY	33
DATA VERIFICATION	33
ADJACENT PROPERTIES	34
MINERAL PROCESSING AND METALLURGICAL TESTING	34
MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES	35
INTERPRETATION AND CONCLUSIONS	37
RECOMMENDATIONS	40
REFERENCES	42
CERTIFICATION	44
CONSENT	46

TABLES

<u>TABLE</u>	<u>PAGE</u>
1 DRILLHOLE SUMMARY TABLE OF MAGNETITE HOST ROCK THICKNESS.....	30

FIGURES

<u>FIGURE</u>	<u>PAGE</u>
1 PROPERTY LOCATION	5
2 REGIONAL GEOLOGY AND ACCESS	6
3 STRATIGRAPHY OF THE BURMIS MAGNETITE DEPOSITS	9
4 VIEW OF THE MILVAIN AND MARASEK DEPOSITS	11
5 PHOTOS OF BURMIS FORMATION MAGNETITE.....	13
6 TOTAL FE AS Fe_2O_3 VS TiO_2 FOR BURMIS ROCK SAMPLES.....	14
7 PROPERTY GEOLOGY MARASEK TO MARASEK SOUTH	17
8 TOTAL FIELD GROUND MAGNETICS	21
9 GRADIENT GROUND MAGNETICS	22
10 GEOCHEMICAL RESULTS BURMIS ROCK SAMPLES	25
11 WINDY RIDGE AREA PHOTOGRAPHS	27
12 TRENCH AND SAMPLE PIT LOCATIONS WINDY RIDGE.....	28

APPENDICES

<u>APPENDIX</u>	<u>PAGE</u>
1 CURRENT PERMIT STATUS	AT END
2 2000 TO 2003 EXPLORATION EXPENDITURES	AT END
3 2001 – 2003 SAMPLING BURMIS MAGNETITE DEPOSITS	AT END
4 2002 TRENCH CROSS-SECTIONS AND PROFILES	AT END
5 PROPOSED EXPLORATION BUDGET – 2004 BURMIS PROJECT	AT END

**2003 TECHNICAL REPORT BURMIS MAGNETITE DEPOSITS,
CROWSNEST PASS, SOUTHWEST ALBERTA
MINERAL PERMITS 9302020061, 9389050002 and 9499120001**

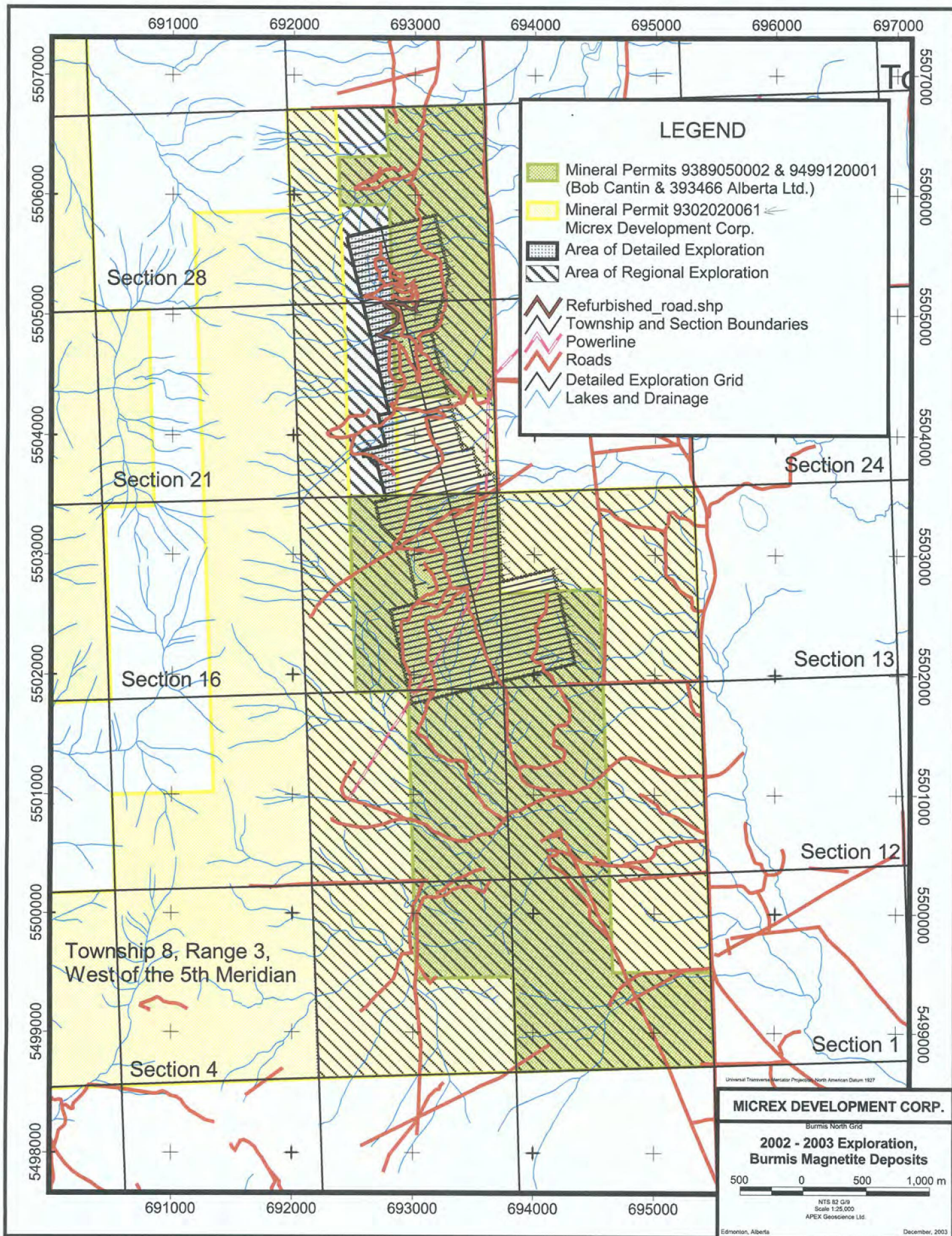
SUMMARY

The Burmis magnetite deposits are located in the Rocky Mountains Foothills within Dominion Land Survey Townships 7 and 8, Range 3, west of the Fifth Meridian. Three magnetite deposits exist at Micrex Development Corporation's (Micrex) Burmis property and are historically named the North Burmis (Marasek), Central Burmis (Milvain) and South Burmis (Boutry) deposits.

Micrex Development Corporation (Micrex) retained APEX Geoscience Ltd. (APEX) during the fall of 2003 as consultants in order to prepare an independent Technical Report for the Burmis magnetite property. Micrex originally retained APEX during the fall of 2000 to review historical exploration data, interpret the results of a High Resolution Airborne Magnetic survey flown during 2000, and to conduct detailed field exploration at the Burmis magnetite property. APEX has since conducted a number of field based exploration programs in the Burmis area on behalf of Micrex from 2001 to present. Exploration during this period has focused on the northernmost historical magnetite deposits within the Burmis area, the Marasek and Milvain deposits. Exploration conducted by APEX has comprised grid construction, ground magnetometer and gradiometer surveying, prospecting, sampling, geological mapping and trenching.

The Burmis magnetite deposits, including the Marasek, Milvain and Boutry deposits, are hosted within Upper Cretaceous Burmis Formation sandstone that has been deformed during Upper Cretaceous and Tertiary tectonism associated with formation of the Rocky Mountains. The Burmis Formation sandstones and intercalated magnetite beds were likely formed within a beach environment along the margin of the Late Cretaceous Colorado Sea. There is a long history of exploration on these deposits dating back to at least 1912.

Historical resource estimates for the three partly exposed magnetite deposits range from 2.1 million short tons up to 6.7 million short tons of unknown grade. These historical resource estimates were based upon a combination of drillhole data and extrapolation using the known surface extent of the magnetite deposits. The existence of these magnetite deposits has been confirmed based upon the results of recent detailed exploration. Ground magnetometer surveys, in particular gradient surveys, have aided in the delineation of poorly exposed discreet individual magnetite zones within the Marasek and Milvain deposits. Confirmatory drilling will be required as part of any pre-feasibility or feasibility studies to determine the exact extent and grade of the deposits and to bring the historic resource estimates into line with acceptable modern standards as required in National instrument 43-101. Airborne and ground magnetometer surveys of Micrex's property show that potential exists for the discovery of



additional near surface magnetite resources that are not exposed at surface and that have not been identified nor drill tested during prior exploration.

At present, the Burmis magnetite deposits, specifically the Marasek and Milvain deposits, are being contemplated by Micrex as a source of magnetite for recoverable dense medium separation in the coal industry. On the basis of the December 2002 trenching program and prior exploration conducted by APEX, Elkview Coal Corporation was successful in identifying a potential five-year supply of magnetite for its Elkview Coal Mine at the Marasek deposit. Elkview was successful in identifying a volume of about 34,550 m³ of magnetite-bearing rock with an average grade of close to 60 weight percent (wt%) magnetic minerals, which translates into an indicated resource of about 111,200 tonnes of rock yielding an average grade of about 60 wt% magnetic minerals. Based upon a consumption rate of 23,000 to 25,000 tonnes of raw ore containing 60 to 65 wt% recoverable magnetic minerals per annum, the Windy Ridge portion and south portion of the A-Knob area of the Marasek magnetite deposit could provide sufficient magnetite feed for the Elkview Coal Mine for at least five years.

Based on the results of exploration conducted by APEX from 2001 to present on the Marasek and Milvain magnetite deposits, the following aggressive exploration program is strongly recommended:

- 1 Complete an aggressive combination diamond and reverse-circulation drilling program of selected high-grade areas of magnetite mineralization at the Windy Ridge and A-Knob areas of the Marasek deposit. The drilling should be conducted in such a manner as to bring a large portion of the inferred magnetite resource into a measured resource category leading to probable and measured reserves.
- 2 Complete detailed geotechnical, metallurgical, mineralogical and geochemical program of work on both surface and drill samples leading to and as part of pre-feasibility studies.
- 3 Continue prospecting and sampling of magnetite exposures and geochemical and magnetic analysis to define the grade and mineralogical character of other zones of magnetite and titanium mineralization.
- 4 Based upon the acquisition of the data above, continue to add to and improve the existing pre-feasibility document constructed by International Metallurgical and Environmental Inc.
- 5 Initiate periodic community information seminars in order to aid the local residents in understanding the scope and size of the project and its associated potential impacts.
- 6 Initiate any and all baseline environmental studies that will be required as part of the pre-mining and on-going mining activities.

The estimated cost to conduct the recommended exploration program is approximately \$250,000, not including GST.

INTRODUCTION AND TERMS OF REFERENCE

Micrex Development Corporation (Micrex) retained APEX GEOSCIENCE LTD. (APEX) during the fall of 2003 as consultants in order to prepare an independent Technical Report for the Burmis magnetite property. The purpose of the report is to provide a complete description of the land tenure, regional geologic setting, history of exploration, and nature and distribution of magnetite concentrations on the property. Micrex originally retained APEX during the fall of 2000 to review historical exploration data, interpret the results of a High Resolution Airborne Magnetic (HRAM) survey flown during 2000, and to conduct detailed field exploration at the Burmis magnetite property. APEX has since conducted a number of field based exploration programs in the Burmis area on behalf of Micrex from 2001 to present. Exploration during this period has focused on the northernmost historical magnetite deposits within the Burmis area known as the Marasek and Milvain deposits. Exploration conducted by APEX has comprised grid construction, ground magnetometer and gradiometer surveying, prospecting, sampling, geological mapping and trenching. This report has been prepared on the basis of available published and unpublished information and documents the results of field exploration conducted by APEX from 2000 to present. All of the exploration conducted by APEX to date, has been performed under the supervision of Mr. M.B. Dufresne, M.Sc., P.Geol., a Qualified Person under National Instrument 43-101. Mr. Dufresne has visited the property on a number of occasions during the field exploration programs, most recently during October 2002. This report conforms to the headings and content described in National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

DISCLAIMER

This report relies, in part, upon work conducted by previous workers other than those under APEX Geoscience Ltd., and for work performed on behalf of companies other than Micrex Development Corporation. Much of the compiled data that is reported on herein has been extracted from publicly available prior exploration assessment reports and government geological reports. The government geological reports were prepared by a person or persons holding post secondary geology, or related university degree(s), prior to the implementation of the standards relating to National Instrument 43-101. The information in those reports is assumed to be accurate. The reports written by other geologists are also assumed to be accurate based upon the property visit and data review conducted by the author. APEX Geoscience Ltd. does not accept any responsibility for errors present within the existing assessment reports. Additionally, reports of previous exploration at the property make reference to resource estimations and calculations that were reported previous to the implementation of National Instruments 43-101 and 43-101CP. These "resource calculations" were not completed according to the guidelines required by National Instruments 43-101 and 43-101CP and thus, APEX Geoscience Ltd.

and Micrex Development Corporation do not claim any responsibility for the accuracy of these estimations. These values are referred to in a strictly historical sense and do not represent valid resource or reserve calculations. The Burmis magnetite property is considered an intermediate to advanced stage exploration property and is characterized by a number of surface magnetite showings, some of which are documented to contain a historical resource.

PROPERTY DESCRIPTION AND LOCATION

The Burmis magnetite deposits are located in the Rocky Mountain Foothills approximately 9 kilometers east and northeast of Blairmore Alberta, on the eastern slope of the Livingstone Range (Figure 1). The deposits lie within National Topographic System (NTS) map area 82G/9 (Blairmore) and are located within Dominion Land Survey Townships 7 and 8, Range 3, west of the Fifth Meridian. The mineral claims and agreements held by Micrex cover approximately 9,901.5 acres (4,007.00 hectares). The legal descriptions as well as maps showing the mineral claims are included in Appendix 1. Three magnetite deposits exist at Micrex's Burmis magnetite property and are historically named the North Burmis (Marasek), Central Burmis (Milvain), and South Burmis (Boutry) deposits. This report reviews the results of the 2000-2001 compilation of the historic drilling data for all three deposits and the 2001 and 2002 field exploration conducted in the vicinity of the Marasek and Milvain deposits. The bulk of the 2001-2002 field exploration was focused on the Marasek and Milvain deposits with only a small amount of work at the Boutry deposit.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Burmis magnetite deposits are accessed by following Highway 3 east from Blairmore, Alberta or west from Pincher Creek, Alberta to the Burmis North Road, just east of Burmis, Alberta (Figures 1 and 2). The Boutry magnetite deposit lies approximately 1000 metres (m) north of Highway 3 and 1000 m west of the Burmis North Road (Figures 1 and 2). The Marasek and Milvain deposits are accessed by traveling north along the Burmis North Road for approximately 11 kilometres (km) and heading west along private cart tracks and four-wheel drive gravel roads (Figures 1 and 2). Permission to cross private land is required to access both the Marasek and Milvain deposits and the claims held by Micrex. The property may be accessed throughout the year with four-wheel drive vehicles, snowmobiles and all-terrain vehicles. Numerous old exploration roads connect the Marasek and Milvain deposits.

The property is situated within sub-alpine to alpine terrain and the area can be classified as alpine tundra having very little tree cover. The claim area is covered by approximately 15 percent (%) short (1 to 5 m) spruce and willow

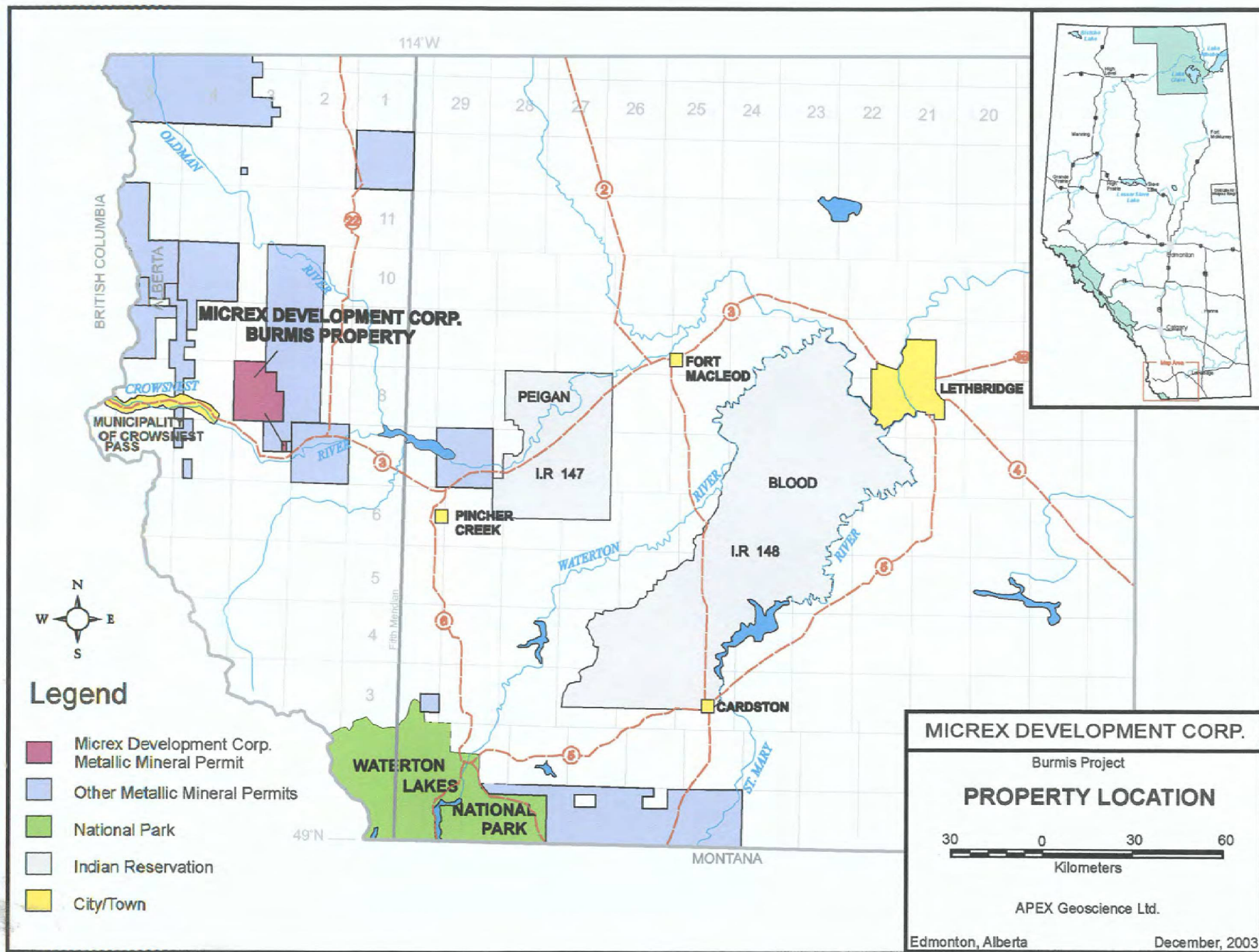


Figure 1

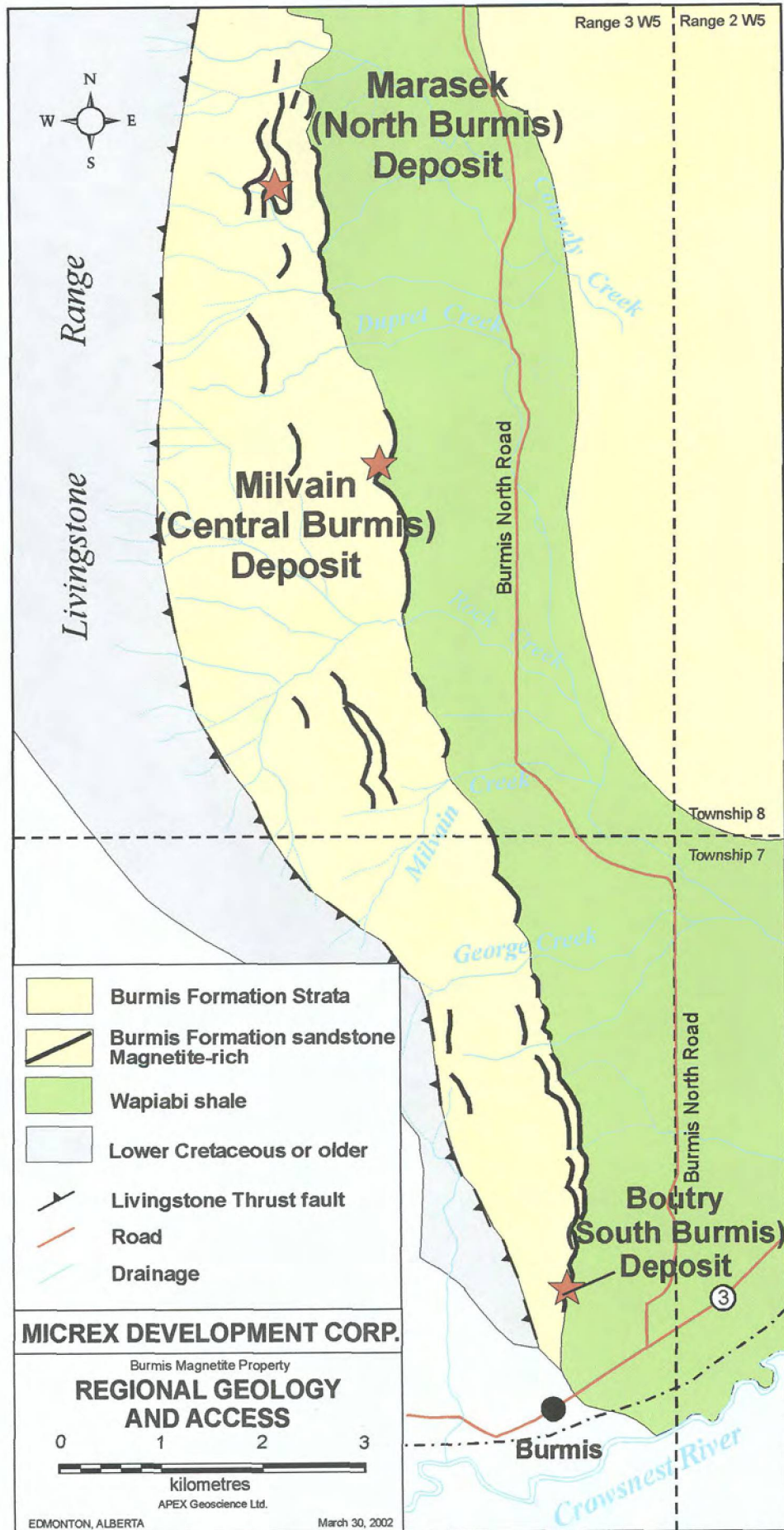


Figure 2.

trees. The majority of the area is used for cattle grazing within the spring, summer and fall months and is thus vegetated mainly with grasses. Local wildlife includes moose, elk, deer, rabbit, hare, coyote, cougar, and domestic livestock. Elevation within the property varies from 1,400 to 2,000 m above sea level (as.) and is drained by several small seasonal creeks and streams including Connelly Creek, Dupret Creek and Rock Creek, all of which flow east and then south into the Crowsnest River. Drainages are typically dry or have little flow from late summer into the early winter. Temperatures range from +25 degrees Celsius (°C) in July to -25 °C in February. Easterly prevailing winds are common throughout the year in the area with velocities of up to 120 km/hour. Accommodation, fuel, groceries and most government services are available in the nearby communities of Crowsnest Pass (Blairmore and Coleman) and Pincher Creek. Local campsites are also available. During the 2001 to 2002 field programs the exploration crew stayed in Blairmore, Alberta.

HISTORY

The geology of the Crowsnest Pass region has been described by several authors throughout the past century. Regional geological mapping of the area was first completed by Leach (1912) who also first described the magnetite deposits north of the Burmis area. Allan (1931) discussed the stratigraphy and structure of the Burmis magnetite deposits. Regional geological mapping of the Fernie area (NTS 82G/NE and 82G/SE) was completed by Price (1962). More detailed geological mapping of the Blairmore area (NTS 82G/9) at a scale of 1:63,360 or 1:50,000 was completed by Norris (1955; 1993) and Jerzykiewicz (2001).

Exploration for magnetite and other metals in the Burmis area began in the early 1900's and is evidenced by older workings and the existence of several mining leases dating back to 1912. West Canadian Magnetic Ores Ltd. (West Canadian) of Calgary, Alberta carried out extensive exploration on the Burmis magnetite deposits as a potential source for iron ore between 1956 and 1957. West Canadian carried out extensive geological and magnetometer surveys throughout the southwest foothills of Alberta where there is high potential for sedimentary magnetite deposits. The company also undertook detailed drilling (110 drillholes) on the Burmis and Dungarvan Creek magnetite deposits. The Burmis magnetite deposits comprise three spatially separate deposits that are historically referred to as the North Burmis (Marasek), Central Burmis (Milvain) and South Burmis (Boutry) deposits. The results from the historic drilling of the Burmis magnetite deposits were compiled by APEX and are reviewed in this report. Based upon the historic drilling these deposits can be referred to as geological deposits, however, no inference is made as to the size or grade of these deposits except as discussed in a historical context below. Several analytical and metallurgical tests were performed on the magnetite-bearing sandstone samples (drill and surface) that resulted from the exploration programs conducted during 1956 and 1957 (Bruce, 1956 and 1957). Steiner

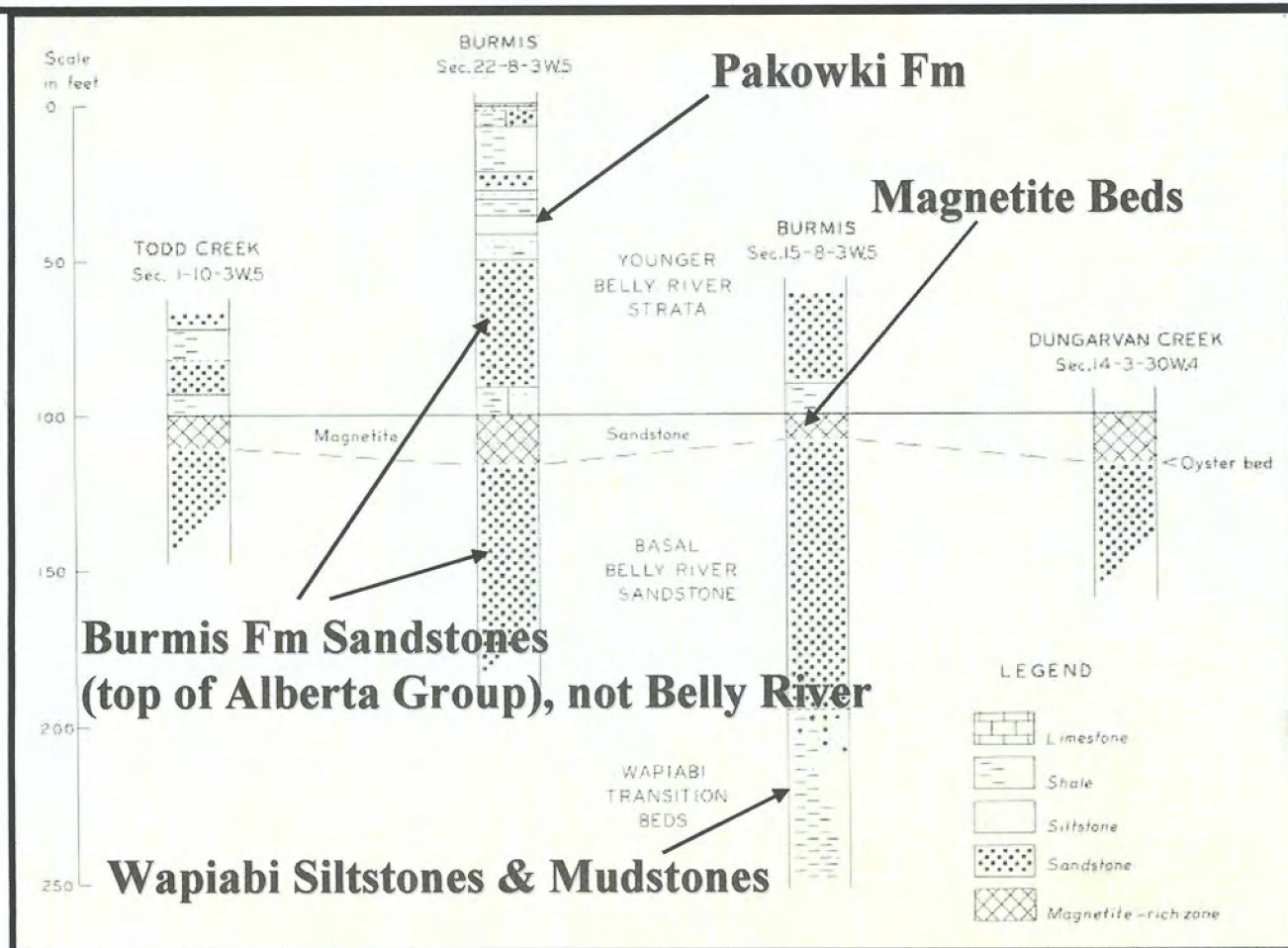
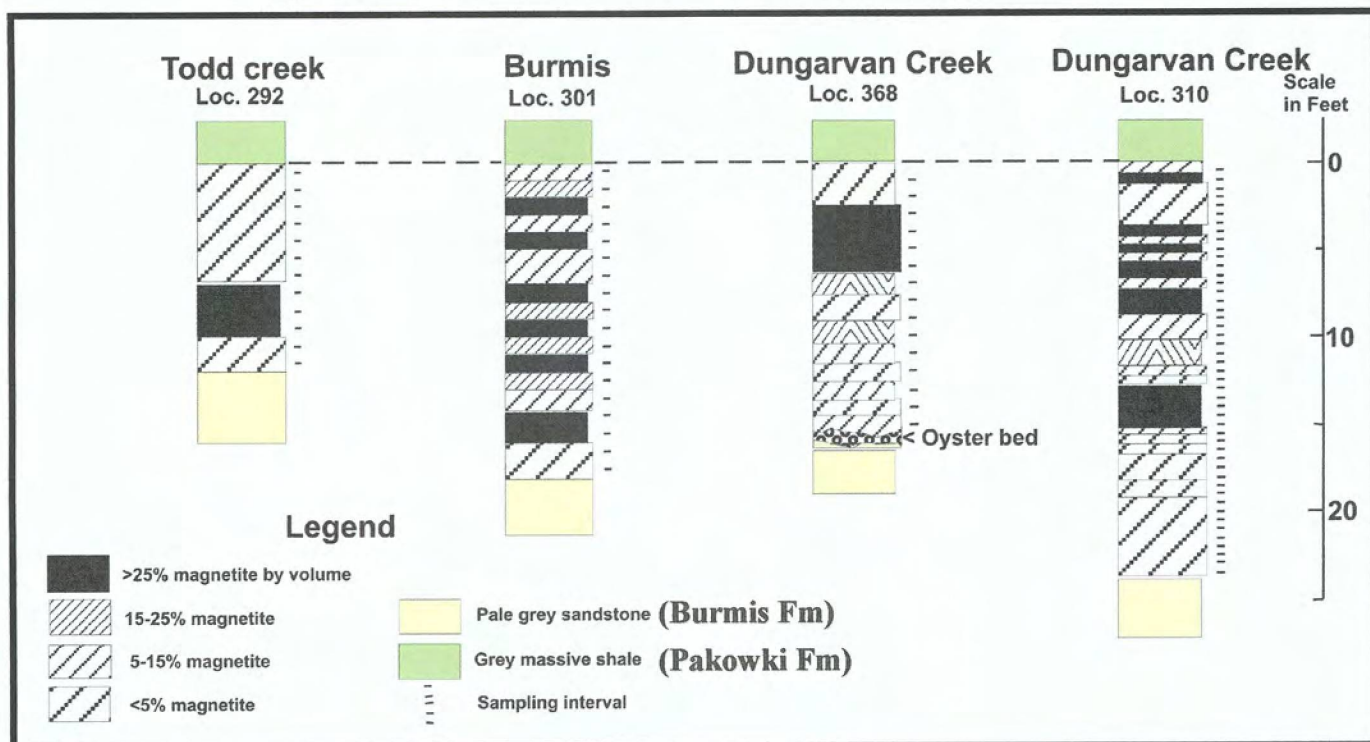
(1958) reported on the exploration and analytical results of exploration conducted on the Marasek deposit. Based upon the work conducted by West Canadian, Steiner (1958) estimated that the Marasek deposit potentially contained 6.7 million short tons of magnetite bearing rock of "significant" but undefined grade. Mr. B. Mellon (1961) of the Alberta Research Council wrote a summary report on the sedimentary magnetite deposits of the Crowsnest Pass region, covering the Burmis and Dungarvan Creek deposits. Mellon's (1961) report summarized the stratigraphic relationships of the various deposits in the region, and compared modal mineral composition with chemical analyses of drill core and surface samples from the 1956 and 1957 exploration campaigns conducted by West Canadian, as well as commenting on the structural disposition of the deposits. Mellon (1961) conservatively estimated a total resource of 2.1 million short tons for the three Burmis magnetite deposits with the bulk of the resource (1.5 million short tons) contained at the Boutry deposit (South Burmis). Details of the historic resource estimates provided by Steiner (1958) and Mellon (1961) are limited. Therefore, these estimates are considered historic and are not considered valid resource estimates under National Instrument 43-101 standards. Future estimates will require confirmatory diamond drilling and/or reverse circulation drilling as part of any pre-feasibility or feasibility studies in order to bring the historic resource estimates to a modern acceptable resource or reserve as dictated by National Instrument 43-101.

Grant and Trigg (1983), and Johnston and Trigg (1983), on behalf of Roymac Holdings Ltd., conducted trench mapping at the Boutry deposit and sampled the Burmis and Dungarvan Creek deposits, analysing the samples for gold (Au), Platinum (Pt) and Palladium (Pd). Concentrations of up to 150 parts per billion (ppb) Au, less than 50 ppb Pt and 15 ppb Pd were received for 14 chip samples and were considered to be of no economic importance. Metallurgical testing was also completed on Burmis "*magnetite ore*" during this time which concluded that the Burmis magnetite ores were potentially economic for use in dense media coal separation and beneficiation (Germain, 1983). Kilborn Engineering Pacific Ltd. performed a preliminary review and data compilation of the Burmis Magnetite Deposits for Micrex (Kilborn, 1999).

GEOLOGICAL SETTING

In general, the Burmis magnetite horizons are hosted in Upper Cretaceous strata directly underlying the regionally extensive Livingstone thrust fault and have a north to northwest strike of tens of kilometres and dip southwest at approximately 40 degrees (Figure 2). Historically, it was proposed that the magnetite horizons were part of the Upper Cretaceous Belly River Formation (Norris, 1955; Mellon, 1961; Price, 1962) overlying the Wapiabi Formation. However, recent work by Jerzykiewicz (1997) and Jerzykiewicz and Norris (1994) indicates that the Burmis magnetite deposits are hosted in Upper Cretaceous (Campanian) Burmis Formation (Figure 3), which overlies the Wapiabi Formation. The Burmis Formation is overlain by the shales of the Pakowki

Figure 3. Stratigraphy of the Burmis Magnetite Deposits.



Formation, which in turn are overlain by the sandstones of the Belly River Formation (Figure 3). The Cretaceous strata containing the Burmis magnetite deposits form the immediate footwall to the Livingstone Front Range as shown on the photo composite in Figure 4.

The Blackstone shale is the lowest Upper Cretaceous unit within the region and lies unconformably on top of the Lower Cretaceous Blairmore Group. Blackstone shales grade upwards into the quartz-rich sandstones of the Cardium Formation, interpreted as near shore deposits on the western margin of the ancient inland Colorado Sea. A sharp contact between the Cardium Formation and the overlying Wapiabi shale is thought to mark an episode of rapid deepening of the Colorado Sea (Mellon, 1961). Interlayered sandstones and shales of the Burmis Formation and the underlying Wapiabi Formation, respectively, indicate a gradual withdrawal of the Colorado Sea to the southeast. The Burmis Formation is overlain by the Pakowki Formation shales, which in turn are overlain by Belly River Formation sandstones (Figure 3).

Lower Paleozoic to Lower Cretaceous platform North American rocks have been thrust upon Upper Cretaceous Pakowki shales, Burmis sandstones and Wapiabi shales (Figure 4). The deformation associated with this convergent tectonism was penetrative resulting in internal imbrication, asymmetric folding and accommodation faulting within the footwall of the Livingstone Thrust. This episode of progressive deformation deformed the magnetite beds within the Crowsnest Pass area. It is well documented the Marasek deposit in particular consists of a series of stacked magnetite horizons, which likely represent structural repetition rather than discrete and separate stratigraphic units. The specific structural aspects of the Burmis magnetite deposits and its relevance to exploration and potential future mining practices are discussed below.

DEPOSIT TYPES

Sedimentary magnetite occurrences in Alberta are believed to be placer heavy mineral deposits formed along beaches margining the late Cretaceous seas. The Burmis magnetite deposits are thin lensing bodies of rock confined to one stratigraphic horizon (Mellon, 1961), which in the case of the Marasek deposit appear to be structurally duplicated beneath the Livingstone thrust fault. The magnetite bodies are made up of a number of magnetite-bearing sandstone horizons of centimeter to tens of centimeters thickness of massive to semi-massive magnetite alternating with horizons of sandstone that are weakly magnetite bearing. The overall thickness of the magnetite-bearing zone, where structurally intact, appears to be on the order of two to four meters in thickness. The horizons of magnetite appear to contain associated titanium-bearing heavy minerals including titaniferous magnetite, rutile, ilmenite and leucoxene.

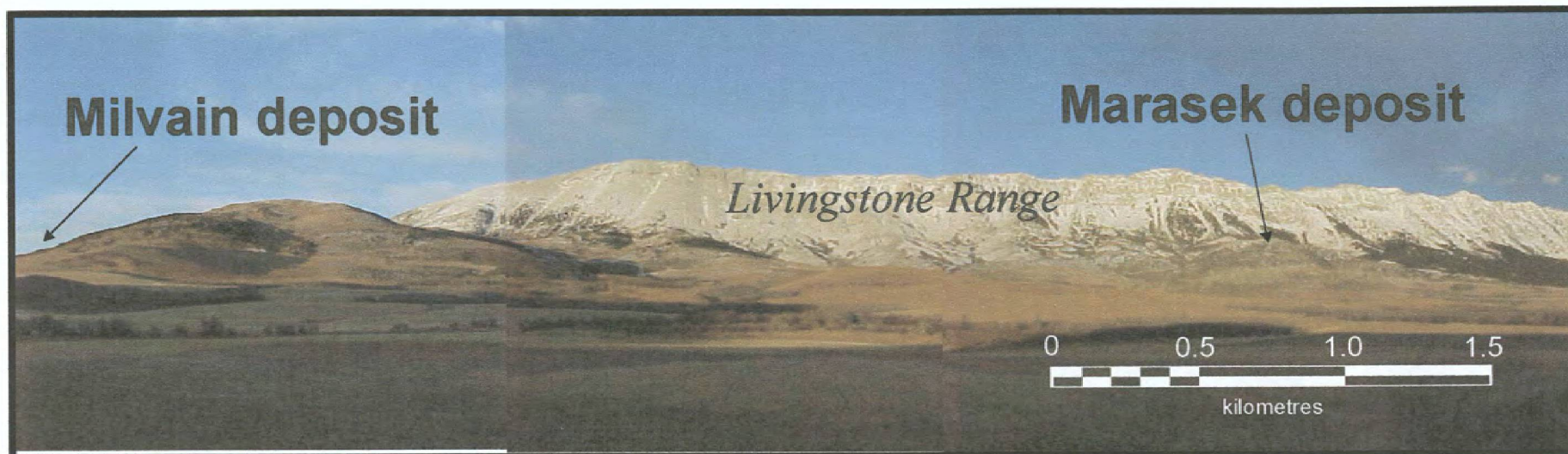


Figure 4. View of the Milvain and Marasek deposits, looking west from the Burmis North road.

The Crowsnest Pass sedimentary magnetite deposits and occurrences appear to all be hosted at the same stratigraphic level as the Burmis Formation. Magnetite deposition at this interval is likely due to resurgence in proximal, near shore (beach-front) detritus accumulation from the emerging Rocky Mountains (eastward prevailing sedimentation). Similar sedimentary magnetite deposits are hosted within analogous but slightly younger Upper Cretaceous strata at a similar regressive contact between the Bearpaw shale and the overlying St. Mary River Formation in Montana (Stebinger, 1912; Mellon, 1961).

