TOTAL FIELD MAGNETOMETER SURVEY
&
SELF-POTENTIAL SURVEY

on the

ASHTON GROUP MINERAL CLAIMS

NTS 92I/6W & 92I/3W
KAMLOOPS MINING DIVISION

LATITUDE: 50°14'52" NORTH
LONGITUDE: 121°23'45" WEST

OWNER: SITKA HOLDINGS LTD

OPERATORS: J.M. ASHTON & ASSOCIATES LTD.
HOUSTON MINERALS INC.

AUTHOR: J.M. ASHTON, P. Eng.

GEOPHYSICIST: D.G. MARK, P.Geo.

CONTRACTOR: GEOTRONICS CONSULTING INC.

SUBMITTED: 8 September, 2009

Prepared by:
J. M. Ashton, P. Eng.
for

J. M. Ashton & Associates Ltd.
&
Houston Minerals Inc.
Suite 911
850 West Hastings Street
Vancouver, British Columbia
V6C 1E1

on behalf of the Owners, Sitka Holdings Ltd.

TOTAL FIELD MAGNETOMETER SURVEY
&
SELF-POTENTIAL SURVEY

on the

ASHTON GROUP MINERAL CLAIMS

NTS 92I/6W & 92I/3W
KAMLOOPS MINING DIVISION

LATITUDE: **50°14'52" NORTH**
LONGITUDE: **121°23'45" WEST**

OWNER: **SITKA HOLDINGS LTD**

OPERATORS: **J.M. ASHTON & ASSOCIATES LTD.**
HOUSTON MINERALS INC.

AUTHOR: **J.M. ASHTON, P. Eng.**

GEOPHYSICIST: **D.G. MARK, P.Geo.**

CONTRACTOR: GEOTRONICS CONSULTING INC.

SUBMITTED: **8 September, 2009**

Prepared by:
J. M. Ashton, P. Eng.
for

J. M. Ashton & Associates Ltd.
&
Houston Minerals Inc.
Suite 911
850 West Hastings Street
Vancouver, British Columbia
V6C 1E1

on behalf of the Owners, Sitka Holdings Ltd.

TOTAL FILED MAGNETOMETER SURVEY
&
SELF-POTENTIAL SURVEY
on the
ASHTON GROUP MINERAL CLAIMS

NTS 92I/6W & 92I/3W

KAMLOOPS MINING DIVISION

TABLE OF CONTENTS

TABLES ASSOCIATED with TEXT

FIGURES

APPENDIX A

Ashton Project

Total Field Magnetometer Survey
&
Self Potential Survey
on the
Ashton Group Mineral Claims

SECTION 1.0 — INTRODUCTION

The Ashton Copper-Gold Prospect is located about 12 miles (19 km) due east of the Village of Lytton, British Columbia. It has seen recorded mineral exploration over the area of interest since the discovery of a large, strong, single element copper-in-soils anomaly in 1969. The anomalous area was re-discovered as a result of a new multi-element soil survey conducted in 1993. Its size and strength corresponded well with the original survey. The copper-in-soils anomaly covers an area about 1 mile (1.6 km) east to west by 1½ miles (2.4 km) north to south and appears to be contained within a much larger area of hydrothermal alteration.

From the results of a small percussion drill program conducted in 1993 the area of interest consists of a heavily altered intrusive complex containing magnetite in contact with a carbonaceous volcanic sedimentary succession also heavily altered. The intrusive complex and the altered volcanic-sedimentary succession contains low grade copper in disseminations and in quartz-carbonate veinlets. The drilling showed propylitic alteration throughout. A deep-probe induced polarization survey over the complex in 1999 showed a large chargeability anomaly below and offsetting the drill holes indicating the probable location of a mineralized diorite porphyry.