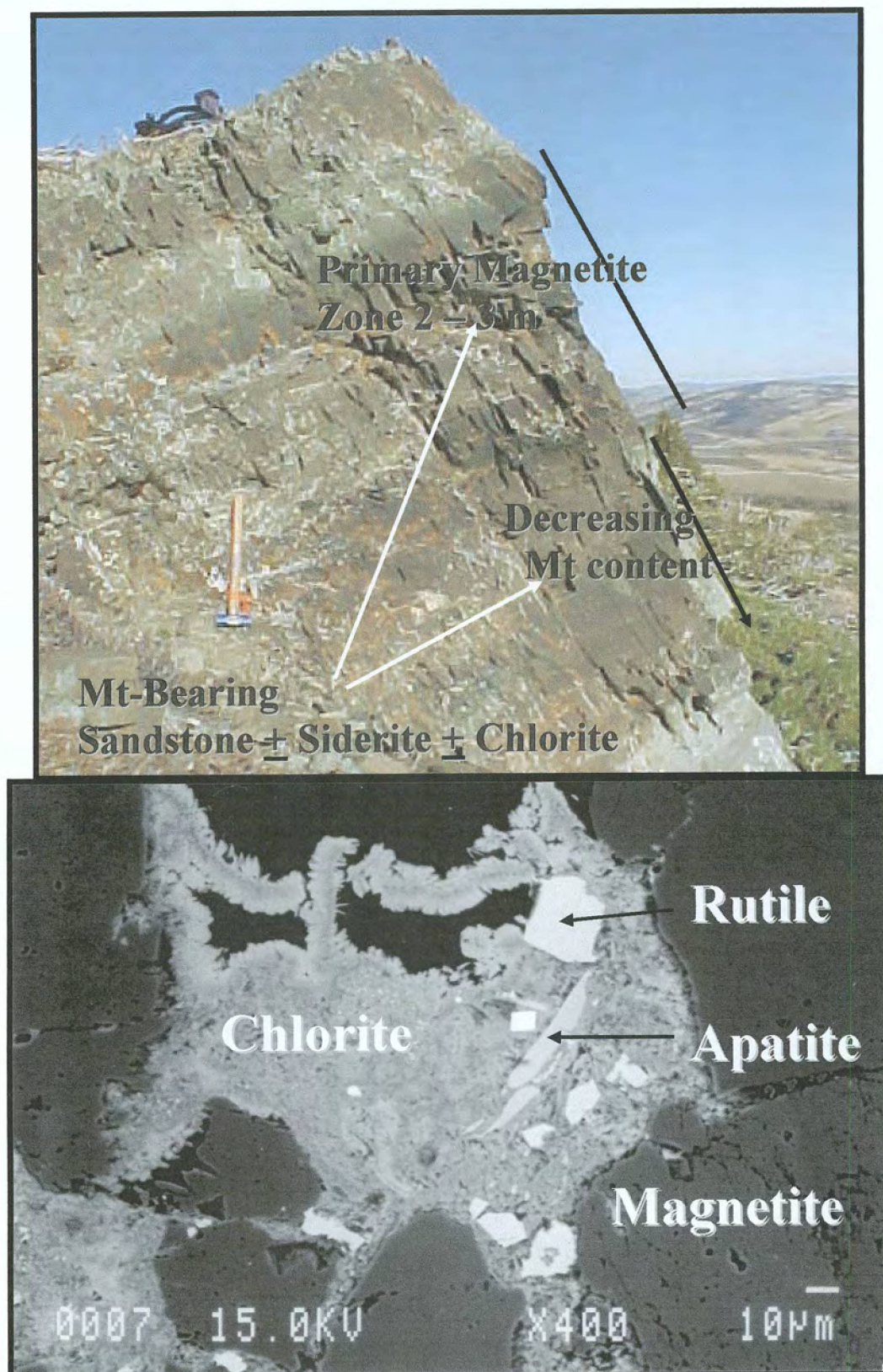
Lower Paleozoic to Lower Cretaceous platform North American rocks have been thrust upon Upper Cretaceous Pakowki Formation shales Burmis Formation sandstones and Wapiabi shales. The deformation associated with this convergent tectonism was penetrative resulting in internal imbrication, asymmetric folding and accommodation faulting within the footwall of the Livingstone Thrust. This episode of progressive deformation deformed the magnetite beds within the Crowsnest Pass area. In the case of the Marasek deposit this deformation has resulted in the structural stacking of the same magnetite horizon.

MINERALIZATION

Geochemical sampling of the magnetite-bearing sandstones at the Marasek deposit returned concentrations of Fe_2O_3 as high as 65.10 weight percent (wt%) and concentrations of TiO_2 as high as 5.70 wt% across a true thickness of 2 metres, which is consistent with historic results (Copeland and Dufresne, 2002). As described by Steiner (1958) and Mellon (1961), many of these sandstones may contain multiple (up to 5) thin (5 cm) layers of massive magnetite with minor amounts of titanium-bearing oxides. Chlorite-hematite-calcite cement is common in these intervals (Figure 5).

Copeland and Dufresne (2002) plotted geochemical data for all of the samples collected from the Marasek magnetite deposit on a scatter plot of Fe_2O_3 versus TiO_2 . The scatter plot displays a positive linear relationship between the two oxides particularly for the APEX samples (Figure 6). A similar trend was described by Mellon (1961) and is consistent with the Dungarvan and other sedimentary magnetite deposits of the Crowsnest Pass region (Figure 6). The positive linear trend exhibited by Fe_2O_3 and TiO_2 may be related to solid solution of titanium bearing (titaniferous) magnetite. Alternatively, the positive trend could reflect consistently proportionate concentrations of magnetite and titaniferous minerals (including rutile, ilmenite, anatase and leucoxene) that have very similar specific gravity and mechanical sorting properties concentrating together in beach-front heavy mineral deposits. Mineralogical work conducted by DuPont during 2002 indicates that a significant proportion of the geochemical titanium is in the form of ilmenite, leucoxene and rutile (McLimans *et al.*, 2002). There is a strong indication that at least some of the titanium-bearing minerals are

Figure 5. Photos of Burmis Formation Magnetite



secondary as they appear in the matrix cement of the rocks (Figure 5). These grains likely represent remobilization during authigenic and burial related processes or later hydrothermal processes. It is likely that the primary detrital magnetite and titaniferous minerals are derived from the erosion of a single related magmatic source rock such as the Crowsnest volcanics or some other magnetite- and ilmenite-bearing volcanic source rock in the region.

At present, the magnetite deposits are being contemplated by Micrex as a source of magnetite for recoverable dense medium separation in the coal industry, not as a source of iron ore. As such, it is the overall magnetic properties of the Burmis magnetite deposits that need to be evaluated as potential ore. To date, this has been looked at only in an indirect way. Mellon (1961) compared the modal mineral compositions of the Burmis magnetite bearing rocks with the major element chemistry and noted that not all of the Fe_2O_3 and TiO_2 within the rock can be attributed completely to magnetite and titaniferous minerals of economic interest. The Burmis magnetite bearing sandstone contains appreciable amounts of chlorite within the matrix as is well illustrated in Figure 5. Mellon (1961) thus derived a regression equation that relates the Fe_2O_3 and TiO_2 whole rock analyses to the volume percent abundance of magnetite and titaniferous minerals, given that rocks containing no magnetite have Fe_2O_3 values averaging 12.17 wt%. This implies that an approximate composition of 40 wt% Fe_2O_3 is required to yield approximately 25 volume percent magnetite.

In contrast to Mellon's (1961) work, recent metallurgical work conducted by Elkview Coal Corporation (Elkview) on samples recovered during the 2002 trenching program indicates that the weight percent recoverable magnetic minerals is in fact usually greater than the wt% Fe_2O_3 indicated by geochemical analysis (Endicott, 2003), which likely is a result of the high SG of magnetite. More extensive surface and drill core sampling, including a full mineralogical work-up, is required to fully determine the magnetic, mineralogical and chemical character of each of the Burmis magnetite deposits and their economic potential.

2001 – 2003 EXPLORATION

Exploration conducted by APEX during 2001 to 2003 consisted of grid construction, ground magnetic and gradiometer (measured vertical gradient) surveys, geological mapping and rock sampling at both the Marasek and Milvain magnetite deposits. A joint APEX – Elkview trenching program was conducted during December 2002 the details of which are in a report by Endicott (2003). The results of the trenching program are discussed below. The surface exploration conducted by APEX during 2001 to 2003 was guided by a High Resolution Airborne Magnetic Survey (HRAM) conducted by SPECTRA Exploration Geoscience Ltd. during 2000 the details of which are incorporated in Copeland and Dufresne (2002). Expenditures for exploration conducted by

APEX and Micrex from late 2000 to present were \$311,457.19, the details of which are included in Appendix 2.

Grid Construction

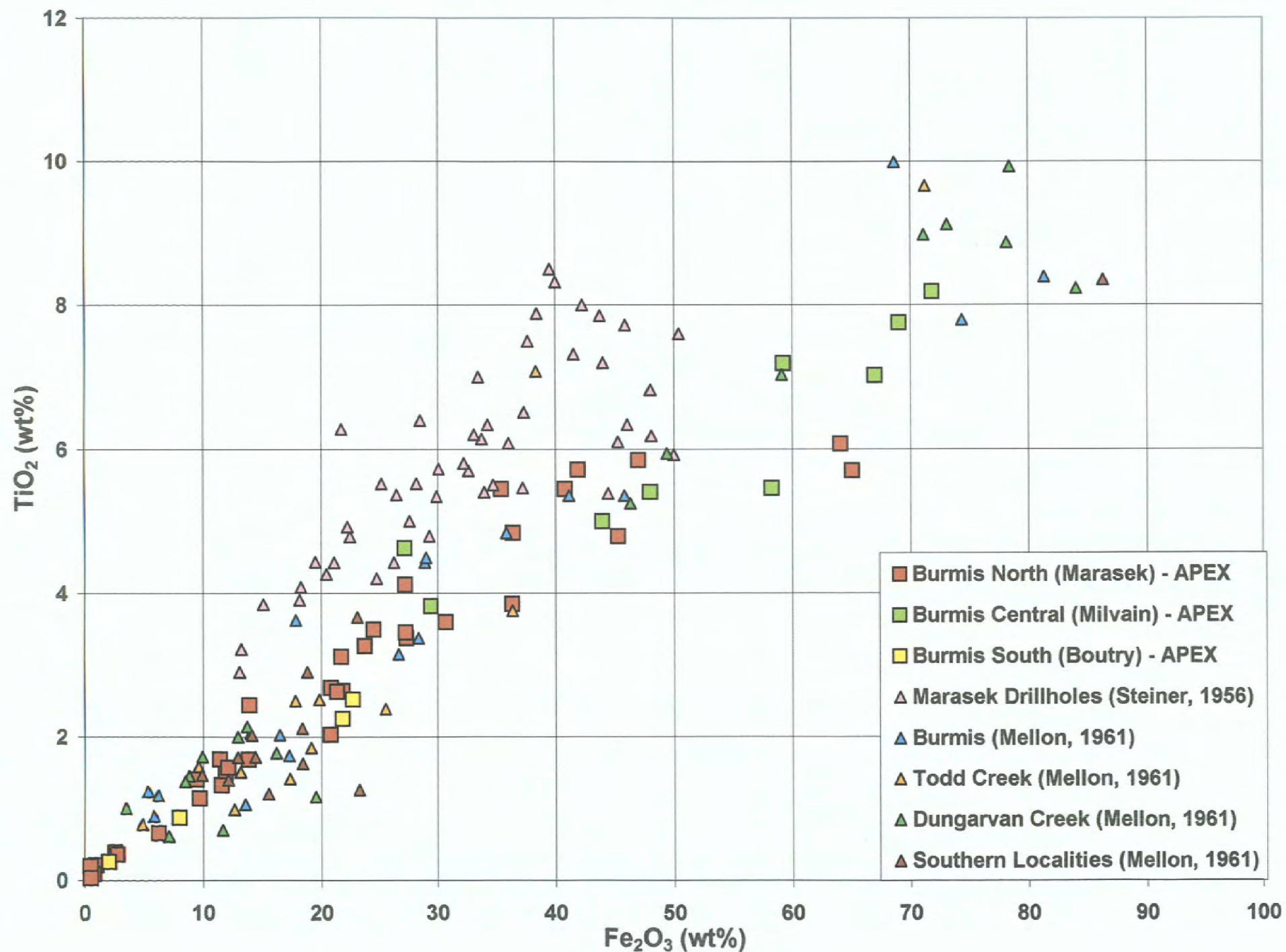
Surveying and grid construction was completed over the Marasek and Milvain magnetite deposits using a digital total station theodolite to survey individual grid pickets. The grid was constructed using a line spacing of 50 m and a station spacing of 25 m. The pickets were placed in the ground within 30 cm of the idealized (actual) position. The orientation of the baseline (100+00 E) is 345.9331 degrees with grid lines trending 75.9331 degrees (with respect to UTM grid north). The trend of the baseline is nearly parallel to the overall strike of the underlying bedrock and sedimentary magnetite layers. Where line of sight became significantly obstructed (trees, topography) as to prevent the use of the theodolite, a differential global positioning system (GPS) instrument was used. This enabled the rapid construction of the grid while maintaining an overall accuracy of approximately one metre. GPS locations were compared with baseline pickets that were surveyed with the theodolite and there was a general agreement (within 1 m) of the measured location.

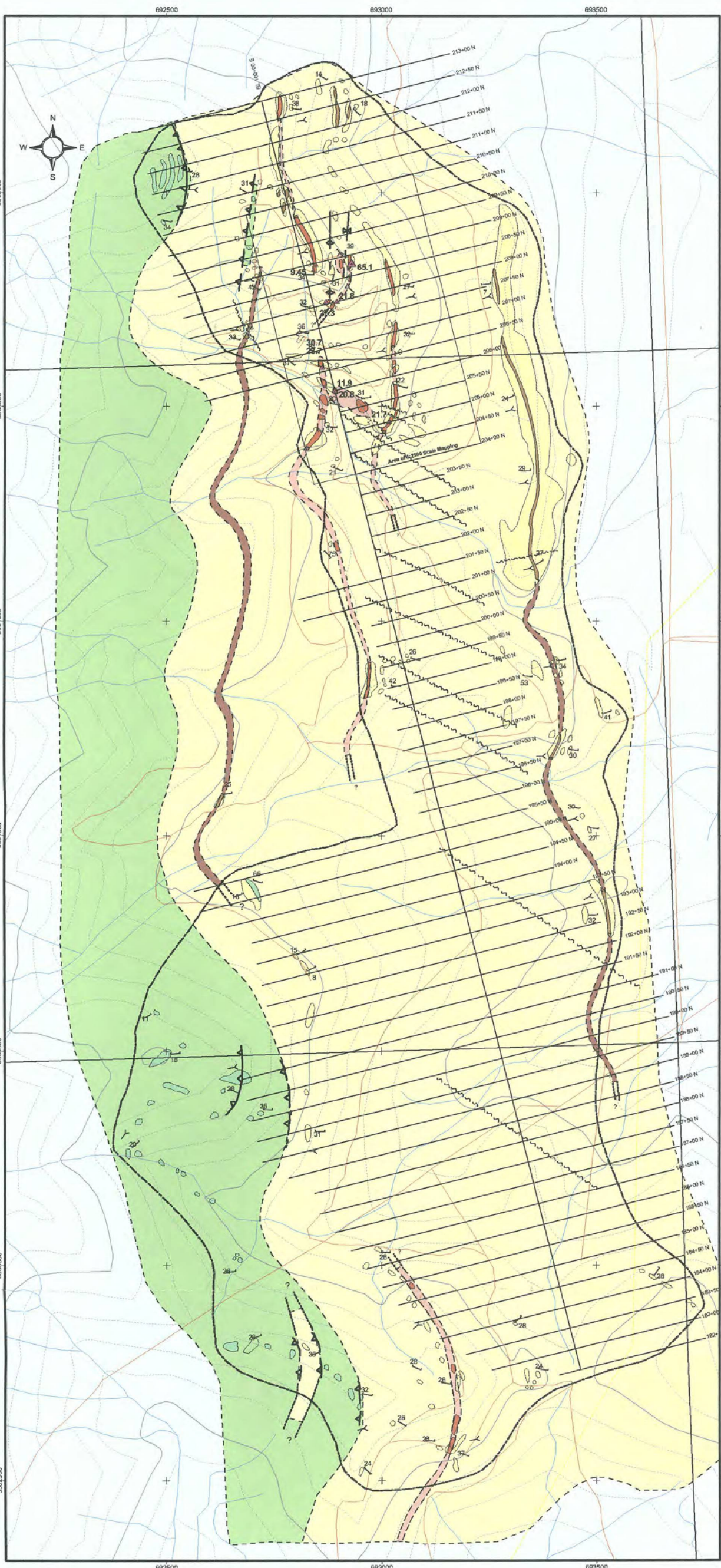
Geological Mapping

Geological mapping of the gridded area was completed at a scale of 1:5,000 with portions at 1:2,500 (Figures 5 and 6 in Copeland and Dufresne, 2002). Since no previous detailed geological maps existed for the area, new mapping was required to provide an adequate base to plan future work, including trenching and future drilling. Measurements of bedding planes, folds, faults and joints were taken during mapping that will aid in the geometric understanding of the folded and faulted magnetite horizons. The Marasek deposit was mapped at a scale of 1:2,500 to provide greater detail in an area of the greatest bedrock exposure in order to provide a better understanding of the nature of deformation in the area. The mapped geology of the Marasek and Milvain area is summarized on Figure 7.

Detailed geological mapping of the Marasek magnetite deposit was performed during 2001 (Copeland and Dufresne, 2002). This work was completed to outline the outcrop exposures of magnetite bearing stratigraphy and to place these occurrences within a local stratigraphic and structural setting. The Marasek magnetite deposit can be divided into two distinct zones, a structurally complex, series of stacked magnetite horizons to the north called the A-Knob area, and a near surface, near flat lying single horizon on a lower ridge to the south call the Windy Ridge area (Figure 7). Steiner (1958) described having difficulties on a number of occasions in intersecting magnetite ore during drilling due to structural complexities, particularly in the vicinity of the A-Knob. Sub-vertically dipping magnetite beds are described in the drill logs and by Steiner (1958), where bedding fabrics were oriented at 70 degrees to the vertical core

Figure 6. Total Fe as Fe_2O_3 vs TiO_2 For Burmis Rock Samples





GEOLOGY

UPPER CRETACEOUS
Belly River Formation

- Magnetite bearing sandstone, outcrop, interpreted
- "Dirty" sandstone with or without magnetite, outcrop, interpreted
- Sandstone, light grey, crossbedded, outcrop, interpreted
- Wapiabi (?) Formation
- Siltstone and sandstone, intercalated, crossbedded, outcrop, interpreted

SYMBOLS

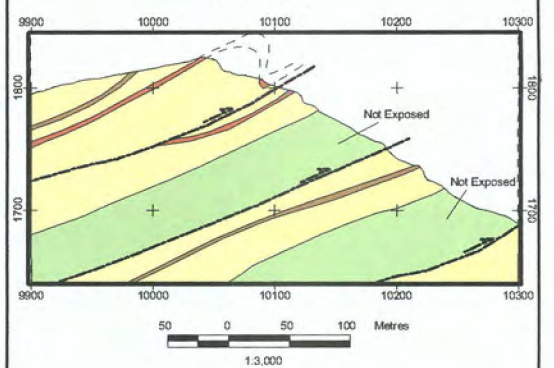
- 30 Bedding, with dip
- Younging direction
- Syncline trace
- Anticline trace
- Thrust fault
- Fault
- Limit of geological mapping
- Road, trail
- Major topographic contours
- Intermediate topographic contours
- Stream, creek
- Powerline
- Outcrop outline
- Geological contacts, interpreted, observed

Fe₂O₃ (Wt.%) 2001 continuous grab samples

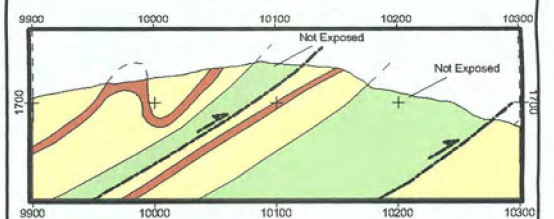
- 2.03
- 2.03 - 13.9
- 13.9 - 30.7
- 30.7 - 45.3
- 45.3 - 65.1

INTERPRETED GEOLOGICAL CROSS SECTIONS

SECTION 209+00 N



SECTION 206+50 N

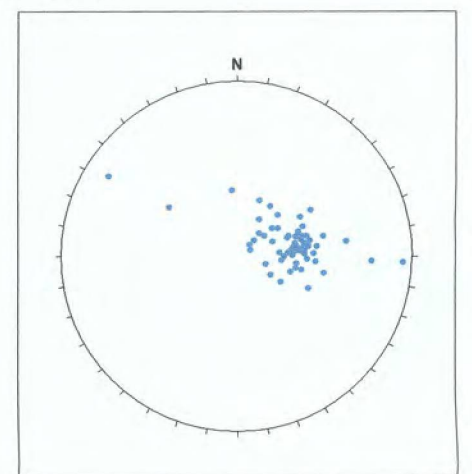


No vertical exaggeration

Elevation in metres above sea level

LOWER HEMISPHERE PROJECTION

POLES TO BEDDING



Universal Transverse Mercator Projection, North American Datum 1927, Zone 11

MICREX DEVELOPMENT CORP.

Burmis North Grid
PROPERTY GEOLOGY
MARASEK TO MARASEK SOUTH

200 0 200 Meters

scale 1:5000 ??

APEX Geoscience Ltd.

Edmonton, Alberta

1:10,000

December 11, 2003

FIGURE 7.

axis. Geological mapping was thus used in an attempt to outline the areas of complex geometry and to then aid in resolving the complexities. At least one outcrop of vertically dipping magnetite beds was found at the A-Knob portion of the Marasek deposit.

Mellon (1961), in a review of drilling data and geological mapping, described the magnetite beds at Marasek as being hosted within the Belly River Formation sandstones. Jerzykiewicz (1997) and Jerzykiewicz and Norris (1994) indicate that the Marasek and other magnetite horizons are most likely hosted with the Burmis Formation sandstones, which cap the Wapiabi Formation and lie beneath the Pakowki and Belly River Formations. Mellon (1961) suggests that this sequence was imbricated along low-angle reverse faults onto the underlying Wapiabi siltstone and shale. Wapiabi siltstone and shale near the Marasek magnetite deposit were not observed in outcrop nor did the present study benefit from a physical review of drill core. However, a review of the historic drill logs does indicate the presence of shales and siltstones presumably from the Wapiabi Formation. Deformed shales and siltstones are present at higher elevations structurally overlying the Marasek magnetite horizons and the host Burmis Formation sandstone. It is unclear whether these shales and siltstones are part of the Wapiabi or the Pakowki Formation. The lower contact between overlying shales and siltstones rocks and the underlying Burmis Formation sandstones is defined by a low angle (25 degree dip) thrust fault that is traceable for the length of the northern half of the survey area (Figure 7). A detailed account of the local geology is given by Copeland and Dufresne (2002).

Wapiabi Formation

The Wapiabi Formation, where exposed, comprises light olive green to maroon coloured siltstones and shales intercalated with lesser light green to grey coloured sandstone. Bedding fabrics are well developed and coarser grained intervals occasionally exhibit cross-bedding. Flecks of black organic particles occur within siltstone but no fossils were recognized. Bedding is typically right way-up (younging westward) based on cross-bedding. Wapiabi rocks occasionally occur as massive siltstones that lack obvious bedding fabrics.

Burmis Formation

Burmis Formation sandstones form the majority of the outcropping bedrock on the gridded area (Figure 7). This is likely due to the relatively weathering resistive nature of the rock. Burmis Formation rocks occur as grey to light brown coloured, quartzose sandstones. These rocks are typically cemented with calcite, silica, and, in the vicinity of magnetite beds, with chlorite. Cross-bedding is common within the sandstone and stratigraphy is generally right-way up (younging to the west). Cross bedding within these rocks does not indicate a consistent direction of ancient water flow or sand deposition. Direction of transport generally alternates between southeast and northwest between

individual beds. This may imply that the sandstone was deposited in a near shore beach environment where storm and wave action caused variable water flow directions. Quartzose Burmis Formation sandstone grades upward into sandstone with a greater abundance of heavy minerals (of high specific gravity). These sandstones are typically dark brown in colour ("dirty sandstones") and often grade laterally into beds of black sandstone containing massive magnetite. At the Marasek area these thin layers of magnetite may grade laterally into thicker (1 to 3 m), more homogeneous magnetite sandstone deposits. This implies local lateral, near strike parallel facies variations within the Marasek deposit. Soft sediment deformation features are observed within the Burmis sandstone and indicate that sediments were being deposited in a tectonically active environment. The basal Burmis sandstone outcrops at three separate elevations within the Marasek area (Figure 7). The structurally lower sequence forms a large prominent bluff at the northeast end of the gridded area (Figure 7). Proceeding up section along line 209+00 N, the second basal member outcrops at 102+00 E and the third at the local height of land (Marasek proper) along the baseline at 100+00 E (Copeland and Dufresne, 2002). From drilling conducted at Marasek area and interpretations by Mellon (1961), the basal Burmis Formation sandstone intervals are interleaved with siltstone and shale of the Wapiabi Formation, likely through a series of thrust and low angle reverse faults. These faults essentially mark the top of the of the basal Burmis sandstones that host the magnetite beds. Interpreted cross-sections illustrating these relationships are shown by Copeland and Dufresne (2002).

Structural Geology

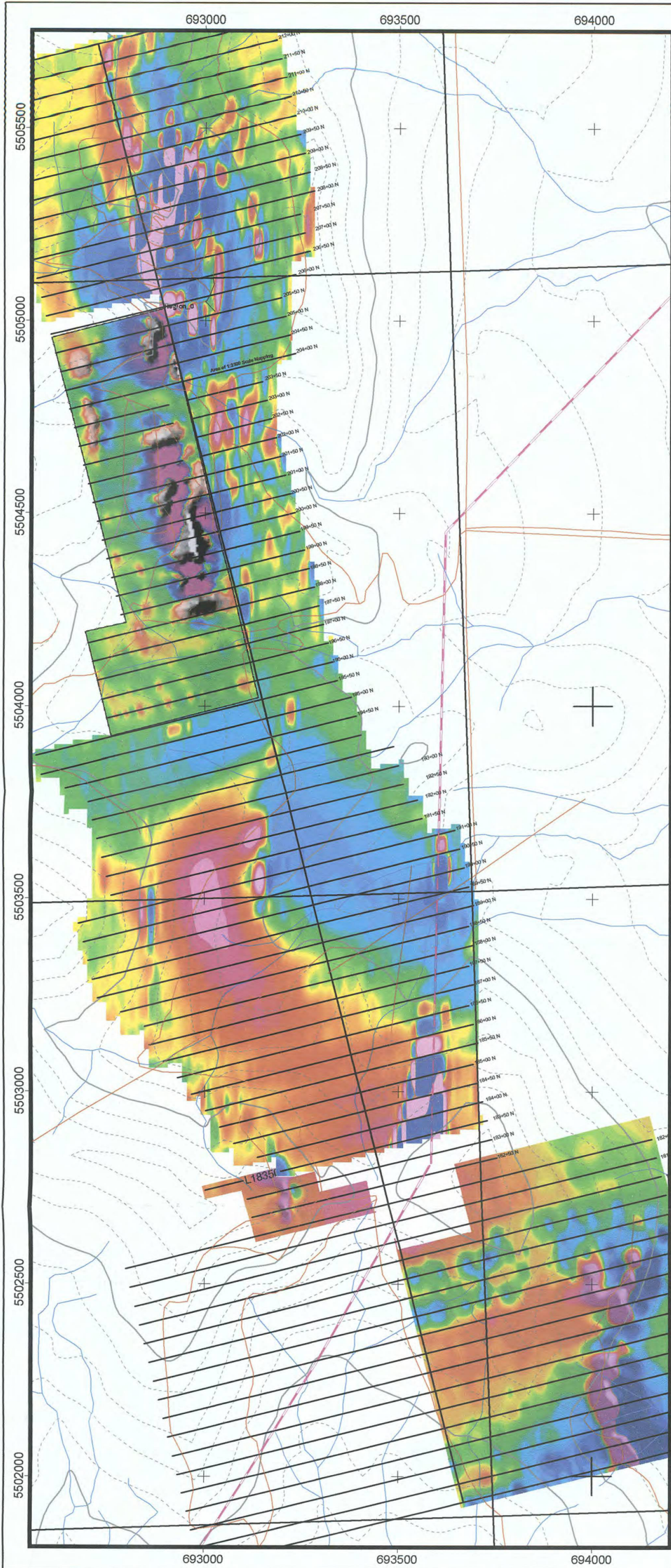
Westerly dipping (25 to 35 degrees) Upper Cretaceous bedrock of the Burmis and Wapiabi formations have been deformed during Late Cretaceous and Tertiary tectonism associated with formation of the Rocky Mountains. The stratigraphy hosting the Burmis magnetite deposits directly underlies the Livingstone Thrust (by 600 to 800 vertical metres) where deformation along subordinate structures has penetrated the footwall rocks at Burmis. Deformation is evidenced by map scale (1:50,000 and 1:5,000) and outcrop scale fold and fault structures that affect both Wapiabi and Burmis lithologies. Bedding has been deformed by outcrop-scale low-angle reverse and thrust faults, along which there is evidence for brecciation. Magnetite horizons within lower portions of the basal Burmis Formation is crosscut by numerous calcite veins that are likely related to deformation during thrusting. Magnetite beds in outcrop have been offset about high angle reverse (thrust) faults, indicating internal imbrication of the local stratigraphy. Burmis and Wapiabi rocks are deformed about prominent map and outcrop scale asymmetric, easterly vergent folds (50 m wavelength). Folds plunge predominantly to the north at 20 degrees. The eastern limbs of the folds are occasionally overturned indicating the relative high-degree of deformation in the area. This is shown in a lower hemisphere stereo plot of total poles to bedding (Copeland and Dufresne, 2002). These folds are geometrically compatible, in that they have similar vergence and geometry, with regional and

local low angle reverse and thrust faults parasitic to the Livingstone Thrust. At the Marasek deposit an asymmetric antiform-synform pair are bounded by thrust faults and illustrate the structural relationship of these two features (Figure 7). The magnetite beds at Marasek follow this pattern of deformation, where a single bed of magnetite has been folded during initial deformation and then dismembered along thrust faults, resulting in magnetite at two or more structural levels at the A-Knob (Figure 7). These complex fold and fault geometries explain some of the difficulties encountered during the historic drilling and described by Steiner (1958), where vertical drillholes intersected steeply west dipping overturned magnetite beds and nearby follow up drillholes intersected no magnetite.

Measurements taken on northwest striking subvertical faults and joints compares well geometrically with discontinuities observed in outcrop and in the total field and vertical gradient magnetic maps of the gridded area (Figures 7 to 9). These structures show dextral horizontal components of displacement of 25 to 50 metres. It is not certain how much effect these structures have had on the geometry of the magnetite beds at Marasek, as no map scale offsets of individual magnetite horizons are visible. Due to the occurrence of these structures locally that have individual displacements of approximately 1 m, it is assumed that there may at least be a cumulative displacement effect that explains some of the observed offsets in the magnetic signatures evident on Figures 8 and 9. Although the structural complexities evident at the Marasek deposit are a cause for concern in trying to determine the extent, size and grade of the historic resource, the structural repetition or thickening of the magnetite horizons and the host stratigraphy may significantly improve the economic factors associated with the deposit. The magnetite horizons appear to be thickened within some of the fold closures at the Marasek deposit. Magnetite in thickened fold closures and structurally repeated horizons near surface and in close proximity to each other may provide for a much greater local volume of material eventually leading to improved economic factors in any pre-feasibility or feasibility studies.

Ground Magnetometer and Gradiometer Surveys

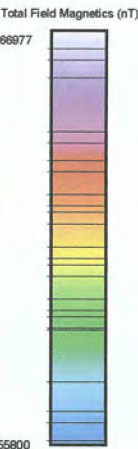
Ground magnetic and gradiometer (measured vertical gradient) surveys were conducted using two mobile magnetometer/gradiometer instruments and one base station magnetometer used to correct for the diurnal variation in the total magnetic field strength. Readings were taken along the surveyed grid at 12.5 m station increments and 50 m line spacing. Data collection was completed in three stints, November-December, 2001, July, 2002 and October, 2002. Corrected data was gridded and contoured using GEOSOFT and ERMMapper software and is presented as Figures 8 and 9.



SYMBOLS

- Road, trail
- Major topographic contours
- Intermediate topographic contours
- Stream, creek
- Powerline

GEOPHYSICAL COLOUR BAR



Universal Transverse Mercator Projection, North American Datum 1927, Zone 11

MICREX DEVELOPMENT CORP.

Burnis North Grid

TOTAL FIELD GROUND MAGNETICS

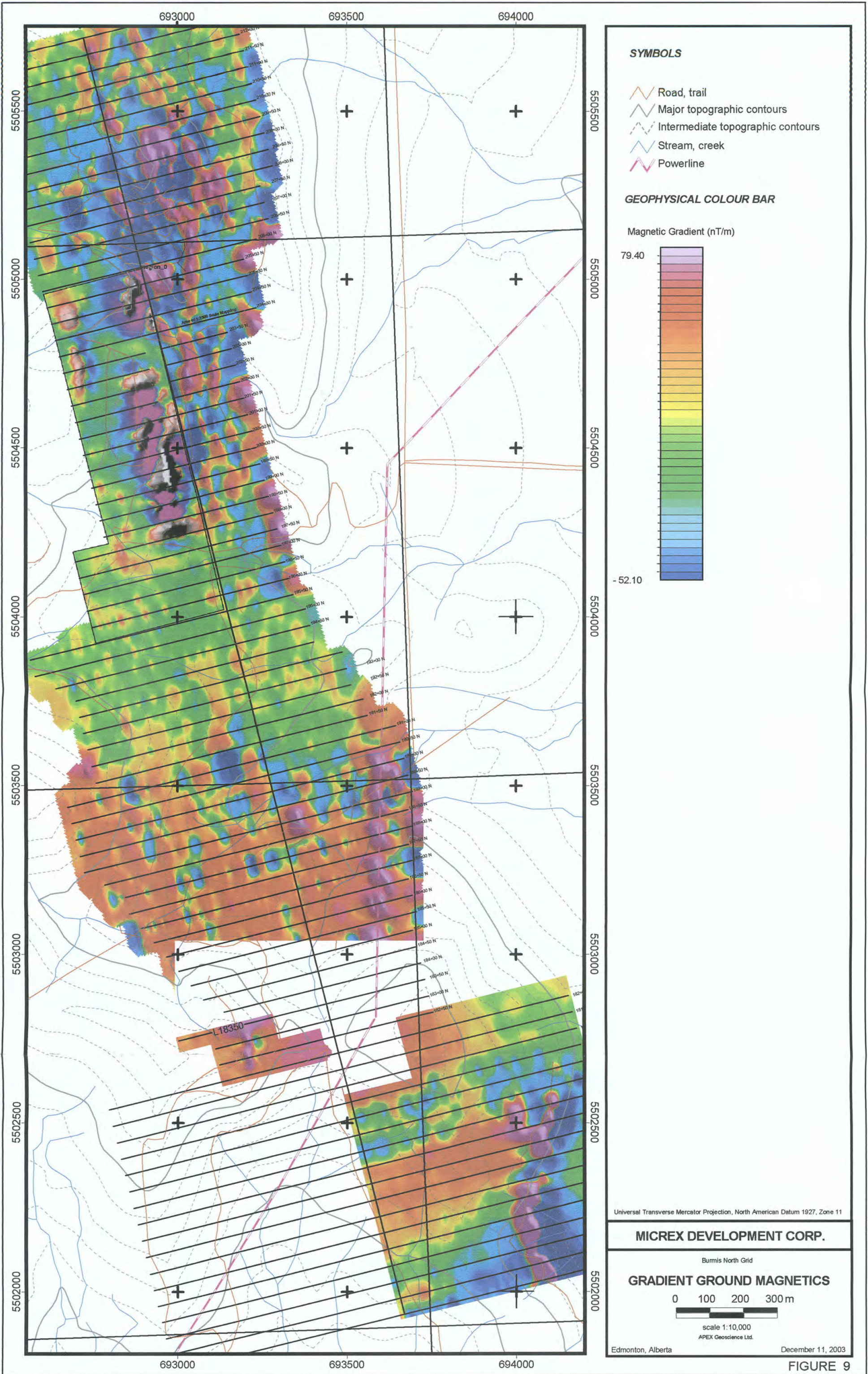


scale 1:10,000
APEX Geoscience Ltd.

Edmonton, Alberta

December 11, 2003

FIGURE 8



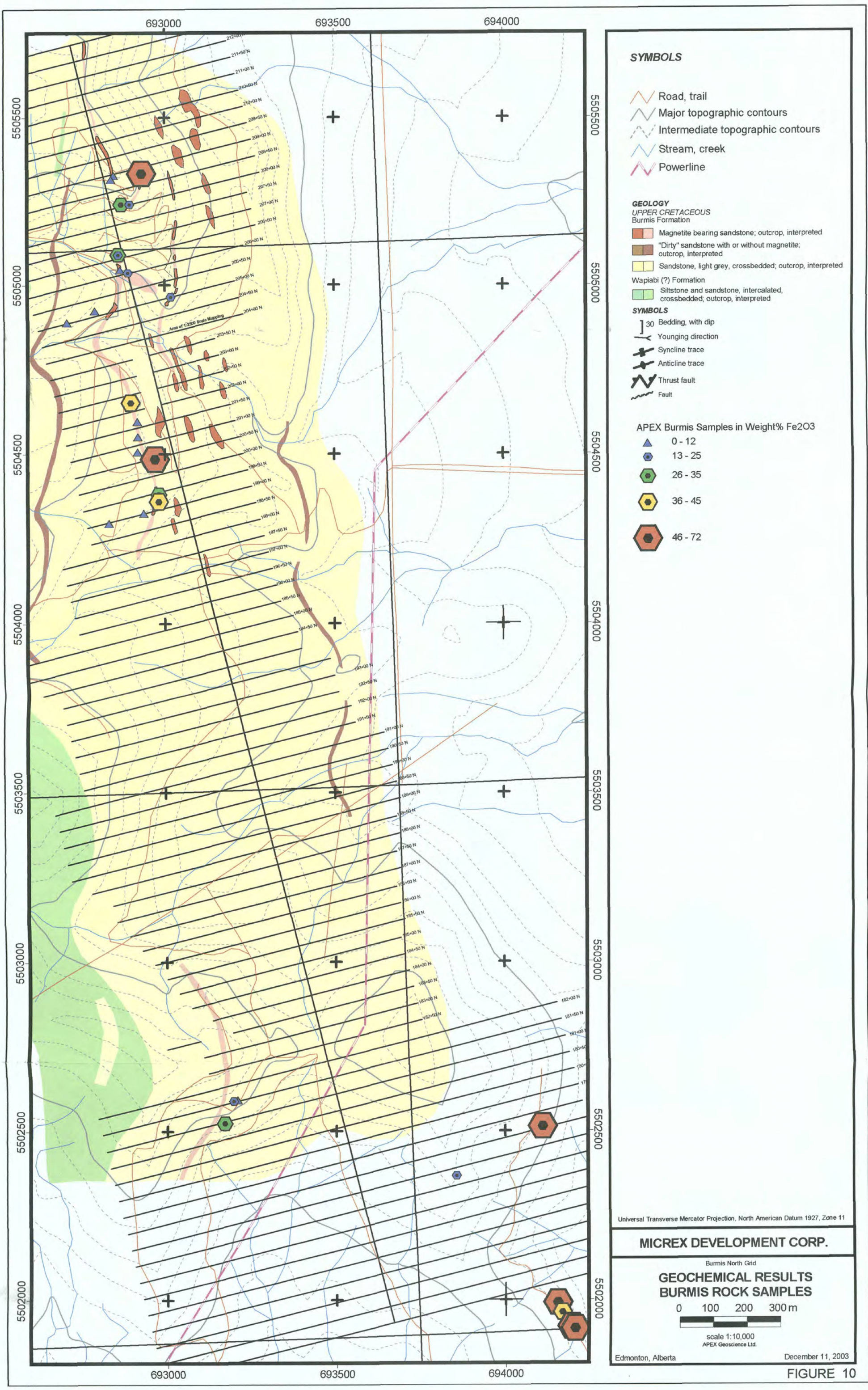


FIGURE 10

Ground magnetometer and gradiometer surveys were conducted over the Marasek magnetite deposit, the intervening ground south toward the northern limit of the Milvain magnetite deposit, and the northernmost portion of the Milvain magnetite deposit. The products of the magnetic survey were a total field magnetic intensity map (Figure 8) and a measured vertical gradient magnetic map (Figure 9). The magnetic surveys targeted three prominent magnetic highs identified from the HRAM survey and coincident intersections of magnetite bearing horizons from historical drilling. Based upon the geological mapping and the ground magnetic surveys, it is evident that the HRAM survey has identified broad high priority areas to be followed up with ground magnetic surveys and geological mapping. However, in detail, the HRAM survey was not successful in identifying the locations of discrete individual magnetite deposits corresponding to those identified from the historic drilling and the geological mapping and ground magnetic surveys. This is likely due to the wide spaced nature of the HRAM survey lines (line spacing of 200 m) and the fact that the survey cross lines were flown north-south more or less parallel to the strike of the magnetite horizons. In addition, most of the structurally repeated magnetite horizons often occur less than 100 m apart in several thrust panels oriented north-south tends to yield only a single HRAM magnetic anomaly even in profile.

In contrast, the ground magnetic surveys, in particular the measured vertical gradient, were successful in defining individual magnetic horizons, as can be seen by comparison with the outcrop geology map (Figures 7 to 9). The total field magnetic and vertical gradient magnetic surveys were also successful in pinpointing target areas for magnetite horizons in covered areas on the basis of strong magnetic highs equivalent in magnitude and character to those magnetic highs that are coincident with outcropping horizons of magnetite. In areas of cover, drillholes collar locations could easily be spotted on the basis of the ground magnetic data. The ground magnetic surveys were also key in discriminating between the narrow, high amplitude, high frequency (near surface) magnetic anomalies and broad, moderate amplitude magnetic anomalies that are thought to represent deeply buried basement features. In some cases, the distinction between the magnetic signature of the near surface and the deep basement related features are not readily discernable from the HRAM data but are discernable on the ground magnetic surveys.

The total field magnetic and vertical gradient magnetic surveys provide enough detail as to discern between individual zones of magnetic horizons and also show beds that were mapped as "dirty sandstone" that contain low concentrations of magnetite. Resolution of the survey was not adequate enough to discern between individual magnetic horizons that were separated by less than 10 metres (12.5 m reading spacing). Thus areas where highly magnetic bedrock is buried may represent multiple, close-spaced magnetite horizons. This could be remedied by tightening up the station reading spacing along the cross lines in areas where a number of magnetite horizon are apparent.

Based upon the geological mapping, the rock sampling and the magnetic surveys, in general there appears to be a good correlation between magnetic signature of the rock and the amount of Fe_2O_3 and contained magnetite. However, the contrast is not so readily discernable at higher concentrations of Fe_2O_3 (e.g. greater than 25 wt%) and does not provide any conclusive evidence as to what might be classified as having economic versus sub-economic grades of magnetite. The magnetic intensity may also be affected by the amount of overburden, including glacial and non-magnetite bearing bedrock that covers a particular magnetic horizon. This may also be a concern in portions of the survey area where the bedrock is covered by thick sequences of recent (post-glacial?) alluvial and colluvial deposits and talus. Linear magnetic highs are discontinuous along strike indicating that the magnetite bearing sandstone layers that they represent are also discontinuous. Some of these discontinuities coincide with recent drainage channels or valleys and as such may indicate that the magnetite horizons and enclosing sandstone have been eroded. This may also indicate that the magnetic signature of magnetite-bearing beds beneath stream valleys is somewhat masked by significant alluvial deposits. The former argument is more reasonable as alluvial deposits would not likely mask the signature enough to prevent an anomalous reading. Alternatively, because of the original depositional environment, it is also quite likely the discontinuous nature of some of the linear magnetic features are explained by the discontinuous nature of the original ribbon-like beach front associated heavy mineral deposits. These deposits would have been discontinuous in the direction of long shore transport likely parallel to the shoreline of the inland Colorado sea at the time of deposition.

Rock Sampling

APEX personnel between December 2001 and October of 2002 conducted three sampling campaigns. A total of 48 rock grab, composite rock grab and rock chip samples were collected by APEX personnel during the three campaigns (Appendix 3). A total of 16 rock samples were collected from the A-Knob area and 15 samples from the Windy Ridge area at the Marasek magnetite deposit (Figure 10; Appendix 3). A total of four samples were collected from a thin and somewhat discontinuous horizon of magnetite at the south end of the Marasek grid, nine samples were collected from the Milvain deposit area and four samples were collected from the Boutry deposit area (Appendix 3).

A fourth sampling campaign was conducted jointly by APEX and Elkview personnel during December, 2002 (Endicott, 2003). A total of 25 rock samples were collected from the Marasek magnetite deposit from a combination of two trenches and eight sample pits along the length of the Windy Ridge area and at the south end of the A-Knob area (Endicott, 2002).

Rock chip sampling of the Marasek magnetite deposit at both the A-Knob and the Windy Ridge area, as well as the Milvain magnetite deposit has returned highly encouraging results and confirmed the results of previous historical

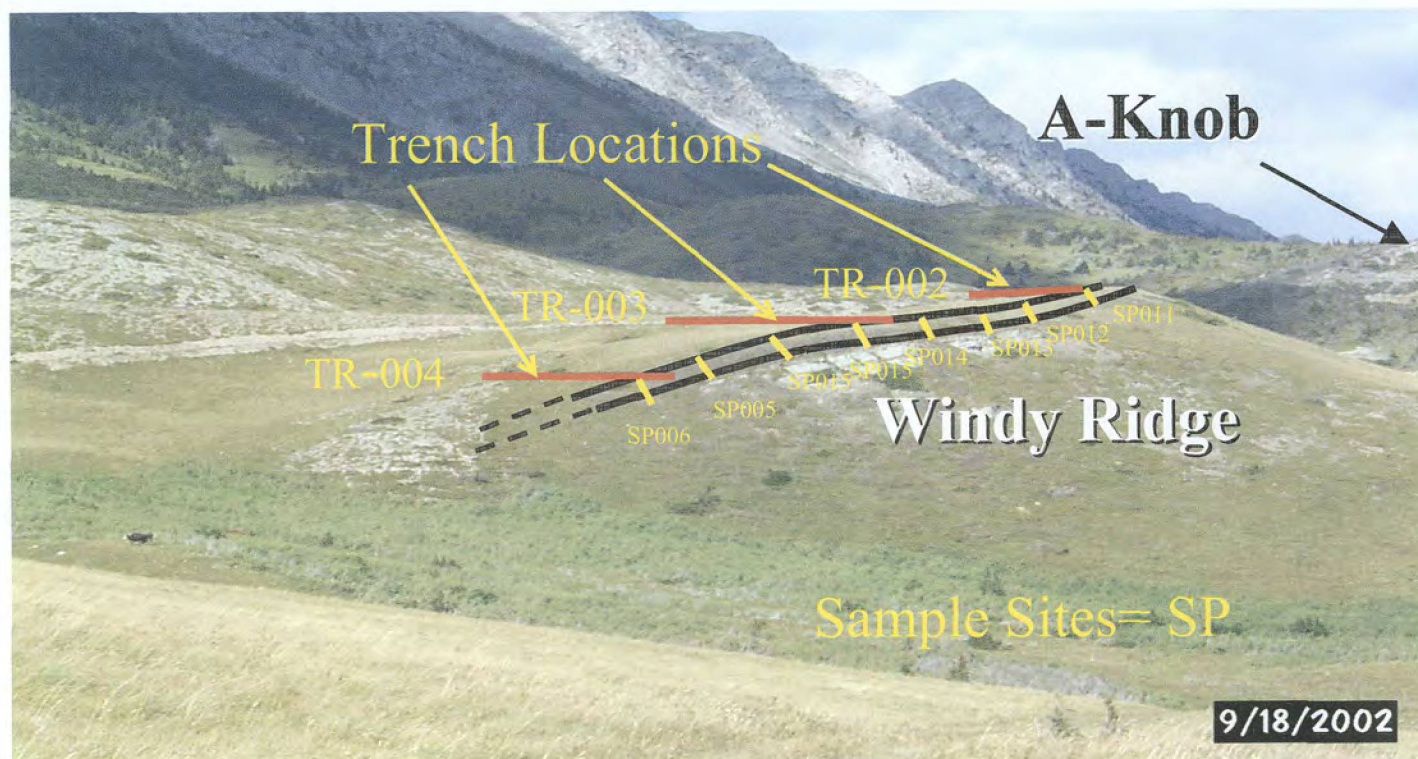
exploration conducted during the late 1950's. Composite rock chip samples were collected across the strike of the exposed sedimentary magnetite horizons at the A-Knob and Windy Ridge areas at the Marasek deposit and at the Milvain area. The best results from the A-Knob area of the Marasek deposit yield an average grade of 55.20 wt% Fe_2O_3 and 5.24 wt% TiO_2 across a true thickness of 4 m including 65.10 wt% Fe_2O_3 and 5.70 wt% TiO_2 across a true thickness of 2 m (Figure 10 and Appendix 3). Other chip samples from other outcrops at the Marasek deposit include 30.70 wt% Fe_2O_3 and 3.59 wt% TiO_2 across a true thickness of 4 m and 20.80 wt% Fe_2O_3 and 2.03 wt% TiO_2 across a true thickness of 5.0 m (Figure 10 and Appendix 3). The remainder of the samples returned lower, but significant concentrations of Fe_2O_3 and TiO_2 . Similar results were obtained for both the Windy Ridge area of the Marasek magnetite deposit and the Milvain area including an average grade of 51.24 wt% Fe_2O_3 and 5.23 wt% TiO_2 across a true thickness of 4.2 m on line 200+50 North and an average grade of 41.35 wt% Fe_2O_3 and 5.58 wt% TiO_2 across a true thickness of 2 m on line 199+25 North at the Windy Ridge area, and up to an average grade of 58.49 wt% Fe_2O_3 and 6.66 wt% TiO_2 across a true thickness of 8.5 m at the Milvain area (Figure 10 and Appendix 3).

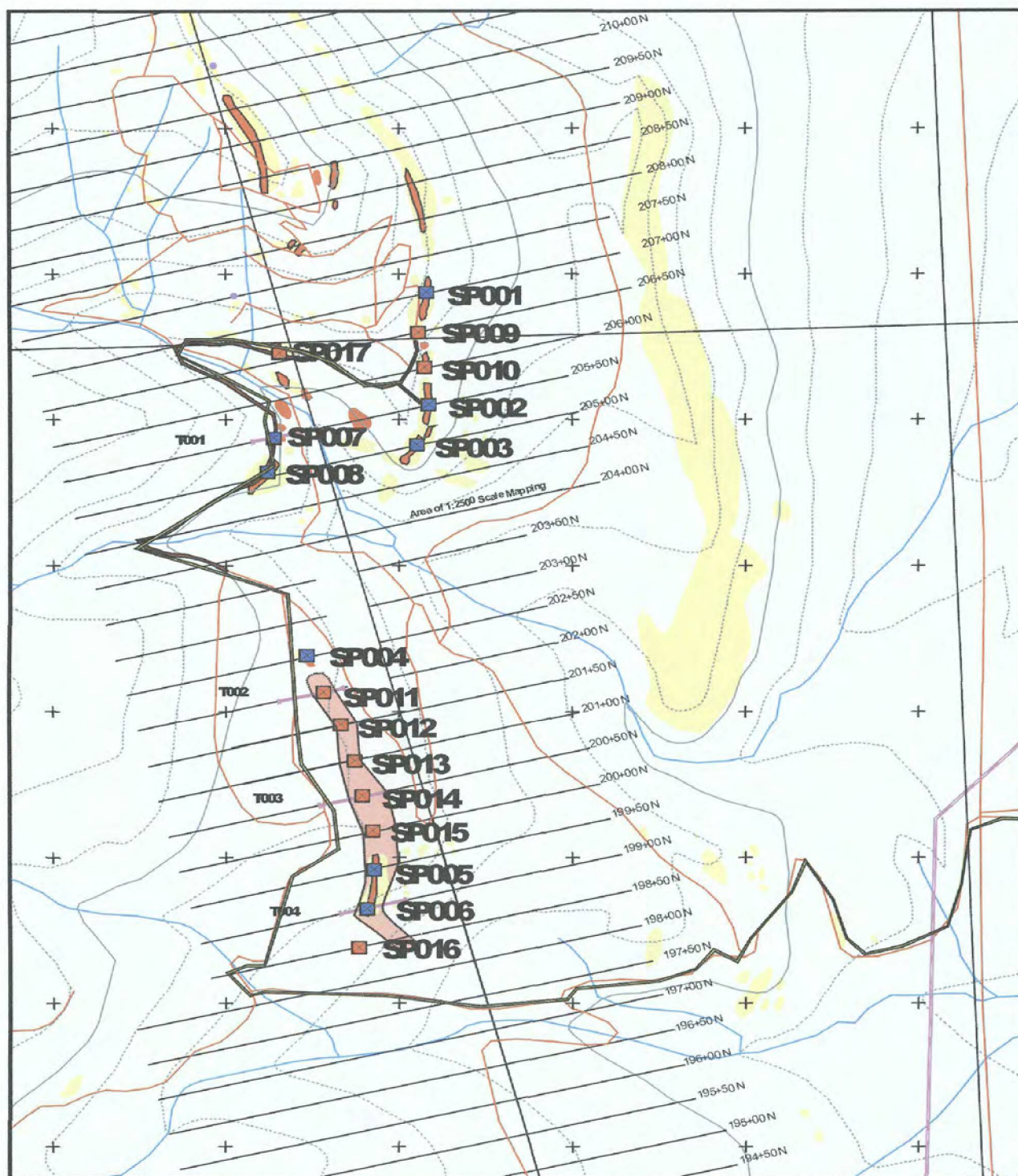
The data for all samples when plotted on a scatter plot of Fe_2O_3 versus TiO_2 display a positive linear relationship between the two oxides. A similar trend was described by Mellon (1961) and is consistent with the South Burmis, Dungarvan and other sedimentary magnetite deposits and occurrences of the Crowsnest Pass region (Copeland and Dufresne, 2002). At present it is unclear whether the linear relationship is a function of solid solution chemistry of titanium bearing (titaniferous) magnetite or reflects proportionate concentrations of magnetite and titaniferous minerals (including rutile, ilmenite, anatase and leucoxene) that have very similar specific gravity and mechanical sorting properties concentrating together in beach-front heavy mineral deposits.

Trenching

A joint Elkview-APEX trenching and sampling program was conducted during December, 2002 (Endicott, 2003). Three trenches were excavated at the Windy Ridge area with Elkview's Cat 300 hoe (Figures 11 and 12; Appendix 4). The trenches were reclaimed at the end of the exploration work. A number of sample pits were also excavated at the Windy Ridge area and at the A-Knob area, the location of which are shown on Figure 12 (Endicott, 2003). Sample pits SP001 to 003, SP009, SP010 and SP017 were not excavated (Figure 12). A total of 25 rock samples were collected from two of the three trenches and eight sample pits (Endicott, 2003). Eleven of the 25 rock samples represent composite samples over the entire thickness of the magnetite horizon that was excavated at each site. Composite samples were collected either from the sample pits or the trenches every 50 m along the Windy Ridge over a strike length of 300 m. Two composite samples were collected from two sample pits about 50 m apart along the southern edge of the A-Knob area. The eleven composite samples yielded a

Figure 11. Windy Ridge area photographs, a) Windy Ridge panoramic view with location of trenches located, b) Magnetite uncovered in Trench T003





Legend

- | | |
|--|-----------------|
| Magnetite Extent Interpreted from Gradient | Stream, creek |
| Magnetite Outcrop | Townships |
| Sandstone Outcrop | Powerline |
| Sample Pit Site with Overburden; Identifier | Property Owners |
| Sample Pit Site with Exposed Outcrop; Identifier | Burm's grid |
| Trench | |
| Refurbished Road | |
| Road trail | |

MICREX DEVELOPMENT CORP.

Burm's Project, Interpreted
Magnetite Extent from Gradient Geophysics

0 60 120 180 240
Meters

WEST 5, RANGE 3, TOWNSHIP 8
Scale 1 : 5,000
APEX Geoscience Ltd.

EDMONTON, ALBERTA

JANUARY, 2003

Figure 12. Trench and sample pit locations Windy Ridge.

range from 32.09 wt% Fe_2O_3 and 4.36 wt% TiO_2 to 55.72 wt% Fe_2O_3 and 6.07 wt% TiO_2 with an average of 46.69 wt% Fe_2O_3 and 5.25 wt% TiO_2 (Endicott, 2003). The eleven composite samples also yield an average of 59.7 wt% magnetics and an average specific gravity (SG) of 3.25 (Endicott, 2003). The SG tests conducted by Elkview were conducted on crushed rock samples and are likely indicative of a minimum SG and are not likely representative of the in situ rock. International Metallurgical and Environmental Inc. (IME) of Kelowna, B.C., have conducted follow-up specific gravity tests of uncrushed magnetite horizon samples and have concluded that the indicated SG of the in situ rock is likely between 3.8 – 4.0 (Mr. Jeff Austin, personal communication, 2003). Based upon an SG of about 5.1 for magnetite and about 2.2 to 2.6 for the remaining gangue minerals, 60 wt% magnetic minerals likely represents about 40 to 45 volume percent magnetite in the magnetite bearing zone.

DRILLING

No drilling has been performed as part of the current exploration effort by Micrex. Copies of drill logs and surface plan maps for much of the historic West Canadian exploration of the Burmis magnetite deposits during 1956 and 1957 were obtained from Mr. T. Bryant, who in turn obtained the information from certain public archives. Compilation of the historic exploration and drilling data for the Burmis magnetite deposits was conducted in two stages between September 1, 2000 and February 28, 2001. The methodology used and the results of the detailed compilation of the historic drilling are reviewed in detail by Copeland and Dufresne (2002).

The bulk of the historic drilling conducted at the Marasek and Milvain areas are situated over two very prominent HRAM magnetic anomalies (Copeland and Dufresne, 2002). Downhole and surface information was compiled by Copeland and Dufresne (2002) using Easimine, an ore deposit modeling software, and included a total of 82 drillholes, 4 trenches and 12 surface outcrops from the 1950's exploration by West Canadian. It should be noted that downhole geological data exists for a total of 110 drillholes, however, accurate locations either in local grid coordinates or UTM coordinates were not available for 28 drillholes. In the case of the Marasek area, the historic drilling tested about 500 m of a prominent magnetic anomaly that is about 1 km in strike length. A second prominent magnetic anomaly of equal quality and about 1.2 km in strike length exists immediately north of the Marasek anomaly. This anomaly does not appear to have been drill tested and is unexplained by the 2001 to 2003 fieldwork. The drilling at the Milvain area has tested about 1.1 km of strike length of a prominent high quality magnetic anomaly that is about 3.5 km in strike length. The anomaly likely exhibits a southwest fault displacement of 200 to 400 m that is apparent at the northernmost limit of the drilling.

Historic geological information from West Canadian for a total of 82 drillholes, 4 trenches and 12 surface outcrops in the Burmis region indicates that drilling spanned an area of about 11 km of strike length, however, the bulk of the drilling was focused at three areas from north to south: the Marasek, the Milvain and the Boutry deposits (Copeland and Dufresne, 2002). A total of 46 drillholes were located at the Marasek deposit, 22 drillholes at the Milvain deposit and 14 drillholes at the Boutry deposit. Most of the 28 remaining drillholes but could not be positioned due to a lack of location data. These drillholes appear to represent reconnaissance drill testing of other targets. Assay data exists for a total of 12 drillholes. All of the remaining holes have been geologically logged employing terms such as "*magnetite ore*", "*ore*", "*lean ore*", "*sandstone some magnetite*", "*weakly magnetic sandstone*" etc. Based upon the 12 drillholes that contain assay data, "*magnetite ore*" or "*ore*" appears to yield from 20 to 50 weight percent (wt%) Fe_2O_3 , with most of the data in the 30 to 50 wt% range. In general, descriptions of "*some magnetite*", "*lean ore*" or "*weakly magnetic sandstone*" yield anywhere from 10 to 30 wt% Fe_2O_3 . The details with respect to the number of intersections and the thickness (core length) of "*magnetite ore*" or magnetite bearing sandstone intersected at each area are summarized below.

Table 1. Drillhole Summary Table of Magnetite Host Rock Thickness

Area	Total DDH's	Type of Ore	DDH's 1-3 m	DDH's 3-5 m	DDH's >5 m	Subtotals
Marasek	46	Mt Ore	8	7	7	22
		Mt Sand	7	9	5	21
		Combined	8	7	14	29
Milvain	22	Mt Ore	3	4	0	7
		Mt Sand	4	3	1	8
		Combined	4	7	2	13
Boutry	14	Mt Ore	2	1	0	3
		Mt Sand	3	2	1	6
		Combined	3	0	3	6
TOTALS	82	Mt Ore	13	12	7	32
		Mt Sand	14	14	7	35
		Combined	15	14	19	48

* DDH = Drillhole, Mt = Magnetite, Mt sand = Magnetite bearing sand, Combined = those holes with both Mt ore and Mt sand

Based upon the subsurface and surface information, the Milvain deposit, including material classified as "*magnetite ore*", "*lean ore*" or magnetite-bearing sandstone, averages just over 3.2 m in core length (vertical) thickness based upon the historic drilling. The magnetite-bearing horizon appears to display dips ranging from about 40 to 60 degrees to the west, which seems to be the normal attitude of thrustured rocks within the area. This is also supported by the fieldwork conducted to date. Based upon an average dip of about 45 degrees, the Milvain

deposit may yield an average true thickness of about 2.3 metres. The drilling to date indicates the presence of only one magnetite horizon at the Milvain area with little evidence of structural disruption or repetition, however, the historic drilling was not likely deep enough nor extensive enough to test for additional magnetite horizons beneath the main horizon. The drilling to date at the Marasek deposit indicates that the combined "*magnetite ore*" and "*lean ore*" or magnetite bearing sandstone may have an average core length (vertical thickness) of just under 8 metres. However, as illustrated by the cross-sections and the three-dimensional modeling provided by Copeland and Dufresne (2002), the Marasek deposit is highly faulted and structurally complex. It is quite possible that several of the vertical drillholes with exceptional thickness of "*magnetite ore*" were drilled parallel to bedding and therefore, down the dip of the magnetite horizons. The detailed geological drill logs and Steiner (1958) document near vertical bedding in many of the drillholes which indicates the presence of repeated near vertical horizons of "*magnetite ore*", likely the result of fault repetition and overturned limbs of asymmetric folds. Confirmatory drilling, including angle drillholes, is required at the Marasek deposit, particularly at the A-Knob area, in order to properly determine its configuration, size and grade. Because of the structural complexity and the existence of what appears to be multiple zones of ore, the Marasek deposit has the greatest potential for an open pit resource of significant tonnage. The multiple layers of sedimentary magnetite likely represent the accumulation of one or two horizons that are fault or thrust repeated. Thrust faulting and related asymmetric folding would explain the vertical and apparent discontinuous nature of the magnetite bearing stratigraphy at the Marasek deposit. Steiner (1958) indicates that the Marasek magnetite is poorly exposed with only two horizons exposed at surface yet six spatially separate zones were intersected in the subsurface. In addition, Steiner (1958) suggests that many of the drillholes were not drilled deep enough to properly test most of the horizons of "*magnetite ore*", a conclusion clearly supported by the results of the compilation by Copeland and Dufresne (2002).

Of the 28 drillholes with no location data, 7 drillholes intersected "*magnetite ore*" and another 7 drillholes intersected either "*lean ore*", "*weakly magnetic sandstone*" or sandstone with thin discontinuous magnetite bands. Significant intercepts of "*magnetite ore*" greater than 5 feet in core length (with no detailed location data) were intersected at "*North Site Anticline*", "*Milvain Southwest*" and "*Evan's*". Intercepts of 2 to 5 feet of "*magnetite ore*" were also intersected at "*Antelope Butte*" and "*Smith's*". These areas could not be located on the old exploration maps and detailed location descriptions were not evident within the associated reports.

There are several prominent HRAM magnetic anomalies across Micrex's Burmis property that likely reflect buried magnetite horizons that have not likely been drill tested to date or that have had one drill hole (Copeland and Dufresne, 2002). As specific examples, drillhole BN079 intersected about 5.48 m of "*magnetite ore*" near the southern edge of a high priority magnetic anomaly that

is about 700 m in strike length. In addition, drillhole BN046 intersected about 2.14 m of "*magnetite ore*" near the southern edge of a magnetic anomaly that is from 1.1 to 2.1 km in strike length. A number of other prominent magnetic anomalies that are likely indicative of near surface magnetite horizons exist on the property and require follow-up ground magnetic surveys and geological mapping.

SAMPLING METHOD AND APPROACH

Sampling by APEX personnel consisted of rock grab samples, composite rock samples across a certain thickness of outcrop or talus and rock chip sampling across a certain thickness of outcrop. Samples were collected using a rock hammer and in some cases a chisel. The samples and sample sites were numbered and tagged, the samples were placed and stored in plastic bags. Sample locations were recorded using a handheld Garmin GPS and were plotted on 1:50,000 scale NTS topographic maps as well as a local grid map. Wherever possible, the composite rock grab samples, which consist of a series of pieces of talus or outcrop, and the rock chip samples were collected perpendicular to the strike and vertically across the paleo thickness of the magnetite horizon. The samples generally consisted of 2 to 10 kgs of rock fragments. For chip samples the rock samples represent a continuous chipping of the outcrop. The composite rock grab samples collected across the strike of the exposed magnetite horizons represent either a continuous series of existing talus or periodic pieces of talus. The APEX sampling was conducted in order to provide preliminary assay data on the concentration of Fe_2O_3 and TiO_2 at surface within certain mapped magnetic horizons. All APEX samples were collected on site by an APEX geologist, were sealed in plastic bags with plastic ties and were placed in five-gallon pails and were sent to a laboratory generally by Greyhound bus or by a trucking company. The pails were not security sealed nor were any blanks or standards inserted as part of the sampling protocol. The samples were always maintained in the possession of APEX personnel until such time as they were shipped to the laboratory.

The trench and sample pit sampling conducted during December, 2002 was conducted not only to assess the concentrations of Fe_2O_3 and TiO_2 within the Windy Ridge and A-Knob areas of the Marasek magnetite deposit, but to also provide a comparison between the geochemical analyses of prior work, the trench sampling and the weight percent recoverable magnetic minerals that might be recovered during dense medium treatment of coal at the Elkview Coal Mine. Details of the sampling protocol employed during the hoe trenching program by Elkview are given by Endicott (2003).

SAMPLE PREPARATION, ANALYSES AND SECURITY

All sampling was conducted by, or under the supervision of Mr. Michael Dufresne, M.Sc., P. Geol., a qualified person under National Instrument 43-101. Rock samples were bagged by APEX personnel, put in pails and then transported to Edmonton where they were shipped to either the Saskatchewan Research Council, Saskatoon, Saskatchewan (SRC) or to ACME Analytical Laboratories Ltd. (ACME) in Vancouver, British Columbia, for processing and analysis. No additional security measures were taken in shipping the samples. The samples were analysed for major oxide geochemistry by lithium metaborate fusion followed by Inductively Couple Plasma Analysis (ICP) or X-Ray Fluorescence.

Gold and multi-element trace element analysis was also performed on the rock samples. This was done using ICP Mass Spectrometer (MS) analysis. The samples were dissolved using a 4-acid digestion on a 0.25 g split yielding total to near total values for all elements, including rare earth elements (ACME Analytical Laboratories Ltd. website, 2003). Gold analysis for each rock sample was performed using a fire assay on a 30 g aliquot followed by ICP – MS analysis

DATA VERIFICATION

APEX geologists collected a total of 48 rock samples during three separate sampling campaigns from the Burmis property as part of the 2001 to 2003 fieldwork program. Due to the limited nature and budget of the sampling program, and the limited number of samples collected, a rigorous quality assurance and quality control (QA/QC) program was not warranted. No blank samples, field duplicate or standard samples were sent to the laboratory for analysis along with the Burmis samples. The 2001 to 2003 sample results do, however, yield similar geochemical results to those samples collected by Mellon (1961) and by others. When managing ongoing exploration programs up to 20 per cent of all samples should be check assayed and analytical standards, blanks and field duplicates should be analyzed regularly to ensure QA and QC. Any future drilling and sampling programs that are conducted with a goal of bringing any of the Burmis magnetite deposits to an ore reserve stage should include an adequate program of check assaying along with a series of analytical standards, blanks and field duplicates in order to maintain QA and QC.

The SRC and ACME both performed standard QA and QC procedures with respect to the rock samples that were sent for analysis during 2001 to 2003. The SRC and ACME routinely analyze analytical blank and standard samples as part of their QA/QC protocol. No significant problems have been observed in the geochemical analyses received to date.

APEX personnel under the direct or indirect supervision of Mr. M.B. Dufresne, M.Sc., P.Geol., a Qualified Person under Instrument 43-101, collected all of the 48 APEX samples. These samples were maintained in the possession of APEX personnel until such time as they were shipped to the laboratory. Therefore, the author believes the data herein to be of acceptable quality and that the data was collected using current industry practices.

ADJACENT PROPERTIES

The author is unaware of any adjacent properties that would be of material interest at this time.

MINERAL PROCESSING AND METALLURGICAL TESTING

At present, the magnetite deposits are being contemplated by Micrex as a source of magnetite for recoverable dense medium separation in the coal industry, not as a source of iron ore. As such, it is the overall magnetic properties of the Burmis magnetite deposits that need to be evaluated as potential ore. Elkview Coal Corporation (Elkview) has conducted a preliminary assessment of the suitability of the magnetite from the Marasek deposit for dense medium separation (Endicott, 2003). Elkview's work has included assessing a number of samples of raw material from the Marasek deposit for recoverable magnetic minerals and the specific gravity of the raw material as well as the final potential ore product. Eleven composite samples were obtained during the trenching program over a strike length of more than 300 m at the south end of the Marasek magnetite deposit and processed for recoverable magnetic minerals and specific gravity (Endicott, 2003). The eleven composite samples yield an average of 59.7 wt% magnetic minerals and an average SG of 3.25 (Endicott, 2003). The SG tests conducted by Elkview were conducted on crushed rock samples and are likely indicative of a minimum SG and are not likely representative of the in situ rock. International Metallurgical and Environmental Inc. (IME) of Kelowna, B.C., conducted follow-up SG tests of uncrushed raw magnetite horizon samples and have concluded that the indicated SG of the in situ rock is likely between 3.8 and 4.0 (Mr. Jeff Austin, personal communication, 2003).

A more rigorous metallurgical program associated with surface and drill core sampling, including a full mineralogical work-up, will be required to fully determine the magnetic, mineralogical and chemical character of each of the Burmis magnetite deposits and their economic potential as part of any feasibility program.

MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Steiner (1958) provides an estimate of 6.68 million short tons of "magnetite ore" at the Marasek area with an additional 3.97 million short tons of inferred ore based upon drilling and several theoretical calculations. Steiner (1958) suggests that there is strong potential to develop up to 16 million short tons of "magnetite ore" in several deposits in the North Burmis region. Steiner (1958) provides little detail for his calculations nor is it clear what assumptions he used in his calculations. Mellon (1961) conservatively estimated a total resource of 1.9 million long tons (2.1 million short tons) for the three Burmis magnetite deposits with the bulk of the resource (1.5 million short tons) contained at the Boutry deposit (South Burmis). Johnston and Trigg (1983) conducted most of their work at the Boutry area about 2 to 3 km north of the town of Burmis. Similar to Mellon's estimates, Johnston and Trigg (1983) suggest the presence of reserves of 1,384,000 tonnes of "magnetite ore" at the Boutry area and 139,200 tonnes at the Marasek area. No details for their estimates were presented. It is evident from the historic drilling that a large volume and tonnage potential exists for magnetite at the Marasek, Milvain and Boutry areas. Further drilling to test the down dip and local strike extent of the existing magnetite deposits at each area, including testing for structural repetition, could confirm or significantly increase the historic resource estimates.

Because of a lack of detailed information for the historic resource estimates, particularly with respect to drillhole sample grades and recoverable magnetic minerals, none of the historic estimates conform to current acceptable standards for resource or reserve classification in National Instrument 43-101 and further defined by the Canadian Institute of Mining and Metallurgy in their paper titled "*CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines*" (Postle *et al.*, 2000). Confirmatory drilling will be required as part of any pre-feasibility or feasibility study in order to bring the existing historic resource estimates into line with acceptable standards for resource or reserve definition as defined by Postle *et al.* (2000).

Although geological logs and other information were found for a total of 110 historic boreholes drilled during the 1950's by West Canadian, the logs did not contain enough geological or assay information to conduct a meaningful resource calculation. In addition, the spatial location information for all or most of the drillholes was found to be accurate enough to guide exploration but not accurate enough to construct a meaningful resource calculation. Copeland and Dufresne (2002) conducted a rudimentary volume calculation using the historic drillhole intersections of "magnetite ore", "lean ore" or magnetite bearing sandstone in order to look at the tonnage potential of the Marasek, Milvain and Boutry magnetite deposits. The volume calculation was conducted on the basis of using the core lengths of "magnetite ore" and "lean ore" intersected in each drillhole. The magnetite horizons were extrapolated half way between sections to a maximum distance of 20 m in each direction. In addition, the magnetite

horizons were extrapolated up dip or down dip, half way to the nearest drillhole or to surface or to a maximum of 20 m up dip or down dip. In all cases the core length (or vertical thickness) was taken as the true thickness. Based upon these assumptions, the intersections of "*magnetite ore*" and "*lean ore*" for the Marasek deposit yields a total of about 242,700 m³, which yields about 873,800 metric tonnes at a specific gravity of 3.6 kg/m³ for the raw magnetite enriched rock (Copeland and Dufresne, 2002). The Milvain deposit yields a total of about 120,300 m³, which yields about 433,300 metric tonnes at a specific gravity of 3.6 kg/m³. The Boutry deposit yields a total of about 71,100 m³, which yields about 256,000 metric tonnes at a specific gravity of 3.6 kg/m³ (Copeland and Dufresne, 2002). Based upon the geological mapping of exposed magnetite horizons and the ground geophysical surveys conducted during 2001 to 2003, these volume estimates are considered conservative. The large discrepancies that exist between the historic resource estimates and the volume estimates presented by Copeland and Dufresne (2002) are likely a function of differences in the assumptions with respect to how far the magnetite horizons were extrapolated to exist along strike and up and down dip, and the inclusion of exposed occurrences of magnetite bearing sandstone in the historic estimates that have not been drill tested. Confirmatory drilling will be required as part of any pre-feasibility or feasibility study in order to bring the existing historic resource estimates into line with acceptable standards for resource or reserve definition as defined by Postle *et al.* (2000).

During December, 2002, APEX and Elkview Coal Corporation (Elkview), an end user of magnetite, conducted a trenching program (Appendix 4) at the Windy Ridge area at the south end of the Marasek magnetite deposit in order to assess whether a five year supply of magnetite feed for the Elkview Coal Mine's dense medium separation circuit could be delineated (Endicott, 2003). Elkview was successful in identifying a volume of about 34,550 m³ of magnetite-bearing rock with an average grade of close to 60 wt% magnetic minerals. Based upon Elkview's analysis of SG for a number of samples this volume translates into an indicated resource of about 111,200 tonnes of rock yielding an average grade of about 60 wt% magnetic minerals (Endicott, 2003). Based upon a calculated consumption rate of 23,000 to 25,000 tonnes of rock containing 60 to 65 wt% recoverable magnetic minerals per annum, which would be required to process 6 million tons of clean coal per year at the Elkview Coal Mine, the Windy Ridge portion and south portion of the A-Knob area of the Marasek magnetite deposit could provide sufficient magnetite feed for the Elkview Coal Mine for five years (Endicott, 2003). If the IME analyses of SG for the in situ magnetite-bearing rock are correct, then the Elkview program may have been successful in identifying an indicated resource of closer to 138,000 tonnes of rock containing an average grade of 60 wt% magnetic minerals, or a six year supply of magnetite feed. As a result, Elkview was successful in achieving the goal of the trenching program, which was to identify a five year supply of magnetite for its Elkview Coal Mine. Bearing in mind that the A-Knob proper contains significant additional resources of magnetite, Endicott (2003) further recommended that Elkview establish a five.

year contract for magnetite with Micrex contingent on the conversion of the indicated resource estimate to a potentially economic reserve estimate based upon a follow-up drilling program.

INTERPRETATION AND CONCLUSIONS

Exploration for magnetite and other metals in the Burmis area began in the early 1900's and is evidenced by older workings and the existence of several mining leases dating back to 1912. West Canadian Magnetic Ores Ltd. (West Canadian) of Calgary, Alberta carried out extensive exploration on the Burmis magnetite deposits as a potential source for raw iron ore between 1956 and 1957. The company undertook detailed drilling (110 drillholes) on the Burmis magnetite deposits including the North Burmis (Marasek), Central Burmis (Milvain) and South Burmis (Boutry) deposits.

At present, the magnetite deposits are being contemplated by Micrex Development Corporation (Micrex) as a source of magnetite for recoverable dense medium separation in the coal industry, not as a source of iron ore. As such, it is the overall magnetic properties of the Burmis magnetite deposits that need to be evaluated as potential ore. During December 2002 to January 2003, Elkview Coal Corporation (Elkview) conducted a preliminary assessment of the suitability of the magnetite from the Marasek deposit, in particular the Windy Ridge area and the south portion of the A-Knob, for dense medium separation (Endicott, 2003). Elkview's work included assessing a number of samples of raw material from the Marasek deposit for recoverable magnetic minerals and the specific gravity (SG) of the raw material. On the basis of the December, 2002 trenching program conducted by Elkview and APEX Geoscience Ltd. (APEX) as well as Elkview's review of the prior exploration conducted by APEX on behalf of Micrex, Elkview was successful in achieving the goal of the trenching program, which was to identify a potential five year supply of magnetite for its Elkview Coal Mine. Elkview was successful in identifying a volume of about 34,550 m³ of magnetite-bearing rock with an average grade of close to 60 wt% magnetic minerals. Based upon Elkview's analysis of SG for a number of samples this volume translates into an indicated resource of about 111,200 tonnes of rock yielding an average grade of about 60 wt% magnetic minerals (Endicott, 2003). Based upon a calculated consumption rate of 23,000 to 25,000 tonnes of rock containing 60 to 65 wt% recoverable magnetic minerals per annum, which would be required to process 6 million tons of clean coal per year at the Elkview Coal Mine, the Windy Ridge portion and south portion of the A-Knob area of the Marasek magnetite deposit could provide sufficient magnetite feed for the Elkview Coal Mine for at least five years (Endicott, 2003).

Steiner (1958) reported on the exploration and analytical results of exploration conducted on the Marasek deposit by West Canadian. Based upon the work conducted by West Canadian, Steiner (1958) estimated that the

Marasek deposit potentially contained 6.7 million short tons of magnetite bearing rock of "significant" but undefined grade. Mr. B. Mellon (1961) of the Alberta Research Council wrote a summary report on the sedimentary magnetite deposits of the Crowsnest Pass region, covering the Burmis and Dungarvan Creek deposits. Mellon's (1961) report summarized the stratigraphic relationships of the various deposits in the region, and compared modal mineral composition with chemical analyses of drill core and surface samples from the 1956 and 1957 exploration campaigns conducted by West Canadian, as well as commenting on the structural disposition of the deposits. Mellon (1961) conservatively estimated a total resource of 2.1 million short tons for the three Burmis magnetite deposits with the bulk of the resource (1.5 million short tons) contained at the Boutry deposit (South Burmis). Johnston and Trigg (1983) suggested the presence of reserves of 1.38 million metric tonnes of "magnetite ore" at the Boutry area and 139,200 metric tonnes at the Marasek area. Few details for any of the three historic resource estimates, including the inherent assumptions for each calculation, are provided by Steiner (1958), Mellon (1961) or Johnston and Trigg (1983). Therefore, these estimates are considered historic and are not considered valid resource estimates under National Instrument 43-101 standards and further defined by the Canadian Institute of Mining and Metallurgy in their paper titled "*CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines*" (Postle *et al.*, 2000). Future estimates will require confirmatory diamond drilling and/or reverse circulation drilling as part of any pre-feasibility or feasibility studies in order to bring the historic resource estimates to a modern acceptable resource or reserve as dictated by National Instrument 43-101.

Based upon the work conducted by APEX from 2000 to present, including, gridding, geological mapping, ground geophysical surveying, rock sampling and trenching, the existence of a sizeable inferred magnetite resource has been demonstrated at the Marasek area and the Milvain area, and, to a lesser degree, the Boutry area. A compilation of the historical drilling, the results of recent detailed (1:5,000 and 1:2,500) geological mapping, sampling and ground geophysical surveys, in particular measured vertical magnetic gradient, have aided in the delineation of poorly exposed discreet individual magnetite zones within the Marasek deposit and Milvain deposits. Further magnetic surveys and confirmatory drilling will be required as part of any pre-feasibility or feasibility studies to determine the exact extent and grade of the deposits and to bring the historic resource estimates into line with acceptable modern standards as required in National Instrument 43-101.

A compilation of the historical drilling data by Copeland and Dufresne (2002) does yield a preliminary indication of the volumes of magnetite resource that could be conservatively expected at the Marasek, Milvain and Boutry deposits. A volume calculation conducted on the basis of using the core lengths of "*magnetite ore*" and "*lean ore*" intersected in each drillhole yields a total of about 242,700 m³, or about 873,800 metric tonnes of magnetic rock at a specific gravity of 3.6 kg/m³ for the Marasek deposit. The Milvain deposit yields a total of about 120,300 m³, or about

433,300 metric tonnes, and the Boutry deposit yields a total of about 71,100 m³, or about 256,000 metric tonnes of magnetic rock. The large discrepancies between the historic resource estimates and the estimates presented here are likely a function of differences in the assumptions with respect to how far the magnetite horizons are extrapolated to exist along strike and up and down dip. Confirmatory drilling will be required as part of any pre-feasibility or feasibility study in order to bring the existing historic resource estimates into line with acceptable standards for resource or reserve definition.

The Marasek and Milvain magnetite deposits are situated over two very prominent magnetic anomalies based upon the results of the recently completed High Resolution Magnetic Survey (HRAM) survey. In the case of the Marasek area, the drilling conducted to date has tested about 500 m of a prominent magnetic anomaly that is about 1 km in strike length. A second prominent magnetic anomaly of equal quality and about 1.2 km in strike length exists immediately north of the Marasek anomaly and appears to be untested. The Milvain drilling has tested about 1.1 km of strike length of a prominent high quality magnetic anomaly that is about 3.5 km in strike length and is for the most part untested or poorly tested. There are several other similar prominent magnetic anomalies that likely reflect buried magnetite horizons that have not likely been drill tested to date or have been drill tested with only one or two drillholes that have encountered significant "*magnetite ore*". A number of other prominent magnetic anomalies likely indicative of near surface magnetite horizons and that appear to be untested exist on the property and require drill testing.

Rock chip sampling of the Marasek and Milvain deposits during 2001 to present has returned highly encouraging results and confirmed the results of previous historical exploration conducted during the late 1950's. The best results from the A-Knob area of the Marasek deposit yield an average grade of 55.20 wt% Fe₂O₃ and 5.24 wt% TiO₂ across a true thickness of 4 m. Similar results were obtained for both the Windy Ridge area of the Marasek magnetite deposit and the Milvain area including an average grade of 51.24 wt% Fe₂O₃ and 5.23 wt% TiO₂ across a true thickness of 4.2 m at the Windy Ridge area, and up to an average grade of 58.49 wt% Fe₂O₃ and 6.66 wt% TiO₂ across a true thickness of 8.5 m at the Milvain area. The data for all samples when plotted on a scatter plot of Fe₂O₃ versus TiO₂ display a positive linear relationship between the two oxides. Mineralogical work conducted by DuPont during 2002 indicates that a significant proportion of the geochemical titanium is in the form of ilmenite, leucoxene and rutile (McLimans *et al.*, 2002). There is a strong indication that at least some of these titanium-bearing minerals could be liberated during the processing of the magnetite raw ore in order to produce a magnetic concentrate (Mr. T. Bryant, *personal communication*, 2003). The recovery of a titanium concentrate suitable for pigment feedstock could be of significant economic benefit to a future mining operation and should not be ignored at this early stage of exploration and development. More extensive surface and drill core sampling, including a full metallurgical and mineralogical work-up, is required to fully

determine the mineralogical and chemical character of each of the Burmis magnetite deposits and their economic potential.

RECOMMENDATIONS

At present, the Burmis magnetite deposits, specifically the Marasek and Milvain deposits, are being contemplated by Micrex as a source of magnetite for recoverable dense medium separation in the coal industry. On the basis of the December 2002 trenching program and prior exploration conducted by APEX on behalf of Micrex, Elkview Coal Corporation was successful in identifying a potential five year supply of magnetite for its Elkview Coal Mine at the Marasek deposit. Elkview was successful in identifying a volume of about 34,550 m³ of magnetite-bearing rock with an average grade of close to 60 wt% magnetic minerals, which translates into an indicated resource of about 111,200 tonnes of rock yielding an average grade of about 60 wt% magnetic minerals (Endicott, 2003). Based upon a calculated consumption rate of 23,000 to 25,000 tonnes of rock containing 60 to 65 wt% recoverable magnetic minerals per annum, which would be required to process 6 million tons of clean coal per year at the Elkview Coal Mine, the Windy Ridge portion and south portion of the A-Knob area of the Marasek magnetite deposit could provide sufficient magnetite feed for the Elkview Coal Mine for at least five years (Endicott, 2003).