In 2001 a total field magnetometer survey was completed from Line 5000 North to Line 4500 North to cover the location of the IP diagnosed porphyry copper deposit. The logs from drill cuttings from drilling into the propylitic zone of this intrusive complex showed a complex made up of gabbro, diorite, quartz-diorite, diorite-porphyry and albite porphyry underlies this area. Except for the albitite all intrusive phases contain significant but variable magnetite, up to 15%, however their relative spatial configurations are unknown. And, no structural details could be determined. A medium sized, altered and mineralised diorite-porphyry dike intrudes the intrusive complex and geologically supports the IP chargeability anomaly which forms below the propylitic zone. The porphyry contains abundant magnetite. The 2001 magnetic survey showed a system of magnetic anomalies which fits the probable trace of the underlying porphyry intrusive determined from the IP survey.

Recently, in 2006 and 2007 two consecutive mobile metal ion (**MMI**) geochemical surveys were conducted. The 2007 integrated results shown in **Figure 16** were the subject of an assessment work report submitted 30 August 2007. The five lines surveyed resulted in the discovery of a large prominent MMI gold anomaly that is 1 km in width and more than 0.5 km in length and is open to the south. Total area of the gold anomaly is 450,000 m^2. It was diagnosed from epithermal gold pathfinder elements as a probable alkalic porphyry related low-sulphidation epithermal gold zone. The MMI gold anomaly contains almost no copper but is south of and contiguous to a large copper in soils anomaly redefined in a 1993 survey.

What is unique about MMI is that the **surface area of an MMI gold anomaly is a measure of its concealed size, and its MMI strength is a measure of its relative gold concentration.** The depth of the gold mineralization and its grade can only be determined by a combination of other geophysical methods and drilling.

Within the MMI gold anomaly are two separate MMI **arsenic** anomalies, with coincident **gold**, that are interpreted to be hydrothermal fluid outflow zones, or hydrothermal flues. They are identified as Hydrothermal Outflow West Zone with an areal extent of 88,000 m^2 and Hydrothermal Outflow East Zone with an areal extent of 150,000 m^2.

Figure 12, "Diagnosed Hydrothermal Outflow Zones & Self-Potential Anomaly 1 in Relation to the Total Field Magnetic Anomalies" partly in colour, shows the magnetic anomalies in relationship to the diagnosed hydrothermal fluid outflow zones, whereas **Figure 11**, "MMI Gold Anomaly in Relation to MMI Arsenic Anomalies & Interpreted Location of Porphyry 1" shows the known soils geochemical relationships of both MMI geochemistry and conventional geochemistry focusing on the predominant universal gold pathfinder elements, arsenic and gold.

Quoting from Hedenquist et al, 2000, "one of the main challenges for exploration is to identify the location of the paleoflow channels, and determine whether or not there is ore potential.... the secret is in determining where the upflow was focused because this is the most likely place to start the search for ore"

Hedenquist cites that "evidence of boiling indicates proximity to upflow channels" and conversely it is believed that the anomalous MMI arsenic with the anomalous MMI gold are upflow channels and related to the main zones of boiling in this epithermal system and are, in all probability, proximal to gold mineralization.

It was the intention of this combined magnetic and self-potential survey to cover that area shown in **Figure 12** from Line 4500 North to Line 4100 North to survey the gold anomaly and main flues of the diagnosed hydrothermal fluid outflow zones for any diagnostic magnetic and self-potential anomalies. Magnetic lows and highs and SP anomalies could add support to the diagnoses.

SECTION 2.0 — SUMMARY & RECOMMENDATIONS

2.1 Summary

The total field magnetic survey successfully surveyed Line 4500 North from Station 650 East to Station 650 West, and Line 4400 from Station 650 West to the Baseline Station 00.

Similarly the Self-Potential survey successfully surveyed Line 4500 North from Station 650 East to Station 650 West, and Line 4400 from Station 650 West to the Baseline Station 00.

Each of the surveys covered the same ground as it was prudent that the two geotechnicians worked in close proximity for safety reasons. Unfortunately the plan was to survey the entire area from Line 4500 North to Line 4100 North from Stations 650 East to Stations 650 West as this is the area of interest that could host a giant gold deposit.