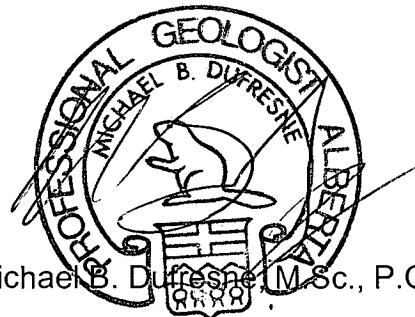
Based on the results of the prior exploration conducted by APEX Based on the results of exploration conducted by APEX from 2001 to present on the Marasek and Milvain magnetite deposits, the following aggressive exploration program is strongly recommended:

- 1 Complete an aggressive combination diamond and reverse-circulation drilling program of selected high-grade areas of magnetite mineralization at the Windy Ridge and A-Knob areas of the Marasek deposit. The drilling should be conducted in such a manner as to bring a large portion of the inferred magnetite resource into a measured resource category leading to probable and measured reserves.
- 2 Complete detailed geotechnical, metallurgical, mineralogical and geochemical program of work on both surface and drill samples leading to and as part of pre-feasibility studies.
- 3 Continue prospecting and sampling of magnetite exposures and geochemical and magnetic analysis to define the grade and mineralogical character of other zones of magnetite and titanium mineralization.
- 4 Based upon the acquisition of the data above, continue to add to and improve the existing pre-feasibility document constructed by International Metallurgical and Environmental Inc.

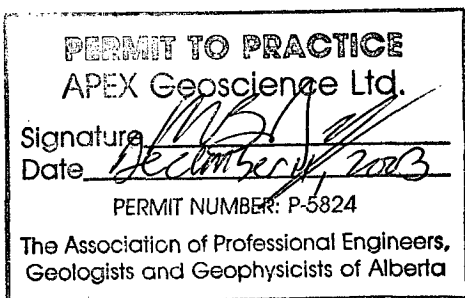
- 5 Initiate periodic community information seminars in order to aid the local residents in understanding the scope and size of the project and its associated potential impacts.
- 6 Initiate any and all baseline environmental studies that will be required as part of the pre-mining and on-going mining activities.

The estimated cost to conduct the recommended exploration program is approximately \$250,000, not including GST.

APEX Geoscience Ltd.



Michael B. Dufresne M.Sc., P.Geol.



December 11, 2003
Edmonton, Alberta, Canada

REFERENCES

- Allan, J. A. (1931) Report of the Geological Survey Division. Research Council of Alberta. Report 27, 12th Annual Report, p. 19-23.
- Bruce, R.W. (1956) Progress report on semi-quantitative spectrographic studies on Magnetite ore from Burmis Flats, Alberta. Report of the Mineral Dressing and Process Metallurgy Division, Department of Mines and Technical Surveys. Report FE-AF-007 (008).
- Bruce, R.W. (1957) Heavy-Media Separation Tests on a Sample of Iron Ore from West Canadian Collieries Limited, Blairmore, Alberta. Report of the Mineral Dressing and Process Metallurgy Division, Department of Mines and Technical Surveys. M.D. Test Report No. 913-OD.
- Endicott, D. (2003) Burmis 2002 Exploration Program Results. Unpublished report prepared by Elkview Coal Corporation on behalf of Micrex Development Corporation, 26 pages.
- Johnston, R.K. and Trigg, C.M. (1983) Magnetite sampling – 1983, South Burmis, Alberta. Unpublished assessment report prepared by Trigg, Woollett Consulting Ltd. on behalf of Roymac Holdings Ltd., 11 pages.
- Germain, R.J. (1983) Evaluation of Magnetite, Research Task 83/76. Independent report prepared for Trigg, Woollett Consulting Ltd. by the Coal Mining Research Centre.
- Grant, A.H. and Trigg, C.M. (1983) Summary of magnetite sampling and research - 1983, Burmis, Alberta. Unpublished assessment report prepared by Trigg, Woollett Consulting Ltd. on behalf of Roymac Holdings Ltd., 7 pages.
- Jerzykiewicz, T. (1997) Stratigraphic framework of the uppermost Cretaceous to Paleocene strata of the Alberta Basin; Geological Survey of Canada, Bulletin , 510, 121 pages
- Jerzykiewicz, T., and Norris, D. K. (1994) Stratigraphy, structure and syntectonic sedimentation of the Campanian 'Belly River' clastic wedge in the southern Canadian Cordillera. Cretaceous Research, vol. 15, p. 367-399.
- Kilborn (1999) Burmis Magnetite Project: Interim Report, Preliminary Review of Geology and Resources. Unpublished report prepared by Kilborn Engineering Pacific Ltd. for Micrex Development Corp.
- Leach, W.W. (1912) Geology of the Blairmore map-area, Alberta. Geological Survey of Canada, Summary Report 1911, p. 192-200.

- McLimans, R., Gunter, R. and Bartlett, H. (2003) Burmis Deposit: Results from 2002 Field Sampling and Suggested Path Forward. Unpublished letter prepared by DuPont Titanium Technologies on Behalf of Micrex Development Corporation, 4 Pages.
- Mellon, G.B. (1961) Sedimentary magnetite deposits of the Crowsnest Pass Region, southwestern Alberta. Research Council of Alberta; Bulletin 9, 98 pages.
- Norris, D.K. (1955) Blairmore, Alberta; Geological Survey of Canada. Paper 55-18, map with marginal notes.
- Norris, D.K. (1993) Geology and structure cross-sections, Blairmore (west half), Alberta. Geological Survey of Canada, Map 1829A, scale 1:50,000.
- Stebinger, E. (1912) Titaniferous magnetite beds on the Blackfeet Indian reservation, Montana. United States Geological Survey, Bulletin 540, p. 329-337.
- Steiner, R. (1958) Report on the Iron Ore underlying the area known as "Marasek's", Burmis, Alberta. Unpublished assessment report prepared on behalf of Western Canadian Magnetic Ores Ltd., 6 pages.
- Postle, J.; Haystead, B.; Clow, G.; Hora, D.; Vallee, M.; and Jensen, M. (2000) CIM Standards on Mineral Resources and Reserves. Prepared by the CIM Standing Committee on Reserve Definitions, Canadian Institute of Mining, Metallurgy and Petroleum.
- Price, R.A. (1962) Geology: Fernie (east half), British Columbia – Alberta, 1:126,720. Geological Survey of Canada, Map 35-1961.

CERTIFICATE of AUTHOR

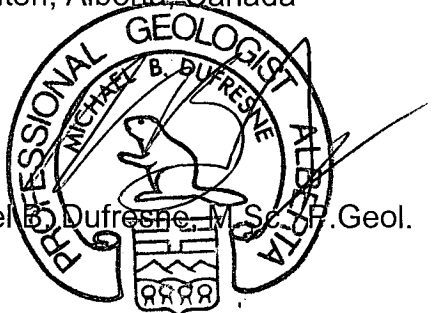
I, Michael B. Dufresne, M.Sc., P.Geol., do hereby certify that:

1. I am President of: APEX Geoscience Ltd.
Suite 200, 9797 – 45th Avenue
Edmonton, Alberta T6E 5V8
Phone: 780-439-5380
Fax: 780-433-1336.
2. I graduated with a B.Sc. Degree in Geology from the University of North Carolina at Wilmington in 1983 and with a M.Sc. Degree in Economic Geology from the University of Alberta in 1987.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1989.
4. I have worked as a geologist for a total of 20 years since my graduation from university.
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 preparation of all sections of the technical report titled 2003 Technical Report, Burmis Magnetite Deposits, Crowsnest Pass, Southwest Alberta and dated December 11, 2003 (the "Technical Report") relating to the Burmis magnetite property. I visited the Burmis magnetite property in December, 2001 for three days, July of 2002 for 5 days, and October of 2002 for five days.
7. I have had prior involvement with the Burmis magnetite property that is the subject of the Technical Report. The nature of my prior involvement has been conducting exploration on behalf of Micrex Development Corporation since 2000 and prior to that, conducting regional exploration on behalf of the Alberta Geological Survey during 1992 and 1993.
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 the issuer applying all of the tests 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 for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 11th Day of December, 2003.
Edmonton, Alberta, Canada

Michael B. Dufresne, M.Sc., P. Geol.



CONSENT of AUTHOR

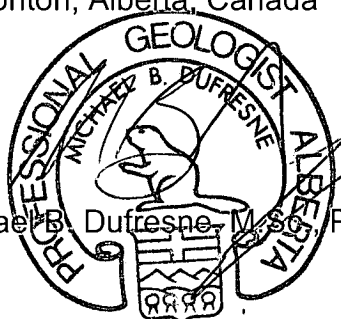
TO: The Alberta Securities Commission and the TSX Venture Exchange

I, Michael Dufresne, do hereby consent to the filing of the written disclosure of the Technical Report titled 2003 Technical Report, Burmis Magnetite Deposits, Crowsnest Pass, Southwest Alberta and dated December 11, 2003 (the "Technical Report") and any extracts from or a summary of the Technical Report in the prospectus or AIF of Micrex Development Corporation, and to the filing of the Technical Report with the securities regulatory authorities referred to above.

I also certify that I have read the written disclosure being filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the Technical Report or that the written disclosure in the prospectus or AIF of Micrex Development Corporation contains any misrepresentation of the information contained in the Technical Report.

Dated this 11th Day of December, 2003.
Edmonton, Alberta, Canada

Michael B. Dufresne, M.Sc., P.Geol.

A circular professional seal for a geologist in Alberta. The outer ring contains the text "PROFESSIONAL GEOLOGIST" at the top and "ALBERTA" at the bottom. Inside the ring, the name "MICHAEL B. DUFRESNE" is written in a curved path. The center of the seal features a stylized profile of a person's head facing left, with a small crest or shield below it containing the letters "QRRR". A handwritten signature, which appears to be "Michael B. Dufresne", is written across the seal.

APPENDIX 1

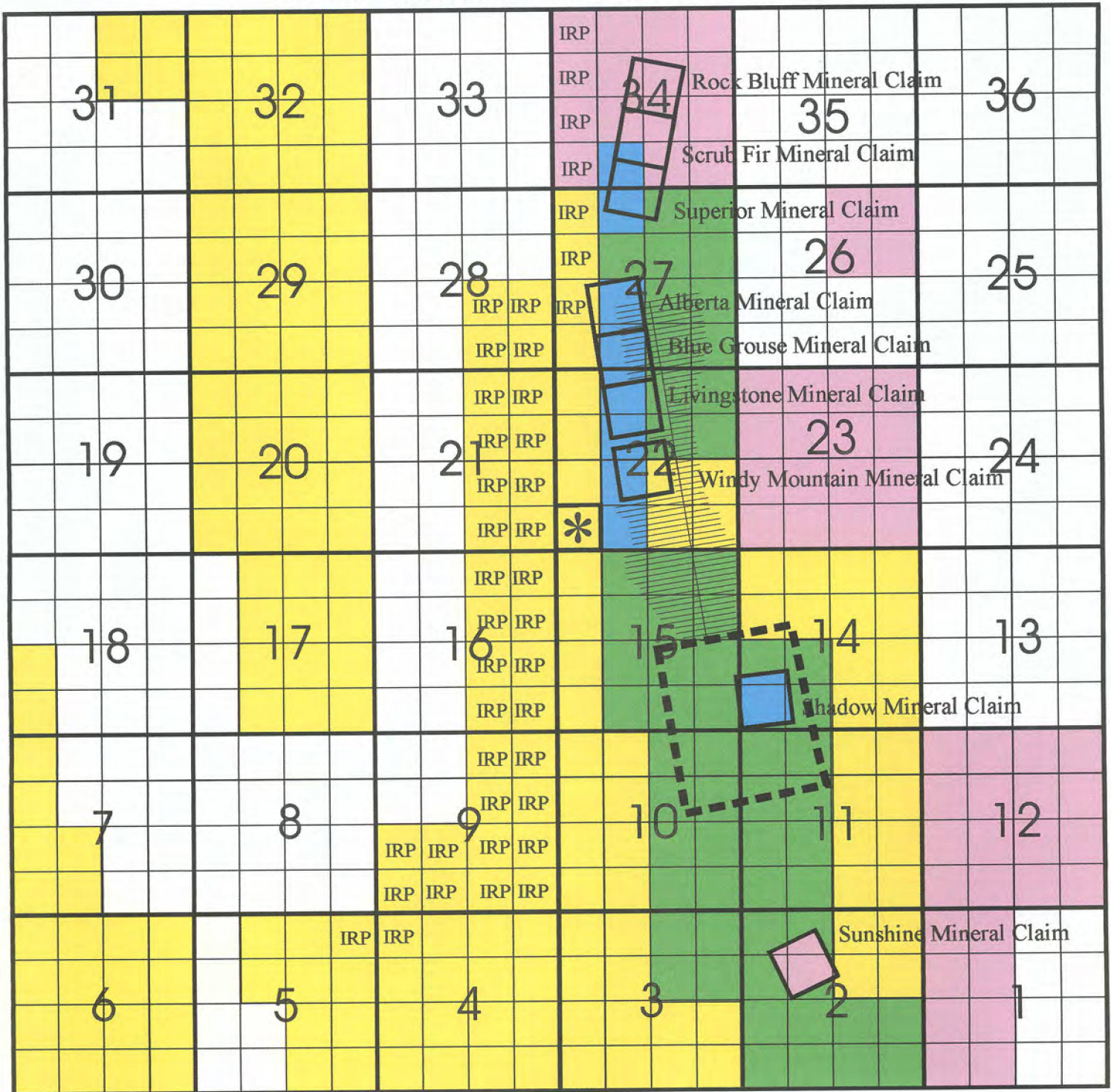
APPENDIX 1
CURRENT PERMIT STATUS
MICREX DEVELOPMENT CORPORATION
BURMIS NORTH PROJECT

PERMIT IDENTIFIER	OWNER	DATE ISSUED	EXPIRY DATE	SIZE (ha)	LEGAL DESCRIPTION			
					M	RNG	TWP	Section
9499120001 (Lease)	Robert Cantin	1999-12-01	2014-12-01	976.00	5	3	8	2S, NWP PORTIONS LYING OUTSIDE SUNSHINE MINERAL CLAIM IN LOT 14 GROUP 14 AS SHOWN ON A SURVEY PLAN SIGNED 1912/01/30, APPROVED 1912/09/16, CONFIRMED 1913/07/02 AND RECORDED IN THE DEPARTMENT OF THE INTERIOR AS FIELD BOOK NO. 12223; 3NE; 10E; 11W; 14SWP PORTION(S) LYING OUTSIDE SHADOW MINERAL CLAIM IN LOT 15 GROUP 14 AS SHOWN ON A SURVEY PLAN SIGNED 1912/01/30, APPROVED 1912/08/14, CONFIRMED 1913/07/02 AND RECORDED IN THE DEPARTMENT OF INTERIOR AS FIELD BOOK NO. 12222; 15SEP PORTION(S) LYING OUTSIDE SHADOW MINERAL CLAIM IN LOT 15 GROUP 14 AS SHOWN ON A SURVEY PLAN SIGNED 1912/01/30, APPROVED 1912/08/14, CONFIRMED 1913/07/02 AND RECORDED IN THE DEPARTMENT OF INTERIOR AS FIELD BOOK NO. 12222; 15NE, L3, L6, L11, L14; 22NE; 27E, L11.
9389050002 Lease	393466 Alberta Ltd.	1999-10-13	2014-10-13	128.00	5	3	7	24SWP, NWP PORTION(S) LYING OUTSIDE CAYUSE MINERAL CLAIM, LOT 10 GROUP 14 AS SHOWN ON A SURVEY PLAN SIGNED 1912/01/30, APPROVED 1912/09/16, CONFIRMED 1913/07/02 AND RECORDED IN THE DEPARTMENT OF INTERIOR AS FIELD BOOK NO. 12223, NWP PORTION(S) LYING OUTSIDE CAYUSE MINERAL CLAIM, LOT 10 GROUP 14 AS SHOWN ON A SURVEY PLAN SIGNED 1912/01/30, APPROVED 1912/09/16, CONFIRMED 1913/07/02 AND RECORDED IN THE DEPARTMENT OF INTERIOR AS FIELD BOOK NO. 12223 AND PORTION(S) LYING OUTSIDE THE BURMIS MINERAL CLAIM, LOT 12 GROUP 14 AS SHOWN ON A SURVEY PLAN SIGNED 1912/01/30, APPROVED 1912/08/14, CONFIRMED 1913/07/02 AND RECORDED IN THE DEPARTMENT OF THE INTERIOR AS FIELD BOOK NO. 12222.

APPENDIX 1
CURRENT PERMIT STATUS
MICREX DEVELOPMENT CORPORATION
BURMIS NORTH PROJECT

PERMIT IDENTIFIER	OWNER	DATE ISSUED	EXPIRY DATE	SIZE (ha)	LEGAL DESCRIPTION			
					M	RNG	TWP	Section
9302020061 (Permit)	Micrex Development Corp.	37298	40950	2903	5	3	8	2 NEP PROTION(S) LYING OUTSIDE SUNSHINE MINERAL CLAIM IN LOT 14 GROUP 14; 3S, NW; 4S, NE, L11, L12, L13P PORTION(S) LYING OUTSIDE CROWSNEST CORRIDOR IRP, L14; 5SE, L9-L11, L14, L15, L16P PORTION(S) LYING OUTSIDE CROWSNEST CORRIDOR IRP; 6; 7SW, L12, L13; 9SP, NEP PORTION(S) LYING OUTSIDE LIVINGSTONE-PORCUPINE HILLS IRP; 10W; 11E; 14N, SE; 15 L4, L5, L12, L13; 16EP PORTION(S) LYING OUTSIDE LIVINSTONE-PORCUPINE HILLS IRP; 17E, L3, L6, L11, L14; 18L4, L5; 20; 21EP PORTION(S) LYING OUTSIDE LIVINGSTONE PORCUPINE HILLS IRP; 22SEP PORTION(S) LYING OUTSIDE SPRING CREEK MINERAL CLAIM IN LOT 17 GROUP 14 AND WINDY MINERAL CLAIM IN LOT 20 GROUP 14, L4P PORTION(S) LYING OUTSIDE SPRING CREEK MINERAL CLAIM IN LOT 16 GROUP 14, L5, L12, L13; 27 L4, L5P PORTION(S) LYING OUTSIDE LIVINGSTONE-PORCUPINE HILLS IRP AND ALBERTA MINERAL CLAIM IN LOT 20 GROUP 14, L12P, L13P PORTION(S) LYING OUTSIDE LIVINGSTONE-PORCUPINE HILLS IRP; 28SEP PORTION(S) LYING OUTSIDE LIVINGSTONE-PORCUPINE HILLS IRP; 29, 31NE; 32

Micrex Development Corp.
West 5, Range 3, Township 8
Mineral Titles and Metallic Mineral Permits



- | | |
|--|--|
| Micrex Development Corp. | Crown Land |
| Robert Cantin, 393466 Alberta Ltd.
JV Agreement with Micrex | IRP Part of Land Designated as Integrated Resource Plan |
| Troymin Resources Ltd.. | * Part of Legal Subdivision contains the
Spring Creek Mineral Claim |
| Barrington Petroleum Ltd. | |
| August Carney, Prospector, Kaslo B.C. | |

APPENDIX 2

APPENDIX 2
2000 To 2003 Exploration Expenditures

Type	Date	Item	Name	Memo	Amount	TOTALS
Cheque	9/18/2000	1025	Vouched items		\$ 448.00	
Cheque	9/29/2000	1037	Spectra Exploration Geo Corp.	Airborne Survey	\$ 14,500.00	
Cheque	11/21/2000	1077	APEX Geoscience Ltd.	Geological Compilation	\$ 3,578.97	
Cheque	12/12/2000	1090	Western Diamex	General Consulting	\$ 10,000.00	
Cheque	12/13/2000	1091	Western Diamex	General Consulting	\$ 6,000.00	
Cheque	12/18/2000	1107	International Metallurgical & Envir.	Analytical	\$ 7,241.70	
Cheque	1/30/2001	1150	Western Diamex	General Consulting	\$ 4,500.00	
Cheque	2/14/2001	1168	Dynatec	Analytical	\$ 14,018.69	
Cheque	3/16/2001	1189	APEX Geoscience Ltd.	Geological Compilation	\$ 1,500.00	
Cheque	3/16/2001	1190	Western Diamex	General Consulting	\$ 1,500.00	
Cheque	3/29/2001	1199	Dynatec	Analytical	\$ 15,000.00	
Cheque	4/1/2001	1201	Dynatec	Analytical	\$ 4,672.90	
Cheque	4/25/2001	1201	Western Diamex	General Consulting	\$ 3,250.00	
Cheque	5/24/2001	1283	Western Diamex	General Consulting	\$ 2,750.00	
Cheque	5/24/2001	1230	Dynatec	Analytical	\$ 4,327.10	
Cheque	6/1/2001	1232	International Metallurgical & Envir.	Analytical	\$ 228.00	
Cheque	6/29/2001	1248	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	7/31/2001	1304			\$ 123.83	
Cheque	7/31/2001	1302			\$ 412.80	
Cheque	7/31/2001	1303	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	8/31/2001	1296	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	9/18/2001	1352	APEX Geoscience Ltd.	Geological Fieldwork	\$ 42,056.08	
Cheque	9/26/2001	1323	Saskatchewan Research Council	Analytical	\$ 805.35	
Cheque	9/27/2001	1354	Western Diamex	General Consulting	\$ 3,096.30	
Cheque	10/14/2001	1359	International Metallurgical & Envir.	Analytical	\$ 6,319.00	
Cheque	10/31/2001	1363	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	11/1/2001	1357	APEX Geoscience Ltd.	Geological Compilation	\$ 5,397.07	
Cheque	11/26/2001	1375	Jackson Fast Anderson	Magnetite projections	\$ 7,500.00	
Cheque	11/28/2001	1429	International Metallurgical & Envir.	Analytical	\$ 7,075.86	
Cheque	11/28/2001	1379	Kilborn Engineering	Engineering/Compilation	\$ 11,214.95	
Cheque	11/30/2001	1430	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	12/21/2001	1435	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	12/21/2001	1438			\$ 280.37	
				Subtotal 2001 Exploration Costs	\$ 195,796.97	
Cheque	1/10/2002	1400	APEX Geoscience Ltd.	Geological Fieldwork	\$ 1,547.00	
Cheque	1/10/2002	1401	APEX Geoscience Ltd.	Geological Fieldwork	\$ 1,150.38	
General Journ.	2/28/2002		APEX Geoscience Ltd.	Geological Fieldwork	\$ 18,493.50	

APPENDIX 2
2000 To 2003 Exploration Expenditures

Type	Date	Item	Name	Memo	Amount	TOTALS
Cheque	3/1/2002	1450	International Metallurgical & Envir.	Analytical	\$ 1,958.00	
Cheque	3/1/2002	1453	Saskatchewan Research Council	Analytical	\$ 870.00	
Cheque	3/1/2002	1707	Western Diamex	General Consulting	\$ 3,225.00	
Cheque	3/30/2002	1712	Western Diamex	General Consulting	\$ 2,775.00	
Cheque	4/30/2002	1717	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	8/3/2002	1502	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	6/17/2002	1729			\$ 500.00	
Cheque	6/26/2002	1731	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	7/26/2002	1756	International Metallurgical & Envir.	Analytical	\$ 8,549.13	
Cheque	6/1/2002	1505			\$ 1,273.34	
Cheque	8/2/2002	1506	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	8/20/2002	1781	International Metallurgical & Envir.	Analytical	\$ 2,314.00	
Cheque	8/20/2002	1780	Saskatchewan Research Council	Analytical	\$ 1,101.08	
Cheque	8/31/2002	1510	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	9/4/2002	1512	D.V. Ranchlands Corp	Access fee to rancher	\$ 5,800.00	
Cheque	11/13/2002	1814	International Metallurgical & Envir.	Analytical	\$ 4,775.76	
Cheque	11/29/2002	1531	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	11/30/2002	1523	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	12/5/2002	1533	D.V. Ranchlands Corp	Access fee to rancher	\$ 700.00	
Cheque	12/20/2002	1540	Western Diamex	General Consulting	\$ 4,000.00	
Cheque	12/20/2002	1841	International Metallurgical & Envir.	Analytical	\$ 712.00	
General Journ	12/24/2002		Elkview Coal Corp.	Joint exploration costs	\$ 8,995.00	
				Subtotal 2001 Exploration Costs		\$ 89,739.19
Cheque	1/15/2003	1843	International Metallurgical & Envir.	Analytical	\$ 1,546.00	
Cheque	1/28/2003	1555	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	2/27/2003	1869	International Metallurgical & Envir.	Analytical	\$ 225.00	
Cheque	2/28/2003	1559	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	3/31/2003	1566	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	4/30/2003	1572	Western Diamex	General Consulting	\$ 3,159.38	
Cheque	6/2/2003	1581	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	6/30/2003	1587	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	7/31/2003	1637	Western Diamex	General Consulting	\$ 3,000.00	
Cheque	8/4/2003	1599	International Metallurgical & Envir.	Analytical	\$ 2,990.65	
				Subtotal 2003 Exploration Costs		\$ 25,921.03
				TOTAL 2000 TO 2003 EXPLORATION COSTS		\$ 311,457.19

APPENDIX 3

APPENDIX 3
2001 - 2003 Sampling Burmis Magnetite Deposits

July to October 2002 Sampling											
Sample	Grid Line	Zone	Easting	Northing	Date Collected	Sample	Total Fe as		Ave. Grade	Ave. Grade	Interval
			NAD27	NAD27		Width (m)	Fe2O3 (wt%)	TiO2 (wt%)	Fe2O3 (wt%)	TiO2 (wt%)	Width
Marasek - A-Knob											
Single Chip and Grab Samples											
1DCP303	208+95N	11	692850	5505329	December, 2001	0.8	9.71	1.14			
1DCP302	208+85N	11	692842	5505317	December, 2001	4.0	9.45	1.4			
1DCP300	208+05N	11	692871	5505241	December, 2001	0.75	27.3	3.37			
1DCP301	208+00N	11	692897	5505243	December, 2001	1.2	21.8	2.64			
1DCP311	206+15N	11	692869	5505045	December, 2001	3.0	11.9	1.49			
1DCP312	206+00N	11	692892	5505035	December, 2001	5.0	20.8	2.03			
02HKC001	205+20N	11	692794	5504923	October 14/02	1.0	2.59	0.39			
02HKC006	205+00N	11	692702	5504879	October 15/02	1.2	12.12	1.57			
02HKC007	205+00N	11	692710	5504888	October 15/02	1.3	6.21	0.65			
Contiguous Chip Samples											
1DCP304	208+80N	11	692931	5505334	December, 2001	2.0	45.3	4.78	55.20	5.24	4.0
1DCP305	208+80N	11	692931	5505334	December, 2001	2.0	65.1	5.7			
1DCP309	206+60N	11	692863	5505090	December, 2001	4.0	30.7	3.59	27.20	3.43	8.0
1DCP310	206+60N	11	692863	5505090	December, 2001	4.0	23.7	3.26			
1DCP306	205+00N	11	693018	5504964	December, 2001	0.4	21.7	3.11			
1DCP307	205+00N	11	693018	5504964	December, 2001	2.5	13.8	1.68			
1DCP308	205+00N	11	693018	5504964	December, 2001	1.0	13.9	2.44	14.64	2.02	3.9
Marasek - Windy Ridge											
Single Chip and Grab Samples											
02HKC008	202+25N	11	692899	5504651	October 15/02	0.7	36.43	4.83			
02HKC009	201+70N	11	692919	5504595	October 15/02	Grab	0.96	0.21			
02HKC010	201+25N	11	692921	5504550	October 15/02	Grab	0.77	0.09			
02HKC011	200+80N	11	692920	5504505	October 15/02	Grab	0.47	0.2			
02HKC015	199+40N	11	692981	5504379	October 15/02	1.0	27.22	3.45			
02HKC016	199+00N	11	692937	5504325	October 15/02	Grab	2.74	0.36			
02HKC017	199+00N	11	692834	5504296	October 15/02	Grab	0.52	0.03			
Contiguous Chip Samples											
02HKC020	200+50N	11	692970	5504483	October 16/02	1.0	36.38	3.84	51.24	5.33	4.2
02HKC012	200+50N	11	692970	5504483	October 15/02	1.2	47.01	5.84			
02HKC021	200+50N	11	692970	5504483	October 16/02	1.0	64.12	6.07			
02HKC022	200+50N	11	692970	5504483	October 16/02	1.0	58.29	5.45			

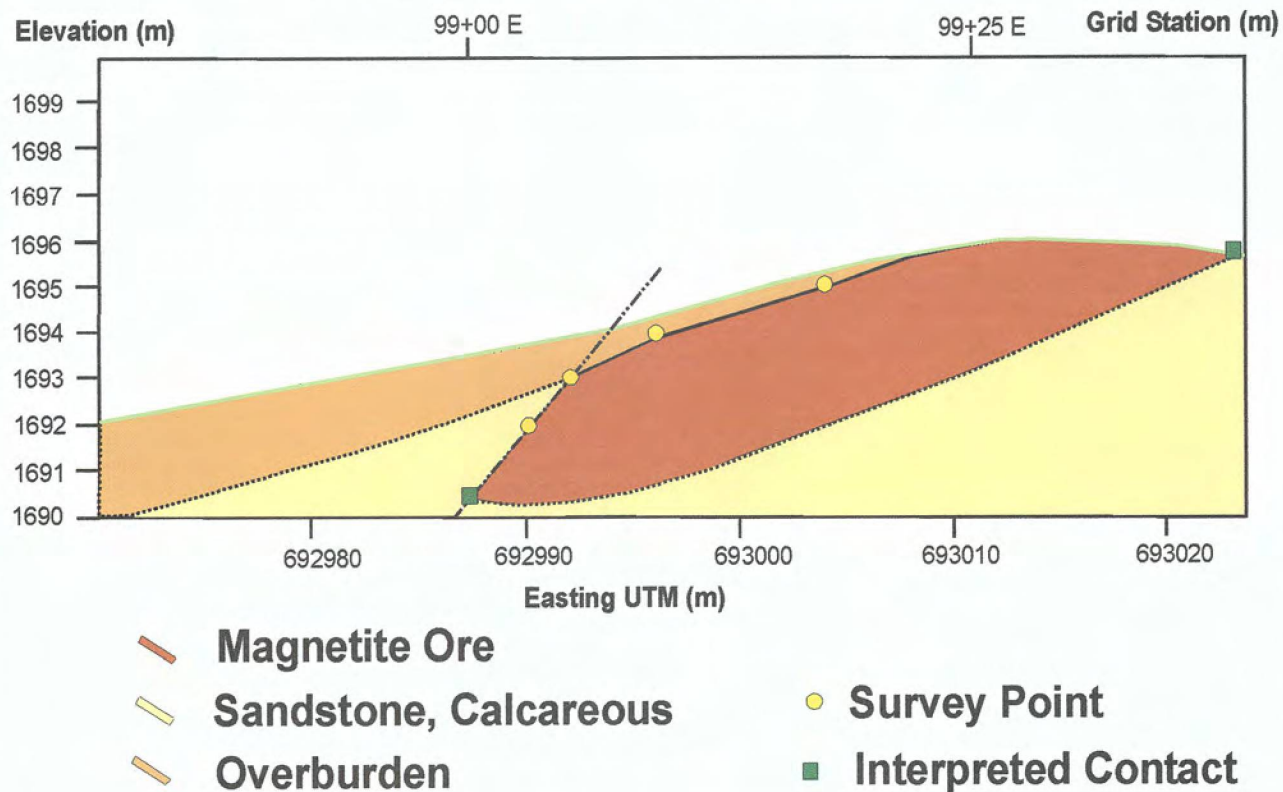
APPENDIX 3
2001 - 2003 Sampling Burmis Magnetite Deposits

Sample	Grid Line	Zone	Easting NAD27	Northing NAD27	Date Collected	Sample Width (m)	Total Fe as Fe2O3 (wt%)	TiO2 (wt%)	Ave. Grade Fe2O3 (wt%)	Ave. Grade TiO2 (wt%)	Interval Width
02HKC013	199+25N	11	692981	5504359	October 15/02	1.0	11.56	1.32	41.35	5.58	2.0
02HKC014	199+25N	11	692981	5504359	October 15/02	1.0	21.33	2.63			
02HKC018	199+25N	11	692981	5504359	October 15/02	1.0	40.81	5.44			
02HKC019	199+25N	11	692981	5504359	October 15/02	1.0	41.88	5.71			
South Marasek											
Single Chip and Grab Samples											
02HKC002	181+50N	11	693208	5502592	October 14/02	1.0	11.4	1.68			
02HKC003	181+50N	11	693196	5502589	October 14/02	1.2	24.48	3.49			
02HKC004	181+20N	11	693190	5502548	October 14/02	1.0	35.41	5.44			
02HKC005	180+90N	11	693170	5502522	October 14/02	1.0	27.21	4.11			
Northern Milvain											
Contiguous Chip Samples											
02JTP006	178+60N	11	694110	5502512	July 18/02	1.5	29.40	3.81	39.55	4.68	3.3
02JTP007	178+60N	11	694110	5502512	July 18/02	1.8	48.01	5.40			
Central Milvain (Central Burmis)											
Contiguous Chip Samples											
02JTN001	173+40N	11	694153	5501991	July 17/02	1.5	71.87	8.18	58.49	6.66	8.5
02JTP002	173+40N	11	694153	5501991	July 17/02	2	27.16	4.62			
02JTN003	173+40N	11	694153	5501991	July 17/02	5	67.01	7.02			
Single Chip and Grab Samples											
02JTP004	173+10N	11	694167	5501962	July 18/02	2	43.98	4.99			
02MDP001	172+60N	11	694195	5501920	July 18/02	Grab	69.07	7.75			
02JTP005	172+50N	11	694204	5501914	July 18/02	8?	59.29	7.19			
Float											
02BWP001	177+80N	11	693856	5502368	July 17/02	Grab	20.85	2.68			
Boutry (South Burmis)											
1CPP001		11	696066	5493801	December, 2001	grab	2.03	0.26			
1CPP002		11	696066	5493801	December, 2001	grab	8	0.87			
1CPP003		11	696066	5493801	December, 2001	grab	21.8	2.25			
1CPP004		11	696066	5493801	December, 2001	grab	22.7	2.52			

APPENDIX 4

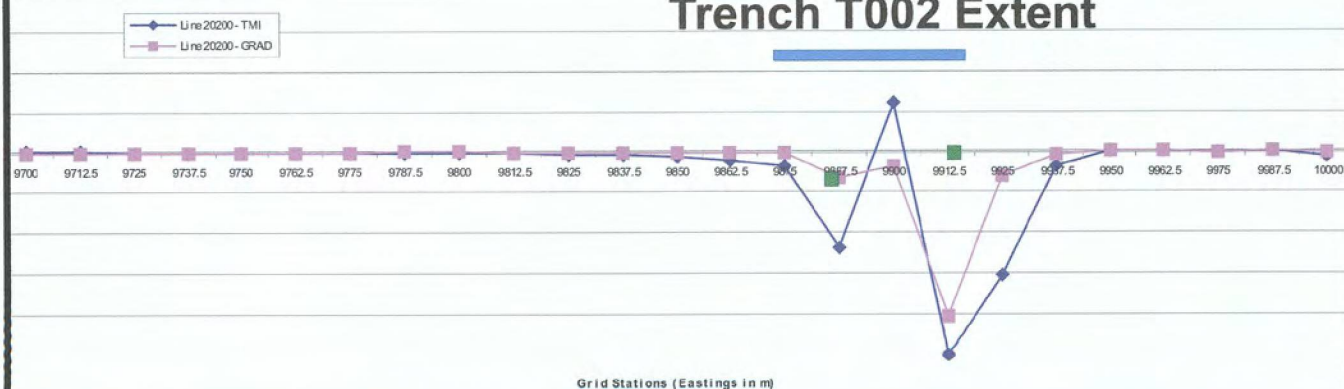
APPENDIX 4 – 2002 Trench Cross-Sections and Profiles

Trench T002, Grid Line 202+00 E, Interpreted Geology Cross Section

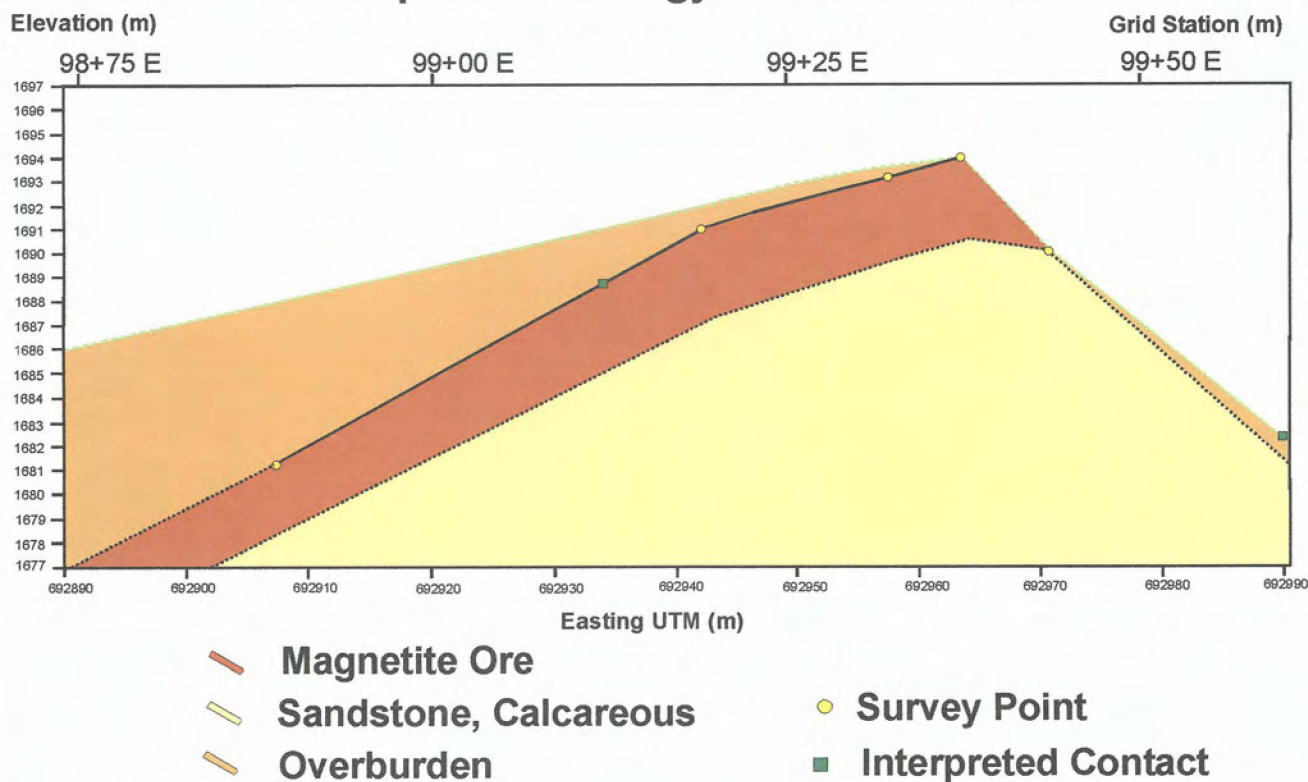


Line 20200 Magnetic Profile

Trench T002 Extent

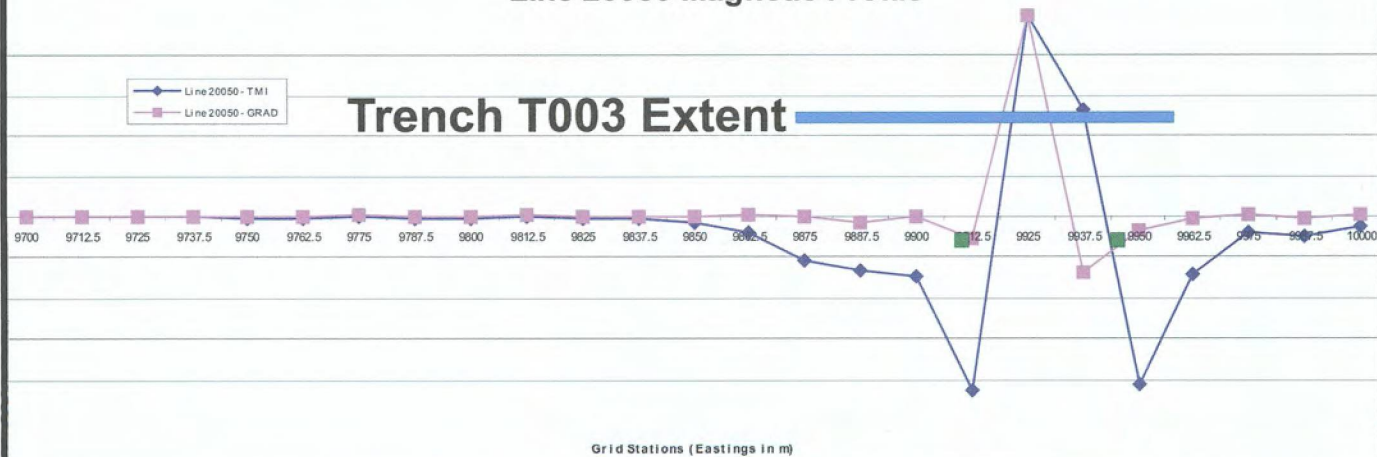


Trench T003, Grid Line 200+50 E, Interpreted Geology Cross Section

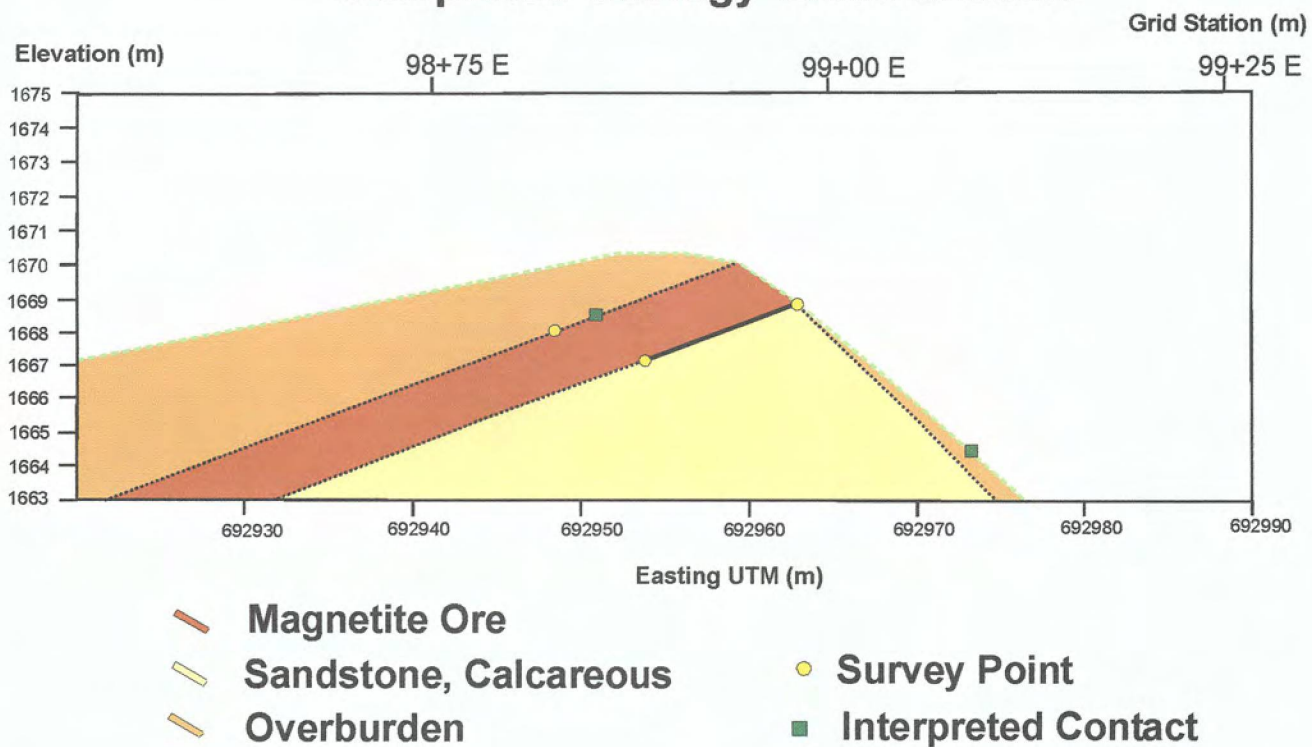


Line 20050 Magnetic Profile

Trench T003 Extent



Trench T004, Grid Line 199+00 E, Interpreted Geology Cross Section



Line 19900 Magnetic Profile

Trench T004 Extent



WIN 20040005

MAY 31 2005

INTERNATIONAL METALLURGICAL AND ENVIRONMENTAL INC.

#13 - 2550 Acland Road, Kelowna, B.C., CANADA, V1X 7L4, Telephone (250) 491-1722, Facsimile (250) 491-1723

E-mail: imeinc@silk.net

MICREX MAGNETITE PROJECT

Laboratory Test Work Results

Prepared for

Micrex Development Corporation
156 Laurier Drive
Edmonton, Alberta, T5R 5P9

Attention: Mr. Stan Marshall - President

January 22, 2001

January 22, 2001

Mr. Stan Marshall
President – Micrex Development Corporation
156 Laurier Drive
Edmonton, Alberta, T5R 5PG

Dear Stan,

International Metallurgical and Environmental Inc. has successfully completed the production of a magnetite product, from an ore sample submitted by Micrex Development Corporation, which was suitable the heavy media industry. The current test work confirmed the previous test results that were completed by International Metallurgical and Environmental Inc. on a lower grade sample in 1999. The current tests showed that the feed material was amenable to upgrading. The product produced exceeded the target specifications (S.G. > 4.80 g/cc, percent magnetics > 96%) for the current industry standards for heavy media.

A continuous low intensity drum magnetic concentrator was used for the tests in closed circuit with a rod mill used for both the primary grinding and also the regrinding of the rougher magnetite concentrates that were produced. The flow sheet of the circuit is shown in Figure 1.

The two drums containing 300 kg of sample were received at International Metallurgical Inc. The entire sample was crushed to 100% minus 4 mesh (Tyler) and thoroughly blended. A mineralogical analysis, whole rock and multi element ICP analysis were conducted on the head sample. The summarized results are shown in Table 1. The detailed results are presented in the Appendix.

Table 1 Head Analysis.

Sample	Magnetics	Fe	TiO ₂	SiO ₂	Zr
	%	%	%	%	ppm
Head	61.8	46.1	6	12.9	1780

A standard Bond Ball Mill Work Index Test that was carried out on the head sample showed that the power requirement was 13.8 kWh/tonne.

A mineralogical analysis was carried out by Dr. Jeff Harris (Appendix 3) that showed that the head sample had a sandstone – like appearance and contained approximately 56% magnetite, 14% ilmenite and 30% gangue minerals, principally quartz, carbonates and limonite. The effective liberation particle

size was shown to be 100 μm . A re-examination of the slide by Dr. Harris showed that minor amounts of rutile or anatase were present in the sample (< 5%).

The crushed sample was ground at 65% solids in a 3' x 2' rubber lined batch rod mill in four batches of 65 kg each. The initial ground product was relatively coarse with 80% passing 130 micron. The milled batches were passed through the drum magnetic separator at a magnetic field strength of 900 gauss. The rougher magnetic product was cleaned by re-processing through the drum magnetic separator. The collected cleaner magnetic product was sub-divided into two portions. One portion was stored for future testing while the second portion was re-ground prior to re-processing through the drum magnetic separator. The process was then repeated until the magnetic product was within the target specifications for a magnetite concentrate according to the current industry standards for heavy media. The final cleaning stage was carried out in closed circuit with the magnetic concentrate being recycled through the magnetic separator.

The summarized physical parameters of specific gravity, magnetics and particle size of the various products are presented in Table 2. The detailed results are presented in Appendix 2.

Table 2 Product Analysis.

Sample	S.G. g/cc	Magnetics %	Minus 45 μm %	Minus 9 μm %
Rougher Con	N.D.	70.1	N.D.	N.D.
Rougher Tail	N.D.	22.4	N.D.	N.D.
6 th Cleaner Con	4.84	N.D.	95.6	31
Final Con	4.85	98.9	95.6	30

N.D. = Not Determined

The rougher non-magnetic fraction contained 22.4% magnetics that represent 6% of the magnetite in the feed. The addition of a scavenger magnetic concentrator stage could reduce the magnetite content in the tailing.

Samples of the various products were analyzed and the summarized results are presented in Table 3. The ilmenite, zircon and gangue minerals were effectively rejected during the cleaning stages of magnetic separation.

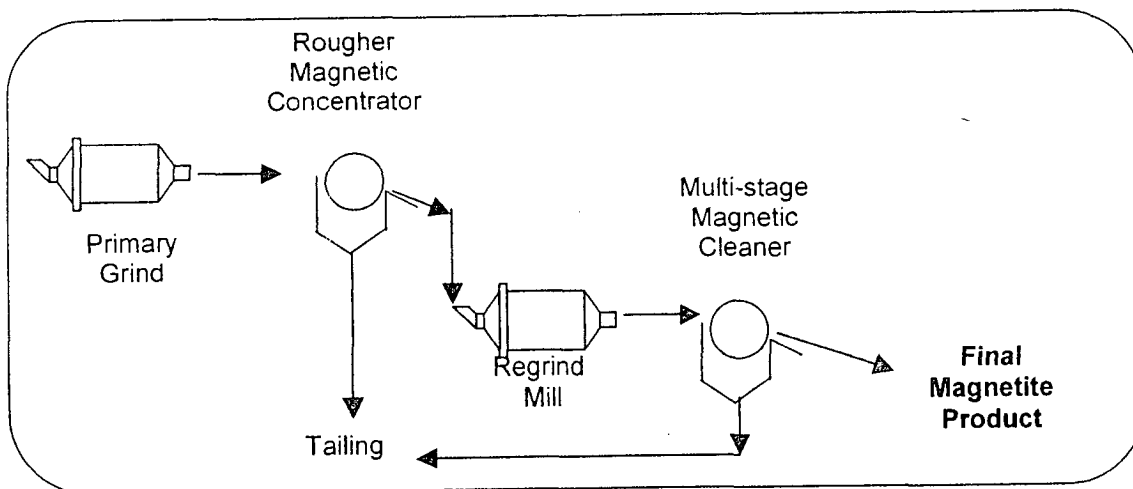


Figure 1 – Magnetite Up-grading Flow Sheet

Table 3 Product Analysis.

Sample	Fe %	TiO ₂ %	SiO ₂ %	Zr ppm
Feed	46.1	6.0	12.9	1780
Rougher Con	48.6	6.7	11.0	1595
Rougher Tail	22.2	6.8	24.0	4610
6 th Cleaner Con	68.3	4.3	3.6	141
6 th Cleaner Tail	36.1	9.6	13.8	1615
Final Con	69.9	3.8	3.4	117
Final Tail	59.4	5.8	8.4	483

The overall material balance for the test is presented in Table 4. Approximately 80% of the TiO₂, 99% of the Zr and 94% of the silicates (gangue minerals) reported to the rougher non-magnetic fraction.

Table 4 Overall Balance.

Sample	Weight %	Magnetics %	Assay TiO ₂ %	Zr ppm	Magnetics %	Distribution TiO ₂ %	Zr %
Final Con	31	98.9	3.8	117	66.9	20.4	1.1
Rougher Tail	69	22.4	6.8	4610	33.1	79.6	98.9
Feed (Assay)		61.8	6.0	1780			

Table 5 indicates the estimated mineral contents in the various products based on the product assays.

Table 5 - Mineral Content per Ton of Sample

Sample	Weight kg	TiO ₂ kg	Ti kg	ZrO ₂ kg	Zr kg
Raw Ore	1000	60	36	2.40	1.78
Final Magnetite Concentrate	1000	38	23	0.16	0.12
Final Non-Magnetic Tail (Calculated)	1000	70	42	3.43	2.54

Recovery of the ilmenite (FeTiO₃), rutile/anatase (TiO₂) and zircon (ZrSiO₄), if required, would require additional test work using a combination of wet high intensity magnetic separation (WHIMS), gravity separation and electrostatic separation.

Please call if you have any questions and thank you for considering International Metallurgical and Environmental Inc. for this project.

Yours very truly,

Bryan S. Tatterson. P.Eng.
Senior Metallurgical Engineer.
International Metallurgical and Environmental Inc.

cc Jeffrey B. Austin. P.Eng. – President, International Metallurgical and Environmental Inc.

cc Mr. Tom Bryant – Micrex Corporation

APPENDIX

- APPENDIX 1 Analysis Results
- APPENDIX 2 Test Results
- APPENDIX 3 Mineralogical Report

APPENDIX 1

Analysis Results

Appendix 1

Head Sample

Whole Rock Analysis
Multi-element ICP Analysis

Metallurgical Products

Iron Analysis
Whole Rock Analysis
Multi-element ICP Analysis

International Metallurgical and Environmental Inc.

Whole Rock Analysis Summary

Project: Micrex

Sample: Head Sample

Date: December 18, 2000

Whole Rock Analysis Summary

Sample	Al ₂ O ₃ %	CaO %	Cr ₂ O ₃ %	Fe ₂ O ₃ %	K ₂ O %	MgO %	MnO %	Na ₂ O %	P ₂ O ₅ %	SiO ₂ %	TiO ₂ %	LOI %	TOTAL %
Micrex Head	2.71	5.08	< 0.01	60.50	< 0.01	1.90	0.34	0.17	0.46	12.88	6.00	7.84	97.88

International Metallurgical and Environmental Inc.

ICP Analysis Summary

Project: Micrex
Sample: Head Sample
Date: December 18, 2000

Sample	Ba ppm	Ce ppm	Cs ppm	Co ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Gd ppm	Ga ppm	Hf ppm	Ho ppm	La ppm
Micrex Head	23	150.5	0.1	3.5	5	4	2.7	0.7	5.9	9.00	13.00	1	85

Sample	Pb ppm	Lu ppm	Nd ppm	Ni ppm	Nb ppm	Pr ppm	Rb ppm	Sm ppm	Ag ppm	Sr ppm	Ta ppm	Tb ppm	Tl ppm
Micrex Head	15	0.5	48	< 5	76	14	24	6.5	< 1	70	< 0.5	1	< 0.5

Sample	Th ppm	Tm ppm	Sn ppm	W ppm	U ppm	V ppm	Yb ppm	Y ppm	Zn ppm	Zr ppm
Micrex Head	25	0.4	1	< 1	6	50	3	24	265	1780


International Metallurgical and Environmental Inc.
Certificate of Analysis

Client: Micrex

PO# - 2827

Date: December 21, 2000

Sample		%Fe
Head		46.0
Ro Conc.		48.6
Mag Ro tail		22.2
1st CI Conc.		55.1
1st Mag CI tail		20.5
6th CI Mag Conc.		68.3
6th CI tail		36.1
Final Mag Conc.		69.9
Final Mag tail		59.4


Approved: Holly Dufour
Senior Analyst

International Metallurgical and Environmental Inc.

Whole Rock Analysis Summary

Project: Micrex

Sample: Head Sample

Date: December 18, 2000

Whole Rock Analysis Summary

Sample	Al ₂ O ₃ %	CaO %	Cr ₂ O ₃ %	Fe ₂ O ₃ %	K ₂ O %	MgO %	MnO %	Na ₂ O %	P ₂ O ₅ %	SiO ₂ %	TiO ₂ %	LOI %	TOTAL %
Micrex Head	2.71	5.08	< 0.01	60.50	< 0.01	1.90	0.34	0.17	0.46	12.88	6.00	7.84	97.88
Rough Mag Con	2.72	4.84	0.01	60.57	0.04	1.77	0.41	< 0.01	0.44	11.03	6.66	6.97	95.46
Rough Non-Mag	3.78	10.12	< 0.01	29.96	0.09	3.51	0.44	< 0.01	0.61	24.01	6.80	13.65	92.97
6th Clean Mag Con	1.07	0.51	< 0.01	87.10	0.51	0.31	0.16	0.20	0.12	3.59	4.30	1.08	96.79
6th Clean Non-Mag	3.61	5.87	0.01	46.51	0.08	1.08	0.55	< 0.01	1.00	13.84	9.58	11.87	94.90
Final Mag Con	1.00	0.59	< 0.01	82.00	0.51	0.23	0.16	0.20	0.08	3.35	3.84	-1.26	90.70
Final Non-Mag	1.86	1.60	< 0.01	68.10	0.59	0.66	0.20	0.20	0.20	8.35	5.84	2.10	89.70

Sample	Ba ppm	Rb ppm	ICP Analysis		Zr ppm	Y ppm
			Sr ppm	Nb ppm		
Head	23	24	70	76	1780	24
Rough Mag Con	< 5	24	68	78	1595	14
Rough Non-Mag	100	22	138	126	4610	58
6th Clean Mag Con	< 5	30	< 2	32	141	< 2
6th Clean Non-Mag	< 5	26	104	134	1615	28
Final Mag Con	< 5	36	< 2	30	117	< 2
Final Non-Mag	< 5	32	12	64	483	6

APPENDIX 2
Laboratory Test Results

Appendix 2

Head Sample	Grindability	Work Index Determination Size Analysis
Summary		Mass Balance
Rougher Concentrate		Size Analysis
Rougher Tail		Size Analysis
6 th Magnetic Cleaner Concentrate		Size Analysis
Final Magnetic Concentrate		Size Analysis
Final Magnetic Tail		Size Analysis
6 th Magnetic Cleaner Concentrate		Cyclosizer Size Analysis
Final Magnetic Concentrate		Cyclosizer Size Analysis
Specific Gravity Summary		
Summary of Magnetite Analysis		

International Metallurgical and Environmental Inc.
Bond Ball Mill Work Index Determination

Project: Micrex

Sample: Magnetite Feed

Weight of 700 cc of fresh feed: 1940.8

Mesh Size used in test: 200 mesh -74 μ m

Bond Ball Mill Work Index Determination

Cycle	Revolutions	Product Oversize g	Product Undersize g	Circulating Load %	Product per Rev. g/rev
1	150	1374.40	560.59	245.2	2.91
2	148	1609.50	326.74	492.6	1.72
3	251	1541.60	393.91	391.4	1.22
4	353	1434.70	501.09	286.3	1.11
5	390	1389.30	546.42	254.3	1.09
6	396	1383.90	552.25	250.6	1.09
7	396	1388.90	547.12	253.9	1.08

80 percent passing size for test feed:	3254	microns
80 percent passing size for product:	50	microns
Average grindability of last 3 cycles:	1.08	grams/rev
Calculated Bond Work Index:	13.8	kW/hr/tonne
	12.5	kW/hr/st

International Metallurgical and Environmental Inc.
Screen Analysis

Project: Micrex
Sample: Magnetite Feed

Bond Work Index - Feed

Mesh Size		% Retained		% Passing
Tyler	Micron	Individual	Cumulative	Cumulative
4 mesh	4760	4.8	4.8	95.2
8 mesh	2360	26.1	30.9	69.1
10 mesh	1700	8.3	39.2	60.8
14 mesh	1180	6.3	45.5	54.5
20 mesh	850	5.8	51.3	48.7
28 mesh	600	4.5	55.8	44.2
35 mesh	425	3.5	59.3	40.7
48 mesh	300	3.3	62.5	37.5
65 mesh	212	3.3	65.9	34.1
100 mesh	150	3.0	68.9	31.1
150 mesh	106	3.6	72.5	27.5
200 mesh	74	5.4	77.9	22.1
Minus 200 mesh	-74	22.1	100.0	

Bond Work Index-Product

Mesh Size		% Retained		% Passing
Tyler	Micron	Individual	Cumulative	Cumulative
200 mesh	74	0.3	0.3	99.7
270 mesh	53	14.8	15.1	84.9
400 mesh	38	24.1	39.2	60.8
Minus 400 mesh	-38	60.8	100.0	

International Metallurgical and Environmental Inc.

Mass Balance Summary

Micrex Magnetite Project

	Wt%	Assay				Distribution			
		Mags %	TiO ₂ %	SiO ₂ %	Zr ppm	Mags %	TiO ₂ %	SiO ₂ %	Zr %
Rougher Mag Conc	83.0	70.1	6.7	11.0	1595	93.9	82.8	69.1	62.8
Rougher Non-Mags	17.0	22.4	6.8	24.0	4610	6.1	17.2	30.9	37.2
Calculated	100.0	62.0	6.7	13.2	2108				
Assay		61.8	6.0	12.9	1780				

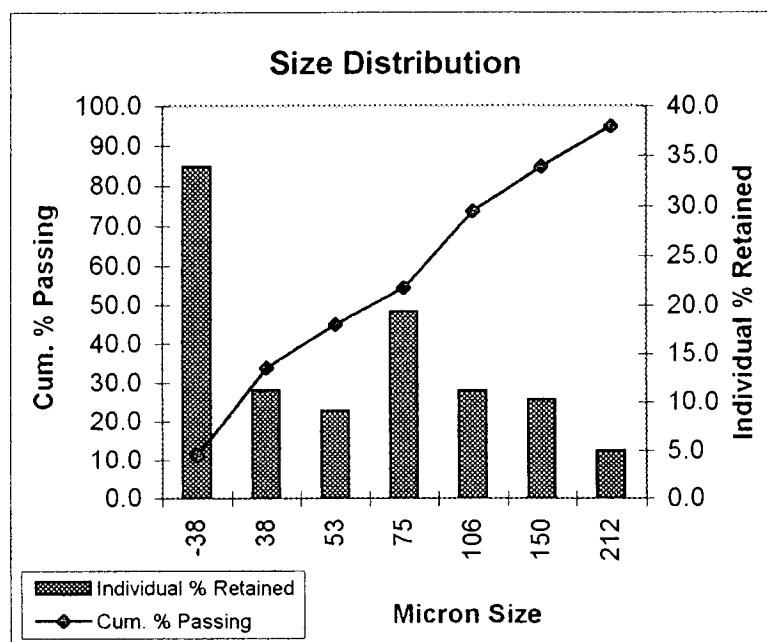
	Wt%	Assay				Distribution			
		Mags %	TiO ₂ %	SiO ₂ %	Zr ppm	Mags %	TiO ₂ %	SiO ₂ %	Zr %
Final Mag Conc	31	98.9	3.8	3.4	117	66.9	20.4	6.1	1.1
Rougher Non-Mags	69	22.4	6.8	24.0	4610	33.1	79.6	93.9	98.9
Calculated	100	46.4	5.9	17.5	3199				

	Weight kg	TiO ₂ kg	Ti kg	ZrO ₂ kg	Zr kg
Raw Ore	1000	60	36	2.40	1.78
Final Mag Conc	1000	38	23	0.16	0.12
Rougher Non-Mags	1000	68	41	6.23	4.61

International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Micrex
Sample: Rougher Mag Con
Date: December 6, 2000
80 % passing 130 μ m

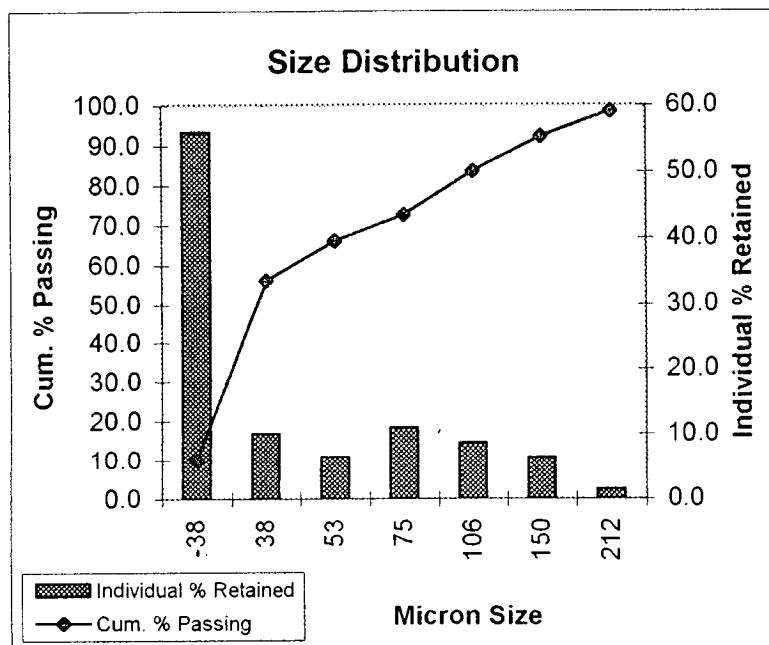
Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	4.9	4.9	95.1
100	150	10.3	15.2	84.8
150	106	11.2	26.4	73.6
200	75	19.3	45.8	54.2
270	53	9.1	54.9	45.1
400	38	11.2	66.1	33.9
-400	-38	33.9	88.8	11.2



International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Micrex
Sample: Rougher Mag Tail
Date: December 6, 2000
80 % passing 96 μ m

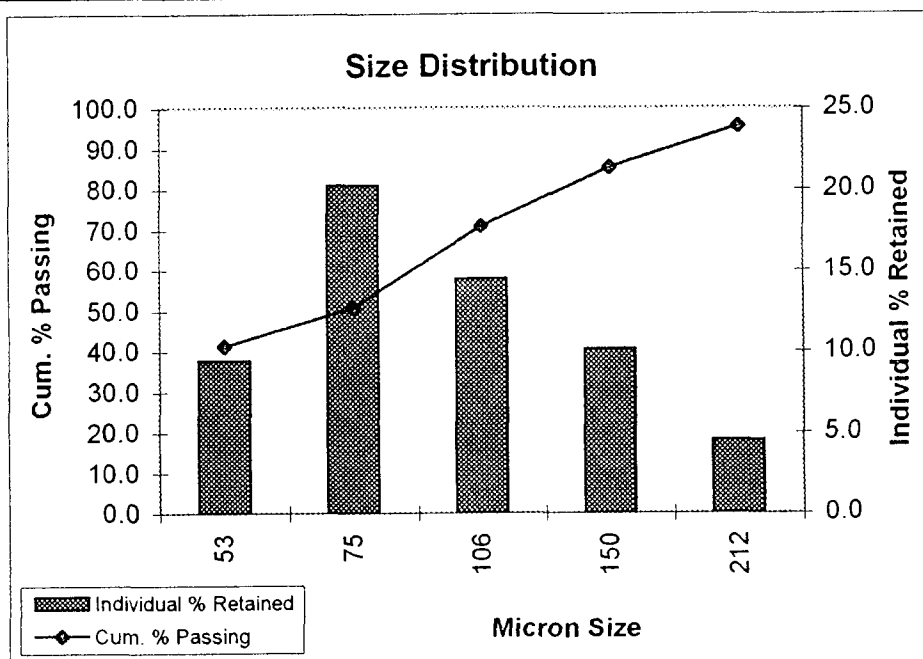
Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	1.4	1.4	98.6
100	150	6.4	7.8	92.2
150	106	8.6	16.5	83.5
200	75	11.0	27.5	72.5
270	53	6.5	33.9	66.1
400	38	10.0	44.0	56.0
-400	-38	56.0	90.0	10.0



International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Microx
Sample: 1st Mag Cleaner Con
Date: December 8, 2000
80 % passing 132 μ m

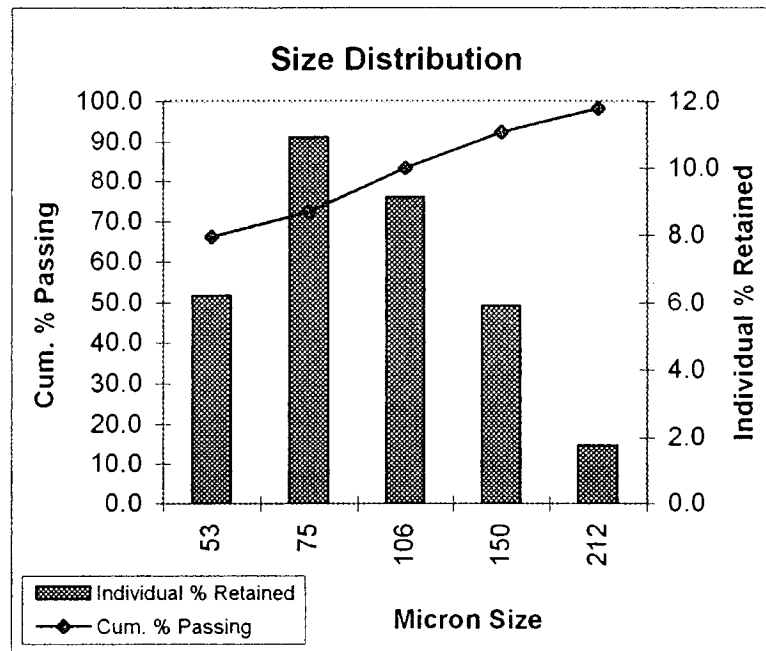
Mesh Size	Micron Size	Wt	% Retained		Cum. % Passing
			Individual	Cumulative	
65	212	9.01	4.5	4.5	95.5
100	150	20.04	10.1	14.7	85.3
150	106	28.66	14.5	29.1	70.9
200	75	40.12	20.2	49.3	50.7
270	53	18.67	9.4	58.8	41.2
400	38	24.57	12.4	71.1	28.9
-400	-38	57.22	28.9	87.6	12.4
		198.29			



International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Micrex
Sample: 1st Mag Cleaner Tail
Date: September 12, 2000
80 % passing 96 μ m

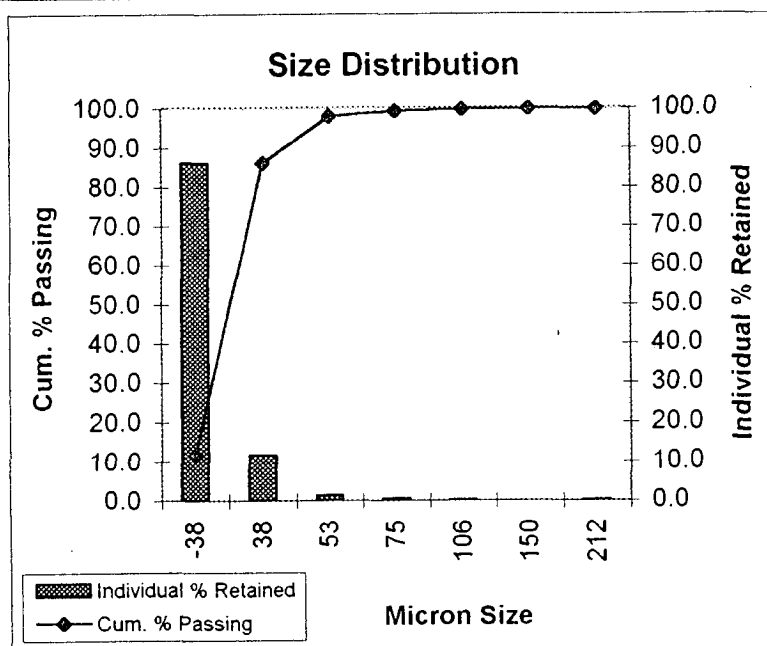
Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	1.8	1.8	98.2
100	150	5.9	7.7	92.3
150	106	9.1	16.8	83.2
200	75	10.9	27.7	72.3
270	53	6.2	33.9	66.1
400	38	9.6	43.5	56.5
-400	-38	56.5	90.4	9.6



International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Micrex
Sample: 6th Mag Cleaner Concentrate
Date: December 18, 2000
90 % passing 43 μ m

Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	0.1	0.1	99.9
100	150	0.1	0.2	99.8
150	106	0.2	0.3	99.7
200	75	0.5	0.9	99.1
270	53	1.2	2.1	97.9
400	38	11.9	14.0	86.0
-400	-38	86.0	88.1	11.9



International Metallurgical and Environmental Inc.
Screen Analysis Summary

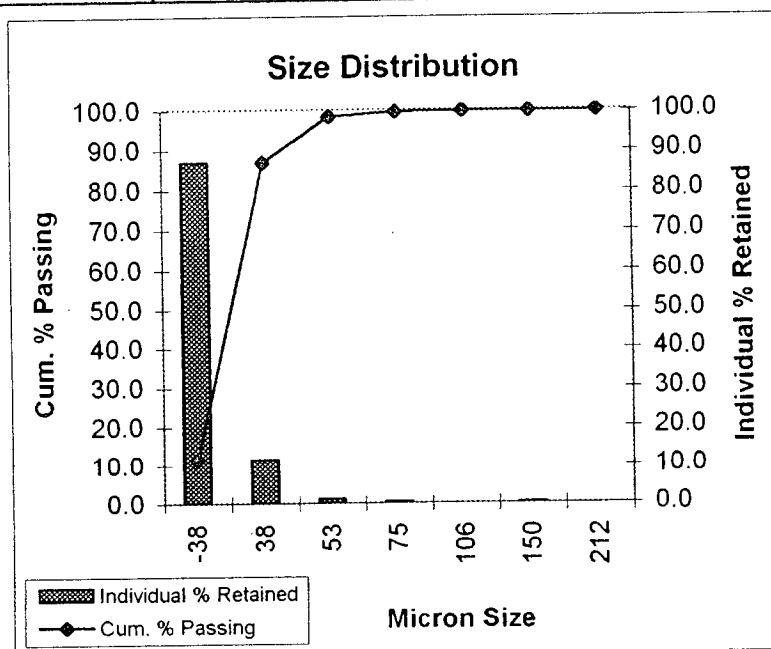
Project: Micrex

Sample: Final Mag Cleaner Concentrate

Date: December 18, 2000

90 % passing 42 μ m

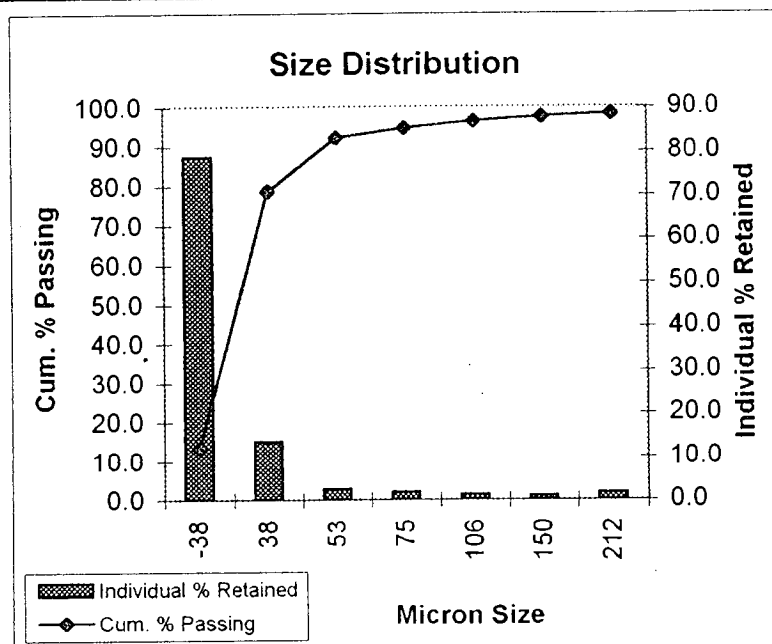
Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	0.0	0.0	100.0
100	150	0.1	0.1	99.9
150	106	0.1	0.2	99.8
200	75	0.3	0.5	99.5
270	53	1.1	1.6	98.4
400	38	11.5	13.2	86.8
-400	-38	86.8	88.5	11.5



International Metallurgical and Environmental Inc.
Screen Analysis Summary

Project: Micrex
Sample: Final Mag Cleaner Tail
Date: December 18, 2000
80 % passing 39 μ m

Mesh Size	Micron Size	% Retained		Cum. % Passing
		Individual	Cumulative	
65	212	1.6	1.6	98.4
100	150	0.8	2.4	97.6
150	106	1.2	3.6	96.4
200	75	1.7	5.3	94.7
270	53	2.4	7.7	92.3
400	38	13.6	21.3	78.7
-400	-38	78.7	86.4	13.6



International Metallurgical and Environmental Inc.
Cyclosizing Analysis Summary

Project: Micrex

Test No.:

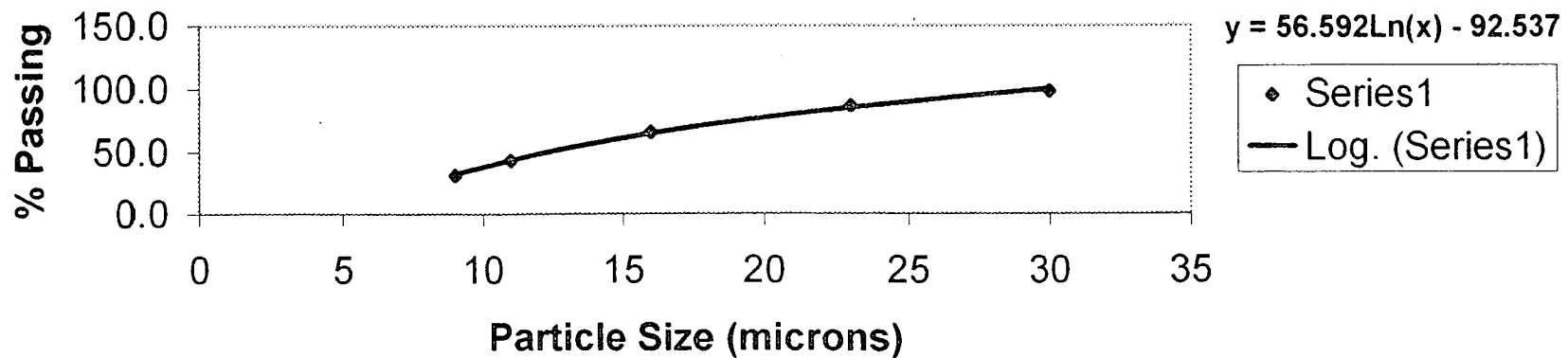
Sample: 6th Cleaner Magnetite Concentrate

Reporting Date December 20, 2000

% Passing 10 µm: 37.8

Sieve Size		Wt grams	% Retained		Cumulative % Passing
Mesh Size	Cyclone Size (µm)		Individual	Cumulative	
Cyclone 1	30	0.82	1.6	1.6	98.4
Cyclone 2	23	6.05	12.1	13.7	86.3
Cyclone 3	16	10.38	20.8	34.5	65.5
Cyclone 4	11	11.19	22.4	56.9	43.1
Cyclone 5	9	6.08	12.2	69.0	31.0
Minus Cyclone 5	Minus 9	15.48	31.0	100.0	
		50			

Particle Size vs Distribution



**International Metallurgical and Environmental Inc.
Cyclosizing Analysis Summary**

Project: Micrex

Test No.:

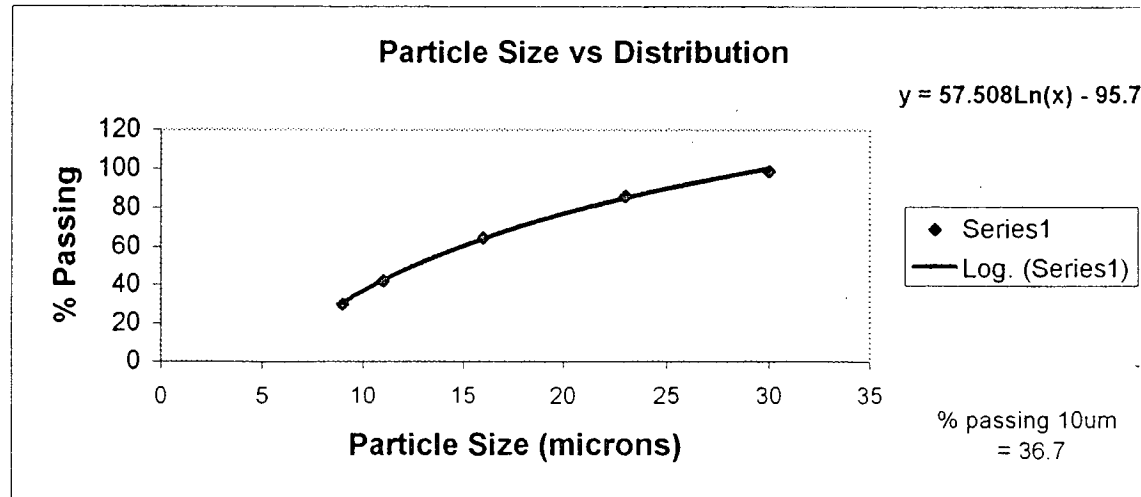
Sample: Final Magnetite Concentrate

Reporting Date: December 20, 2000

% Passing 10 μ m: 36.7

Cyclosizing Analysis Summary

Sieve Size		Wt grams	% Retained		Cumulative % Passing
Mesh Size	Cyclone Size (μ m)		Individual	Cumulative	
Cyclone 1	30	0.73	1.5	1.5	98.5
Cyclone 2	23	6.36	12.7	14.2	85.8
Cyclone 3	16	10.59	21.2	35.4	64.6
Cyclone 4	11	11.24	22.5	57.8	42.2
Cyclone 5	9	6.10	12.2	70.0	30.0
Minus Cyclone 5	Minus 9	14.98	30.0	100.0	
		50			



International Metallurgical and Environmental Inc.
Summary of Magnetite Analysis

Micrex Development Corporation
Reporting Date: December 14, 2000

Sample	Specific Gravity	Percent Magnetics % (900 Gauss)	Passing 45 micron %	Passing 38 micron %	Passing 10 Micron %
Rougher Magnetic Concentrate		70.1		33.9	
Rougher Tails		22.4		56.0	
Final Concentrate 1	4.85	99.2	95.6	86.8	31.0
Final Concentrate 2	4.85	98.6	95.6	86.8	31.0

Jeffery B. Austin, P. Eng.-President
International Metallurgical and Environmental Inc.

International Metallurgical and Environmental Inc.

Specific Gravity Summary

Client: Micrex

Project: Magnetite Concentration

Date: December 15, 2000

Specific Gravity Summary

Sample	Flask #	Flask Vol	Flask Wt	Flask + Solids	Solids Wt	F+S+W Wt	S.G. g/cc	S.G. Average
6th Cl Conc.	1	200	83.32	183.29	99.97	362.30	4.82	4.84
6th Cl. Conc.	2	200	81.10	181.09	99.99	360.29	4.86	
Final Conc.	3	200	79.56	179.53	99.97	358.71	4.86	4.85
Final Conc.	4	200	79.18	179.17	99.99	358.24	4.83	
H ₂ O	5	200	75.07			274.80	0.999	0.999

APPENDIX 3

Mineralogical Analysis – by Dr. Jeff Harris

Harris
**EXPLORATION
SERVICES**

MINERALOGY AND GEOCHEMISTRY

534 ELLIS STREET, NORTH VANCOUVER, B.C., CANADA V7H 2G6

TELEPHONE (604) 929-5867

Report for: I.M. & E. Inc.,
13 - 2550 Acland Rd.,
KELOWNA, B.C.
V1X 7L4

Report 01-12

February 5, 2001

(Supplement to Report 00-102)

As requested I have re-examined the polished thin section of the Micrex Head sample, with special reference to the abundance of anatase and/or rutile.

Opaque oxides in this sample consist of magnetite (grey, moderate reflectivity, isotropic), plus accessory ilmenite (brownish grey, anisotropic) and limonite (more or less poorly polished, sometimes sub-translucent brown).

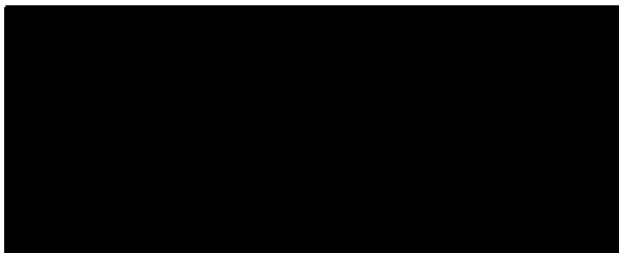
Very occasional grains, which are otherwise virtually indistinguishable from the magnetite, when viewed in cross-polarized reflected light appear translucent with abundant white to orange internal reflections. These are most likely anatase and/or rutile (composition TiO_2)

A count of 700 grains of apparent magnetite revealed only 6 grains exhibiting this feature, indicating that the abundance of anatase/rutile is very low. It would appear, therefore, that almost all the analyzed Ti in the present sample must be present in the form of ilmenite.