This area also appears to contain two large hydrothermal outflow zones, or flues, defined by strong MMI arsenic anomalies. Arsenic is a universal pathfinder for gold deposits and anomalous arsenic is one of the gold pathfinder elements commonly found within the main fluid outflow channels of a hydrothermal gold mineralizing event. These zones are identified as Hydrothermal Outflow West Zone and Hydrothermal Outflow East Zone in **Figure 12**.

The anomalous gold MMI Response Ratio results found along and between Lines 4500 and Line 4100 are significant. A plan view of this large anomalous gold zone is shown in **Figure 16.** In terms of probability this large anomaly represents a gold-rich magmatic-hydrothermal system, possibly of the porphyry related low-sulphidation epithermal type. The gold has likely been deposited within structural and other permeable zones known to underlie the area.

Gold anomalies determined by the MMI assay technique are indicative of primary gold mineralization concealed at an unknown depth. MMI is uniquely precise. The area of an anomaly is a measure of its concealed size and its anomalous strength is a measure of its relative gold concentration.

The results from this magnetometer survey are inconclusive but have added to the magnetic data base. The results from the self-potential survey are positive and encouraging. The majority of the intended target area was unable to be surveyed due to the time constraints on the number of field days allocated to the budget.

2.2 Recommendations

The following recommendations are made:

1. Extend the magnetometer survey and self-potential survey to at least Line 3800 North to totally cover the MMI Gold Zone and hydrothermal fluid outflow zones.

2. Still a priority, is geological mapping of the entire property.

3. Extend the MMI survey another 500 metres to south of Line 4100 to at least Line 3800 and another 500 metres to the north of Line 4500 North to Line 5000 North because the newly discovered gold zone is open to the south and to the north.

4. Carry out the recommendation made in the 1999 deep-probe IP survey, report, and complete a detailed deep-probe induced polarization survey with at least 21 contiguous deep-probe survey lines with lines 100 metres apart and stations at every 100 metres between Line 3,800 North and Line 6,000 North and between Stations 800 East to 800 West. The survey lines must be cut and surveyed. The IP budget should allow for not less than 40 km of survey and include an allowance for detailing. The results of this survey will provide a composite, integrated, and geophysically meaningful three-dimensional pseudosection of the entire target area identified to date showing chargeabilities, resistivities and differential SP results. This coverage will detail the IP survey around both porphyries.

   Given the high probability that this intensely altered system plays host to a porphyry related low-sulphidation epithermal gold system, the IP method is also suited to assessing epithermal deposits by identification of high-resistivity zones characteristic of silicification and quartz vein development. Similarly if the system includes high-sulphidation mineralization in the form of vuggy quartz veins/silicic cores or massive sulphides, resistivity and chargeability anomalies, respectively, should identify these structures. Similarly clay alteration zones which are found proximal to hydrothermal outflow zones both high- and low-suphidation mineralization may be diagnosed from their characteristic low resistivity signatures.

   The geological and mineralogical theme of the property is complex. Detailed exploration as a prelude to drilling should include but not necessarily limited to a deep-probe IP survey, geological and alteration facies mapping, an expanded MMI geochemical survey, an expanded self-potential survey and a magnetic survey using the same magnetometer throughout. Isotope geochemstry is also recommended.

4. As per Gale's 1994 recommendation, diamond core drilling only, is recommended for testing the target structures in this complex geological environment.

SECTION 3.0 — LOCATION AND ACCESS

The Ashton Group of mineral claims is located approximately 19 km (11.8 miles) south of Spence's Bridge, British Columbia and south of the confluence of the Nicoamen River and Thompson River where this river turns sharply west towards Lytton. Spence's Bridge is located approximately 170 km (110 miles) as the crow flies, northwest of Vancouver, British Columbia, on Trans-Canada Highway 1.