Ti is also known to occur as a trace element in some magnetites but, where present in greater than trace proportions, it is usually manifested as exsolved lamellae of Ti-rich composition. This feature is not recognizable in the present sample, where the magnetite appears homogenous even at maximum magnification.

Based on re-examination of the polished thin section, the estimated mode is as follows:

Magnetite	55.5
Ilmenite	14
Anatase)	0.5
Rutile)	
Limonite	9
Quartz	4.5
Carbonate	12
Chlorite)	4
Biotite)	
Zircon	0.5
Pyrite	trace



J.F. Harris Ph.D.

Harris
**EXPLORATION
SERVICES**

MINERALOGY AND GEOCHEMISTRY

534 ELLIS STREET, NORTH VANCOUVER, B.C., CANADA V7H 2G6

TELEPHONE (604) 929-5867

Report for: I.M. & E. Inc.,
13 - 2550 Acland Rd.,
KELOWNA, B.C.
V1X 7L4

Report 00-102

December 12, 2000

MINERALOGICAL EXAMINATION OF A SAMPLE FROM THE MICREX PROJECT

Introduction:

A sample of crushed rock, labelled Micrex Head, was submitted by Bryan Tatterson, with a request for microscopic examination re characteristics appertaining to magnetite separation.

A small portion of the sample was briquetted in epoxy and prepared as a polished thin section (slide 00-14344).

Description:

Estimated mode

Magnetite	56
Ilmenite	14
Quartz	4.5
Carbonate	12
Chlorite)	4
Biotite)	
Limonite	9
Zircon)	0.5
Monazite)	
Pyrite	trace

This sample consists of rock fragments up to 5 mm or so in size, plus disaggregated fines.

Thin section examination shows that the constituent lithotype is a rock of clastic (sandstone-like) appearance, comprising cemented aggregates of polymineraleic, angular to sub-rounded mineral grains, 0.1 - 0.3 mm in size.

These grains are principally magnetite, but are accompanied by accessory proportions of a slightly browner, anisotropic oxide phase thought to be ilmenite. Carbonate and quartz are additional accessories. These constituents occur in the cemented aggregates as individual monomineralic grains, similar in size to the magnetite.

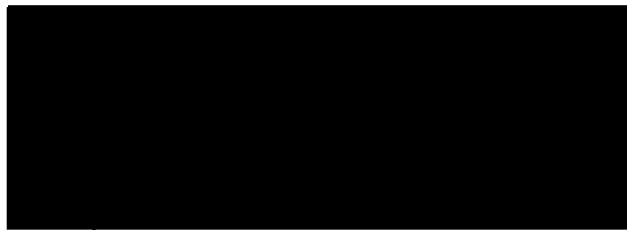
In most of the rock fragments making up the thin section the clast-like mineral grains are predominantly Fe and Fe-Ti oxides, but in some cases quartz and/or carbonate are equally or - occasionally - more abundant.

The cementing phase also shows considerable variation. In some cases it is carbonate; in others a translucent, green, compact chloritic or biotitic material; in others it is ochreous limonite; and in others it is a mixture of two or more of the above.

The off-cut corresponding to the sectioned portion of the sample shows localized effervescence when tested with dilute HCl. This indicates that the carbonate component includes some calcite. It seems likely, however, that other carbonate species (possibly Fe-bearing) may also be present. This could be verified by XRD analysis.

The effective particle size of the magnetite for liberation purpose would appear to be in the order of 0.1 mm. How clean the magnetite grains will actually be with such a grind will depend on whether the rock breaks preferentially along the clast contacts (thus minimizing the proportion of grains with adhering "corners" of the cementing phases(s)).

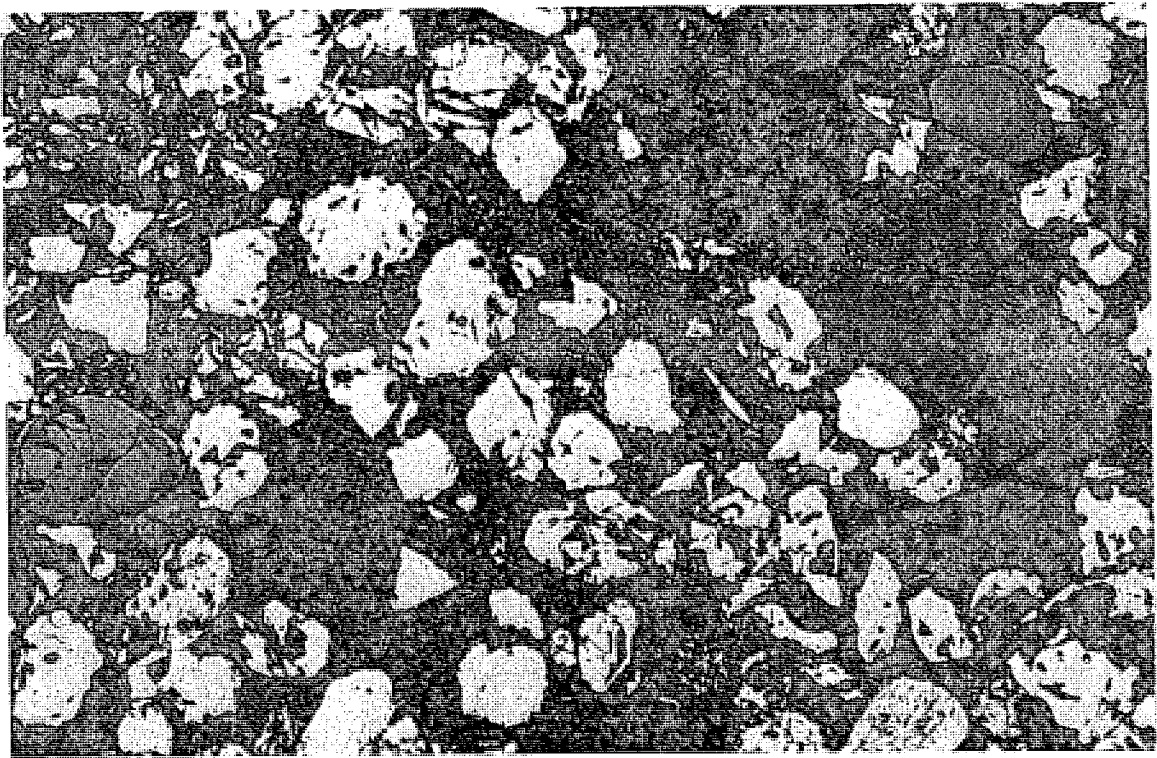
The attached photomicrographs provide visual illustration of the unusual textural character of this sample.



/ J.F. Harris Ph.D.

PHOTOMICROGRAPHS

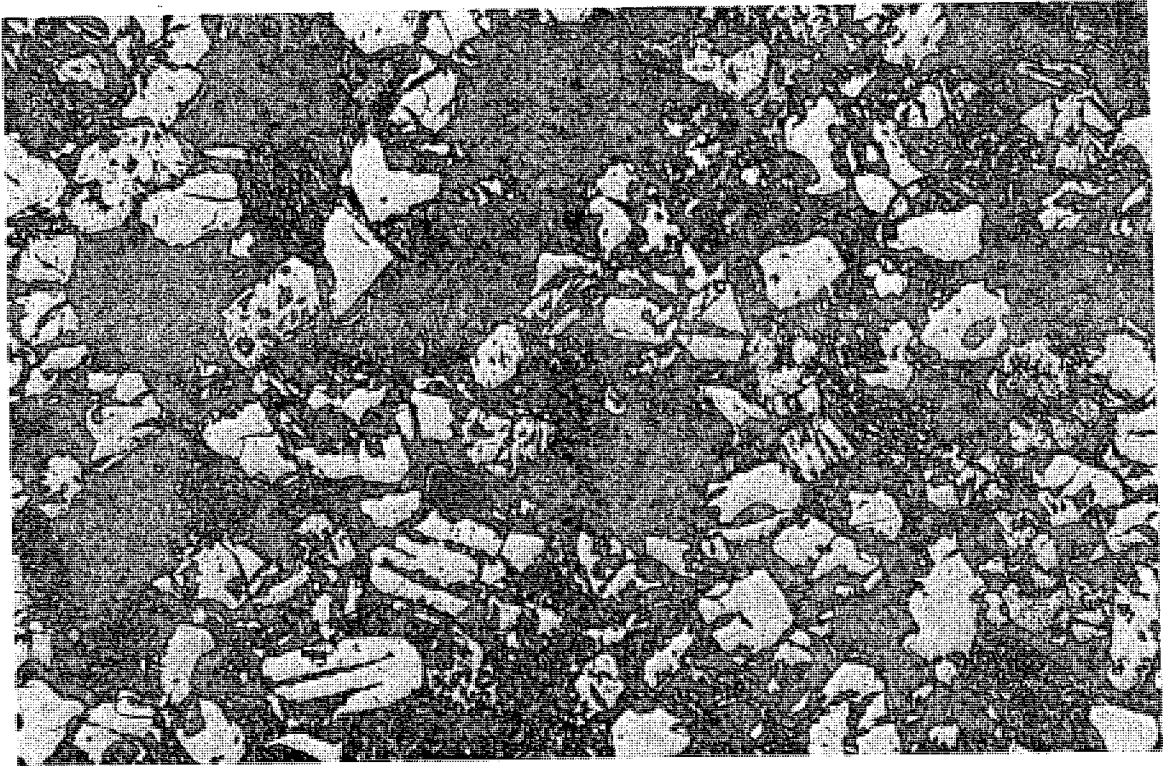
All photos are at a scale of 1 cm = 85 microns.



Neg. 492-18A: Typical field by reflected light, showing mode of occurrence of Fe and Fe/Ti oxides (light greys), as discrete, sub-rounded clasts, along with larger clasts of quartz and carbonate (lower reflectivity grains, e.g. upper right). Cementing phase in this case is carbonate.

PHOTOMICROGRAPHS

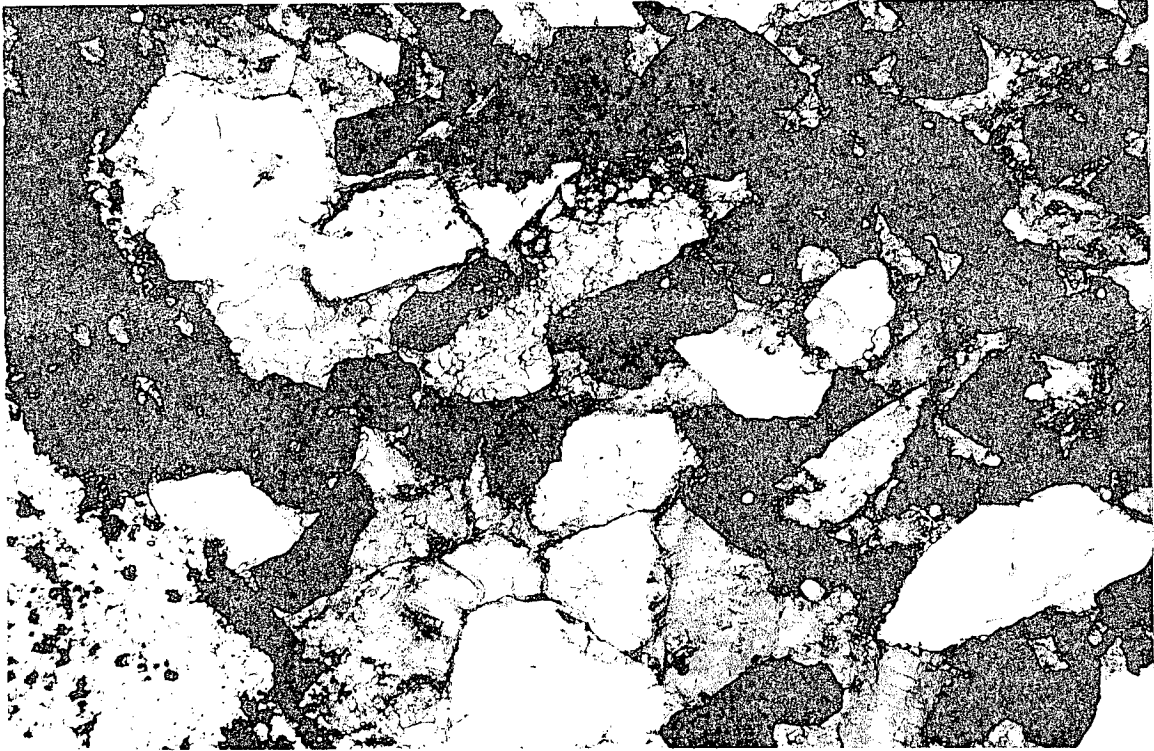
All photos are at a scale of 1 cm = 85 microns.



Neg. 492-20A: Another field showing similar features to 492-18A, but with a cement of earthy limonite. The oxide minerals (smaller, light grey grains) include both magnetite and probable ilmenite. The latter is distinguishable from the magnetite by its slightly more yellowish-brown colour (examples circled).

PHOTOMICROGRAPHS

All photos are at a scale of 1 cm = 85 microns.



Neg. 492-21A: Transmitted light, showing part of a rock fragment in which the constituent clasts consist of quartz (white) and carbonate (buff colour) in roughly equal proportion to Fe and Fe-Ti oxides (opaque; black). The sandstone-like character of this material is clearly apparent. The cementing phase in this example is a mixture of carbonate and chlorite. An edge of the rock fragment is just visible at bottom left (the speckled white area being the mounting medium).

MIN 20040005

MAY 31 2005

ELKVIEW COAL CORPORATION
Burmis 2002 Exploration Program Results
January 2003
D. Endicott

In July 2002 Elkview Coal Corporation (ECC) and Micrex Development Corporation (MDC) representatives toured a magnetite deposit located in the Alberta foothills just east of the Crowsnest Pass. The purpose of the visit was to determine the potential of the site as a source of magnetite suitable for use in dense medium coal separation at our Plant facility.

The Marasek magnetite deposit forms the northern portion of the magnetite reserves held by MDC. The Marasek magnetite is hosted within the Upper Cretaceous Belly River sandstone that has been deformed during Upper Cretaceous and Tertiary tectonic activity associated with the formation of the Rocky Mountains. The Belly River sands and intercalated magnetite beds were likely formed within a beach environment along the margin of the Late Cretaceous Colorado Sea. There is a long history of exploration on these deposits dating back to at least 1912.

An exploration report compiled by Apex Geoscience Ltd. (AGL) which reviewed the historical data and results of work conducted in 2001 lists the resource estimate for the Marasek area at 242,700 cubic metres. This yields about 873,800 metric tonnes of magnetite ore at a specific gravity of 3.6kg/m³.

Following a review of the data provided by Micrex and an initial economic evaluation of the potential for mining by ECC staff it was agreed that additional exploration activity was required to accurately delineate reserve values which were capable of supplying ECC needs for a five year period. It was decided at a meeting in September of 2002 between ECC and MDC representatives that this exploration would be focussed on the Windy Ridge area of the Marasek magnetite reserves. The Windy Ridge area was chosen by ECC because of the favourable geology, topography, access and ore thickness exposed in two old excavations related to exploration activity dating back to ~1956. Exploration by Micrex had been avoided in this area prior to July 2002 due to a dispute regarding surface rights ownership and accessing problems. This issue was resolved by the Alberta Government early in 2002 and cleared the way for MDC to work on their mineral claims in this area. A surface exploration plan for the Windy Ridge area was delineated in late September of 2002 to augment geophysical ground survey work in the same area previously planned by MDC. This was intended to try and define 300,000t of magnetite ore in the Windy Ridge and immediately adjacent areas.

In December of 2002 ECC employees along with Apex Geoscience employees (on behalf of MDC) conducted a five day exploration program which involved trenching, surveying, mapping and assaying of magnetite ore zones in the Marasek area. Following the analysis of 25 samples collected in the area the estimated magnetite ore resources total ~32,000 cubic metres at an average 3.2 SG and 2,550 cubic metres at 3.4 SG. This translates into ~111,200t containing approximately 60% magnetics. At this concentration the defined resource would last 4-5 years at an annual ECC consumption rate of 23-25,000t per year (at 6 million clean tons coal/year). See Tables 4 and 5 in the Appendix to view detail of the **"Burmis Magnetite Mill Flowsheet and Mass Balance"** with the required ore tonnage at 60% and 65% magnetics content.

Additional magnetite resources exist directly north of the area explored in December and ongoing exploration in these areas could extend the life of the deposit considerably.

Table of Contents

		<u>Page</u>
1.1	Introduction and Location	1
1.2	Regional Geological Setting	3
1.3	Exploration Activity	5
1.4	Exploration Results	6-10
1.5	Magnetite Ore Resources	11-12
1.6	Conclusions	13
1.7	Recommendations	14

	<u>LIST OF FIGURES</u>	<u>Page</u>
Figure 1	Location	2
Figure 2	Burmis General Geology	4
Figure 3	X – section T002 and Magnetic Profile	Appendix
Figure 4	X – section T003 and Magnetic Profile	Appendix
Figure 5	X – section T004 and Magnetic Profile	Appendix
Figure 6	Sample Site Locations and Interpreted Magnetite Extent from Gradient Geophysics	Appendix
Figure 7	Reserve Calculation Drawing	Appendix

	<u>TABLES</u>	
Table 1	Burmis Magnetite Ore Sample Analysis	9
Table 2	Undiluted Resource Estimate for the Burmis Project	Appendix
Table 3	Burmis Magnetite Flowsheet-60% Magnetics	Appendix
Table 4	Burmis Magnetite Flowsheet-65% Magnetics	Appendix

1.1 Introduction and Location

In July and September 2002, ECC representatives and MDC representatives toured a portion of the Burmis magnetite deposit located 9 kilometres east and northeast of Blairmore Alberta, on the eastern slopes of the Livingstone Range (Fig. 1). The property is situated within sub-alpine to alpine terrain and is used mainly for cattle grazing by local farmers. The purpose of these visits was to assess the potential for the long-term supply of magnetite to ECC for use in the dense medium separation process at the Plant.

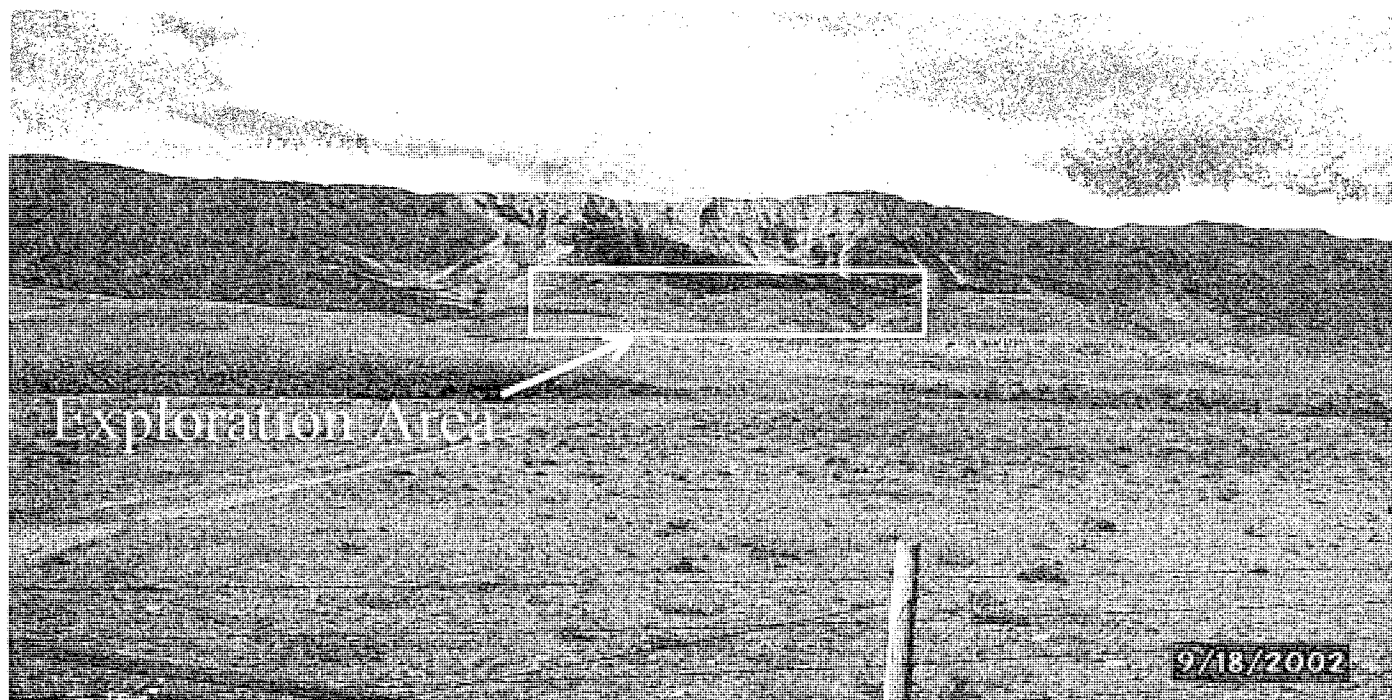


Photo 1 – View (looking west) of the north end of the Burmis magnetite deposit. The magnetite beds lie just above the resistant sandstone cliff on the lower right hand side of the photo and run parallel to the Livingstone Range south to Highway 3.

Three magnetite deposits exist at the Burmis property and are historically named the North Burmis (Marasek), Central Burmis (Milvain), and South Burmis (Boutry) deposits. Micrex began exploration and a review of historical data available on the area in September 2000. Their exploration since 2000 has focussed on the northernmost historical magnetite deposits within the Marasek and Milvain areas. The mineral claims held by MDC cover approximately 4,000 hectares.

This report reviews the assessment of a portion of the reserves in the Marasek area following a ground magnetics survey and sampling program conducted by Apex Geoscience in October as well as a joint surface exploration program conducted from December 11-15, 2002.

1.2 Regional Geology Setting

Figure 2 illustrates the general geology of the area north of Burmis. The Burmis magnetite deposits are hosted in the Upper Cretaceous Belly River Formation. In general, the magnetite horizons are hosted in Cretaceous strata directly underlying the Lewis thrust fault and have a north to northwest strike of tens of kilometres and dip southwest at values ranging from 5-40 degrees. The Cretaceous strata containing the magnetite deposits form the immediate footwall to the Livingstone Front Range.

The tectonic activity associated with the formation of the Lewis thrust resulted in internal imbrication, asymmetric folding and accommodation folding within the Upper Cretaceous Belly River Formation.

The Blackstone shale is the lowest Upper Cretaceous unit within the region and lies unconformably on top of the Lower Cretaceous Blairmore Group. Blackstone shales grade upwards into the quartz-rich sandstone of the Cardium Formation, interpreted as near shore deposits on the western margin of the ancient inland Colorado Sea.

A sharp contact between the Cardium Formation and the overlying Wapiabi shale is thought to mark an episode of rapid deepening of the Colorado Sea (Mellon 1961). Interlayered sandstone and shale of the Belly River Formation and the underlying Wapiabi Formation, respectively, indicate a gradual withdrawal of the Colorado Sea to the south east. The Crowsnest Pass sedimentary magnetite deposits are hosted at this stratigraphic level. Magnetite deposition at this interval is likely due to resurgence in proximal, near shore (beach-front) detritus accumulation from the emerging Rocky Mountains (eastward prevailing sedimentation).

1.3 Exploration Activity

On December 11, 2002 ECC mobilised a Cat 300 backhoe to the Burmis project to do some exploratory trenching and sampling along a 0.5-1.0 km stretch of magnetite outcroppings in the Marasek area. The exploration focussed on a ridge referred to as Windy Ridge because of the favourable geology seen during site visits in July and September of 2002. The object of the exploration program was to reveal outcrop locations for sampling, measuring and surveying of the magnetite layer. In addition, 4 trenches were to be dug, from outcrop progressing west, to determine the structural geology and evaluate the difficulty involved in removing overburden from the magnetite layer.

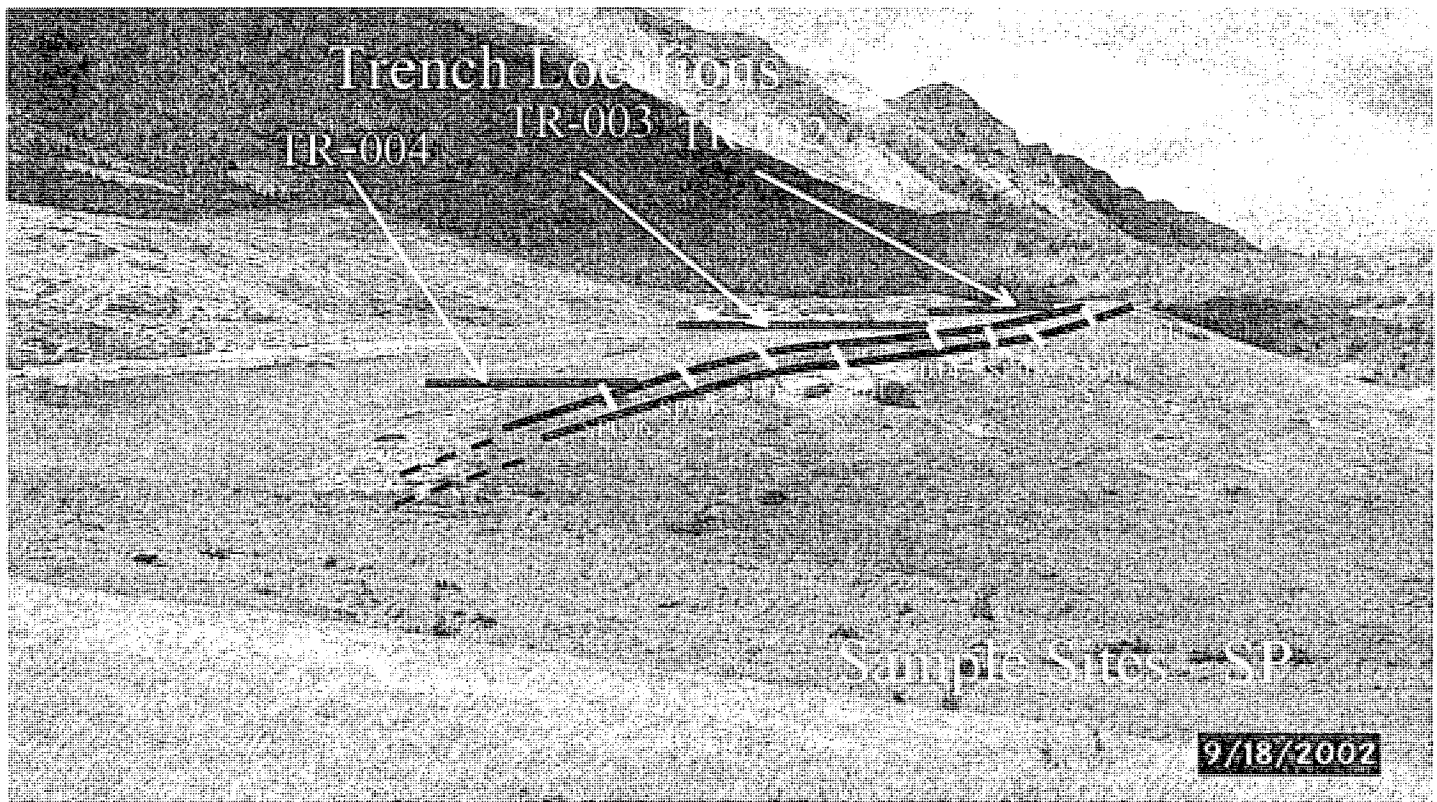


Photo 2 – View of Windy Ridge looking northwest with the approximate location of sample sites and trenches dug in December 2002.

Apex Geoscience Ltd. also conducted a sampling program and ground magnetic survey over the Windy Ridge area in October 2002 following a resolution of surface rights ownership. The results of the above two programs have been incorporated to provide a better understanding of the reserve potential, ore quality and mining conditions in the Marasek area in the following report sections.

1.4 Exploration Results

Excavation with the Cat 300 hoe began on December 11, 2002. The excavations focussed initially on digging the three main trenches in the Windy Ridge area to assess geology and digging conditions working to the west. Figures 3,4 and 5 in the appendix illustrate the X-section interpretation at each trench site provided by Apex Geoscience following a review of outcrop survey data obtained in December and magnetic survey data (done in October 2002).

In October 2002 ground magnetometer and gradiometer surveys were conducted over the Windy Ridge area. One of the products of the magnetic survey was a "Magnetic Extent From Gradient Geophysics" map (Fig. 6). This map confirms the lateral extent of the mapped ore and some proof of an extension downdip of 25-40m. When the information gathered in the magnetic survey is compared to the trench excavation data we can see that looking west. Hanging wall material



Photo 3 -View of Trench 003 excavation appeared to be hard packed post glacial debris accumulated on top of a 70cm band of dark mudstone sitting on top of the magnetite layer dipping 9-10 degrees west and extending ~25m west.

the eastern most projection of the ore data boundary extends beyond the surveyed outcrop data. The western most extent is interpreted in Trench 003 as extending only 20-30m down dip whereas the hanging wall of the ore in Photo 3 is shown as very consistent and was followed ~ 50m down dip. These magnetic response limits are denoted as green squares on the X-sections.

1.4 Exploration Results Cont'd

At the Trench 002 site very little overburden (<0.5m) covered the magnetite layer which was dipping at ~5 degrees to the west and averaged 2.6m in thickness. The western side of the trench exposed a thrust fault, which had been anticipated to cut off the magnetite layer.

In Trench 003 the ore surface was traced approximately 50m down dip. At this point the hoe had dug through ~ 6.8 meters of recent post glacial debris material with relative ease to scratch the surface of the ore (similar to Photo 3). The ore layer surface at this point was very hard. Unfortunately the backhoe was at its limit and could not dig any deeper to determine the thickness of the ore at this point or continue to the west to find the thrust fault structure observed in Trench 002. The geophysical survey data however concluded that the ore zone had ended approximately 35m down dip where approximately 4m of overburden covered the ore.

Trench 004 on the south end of the Windy Ridge deposit was excavated along a steep side hill to expose the magnetite band which had thinned to ~1.8m in thickness.

In a previous report issued by Apex it was stated that the magnetic intensity may be affected by the amount of overburden, including glacial and non-magnetite bearing bedrock, that covers a particular magnetic horizon. This may explain the loss of the response working down dip or it could signify a rapid thinning of the ore layer. Drilling several holes along strike to determine the true thickness of the ore at this point will be required to remove any doubt. This will help confirm interpreted ore volumes in the Windy Ridge deposit. The ore thickness at the western extent of the deposit in Trench 003 and extending southwest of Trench 004 were thinned to a nominal 2 meters and 1.4m respectively for resource calculations.

When analysing the response of the magnetometer and gradiometer survey results on the eastern margin it appears that eroded magnetite bearing debris, which has rolled down the slope, may be influencing the nature of the response beyond the true outcrop boundary.

After the trenches were dug the focus turned to exposing the eastern margin of the ore outcrop every 50m to assess the thickness and take representative samples. Figure 8 illustrates the planned sample sites and trench locations for the December 2002 program as well as the interpreted magnetite extent from the gradient geophysics. Only 9 of the designed 17 sample sites were tested. In the Windy Ridge area samples were collected every 50m starting at SP006 working north to the SP011 site. No ore was located at the SP004 site as the ore is cut off along the western margin by a thrust fault. No sample was collected at the SP016 site, as the topography was too steep.

1.4 Exploration Results cont'd

Following the completion of work in the Windy Ridge area the hoe was used to reconstruct a section of old road to access the designed SP007 and SP008 sites on Knob-A. After reviewing the outcrop bedding it was felt that a tight fold structure existed at Knob-A and there was no stripping required to expose the ore surface (see Photo 4). The axis of the fold appeared to parallel the slope on the north side of the ridge and lined up with the intersection of two limbs of magnetite exposed further north. This structural interpretation differs from that put forward in the March 30, 2002 report issued by Apex Geoscience, which has a thrust fault separating the two limbs shown in the background. 3 magnetite samples were collected from the fold area.

It should be noted at this point that Apex has accumulated significant grab sample data from the Marasek area north of Knob-A, which can be used for developing additional reserves. The challenge when looking at this area would be the access development design and cost control to release economic reserves.

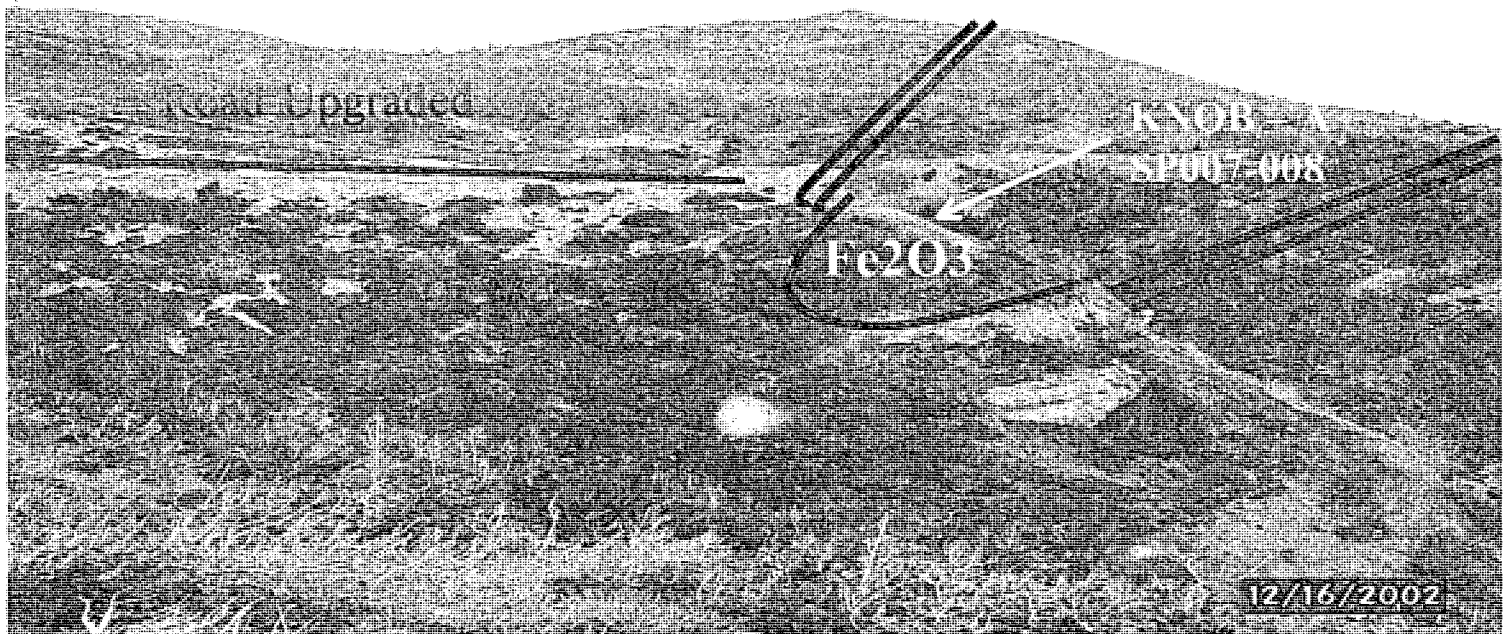


Photo 4 – View looking north showing the section of road upgraded to access sample sites 007 and 008. A tight fold in the magnetite ore has been interpreted on Knob-A. Accessing further north into the Marasek deposit to sample ore shown in the background was not achieved.

1.4 Exploration Results cont'd

Access to sample sites further north was not possible as the hoe was required to do trench infilling and reclamation prior to the December 15 deadline for removing the hoe from the area. The deadline was an exploration permit condition imposed due to the elk migration patterns in the area.

Altogether 25 magnetite samples (see Table 1) were collected during the 5 days of exploration work. As many as 5 samples were taken from one sample site in an effort to understand changing magnetite concentration within the interval sampled.

Table 1							
Burmis Magnetite Ore							
						900 gauss	
Trench ID	Sample Area ID	Lab #	Received Date	Percent TiO2	Percent Fe2O3	Percent Magnetics	Apparent SG Density
Trial		2002-3637	13-Dec-02			50.10	
02JTA001	T002	2002-3638	13-Dec-02			50.25	
02JTB001	T002	2002-3639	13-Dec-02			62.95	
02JTC001	T002	2002-3640	13-Dec-02			49.74	
02JTD001	T002	2002-3641	13-Dec-02	5.34	43.25	48.60	3.12
02JTA002	SP014	2002-3664	16-Dec-02			53.95	
02JTB002	SP014	2002-3665	16-Dec-02			54.95	
02JTC002	SP014	2002-3666	16-Dec-02			72.20	
02JTD002	SP014	2002-3667	16-Dec-02	6.00	54.18	65.25	3.32
02JTE002	SP014	2002-3668	16-Dec-02				
02JTA003	T004	2002-3683	17-Dec-02	4.36	32.09	55.99	3.06
02JTA004	SP005	2002-3669	16-Dec-02	4.46	39.75	60.45	3.19
02JTA005	SP015	2002-3670	16-Dec-02			57.25	
02JTB005	SP015	2002-3671	16-Dec-02			49.80	
02JTC005	SP015	2002-3672	16-Dec-02	4.61	39.68	57.02	3.14
02JTA006	SP013	2002-3673	16-Dec-02	5.61	55.72	65.81	3.31
02JTA007	SP012	2002-3674	16-Dec-02			52.50	
02JTB007	SP012	2002-3675	16-Dec-02			56.70	
02JTC007	SP012	2002-3676	16-Dec-02	4.84	39.86	58.99	3.22
02JTA008	SP011	2002-3677	16-Dec-02			70.90	
02JTB008	SP011	2002-3678	16-Dec-02			69.60	
02JTC008	SP011	2002-3679	16-Dec-02	5.59	50.15	67.20	3.27
02JTA009	SP007	2002-3680	16-Dec-02	5.38	51.13	69.20	3.36
02JTB009	SP007	2002-3681	16-Dec-02	6.07	55.52	64.70	3.41
02JTA010	SP008	2002-3682	16-Dec-02	5.46	52.31	68.80	3.39
Note: % Magnetics performed @ 900 gauss.							

1.4 Exploration Results cont'd

There were 11 composite samples taken over the entire thickness sampled at each location. The composite results of the analysis are highlighted in yellow. The focus of the analysis has been on percent magnetics, %Fe₂O₃ (Magnetite), %TiO₂ (Titanium) and the specific gravity of each composite. These analyses were done in order to understand the effectiveness of this material in our Plant and to determine accurate in place reserve estimates. It is believed that the titanium is hosted in the mineral ilmenite, which has an Fe component and is slightly magnetic. When the Fe₂O₃ content is added to the titanium content the value approaches the overall magnetics content of the sample but does not account for all the differences. In some cases the percent magnetics are 15% higher than the sum of the Fe₂O₃ and TiO₂ values. An attempt to understand the reasons for this discrepancy should be undertaken as most of the data reported by MDC is in terms of Fe₂O₃ and TiO₂ content. The Plant personnel in evaluating the potential performance of this material value the percent magnetics results more than the Fe₂O₃ and TiO₂ content data

A composite of the Windy Ridge samples 3641, 3667, 3683, 3672, 3673, 3676 and 3679 is being assembled and sent out for analysis to determine the average density of the magnetite in this area. A weighted average of the individual results using the thickness of the ore at each location yielded a 3.2 SG.

A composite of the Knob-A block working north (Photo-4) is also being assembled using samples 3680-82 and sent out for analysis to determine the average density of the magnetite in the fold structure. An average of the 3 samples taken in this area weighted equally yielded a 3.4 SG.

1.5 Magnetite Ore Resources

Magnetite (FeFe_2O_4) is an important ore of iron. The composition of magnetite can be broken into ferrous and ferric iron oxide ($\text{FeO}:\text{Fe}_2\text{O}_3$). ECC analysed the samples collected in December to determine the total magnetics within each sample. It is important to mention here that the magnetic properties may come from other simple oxides such as hematite (Fe_2O_3) and ilmenite (FeTiO_3) as well as the magnetite. This data was required for determining how the ore will react in the Plant.

Rock chip sampling by Apex Geoscience Ltd. of the Marasek area in 2001 and 2002 returned highly encouraging results and confirmed the results of previous historical exploration conducted during the late 1950's. These samples were analysed for wt% Fe_2O_3 and wt% TiO_2 .

In reviewing the literature provided by MDC there has been no mention of the correlation of total magnetics to the Fe_2O_3 concentrations which have been mapped across the area. Results of sample analysis shown in Table 1 do not show a very good correlation between the percent Fe_2O_3 and the percent magnetics. It can be noted that all of the percent magnetics analyses are higher than the percent Fe_2O_3 . The positive difference ranges from 5-24%.

Two resource calculation numbers were determined to project potential ore reserves in the Windy Ridge and Knob A areas:

- Apex calculated a total resource of 111,730t in the two areas by calculating volumes every 50 meters and multiplying by the specific gravity at that section (Appendix – Table 2).
- ECC calculated a resource number of 111,196t by using an autocad drawing (Appendix-Figure 9) and breaking up the Windy Ridge area into three blocks. These areas were bounded by surveyed footwall and hanging wall points where possible. In trench 003 the last survey point on the hanging wall marked the western limit. This survey point was joined to the surveyed thrust fault cut-off of the ore zone in trench 002 to form a line and project it to the south. This projected line cut off the ore zone just west of the outcrop surveyed in Trench 4. As we have no drilling information in this area it is not possible to determine an accurate reserve value. It was inferred that the ore zone thinned to the south and west, being 2 meters thick at the last survey point in Trench 3 and 1.4m in the down dip extent of Trench 004.

Based on these resource evaluation numbers and the amount of raw ore required to run the ECC Plant at 6 million clean tonnes/year we can estimate that enough recoverable ore has been defined to last 4-5 years. (Appendix – Table 3 and 4) Additional resource potential exists if the western limit of the Windy Ridge block extends beyond the last surveyed hanging wall point in Trench 003 and the thickness is wider than the projected 2 meters.

Some historical drill hole data exists in the Marasek area but was not included in this evaluation due to the uncertainty of the plotted locations and magnetite intercept descriptions. This data should be evaluated to help plan additional work. This work should include core drill holes, which would be 10-15m deep in the Windy Ridge area to confirm the down dip extent of the ore in the southern area of the deposit. This data is necessary to convert the resource numbers presented into reserve numbers.

- 1.) The Windy Ridge and Knob-A magnetite deposits contain an estimated resource of 111,000t containing 60-65% magnetics.
- 2.) Hanging wall material is easily removed and does not require drilling and blasting.
- 3.) The magnetic geophysical surveys do not confirm the down dip extent of the projected magnetite bed.
- 4.) Drilling is required to prove the down dip extent of the magnetite layer, as well as the thickness and grade.
- 5.) Additional resources of magnetite exist directly north of the Windy Ridge and Knob-A resources and could extend the life of the project considerably.
- 6.) There is a positive variance between Fe₂O₃ values and percent magnetics in the samples collected in December 2002. The percent magnetics analyses for each sample are 5-24% higher than the measured Fe₂O₃ content.

- Continue to establish a contract with MDC for establishment of a five year supply of magnetite to ECC contingent on the conversion of the resource estimate to a reserve estimate based on proposed new drill data and completion of the proposed 2002 exploration work.
- Propose a core drilling program to drill 4 to 8 15m holes on the west side of the Windy Ridge deposit to confirm the down dip extent of the magnetite bed. ECC and MDC should negotiate the cost of this program while establishing a potential long-term contract.
- Establish a MineSight Model of the Marasek ore reserves for accurate reserve delineation, access and mine planning.
- Commission lab work which will help determine the cause for the difference in percent magnetics versus the Fe_2O_3 data.

References

Copeland D. A. and Dufresne M. B. (2002) Exploration 2001- Burmis Magnetite Deposits, Southwest Alberta, Canada

Mellon, G. B. (1961) Sedimentary magnetite deposits of the Crowsnest Pass Region, southwest Alberta. Research Council of Alberta; Bulletin 9, 98 pages.

Acknowledgements

The author would like to thank the many individuals who participated in the December 2002 exploration and helped to prepare the information necessary for this report.

Thank you to Johanna Tuck for co-ordinating the fieldwork, preparing the X-sections, the "Interpreted Magnetite Extent From Gradient Geophysics" map and allowing the use of Apex's regional geology map of the area.

Thank you to Mike Dufresne for providing project support and constructive feedback on the correlation of magnetic survey data to sample data accumulated by MDC and ECC in 2002.

APPENDIX 1

Table 2**Undiluted Resource Estimate for the Burmis Project, Windy Ridge**

Grid Line (Northing)	Magnetite Avg. (%)	Volume (m ³)	Specific Gravity	Undiluted Resource Estimate (Tonne)
198+50	51*	2000*	3.06*	6,120.00
199+00	55.99	1980	3.06	6,058.80
199+50	60.45	2500	3.19	7,975.00
200+00	53.41	5920	3.14	18,588.80
200+50	59.05	7750	3.32	25,730.00
201+00	65.81	3500	3.31	11,585.00
201+50	56.8	2600	3.22	8,372.00
202+00	60.85	3250	3.2	10,400.00
Total Undiluted Resource				94,829.60

NOTE: * Minimum values obtained from sample results used to calculate for this grid line

Undiluted Resource Estimate for the Burmis Project, Knob-A

Grid Line (Northing)	Magnetite Avg. (%)	Volume (m ³)	Specific Gravity	Undiluted Resource Estimate (Tonne)
205+00	67.57	5000	3.38	16,900.00
Total Undiluted Resource				111,729.60

Table 3			
BURMIS MAGNETITE MILL FLOWSHEET & MASS BALANCE			

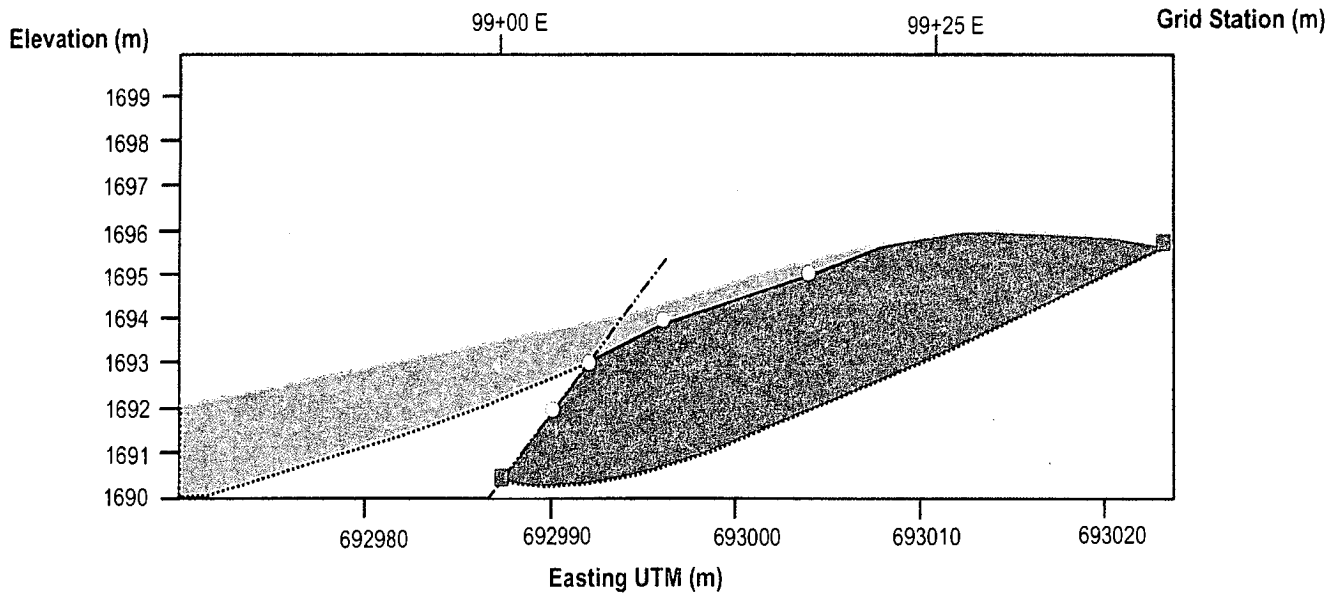
PARAMETER		NOTE	
Plant feed rate (tph)	1500		
Magnetite consumption (kg/ton)	1.2	Design number, rather conservative	
Magnetite consumption (tons/hour)	1.8		
Magnetite consumption (tons/day)	43.2		
Plant operating time (%)	93%		
Mill operating hours per week	60	36% of the time	
Required magnetite production rate (tph)	4.7		
Ore, % of magnetite	60%		
Magnetite recovery efficiency (%)	98%		
Required mill feed rate (tph)	8.0		
Feed Solids SG	3.2	Number acquired from Micrex study	
Cyclone Feed weight % solids	50%	Number acquired from Micrex study	
Cyclone Underflow weight % solids	70%	Number acquired from Micrex study	
Cyclone Overflow weight % solids	32%	Number acquired from Micrex study	
Cyclone Recirculating Load (%)	66.7%	Number acquired from Micrex study	
Mill & Cyclone total feed tonnage (tph)	23.9		
Mill & Cyclone total water flow (m3/h)	23.9		
Mill & Cyclone total feed flow (m3/h)	30.6		
Cyclone Underflow tonnage (tph)	15.9		
Cyclone Underflow water flow (m3/h)	6.8		
Cyclone Underflow total flow (m3/h)	11.3		
Cyclone Overflow tonnage (tph)	8.0		
Cyclone Overflow water flow (m3/h)	16.9		
Cyclone Overflow total flow (m3/h)	19.2		
Note: Red numbers are input variables, the rest is calculated.			
Total Ore tonnage per year (tonnes)	24,871	*Based on 6 million clean tonnes/year	

Table 4			
BURMIS MAGNETITE MILL FLOWSHEET & MASS BALANCE			

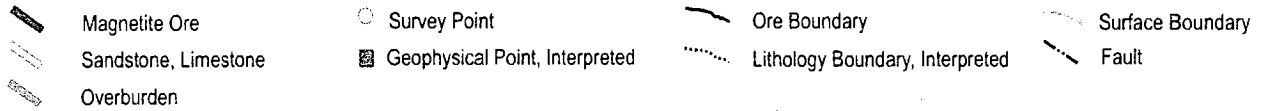
PARAMETER		NOTE	
Plant feed rate (tph)	1500		
Magnetite consumption (kg/ton)	1.2	Design number, rather conservative	
Magnetite consumption (tons/hour)	1.8		
Magnetite consumption (tons/day)	43.2		
Plant operating time (%)	93%		
Mill operating hours per week	60	36%	of the time
Required magnetite production rate (tph)	4.7		
Ore, % of magnetite	65%		
Magnetite recovery efficiency (%)	98%		
Required mill feed rate (tph)	7.4		
Feed Solids SG	3.2	Number acquired from Micrex study	
Cyclone Feed weight % solids	50%	Number acquired from Micrex study	
Cyclone Underflow weight % solids	70%	Number acquired from Micrex study	
Cyclone Overflow weight % solids	32%	Number acquired from Micrex study	
Cyclone Recirculating Load (%)	66.7%	Number acquired from Micrex study	
Mill & Cyclone total feed tonnage (tph)	22.1		
Mill & Cyclone total water flow (m3/h)	22.1		
Mill & Cyclone total feed flow (m3/h)	28.2		
Cyclone Underflow tonnage (tph)	14.7		
Cyclone Underflow water flow (m3/h)	6.3		
Cyclone Underflow total flow (m3/h)	10.4		
Cyclone Overflow tonnage (tph)	7.4		
Cyclone Overflow water flow (m3/h)	15.6		
Cyclone Overflow total flow (m3/h)	17.7		
Note: Red numbers are input variables, the rest is calculated.			
Total Ore tonnage per year (tonnes)	22,958	*Based on 6 million clean tonnes/year	

Figure 3

**Trench T002, Grid Line 202+00 E,
Interpreted Geology Cross Section**



Legend



Line 20200 Magnetic Profile

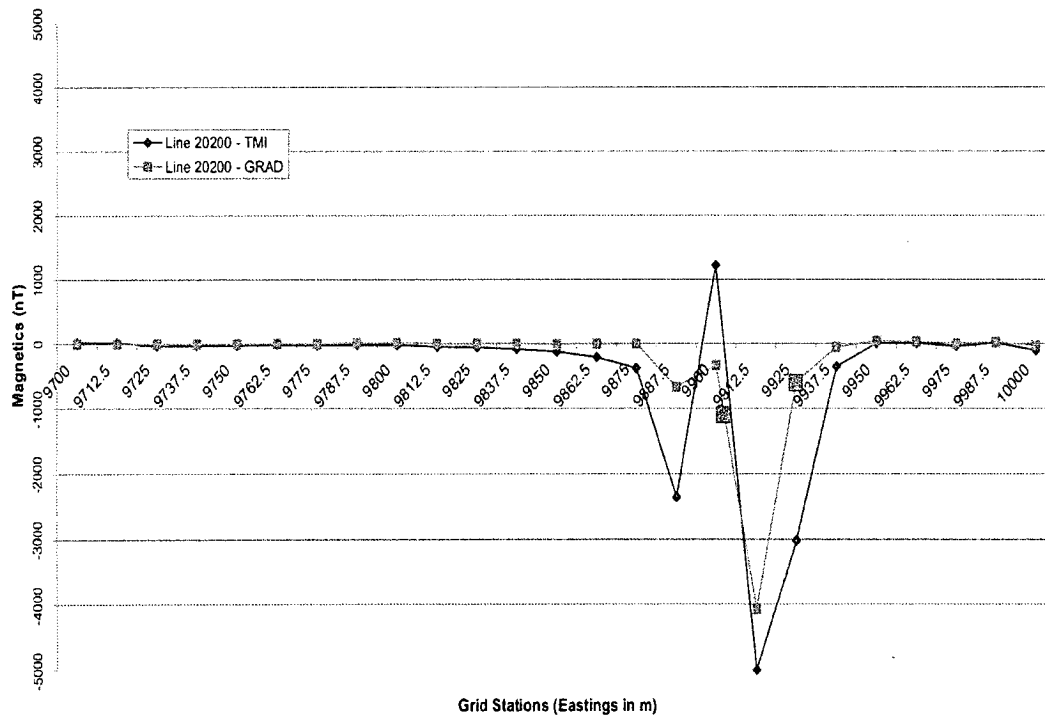
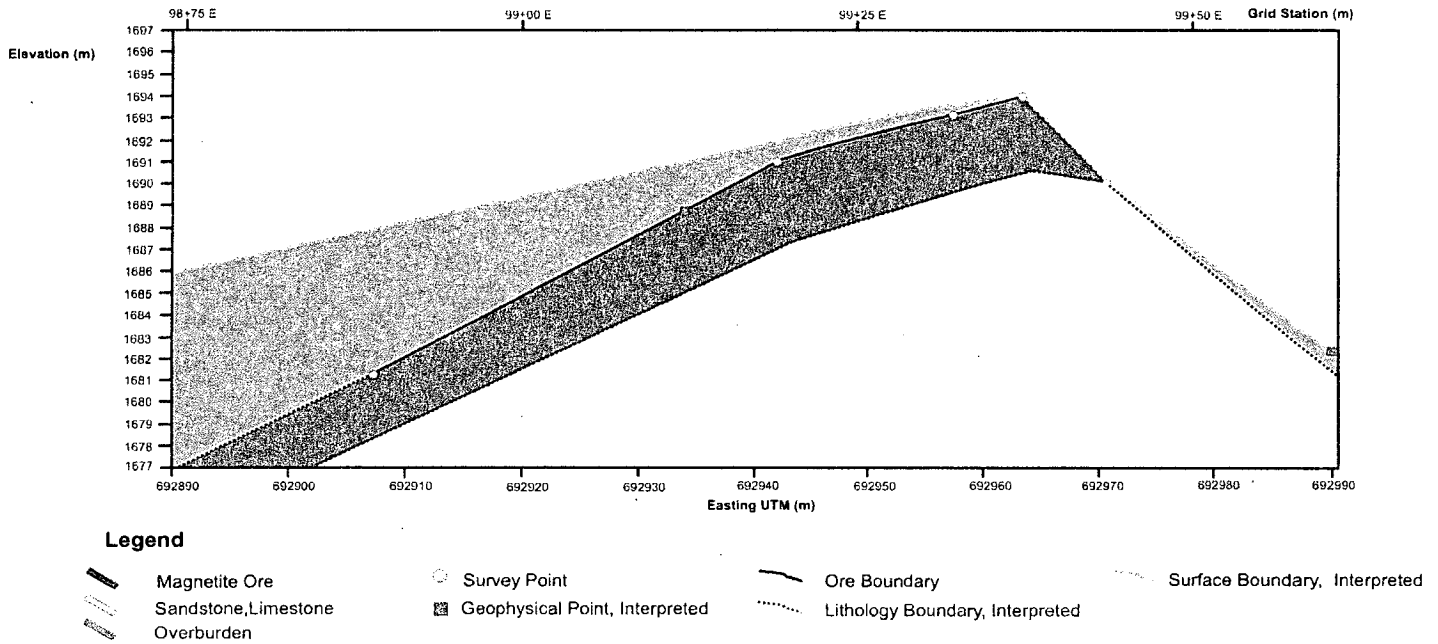


Figure 4

Trench T003 and SP014, Grid Line 200+50 E,
Interpreted Geology Cross Section



Line 20050 Magnetic Profile

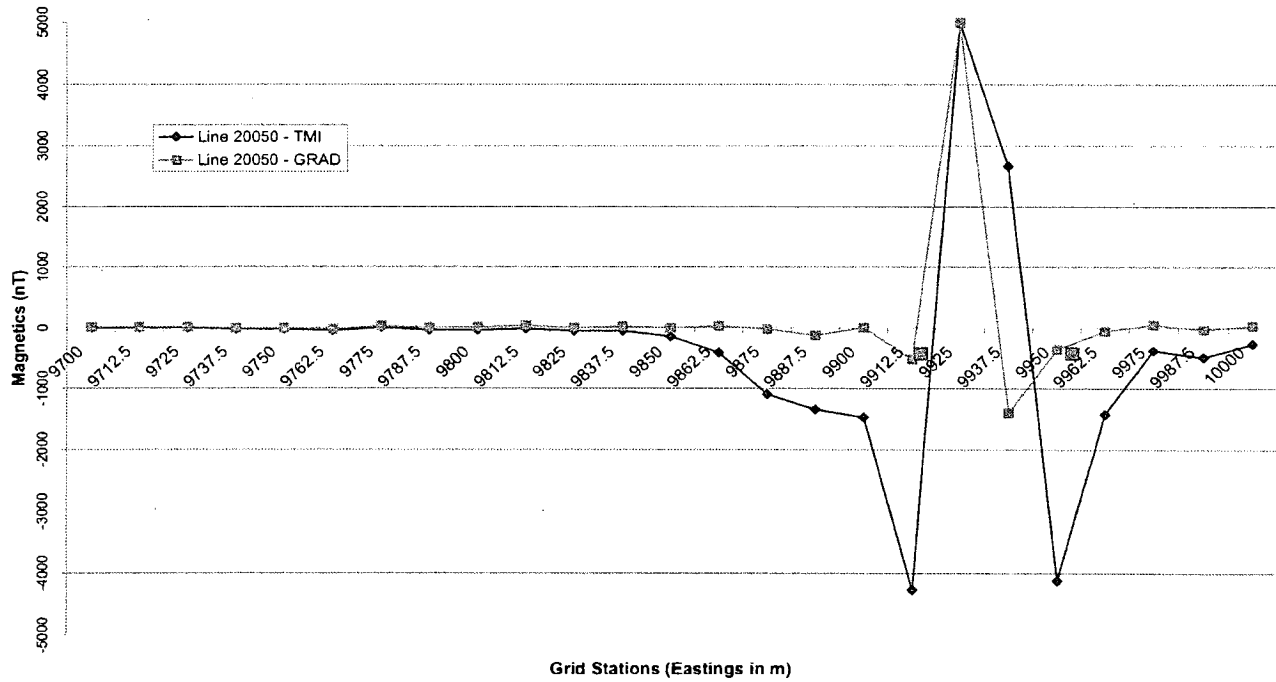
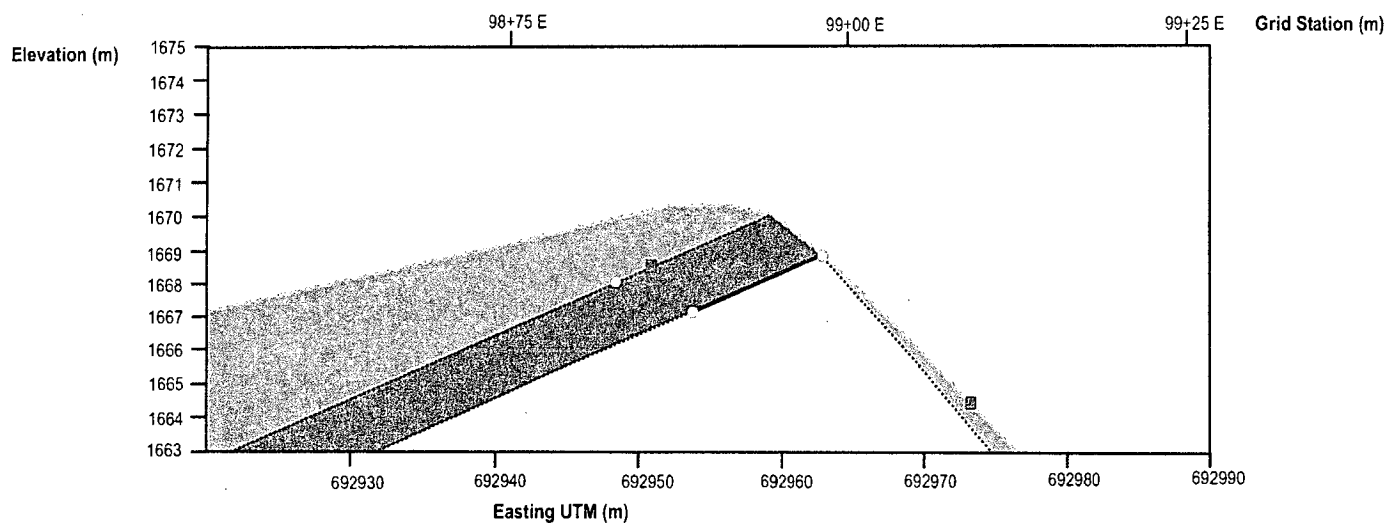


Figure 5

Trench T004, Grid Line 199+00 E,
Interpreted Geology Cross Section



Legend

- Magnetite Ore
- Sandstone, Limestone
- Overburden
- Survey Point
- Geophysical Point, Interpreted
- Ore Boundary
- Lithology Boundary, Interpreted
- Surface Boundary, Interpreted

Line 19900 Magnetic Profile

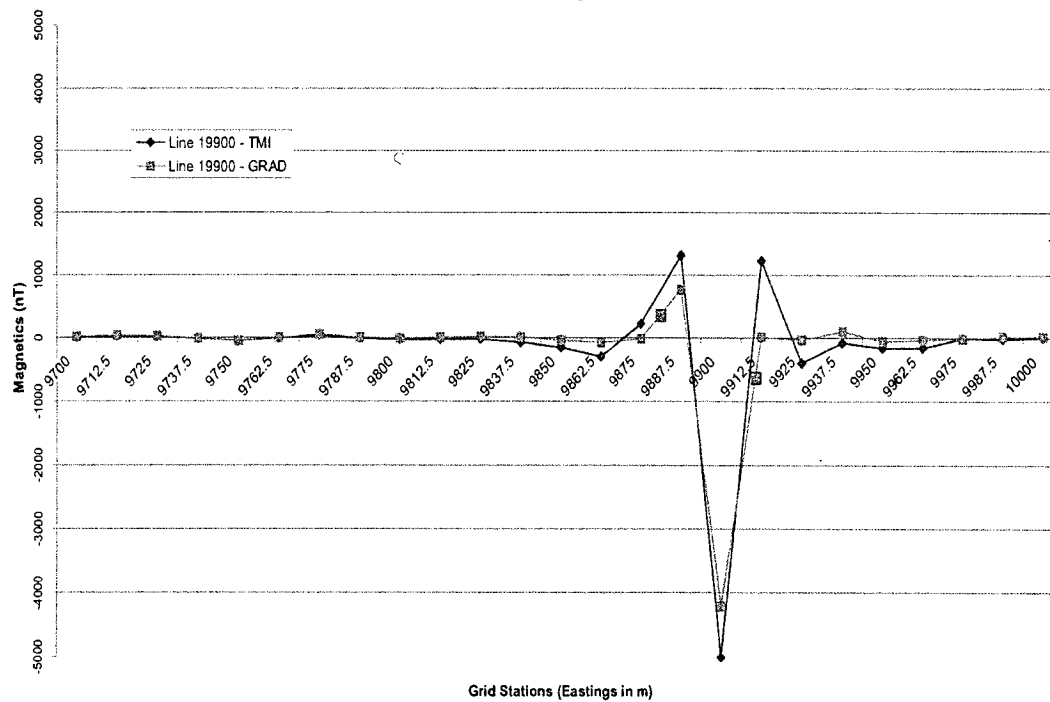
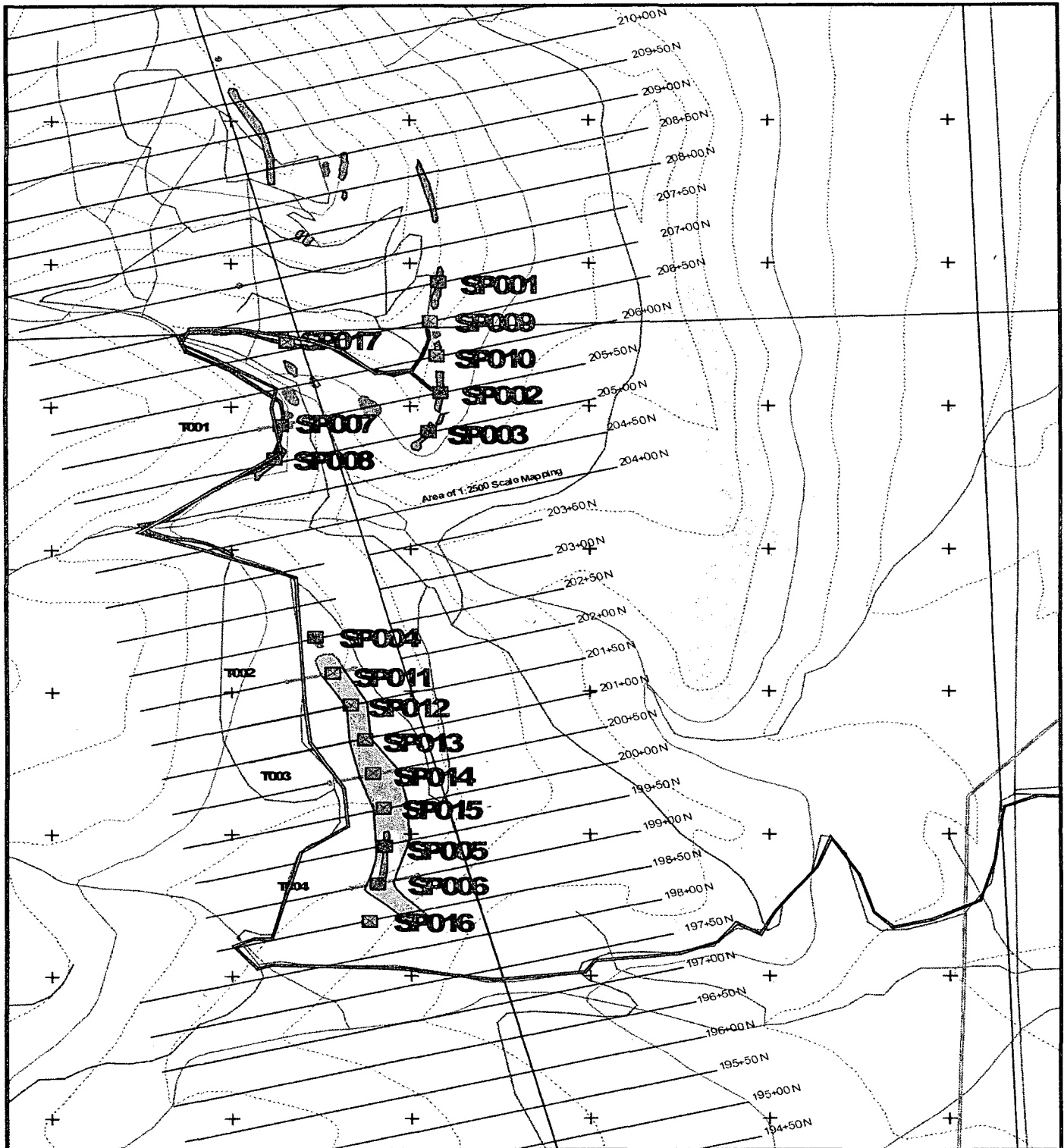


Figure 6



Legend

- | | |
|--|-----------------|
| Magnetite Extent Interpreted from Gradient | Stream, creek |
| Magnetite Outcrop | Townships |
| Sandstone Outcrop | Powerline |
| Sample Pit Site with Overburden; Identifier | Property Owners |
| Sample Pit Site with Exposed Outcrop; Identifier | Burmis grid |
| Trench | |
| Refurbished Road | |
| Road, trail | |

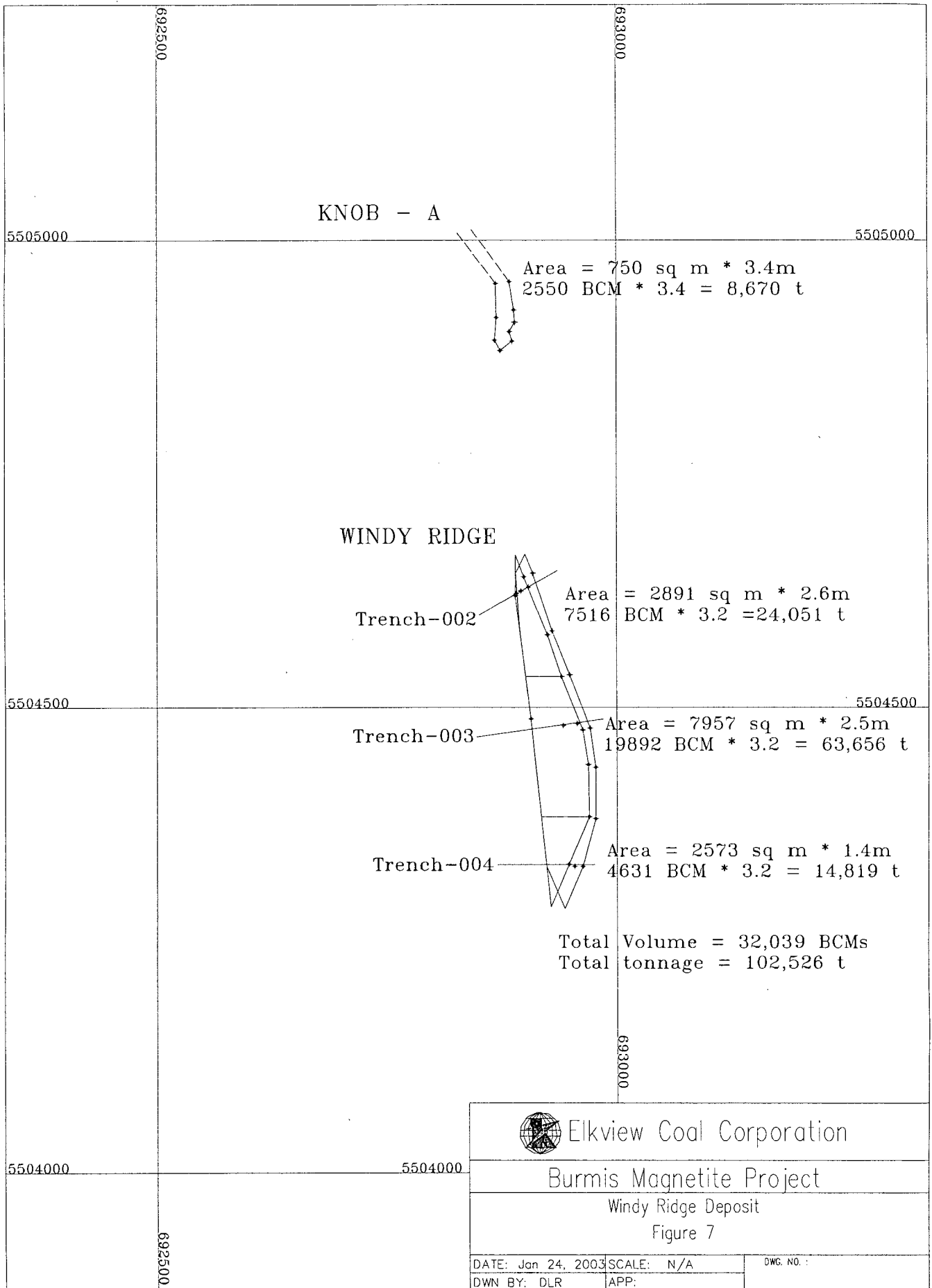
MICREX DEVELOPMENT CORP.

Burmis Project, Interpreted
Magnetite Extent from Gradient Geophysics

0 60 120 180 240
Meters

WEST 5, RANGE 3, TOWNSHIP 8
Scale 1 : 5,000
APEX Geoscience Ltd.

EDMONTON, ALBERTA JANUARY, 2003



FEB 01 2005
20040005

MICREX DEVELOPMENT CORPORATION

BURMIS MAGNETITE PROJECT

Project No. 448956-15

INTERIM REPORT

PRELIMINARY REVIEW OF GEOLOGY AND RESOURCES

KILBORN ENGINEERING PACIFIC LTD.
400 - 1380 Burrard Street
Vancouver, B.C.
V6Z 2B7

MARCH 1999

**MICREX DEVELOPMENT CORPORATION
BURMIS MAGNETITE PROJECT
PRELIMINARY REVIEW OF GEOLOGY AND RESOURCES**

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
1.1 Disclaimer	2
2.0 LOCATION	3
3.0 GEOLOGY AND RESOURCES	5
3.1 Review of Geology	5
3.2 Review of Data	8
3.3 Review of Resources	12
4.0 CONCLUSIONS	17
5.0 RECOMMENDATIONS	18
6.0 REFERENCES	20

Appendix A Drill Hole Plans and Sections

1.0 INTRODUCTION

Micrex Development Corporation ("Micrex") has requested Kilborn Engineering Pacific Ltd. ("Kilborn") to review data for the Burmis magnetite deposit. Micrex has submitted the following to Kilborn:

- Sedimentary Magnetic Deposits of the Crowsnest Pass Region, Research Council of Alberta, (Mellon, 1961);
- Report for Assessment for Alberta Metallic Mineral Permits 9389050002 and 9389060001, Western Diamex, Burmis Project for the Period February 1993 to February 1995; (Western Diamex, 1995);
- Magnetite Sampling and Research, 1983; (Trigg, Woollett Consulting Ltd, 1983);
- Burmis Magnetite Project Business Plan, 1997; (Iron Ore Developments Ltd., 1993);
- Transcribed drill logs signed by Robert Steiner;
- Summary drill logs;
- Magnetometer Survey for West Canadian Magnetic Ores, Area "B2"; survey conducted by RBEM Canada;
- Airborne Magnetometer Survey Oldman River Area, Alberta, West Canadian Collieries Limited;

- - Plan of Drill Holes of Area "B2" (General Area of Marasek Claims), West Canadian Magnetic Ores Ltd., Blairmore, Alberta;
- Untitled Plan of Drill Holes for South Burmis area.

Additional sources of information reviewed were:

- Geology and Structure Cross-Sections, Blairmore (West Half), Alberta (Norris, 1993);
- Flexural-Slip Folds in the Rocky Mountains, Southern Alberta and British Columbia (Price, 1964);
- Structural Geology in the Eastern Margin of the Canadian Rocky Mountains, (Dahlstrom, 1970).

1.1 DISCLAIMER

This document contains the expression of the professional opinion of Kilborn Engineering Pacific Ltd. ("Kilborn") as to the degree of confidence to be placed in Micrex Development Corporation's ("Micrex") data concerning the Burmis Magnetite Deposit, and Kilborn's recommendations for additional exploration work felt necessary so as to increase this degree of confidence.

Kilborn's opinion is based on its review of data provided by Micrex and others. Kilborn has not validated such data, but has performed such review of the data as was deemed necessary for Kilborn to form its opinion. Kilborn therefore makes no representation as to the accuracy of the data and conclusions reached based thereon, as presented in this document.

This document is meant to be read as a whole, and sections or parts thereof should thus not be read or relied upon out of context.

This document is written solely for the purpose of conveying the aforementioned opinions, and for the sole and exclusive benefit of Micrex, whose remedies, as a result of or in connection with this document, including reliance thereon are, as is the liability of Kilborn, its officers, directors, employees, agents and representatives, governed by and limited to those set out in the October 13, 1998 Agreement among Kilborn and Micrex. This document may not be published or referred to, nor shall it be quoted or distributed to, nor relied upon by, any other person or entity other than Micrex. Any such publication, reference, quoting, distribution or reliance is at the sole risk and under the sole responsibility of the person publishing, referring to, quoting or distributing the document, and of the person relying thereon, and Kilborn disclaims all liability in that regard.

2.0 LOCATION

The Burmis property is located in the foothills of southern Alberta. The property is located on moderate slopes along the eastern edge of the Livingstone Mountain Range. Maximum relief across the claim areas is about 300 m. The claim areas are partially forested.

The Burmis claims are well situated with regard to infrastructure. The claim areas are located from 1 to 2 km from a gravelled all weather road that connects to the No. 3 Crowsnest Highway. The nearest town is approximately 7 km from the claim areas and is located next to the No. 3 highway. The Canadian Pacific railway line and power transmission lines are adjacent to the No. 3 highway. One of the larger towns in the area is Bellevue (Figure 2-1). The larger centres in the region are: Lethbridge, Alberta located about 100 km to the east and Sparwood, British Columbia located about 50 km to the west.

3.0 GEOLOGY AND RESOURCES

3.1 REVIEW OF GEOLOGY

The geology of the deposit is given in some detail by Mellon (1961). Only a brief description of the deposit geology will be given here to highlight factors critical to developing the Burmis magnetite deposit.

Mineralization at the Burmis deposit occurs in a thick sequence of sedimentary rocks. The deposit is associated with the basal sandstone member of the Upper Cretaceous Belly River Formation. This unit consists of pale grey sandstone with minor beds of dark brown weathering strongly calcareous sandstone. Weathering of this sandstone unit forms topographic ridges in the foothills of southern Alberta. The unit is generally barren of magnetite except for a few localities including the Burmis area where magnetite occurs in the upper portion of the basal sandstone unit. Typically the magnetite occurs as magnetite rich beds of calcareous sandstone complexly interbedded with magnetite poor sandstone beds. The individual magnetiferous beds are reported to range from less than 3 cm to 90 cm thick.

The basal sandstone unit is overlain stratigraphically by thick homogenous units of sandstone with minor interbeds of siltstone and silty shale of the Belly River Formation. The basal sandstone unit is underlain stratigraphically by silty shales and sandstones of the Wapiabi Formation. The contact between the Wapiabi Formation and the basal sandstone unit is gradational.

Mesozoic and Paleozoic sediments including the Belly River Formation have been extensively altered structurally by the Laramide Orogeny. Sediments in the vicinity of the Burmis area have been folded and faulted. The Burmis area is bounded by two major

thrust faults that strike in a north-south direction: The Livingstone thrust fault to the west and the Todd Creek thrust fault to the east (Figure 3.1-1). Three thrust splays or reverse fault splays are associated with the major faults in the Burmis area. Faulting in the Burmis area has created an imbricated structure of superimposed sediments.

The structure of the Burmis area is further complicated by folding and additional faulting in some areas. Mellon (1961) has identified tight anticlinal folding and evidence for an overturned synclinal structure in the North Burmis claim areas. Steiner (1958) identified anticlinal structures and drag fold features along fault planes. Steiner (1958) also identified possible west trending vertical cross-faults that may have caused local displacements of mineralized beds.

The geological structure of the Burmis area is a complex system of large scale thrusting events and smaller scale folding and faulting. On a large scale the mineralized beds have been telescoped so that magnetite rich beds are emplaced above each. Up to three stacked magnetite beds have been identified. However smaller scale structures such as folds and faults may affect the continuity of the mineralized beds. It is therefore critical to identify these structures in order to delineate the mineralization at the Burmis deposit.

Magnetiferous zones are reported to range from 3 m to 7 m thick. The dip of the zones is reported to about 25° to 30°, in some localities magnetite beds may dip sub-vertically or sub-horizontally.

3.2 REVIEW OF DATA

To evaluate the existing data base for the Burmis Project Kilborn reviewed two sets of drill hole logs, two sets of drill hole plans, a magnetometer survey carried out over the area, and trend mapping and sampling program.

Drill Hole Location Plans

Two drill hole plans covering Micrex's North Burmis, Central Burmis and South Burmis claims were provided to Kilborn. The plans represent a drilling program conducted by West Canadian Magnetic Ores Ltd. (WCMO) in 1956. WCMO established two grids over an area indicated in Figure 2-1. The grid base lines were orientated approximately at azimuth 345° (North Burmis and Central Burmis) and 350° (South Burmis) and grid lines were spaced at 400 ft intervals. The two plans indicate drill hole collar locations. The maps also include elevation contours at 50 ft intervals, section lines and some iron bar locations at section corners. Drill hole access roads are also indicated on the map covering North Burmis and part of Central Burmis claim areas.

The drill hole maps reviewed by Kilborn were reduced copies of the originals drawn at a scale of 1 in. to 200 ft. Some details such as drill hole names were difficult to distinguish because of the reduced scale. Drill holes located on the plans covering North and Central Burmis areas correspond to collar coordinates given in drill hole logs. With this correspondence it may be possible to relocate drill hole collar and grid lines on site by surveying from iron bars identified on the drill hole plans.

Some structural elements are indicated on the North Burmis drill hole plan. An overturned fold with a grid northeast strike, is indicated between grid lines 11200N and 9600N. A possible fault structure with a similar strike may also be indicated on the map by a dashed line. These structures need to be confirmed by surface mapping.

Thirteen drill holes are indicated on the South Burmis map. Eleven of these holes are designated by single letters that have not been found to correspond to any drill hole designation in the logs reviewed by Kilborn.

Magnetometer Survey Maps

Magnetometer survey maps covering the North Burmis and Central Burmis permit areas were provided to Kilborn. The survey was conducted for WCMO in 1956. Magnetometer readings were taken along a grid similar to the drill hole collar grid. Magnetometer survey stations were spaced at 100 ft along lines. The surveyed lines were spaced 400 ft apart. Elevation points were recorded at stations spaced 400 ft along each line.

The magnetometer maps reviewed by Kilborn were reduced copies of originals that were drawn at a scale of 1 in. to 200 ft. Much of the elevation data and magnetometer readings were difficult to read at the reduced scale. However the magnetic anomalies identified in the survey are readily identified by contouring of the magnetic data. Kilborn observed that drill holes were located in the vicinity of all strong magnetic anomalies.

Drill Hole Logs

The drill information can be grouped into two types: Summary drill hole logs and detailed drill hole logs. The summary drill hole logs appear to be preliminary logs that give only limited lithological information about each drill hole with some approximate drilled depth data. Seventy-three drill holes with the "BN" prefix are listed in the summary logs. Of these holes, 15 holes do not have a grid northing and easting instead there are what appear to be location names. These locations have not been established.

A set of 97 holes with the "IF" prefix are also listed in the summary logs. The location of these holes has not been determined; presumably they are located in South Burmis permit

area. All these drill holes have grid northing and easting collar coordinates but it remains unclear which grid they correspond to.

The value of these summary logs for developing a model of the Burmis deposit may be limited. The northing and easting location of drill hole collars is given in 155 holes of a total of 170 holes. However, the drill hole collar elevations are absent from the logs. The elevation of the Burmis properties varies as much as 300 m therefore it is critical to have collar elevations in order to locate mineralized areas. Collar elevations may be estimated from magnetometer survey maps of the area but this would necessarily introduce some degree of uncertainty in the level of confidence in locating mineralized zones.