The Canadian Pacific Railway parallels the Trans-Canada Highway at this location on the east side of the Thompson River.

Locally, the northwest quadrant of the claim group is located about 1,000 metres south from the confluence of the Nicoamen River where it enters Thompson's River.

A good all-weather forest service road provides immediate and easy access to the central part of the claims southward off of the paved Trans-Canada Highway immediately north of the Nicoamen River and highway bridge. Several old logging roads with secondary tree growth cross the property and intersect with the main access road, thereby providing the potential for road access to a large portion of the area of interest through a minimum of rehabilitation.

SECTION 4.0 — PROPERTY AND OWNERSHIP

The Ashton Group is comprised of the following mineral claims with expiry dates as shown. The claims all have a common anniversary date. All claims except Rebecca 2 have been converted to Cell Tenure and two (2) cell tenure claims have been added, Tenures 537358 and 537360. Expiry dates shown are subject to acceptance of this report.

All of the following mineral claims are held by record in the name of Sitka Holdings Ltd. of Vancouver, British Columbia.

Mineral Claim	Tenure No.	Area in Hectares	Cells (C) or Units (U)	Expiry Date
Rebecca 2	369944	375.00	15U	17 July 2010
Cell Tenure	537356	186.01	7.44C	17 July 2011
Cell Tenure	537357	227.28	9.09C	17 July 2012
Cell Tenure	537358	144.62	5.79C	17 July 2014
Cell Tenure	537359	413.33	16.53C	17 July 2011
Cell Tenure	537360	62.00	2.48C	17 July 2013
	Total -	1,408.24		

The following mineral claim is held by record in the name of J. M. Ashton of Vancouver, British Columbia and his held on behalf of Sitka Holdings Ltd.

Mineral Claim	Tenure No.	Area in Hectares	Cells (C) or Units (U)	Expiry Date
Final 1	598590	20.67	0.83C	17 July 2016
	Total -	20.67		

SECTION 5.0 - EXPLORATION HISTORY

The first recorded exploration work on the area now occupied by the Ashton Project was directed by Alfred A. Burgoyne, M.Sc., in October 1969. His exploration resulted in the delineation of a large area of anomalous copper in soils from a single element geochemical survey. This work was followed up by J. W. Antal, Ph.D., P. Geol. (Alberta) with a small program of surface trenching, geological assessment, and interpretation. Trenching showed shear-zone hosted copper mineralization in skarn within part of the copper anomaly. There was no mention of intrusives. Antal's 1969 report concluded that the prospective area had the potential for hosting a large low-grade copper deposit at depth.

In 1990, a total-field magnetometer survey, and very low frequency electromagnetic (VLF-EM) survey was carried out over the north half of the area of interest between Lines 5000 North and Line 6400 North, under the direction of J. M. Ashton, P. Eng. A prominent, distinct, magnetic anomaly north was discovered between Line coordinates 5300 North to Line 5700 on the baseline with its major axis striking north-south with a maximum amplitude response of 4,600 gammas (Nanoteslas) above background. The ½ space dimension of the anomaly is about **500 metres** (1,600 feet) north-south **by 200 metres** (650 feet) east-west.

The VLF-EM survey located a number of electromagnetic (EM) conductors each with a characteristic north-south strike. At the time, these conductors were diagnosed as either structurally controlled ionic conductors or electronic conductors and could be combinations of both. The strongest EM conductor of the survey extends from Line 5000 North at Station 400 East to Line 5400 North, Station 500 East. A follow-up 1993 soils survey showed an anomalous, linear, copper-in-soils anomaly coincident with the 1990 VLF-EM anomaly. A deep-probe IP survey, conducted in 1999, showed a very strong conductivity anomaly at 120 metres (400 feet) below the coincident VLF-EM anomaly and coincident copper anomaly. This conductor is estimated to be about 100 metres thick and dips about –40 degrees to the east. It conforms with a volcanic-sedimentary succession mapped by Antal which was later found to be in contact with the intrusive complex.

Petrographical work by P. B. Reid, Ph.D., consulting geologist, in 1991 from altered rock sampled by Ashton within the area of the magnetic anomaly showed that the specimen was:

> *"a heavily altered fine-grained pyroxene diorite? with the alteration assemblage consisting of calcite, chlorite, epidote, sphene, pyrrhotite, and hematite. The original rock has been nearly obliterated by alteration. The tourmaline, a major part of the alteration assemblage, indicates that hydrothermal solutions causing the alteration contained significant volatiles."*

This diagnosis supports the hydrothermal character of the alteration which pervades the area.

In August 1992, R. E. Gale, Ph.D., P.Eng., consulting geological engineer, examined the prospect and confirmed the skarnification reported by Antal, and altered and unaltered diorite reported Ashton.

In April 1993, Kingston Resources Ltd. optioned the property from S. E. Apchkrum, the recorded owner at the time and, in June 1993, carried out a multi-element geochemical sampling program and some cursory geological mapping to confirm the copper-in-soils anomalies identified by Burgoyne in 1969. The geochemical survey confirmed the size, strength, and location of Burgoyne's 1969 copper anomaly. Cursory geological mapping also confirmed that heavily altered diorite with disseminated magnetite was associated with the copper-in-soils anomaly.

In 1993 a shallow-probe IP survey using a pole-dipole array with a 50 metre 'a' spacing was conducted by Lloyd Geophysics Inc. Four (4) levels were surveyed which gives a maximum depth of penetration of the order of 100 metres (330 feet).

A high-chargeability anomaly was found to be co-incidental with the southwestern quadrant of the copper-in-soils anomaly. Later prospecting identified altered diorite exposed in sporadic outcrop. This ellipsoidal anomaly, indicative of disseminated sulphides, using the 7.5 millisecond chargeability isopleth, covers about 32 hectares (80 acres). Its major axis has an apparent strike of about 290° azimuth.

In 1994 Kingston Resources Ltd. drilled five percussion drill holes into the highest amplitude portion of the chargeability anomaly and two drill holes into anomalous geochemistry about 500 metres to the north-east. The drill cuttings were not logged. Kingston dropped their option.

In February 1994, at the request of Ashton, Gale completed a detailed logging of a representative suite of cuttings saved from the drilling. Gale identified multiple episodes of altered and mineralized intrusives in the area drilled by the five holes consisting of quartz-diorite, diorite, gabbro, diorite-porphyry, and albite porphyry in the high chargeability zone, and significant skarnification and marblization to the southeast within the altered sedimentary-volcanic succession. Gale also noted pervasive and widespread carbonate alteration. Copper mineralization was found in disseminations and vein systems. He discovered that the bottom 70 feet of PDH93-3 contained a stockworks zone of ***pyrite-chalcopyrite, quartz-carbonate veinlets.***

At the recommendation of Gale, Ashton engaged Peter Reid, Ph.D., in 1995, to complete a petrographical study of selected drill chips. Read supported Gale's logging but added that widespread intrusions also include pyroxene gabbro, pyroxenite and horneblendite and their altered equivalents. Read also identified tonalite and albitite (albite porphyry) as intrusive species along with a host of hydrothermal alteration facies.

In June 1999, Geotronics Surveys Limited, under the direction of Geophysicist D. G. Mark, P. Geo. were engaged by Ashton to carry out a two-line reconnaissance deep-probe IP survey to cross the area of geochemical and lithological interest drilled by Kingston in 1994. The survey was designed to cross the target area with one line from east to west and the second line from south to north to obtain an elementary 3-dimensional pseudosectional view of the IP survey variables. The survey electrodes consisted of a dipole-dipole array with an 'a' spacing of 100 metres (328 feet). Six (6) levels were surveyed which represents a nominal 420 metres (1,400 feet) survey depth. Each survey line was 2.2 km (6,888 feet) in length.