The lithological descriptions in the summary logs may be sufficient for defining the preliminary spatial extent of mineralization. The limited structural information in the summary logs does not allow for a detailed definition of the spatial extent of the mineralization.

The second set of drill hole logs provide more detailed information including collar locations, lithological, structural and assay data. This set of drill holes includes 24 drill holes with the "BN" prefix. All of these drill holes are located in the North Burmis claim area. These drill logs represent a portion of the drilling completed in the North Burmis area. In some cases detailed drill logs of adjacent or nearby drill holes are not available. The logs give detailed collar locations including collar elevations. Collar coordinates for the same drill holes in this set of logs are similar but more precisely located than collar coordinates in the summary logs. Based on this observation it can be assumed that the location of drill hole collars may be more accurate than the summary log data.

The logs contain detailed lithological information. The drilled extents of geological units are given in more detail than the summary logs. The salient differences are:

- Drilled intervals are given to the nearest 0.1 m; nearest 0.5 m in the summary logs;
- Sandstone, shale and magnetite units are described in detail and are divided into sub-units; no descriptions and no sub-units in the summary logs.

These logs appear to be more precise and detailed than the summary logs. It seems reasonable to deduce from the fact that these drill logs have been carefully logged and represent data with a higher level of confidence.

Structural information in these logs has been described in some detail. Structural information includes identification of structural features as well as measurements of bedding, banding, fault planes and slickensides. These parameters are important to defining the spatial extent of Burmis mineralization.

Assay information is present in this set of detailed drill logs. The assay information includes sampled intervals and assays for iron content, titanium content and other factors such as insolubles and a number for loss on ignition. A discussion of drill core assays by Steiner (1957) indicates that no records of assay procedures were available. The reliability and accuracy of these assays are difficult to assess without knowledge of analytical procedures used. Therefore assays reported in the drill logs are associated with a lower confidence level.

Trench Mapping and Sampling

A trench mapping and sampling program completed for Roymac Holdings Ltd. (Trigg, Woollet, 1983) included mapping and sampling of three trenches in the South Burmis area. Two trenches, trench 1 and 3, were located in the central region of the South Burmis claims. Trench 1 is located approximately 200 m west of trench 3. A third trench, trench 2 is located in the northern portion of the South Burmis claims and is about 500 m north of trench 1. All three trenches were excavated across the general strike of rocks in the area.

Trench 1 and 3 are 7.0 and 6.5 m long and were mapped in detail. Only a small outcrop adjacent to trench 2 was sampled and mapped.

Geological mapping of the trenches indicated magnetite rich sandstones in trench 1 and trench 3. Detailed mapping in these trenches indicate a high density of faulting with significant folding. Contacts between magnetite poor and magnetite rich sandstones appear to be predominately fault contacts with sub-vertical to moderate dips and a few possible stratigraphic contacts. Analytical data consists primarily of gold, platinum and palladium analysis. However, one chip sample section was reported to contain 40% magnetite.

3.3 REVIEW OF RESOURCES

Several resource estimate for the Burmis deposit have been made from the 1950's and later. Of the material reviewed by Kilborn, the resource estimation methodology used by Mellon (1961) was the most clearly and thoroughly documented. Kilborn compared existing information to resources estimated by Mellon. Mellon's resource estimate was chosen for comparison because the methodology used by Mellon is the most clearly and thoroughly documented material available to Kilborn.

Grade Estimates

The focus of Mellon's work was to estimate the iron ore resources for the Burmis deposit. Therefore the published resources for the deposit are iron ore resources as tabulated in Table 3.3-1. Mellon has noted that the sampled sections include beds or bands of magnetite poor sandstones because of lensing nature of mineralization and structural complexities. As a result the average grades for each sampled section was reported, as he felt the sampling data was insufficient to determine a weighted averages for each block.

Table 3.3.-1
Burmis Iron Ore Resources (Mellon, 1961)

Area	Block	Sampled Section	Iron Grade [%]	Magnetite [vol. %]	Tonnage [thousand long tons]
NORTH	1	301	27.5	24.1	55
	2	325	22.2	17.5	22
		386	27.3	23.9	
	3	326	30.6	27	60
		327	22.2	17.5	
CENTRAL	4	342	21.1	16.2	45
	5	345	24.1	19.9	341
		344	40.9	40.8	
		338	18.5	13	
		341	14.8	8.4	
SOUTH	6	348	18.1	12	1363
		350	30.8	28.2	
		354	8.8	1	
		385	24.1	19.9	
Total Tonnage				19.24285714	1886

Magnetite grades reported by Mellon were based on a limited number of samples that were analyzed by X-ray fluorescence, magnetic separation, microscopic modal analysis and chemical analysis. Based on this subset of samples Mellon correlated bulk density with magnetite grade. Using this relationship magnetite grades were estimated for other samples based on sample bulk densities. The accuracy of these methods to current standard analytical procedures using a Davis Tube should be confirmed. The magnetite grades estimated by Mellon for each of the sampled sections are given in Table 3.3-1 as a volume percentage.

Some uncertainties are associated with the magnetite grades estimated by Mellon. As noted by Mellon, the variation of magnetite grade is affected by stratigraphic and structural elements that have not been established with a high degree of confidence. Similarly the accuracy between analytical methods used by Mellon and analytical methods using a Davis Tube is associated with some degree of uncertainty. Therefore a lower degree of confidence is associated with magnetite resources estimated by Mellon.

Spatial Extent of Mineralization

The dimensions of mineralized blocks used by Mellon was based on outcrops and some drilling information. The extent of mineralization reported by Mellon was compared by Kilborn with information from magnetometer survey maps, drill logs and trenches and summarized below:

North Burmis Area

For the North Burmis area (legal description: 25,22-9-3 W.5) Mellon has outlined the strike extent of mineralization in blocks 1, 2 and 3 for approximately 500 m. This corresponds to two strong magnetic anomalies extending for a total of 1,200 m along strike on the WCMO map. Drill logs indicate that magnetite has been intercepted over a strike distance of about 850 m; however structural continuity of this intercepts could not be

verified. In fact, a review of detailed logs indicates several possible structural discontinuities along strike. (Appendix A). Mellon has estimated the mineralization to extend from 80 m, 15 m and 8 m along dip for blocks 1, 2, and 3 respectively. This could compare to WCMO magnetic anomalies extending 20 m to 40 m horizontally in an east-west direction. Information from the detailed drill logs is too sparse to confirm the dip extent of mineralization.

The estimated dimensions of mineralization for the North Burmis area are generally consistent with available data. The 500 m strike extent for three zones of magnetite mineralization does not exceed potential mineralization outlined by drilling and magnetometer surveys. It may be possible that mineralization may exceed the 500 m of strike length estimated by Mellon. The dip extent of mineralization estimated by Mellon is less clearly established but does appear to be consistent with magnetometer data. A degree of uncertainty in the spatial extent of mineralization, results from complex structural faulting and folding of mineralized beds that has not been defined to a high level of confidence.

Central Burmis Area

Mellon estimated mineralization in two separate northerly trending intervals, blocks 4 and 5 (description: 11,14-8-3 W.5), extending for a total of about 850 m along a north-south strike and about 45 m along an east-west dip in the Central Burmis area. The available WCMO magnetic survey does not cover the entire area outlined by Mellon. However magnetic anomalies extend 730 m along strike in the same area. Magnetic survey maps indicate that the magnetic anomalies may extend to the south. Drill logs indicate 13 holes intersecting magnetite mineralization over this area. However, the drill hole data reviewed was insufficient to draw conclusions about the geological structure of this area. The north trending magnetic anomalies in the WCMO magnetic survey extend 30 m to 60 m in an east-west direction and may compare to a 45 m dip length of mineralization estimated by Mellon.

Information available to Kilborn generally corroborates the extent of possible mineralization estimated by Mellon for the Central Burmis areas. The estimated strike length and dip length of mineralization are consistent with magnetic anomaly maps and limited drill information. However, some uncertainty exists with regard to the continuity of mineralization in this area. For this reason the spatial extent of mineralization for this area indicated by Mellon should be classified with a lower confidence level.

South Burmis Area

Mineralization for the South Burmis area, block 6 (description: 13, 24, 26-7-3W.5), was estimated by Mellon to extend for approximately 1,500 m along strike and 90 m along dip. Some of the outlined mineralization (sampled section 354) may lie just outside the Micrex South Burmis claim blocks (13-7-3-W.5). However, most of the mineralization outlined by Mellon lies within the South Burmis claim areas. Magnetic survey and drill logs were not available for review in this area. Trench mapping and sampling conducted in this area for Roymac Holdings Ltd. confirms magnetite mineralization. Trench mapping indicates that the occurrence of magnetite rich sandstones may be controlled by a complex system of faulting and folding. Mellon has noted that his estimate relies on the assumption that sporadic outcrops of magnetite rich sandstones in this area, along a north-south trend indicate continuous mineralization.

Corroboration of the extent of mineralization for the South Burmis area is indirect. Magnetic and drill hole information were not available for this area and therefore the extent of possible mineralization could not be directly compared. Trenching confirms magnetite mineralization but the extent and continuity of mineralization is associated with some uncertainty. The spatial extent of magnetite mineralization should be classified with a lower degree of confidence.

4.0 CONCLUSION

The magnetite resources for the Burmis deposit estimated by Mellon (1961) can be considered as a good preliminary estimate of resources. It is reasonable to expect magnetite mineralization in the areas outlined by Mellon because the work was carried out in a reasonable manner and the methodologies used were clearly documented. Potential mineralization over the North and Central Burmis claim areas estimated by Mellon are corroborated by a magnetic ground survey and some drill log information. Possible mineralization in the South Burmis area are not corroborated as confidently because magnetic survey data and drill logs were not available. Geological mapping of two trenches does corroborate some mineralization in the South Burmis claims. Average grades for sampled sections reported by Mellon were conducted in a reasonable manner and all procedures were well documented. Therefore, magnetite grades reported by Mellon can be considered as preliminary estimates of grades.

A confident and detailed prediction of magnetite tonnage and grade for the Burmis deposit is not yet achievable for the following reasons:

- The variation of magnetite grade with respect to stratigraphic and structural factors have yet to be defined in sufficient detail to allow a confident prediction of grade in mineralized zones;
- The analytical techniques used to determine magnetite grades are different from current standard analytical techniques; as a result there is some uncertainty in the grades estimated by Mellon; large variations in grade are not expected but smaller variations in the accuracy of grades are possible;

- The spatial continuity of mineralization with respect to faulting and folding has not been defined in sufficient detail to allow a detailed prediction where mineralization is located and how far it extends.

For these reasons Mellon's resources have been classified as inferred resources according to the Proposed National Instrument 43-101 and Companion Policy 43-101CP Standards of Disclosure for Mineral Exploration and Development Properties and Rescission of National Policy Statement No. 2-A issued by the Canadian Securities Administrators, July 3, 1998 (NI 43-101).

The Burmis deposit shows good potential for the development of magnetite resources. Zones of potential magnetite mineralization have been established and can be relocated with a small amount of field work. Therefore, there should be little risk involved with locating and identifying mineralized zones. Based on Mellon's inferred resources the property may have the potential of becoming a mine with the ability to produce about 60,000 t of magnetite annually over a period of five to six years. Based on these reasons further work on the property to develop indicated and measured resources is recommended.

5.0 RECOMMENDATIONS

Resources for the Burmis deposit can be further developed with a two stage exploration program. The focus of the program will be to define the grade and extent of magnetite mineralization with more detail and a higher confidence level.

Initially the first stage should consist of locating areas of mineralization from the drill hole plans and magnetometer survey maps reviewed by Kilborn. Once these areas have been identified a grid should be established over these areas. Following this a detailed mapping

and-sampling program is proposed to determine as much structural detail and grade information as is possible from surface examinations. A detailed ground magnetometer survey should also be run in conjunction with mapping and sampling. This program should identify drilling targets for the next stage of development. It is estimated that this stage will require four to five weeks for completion. It is assumed that geological, geophysical and line cutting work will be contracted. The estimated cost for the first stage of development is \$35,000.

The second stage of the program should consist of a diamond drilling program to test the extent of mineralization at depth and to characterize the variation of magnetite grades at depth. At the completion of the drilling program the data will be analysed and the resources for the deposit should be estimated.

It is assumed that mineralization will be drilled at 100 m spaced lines with 50 m between drilling stations. The maximum drilling depth is assumed to be 40 m. Using current information about the deposit it is estimated that about 2,600 m of drilling will be required. The estimated duration of this program is about 10 to 11 weeks for completion. The estimated cost of this program including a contract geologist to supervise the drilling program is estimated to be about \$275,000.

6.0 REFERENCES

- Norris, D.K. 1993: Geology and structure cross-sections, Blairmore (West Half), Alberta, Geological Survey of Canada, Map 1829A.
- Iron Ore Developments Ltd. 1997: Burmis Magnetite Project, Business Plan.
- Dahlstrom, C.D.A. 1970: Structural geology in the eastern margin of the Canadian Rocky Mountains. Bulletin of Canadian Petroleum Geology. 18(3).
- Price, R. A. 1964: Flexural-slip folds in the Rocky Mountains, southern Alberta and British Columbia. Geological Survey of Canada, Reprint 78.
- Mellon, G.B. 1961: Sedimentary magnetite deposits of the Crowsnest Pass Region, Southwestern Alberta, Research Council of Alberta, Bulletin 9.
- Western Diamex 1995: Summary Report on Work for Western Diamex - Burmis Project for the period Feb 1993 to Feb. 1995.
- Trigg, Woollett Consulting Ltd. 1983: Roymac Holdings Ltd: Summary of Magnetite Sampling and Research -1983, Burmis Alberta. Authors A.H. Grant, C.M. Trigg.

APPENDIX A

*Micrex Development Corporation, Burmis Magnetite Project
Preliminary Review of Geology and Resources*

Drill Hole Plans and Sections

This appendix consists of one plan and seven sections for the North Burmis area. Drill holes indicated on the plans and sections are based only on detailed drill logs that were reviewed by Kilborn. The plans and sections do not include all drill holes in the area. Kilborn has not verified the accuracy of the drill hole information.

The coordinate system used in the plans and sections are based on the grid coordinates from detailed drill logs. These coordinates are believed to coincide with the WCMO grid. Grid coordinates on plans and sections are annotated as follows:

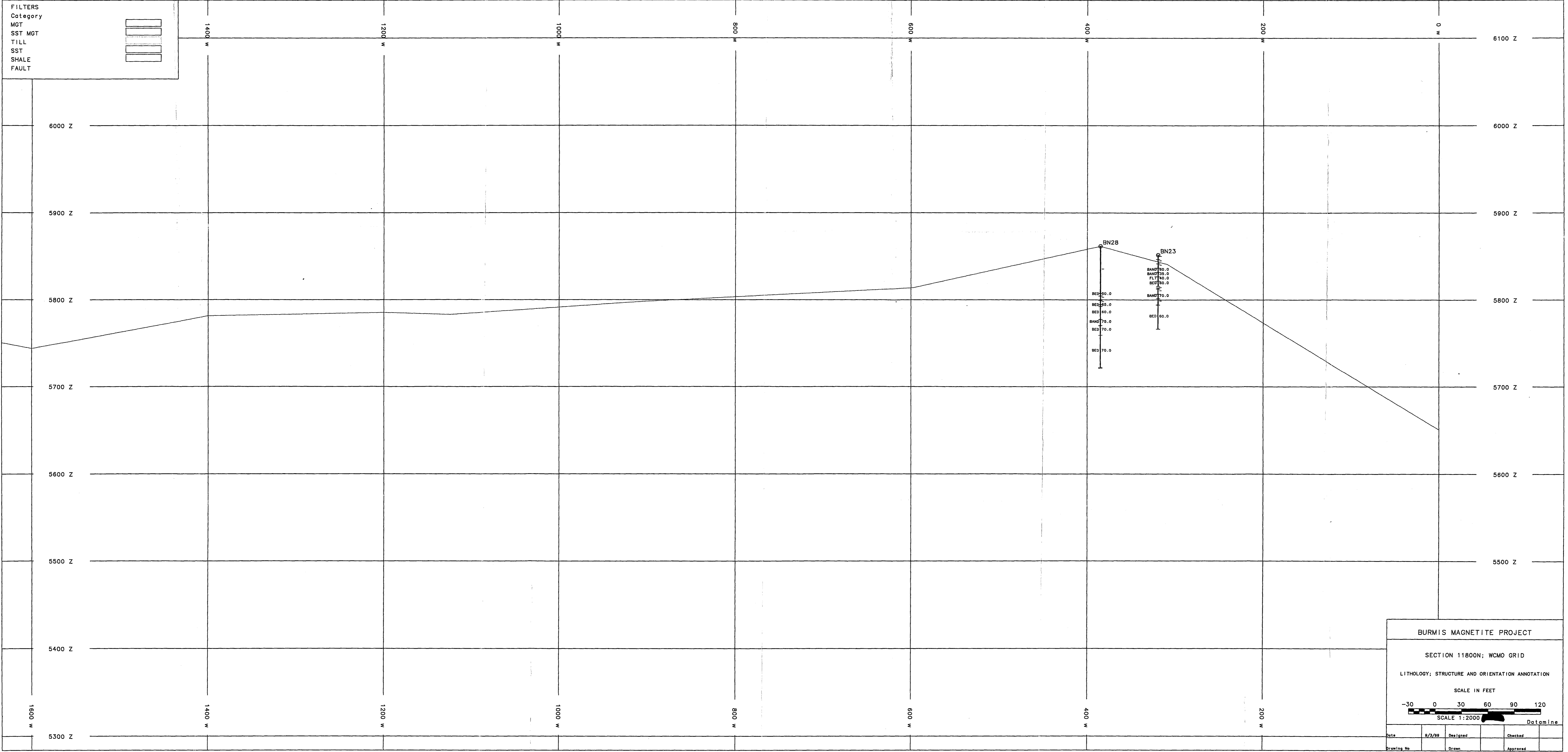
Sections: Grid coordinates west of the base line indicated by coordinate followed by "W"; base line is indicated by 0W;

Plans: Grid coordinates west of the base line indicated by a negative coordinate followed by "E"; base line indicated by 0E; grid coordinates east of the base line are indicated by positive coordinates followed by "E"

The following notes apply to the drill hole sections:

1. Drill holes are colour coded according to cross section legend; the legend codes are as follows:

MGT	Sandstone with magnetite mineralization
SST MGT	Sandstone with minor magnetite mineralization
TILL	Glacial cover, overburden
SST	Sandstone, unmineralized
SHALE	Shale units
FAULT	Distinct rock unit logged as a tectonically disturbed, fault breccias, fault gouge
2. Drill hole annotations consist of geological structures noted in the drill logs and their orientations measured from the core axis in degrees.
3. An approximate surface topography is indicated on the cross sections by a green line; this surface was approximate from drill hole collar elevations and magnetometer survey elevation data.



6100 Z

6000 Z

5900 Z

5800 Z

5700 Z

5600 Z

5500 Z

5400 Z

5300 Z

1600 W

1400 W

1200 W

1000 W

800 W

600 W

400 W

200 W

0 W

BN28

BN23

BED 70.0

BED 70.0

BED 75.0

BED 80.0

BED 85.0

BED 90.0

BED 60.0

BED 70.0

BED 75.0

BED 80.0

BED 85.0

BED 90.0

SCALE IN FEET

-30 0 30 60 90 120

SCALE 1:2000

DATE

9/3/99

DESIGNED

CHECKED

DRAWING NO.

DRAWN

APPROVED

DATE

9/3/99

DESIGNED

CHECKED

DRAWING NO.

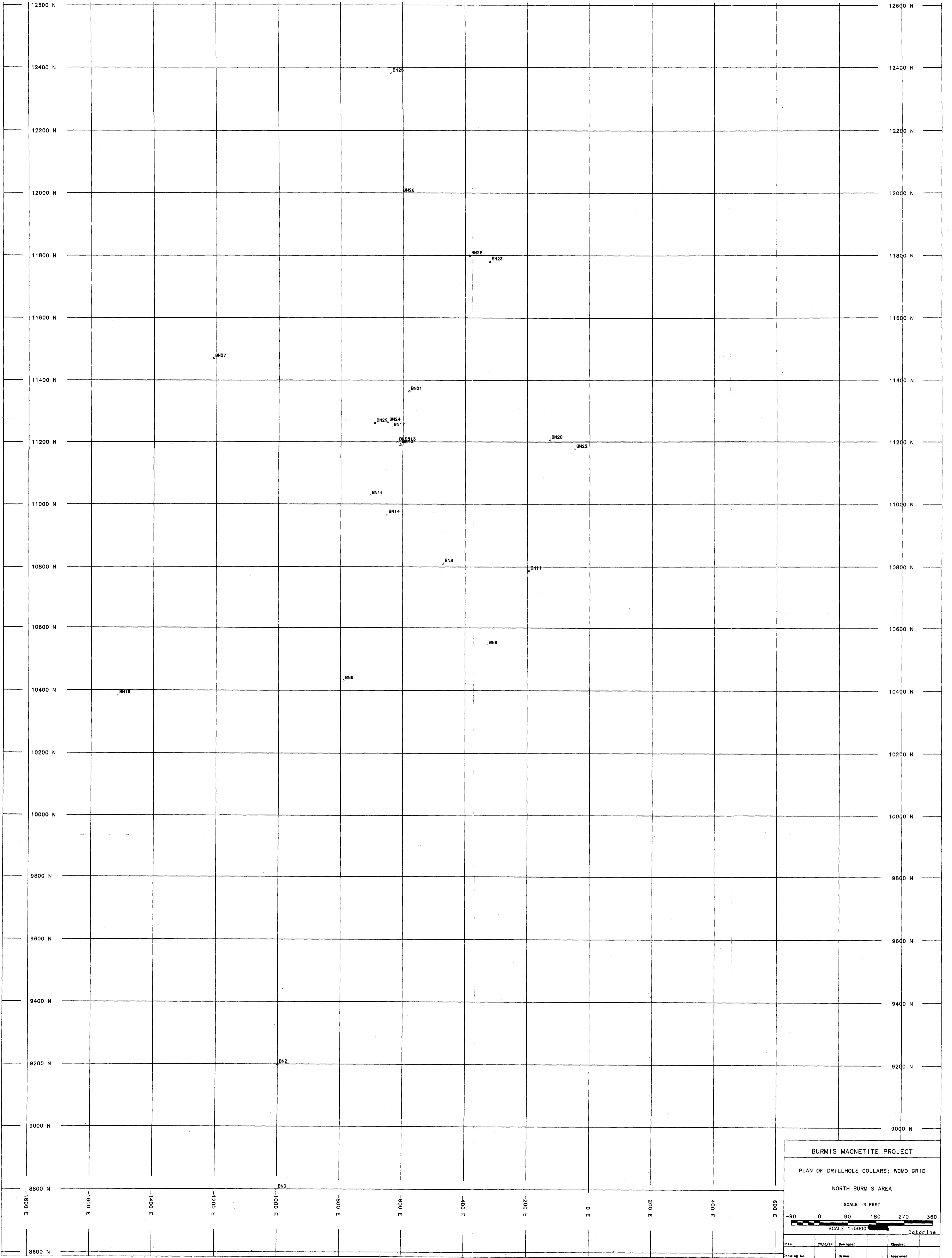
DRAWN

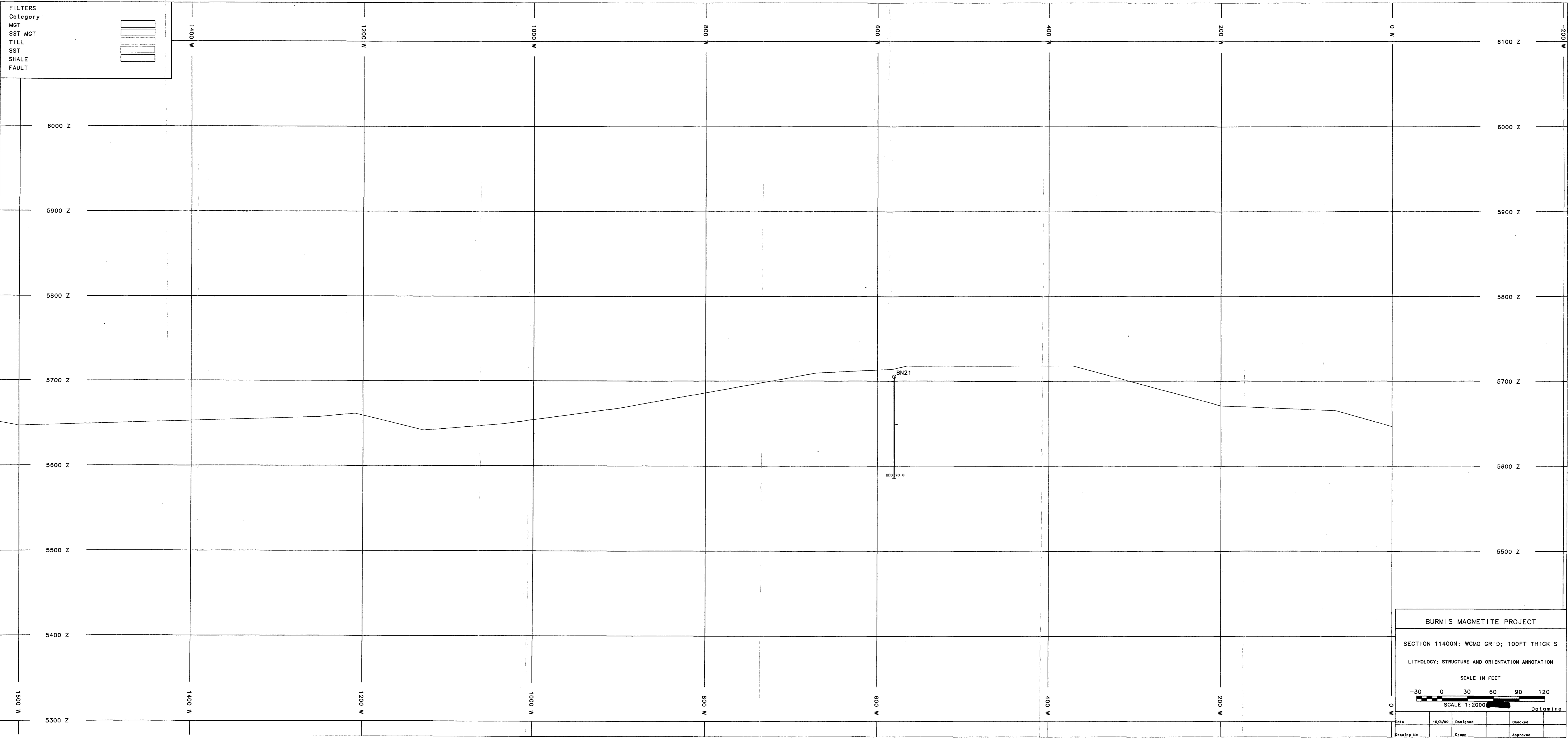
APPROVED

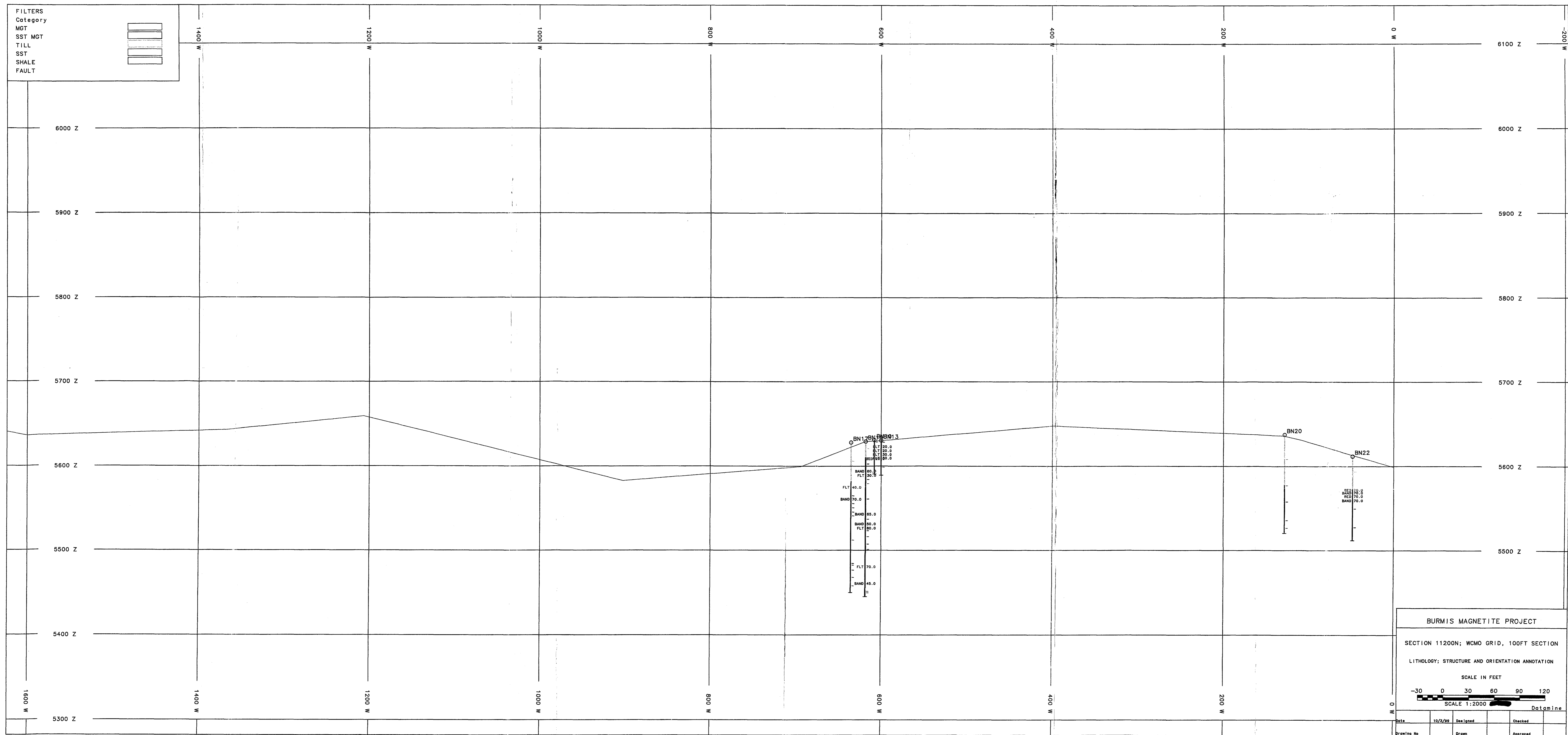
BURMIS MAGNETITE PROJECT

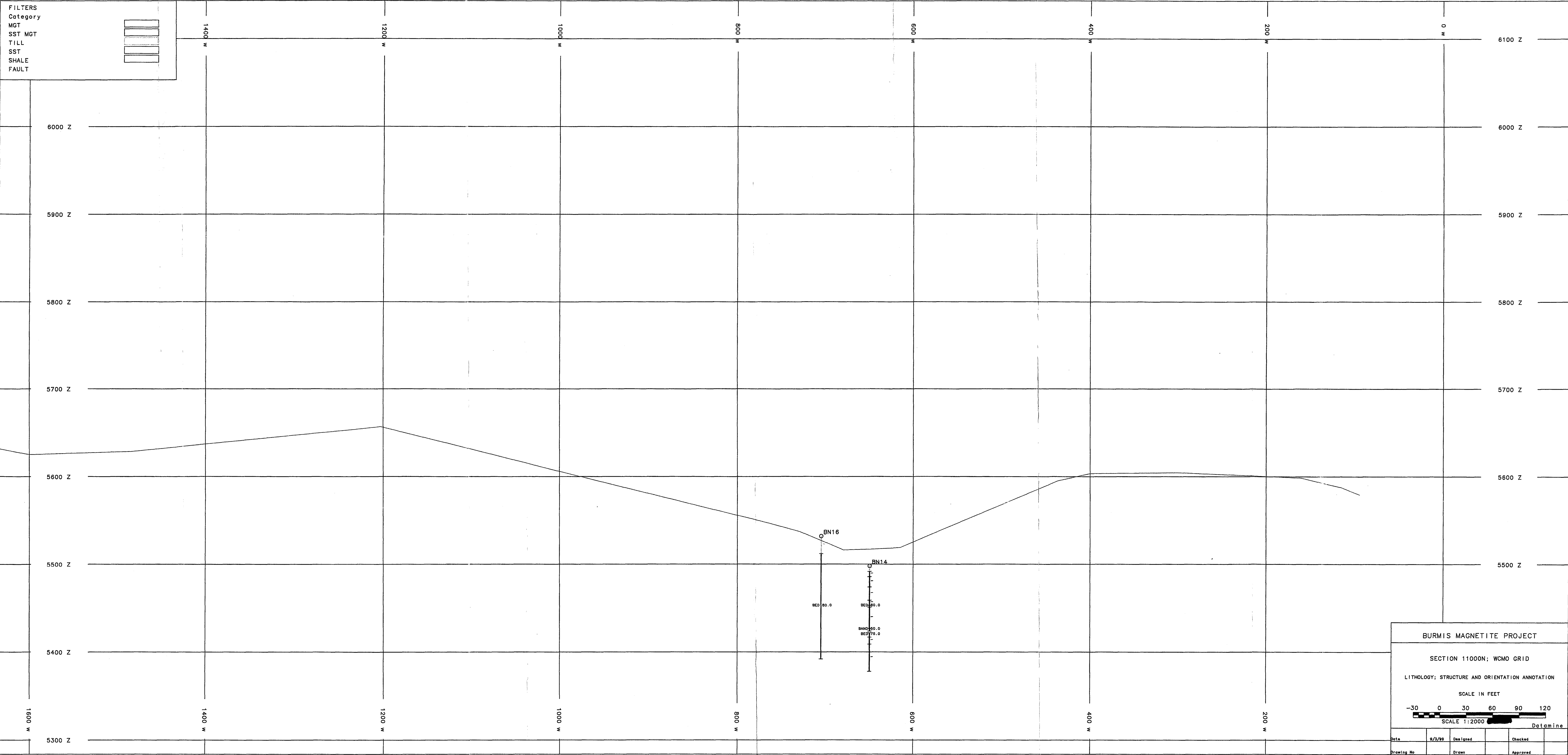
SECTION 11800N; WCMO GRID

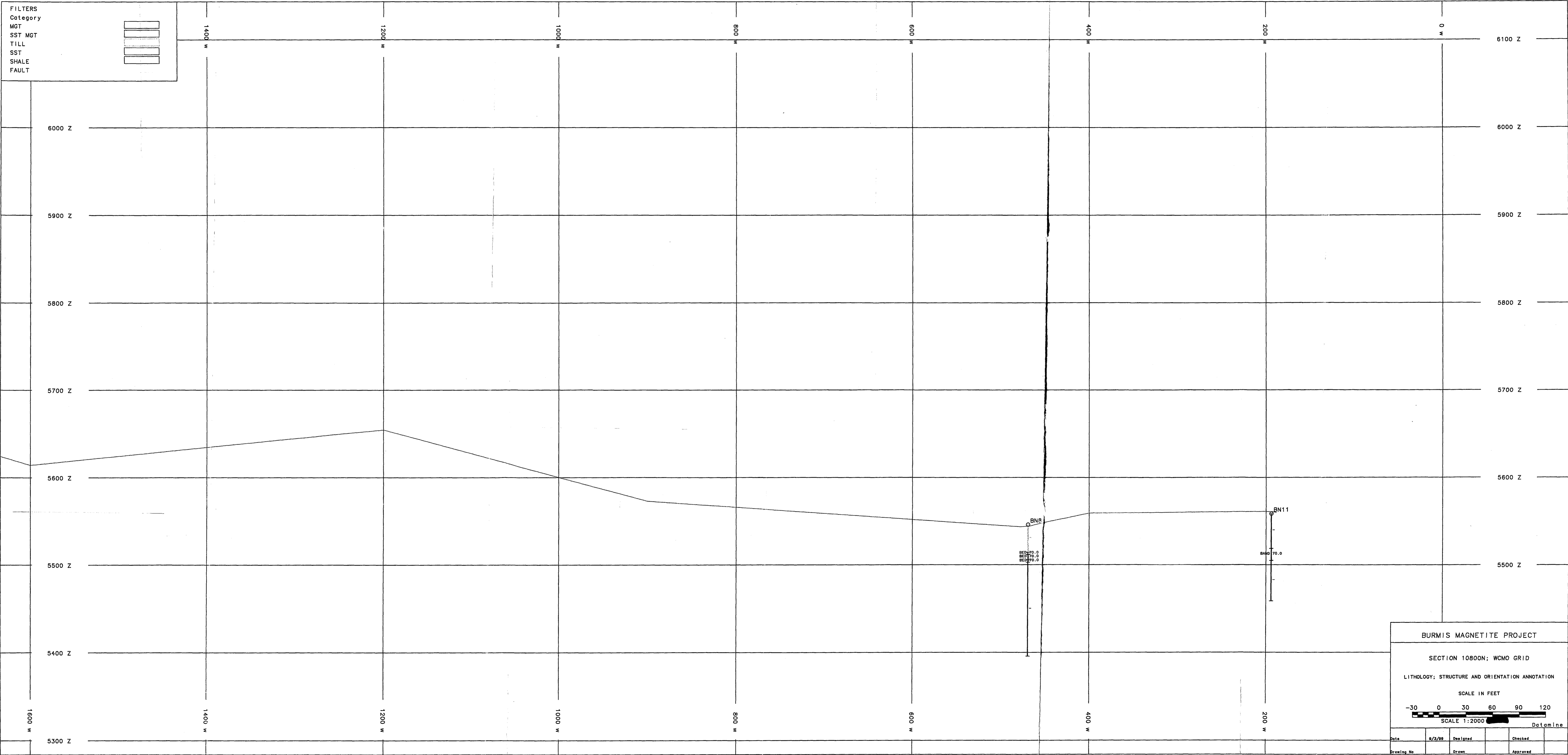
LITHOLOGY; STRUCTURE AND ORIENTATION ANNOTATION











FILTERS

Category

MGT

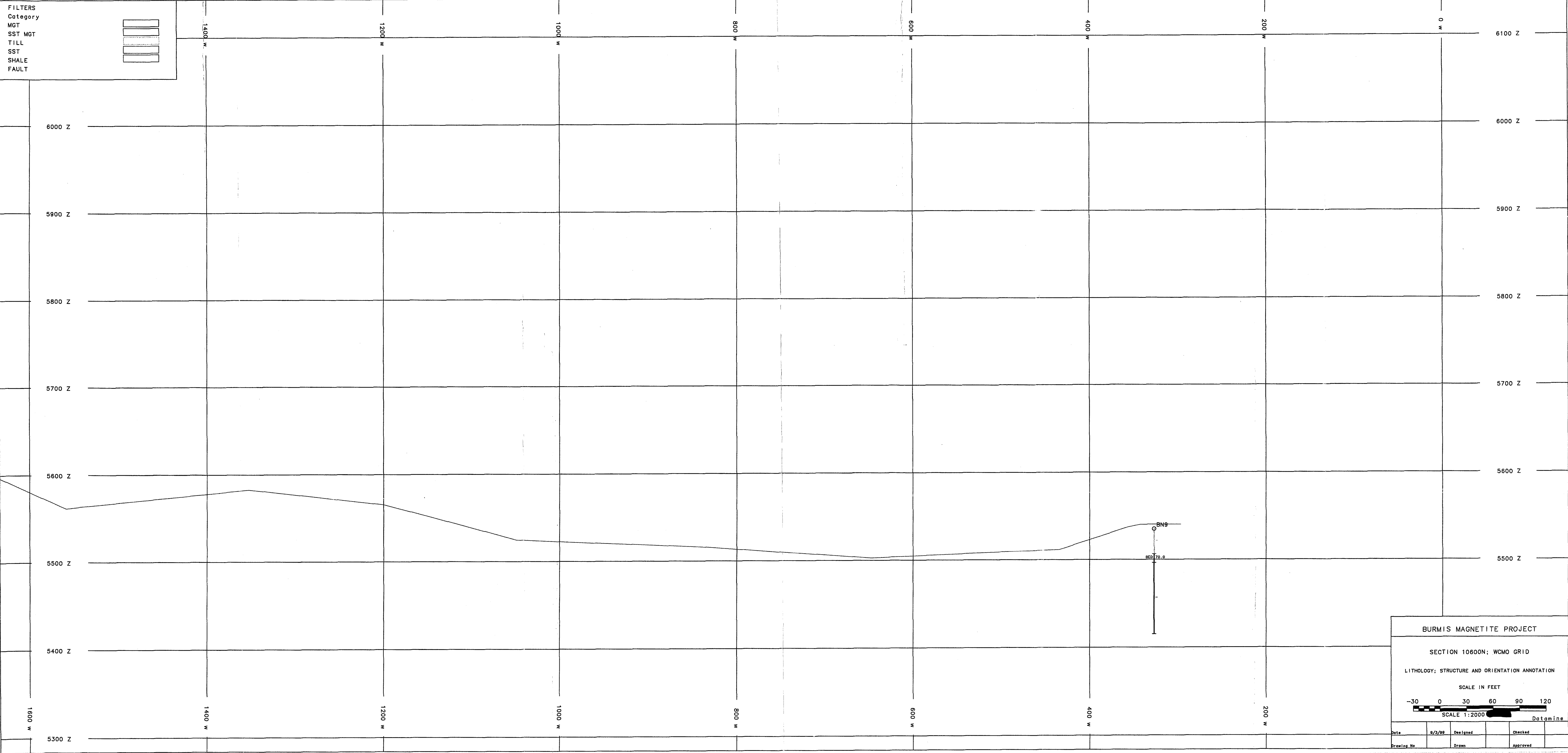
SST

TILL

SST

SHALE

FAULT



BURMIS MAGNETITE PROJECT

SECTION 10600N; WCMO GRID

LITHOLOGY; STRUCTURE AND ORIENTATION ANNOTATION

SCALE IN FEET

-30 0 30 60 90 120

SCALE 1:2000

DATE 8/3/98

DESIGNED

CHECKED

DRAWING NO.

DRAWN

APPROVED