Two large, distinct, IP anomalies were discovered below the shallow-probe chargeability anomaly discovered by Kingston in 1993. One IP anomaly, directly below the large copper in soils anomaly was diagnosed as a large polarizable body containing significant disseminated sulphides and was diagnosed as a probable porphyry copper deposit with the possibility of contained gold. The second IP anomaly, located along the eastern contact zone of the disseminated sulphide body is a strong conductivity anomaly diagnosed as a lithologically controlled semi-massive to massive-sulphide body at about 120 metres depth below a surface zone of intense hydrothermal alteration. A large low resistivity anomaly occupies the hanging wall zone of the sulphide body and was diagnosed as a clay altered zone. Each anomaly is considered a major drill target.

The large disseminated-sulphide body discovery is spatially oriented such that the shallow probe IP survey would not have detected it nor would the percussion drilling have penetrated it. Similarly, the top of the semi-massive to massive-sulphide body was below the maximum survey depth of the shallow probe IP survey and remained undetected until the deep-probe IP survey discovered it.

In **2001**, Dave Mark, P. Geo. conducted a **total field magnetometer survey** in the area to extend the 1990 magnetic survey from Line 5000 North to Line 4500 North which extended the 1993 coverage 500 metres to the south. The 2001 magnetic data shows a sizeable, distinct, magnetic low in the hanging wall of the massive sulphide body which coalesces into the low-resistivity anomaly averaging about 87 ohm-metres (diagnosed as clay alteration) in the hanging wall zone of the interpreted sulphide body; the negative peak of this magnetic low can be seen in **Figures 5** and **6** on Lines 4600 N and 4700 N with its areal effect clearly shown in **Figure 5**, the coloured plan. The surface area above the sulphide body is intensely hydrothermally altered. This hanging wall zone is identified as a hydrothermal fluid outflow zone.

The area below the large copper in soils geochemical anomaly, **Figure 11,** is magnetically anomalous and is attributed to the intrusive complex concealed beneath the copper anomaly.

As stated above, the percussion drilling showed an igneous complex of gabbro, diorite, quartz-diorite, tonalite, diorite porphyry and albite porphyry. All these intrusives contain significant magnetite, up to 15%, except the albitite which doe not contain magnetite.

In July 2004, Geotronics Consulting Inc. under the direction of Geophysicist D. G. Mark, P. Geo. were engaged by Ashton to carry out a single-line reconnaissance deep-probe IP survey to intersect the south end of the 4,600 gamma magnetic anomaly discovered in 1990. It was also near this location that the 1999 deep-probe IP survey measured a very strong Self-Potential anomalous response at minus 273 millivolts which is diagnostic of a significant sulphide body concealed below surface.

The 2004 deep-probe survey used a dipole-dipole array with an 'a' spacing of 100 metres (328 feet). Six (6) levels were surveyed which represents a nominal 420 metres (1,400 feet) survey depth. The survey line length was 1.6 km (5,248 feet).

This survey resulted in the discovery of a second large disseminated-sulphide body composed of two separate disseminated sulphide limbs, almost bilaterally symmetrical which form on each side of the north-south long axis of the 4,600 gamma magnetic anomaly. It is diagnosed as a probable porphyry copper deposit, possibly the gold-rich variety because of its magnetic core zone. This geophysical signature is analogous to the Island Copper deposit and several gold rich varieties found throughout the Pacific Rim which have a similar geophysical signatures. The anomalous magnetic signature of these deposits is due to a core zone of quartz-magnetite-amphibole alteration. The heavily altered diorite petrographically determined by Read in 1993 was taken from surface outcrop above this anomaly.

Arsenic data from the 1993 soils survey was plotted in 2004 and resulted in the discovery of a significant arsenic in soils anomaly along the south contact aureole of diagnosed Porphyry 1. Similarly, a strong arsenic anomaly was found on surface above the diagnosed Massive Sulphide Body H2.

In 2004, a small prospecting and sampling program in altered outcrop within the arsenic anomalies along the diagnosed porphyry's south contact aureole and in the altered area above diagnosed Massive Sulphide Body H2 returned significant gold pathfinder elements.

The best example was from a sample taken from with Arsenic Anomaly 2 near the south contact aureole of Porphyry 1. Assays returned the following anomalous epithermal gold pathfinder values: **Te (200 ppb),** [200 x normal @ 1 ppb]; **As (218 ppm),** [121 x normal @ 1.8 ppm]; **Hg (10,658 ppb),** [133 x normal @ 80 ppb]; **Sb (7.13 ppm)** [36 x normal @ 0.20 ppm]; **Se (16.9 ppm)** [338 x normal @ 0.05 ppm]; and **Ag (3.9 ppm)** [56 x normal @ 0.07 ppm]. [normal = average abundance in the Earth's unaltered Crust].

The above pathfinders are indicators of a concealed porphyry related epithermal gold mineralizing event at depth. Tellurium is indicative of a gold rich alkalic magma

Other anomalous gold pathfinders including anomalous tellurium found within the area of arsenic in soils anomalies interest motivated the 2006 Mobile Metal Ion (MMI) Survey. This survey consisted of two parallel east-west oriented lines, Line 4500 and Line 4400 spaced 100 metres apart. The two metals of primary interest were arsenic and gold.

The MMI survey results showed several arsenic anomalies that corresponded with the conventional arsenic in soils anomalies from the 1993 soil survey; and are of potential economic significance as pathfinders to a concealed gold zone. The MMI survey showed that anomalous MMI gold accompanied the arsenic in a nearly one to one correspondence. The anomalous MMI gold Response-Ratio results found along Line 4500 and Line 4400 were considered significant and in terms of probabilities represent a gold-rich magmatic-hydrothermal mineralising event at depth probably of the porphyry-related low sulphidation epithermal type. The MMI gold anomalies indicate there could be significant deposit sites within structural and other permeabilities within and beyond the southern and eastern contact aureole of diagnosed Porphyry 1.

Accordingly, in 2007, the MMI survey was extended by three additional lines to the south of the 2006 survey. The combined MMI results from Lines 4100 North to 4500 North inclusive a north-south distance of 500 metres shows a large MMI gold anomaly about 1,000 metres wide and still open to the south and to the north. The anomalous zone covers an area measuring about 455,000 m^2 which may be economically significant.

Within the MMI gold anomaly a west zone MMI arsenic anomaly about 160,000 m^2 and an east zone MMI arsenic anomaly about 200,000 m^2 are interpreted to be the main hydrothermal flues or outflow zones from a gold mineralising event at depth. The arsenic is the classic pathfinder to a concealed gold deposit at depth.

There are many published testimonials where the discovery of MMI gold anomalies have resulted in the discovery of blind gold deposits.

A re-examination of the percussion drill core assays of 1993 in 2006 showed several intersections of anomalous arsenic and antimony.

SECTION 6.0 — PHYSIOGRAPHY AND OUTCROP

The claims cover an area of moderate to steep topographical relief. The central and western part of the claims are traversed by a multiple switchback road that climbs the east side of the Thompson River canyon rising from the canyon bottom at 700 feet (213m) elevation to a saddle between two peaks at 3,500 feet (1,070 m) elevation within a distance of 2 miles (3.2 km). This represents an average mountain slope of about 25%. Locally the relief is moderate to steep, yet relatively accessible on old logging roads by foot from the main switchback road. Off-road travel requires extra exertion to negotiate the steep slopes. The steeper slopes are covered with scree and/or talus. Depth of overburden in the 1993 drilled area ranged between 10 feet to 27 feet in the area of Porphyry 1 between Lines 4600 North and 5100 North and west of Station 300 East. Northwesterly from that area, at Line 5300 North, Station 400 East depth of overburden is 130 feet.

The area of interest is part of the Cascade Mountains which are separated from the Coast Mountains to the west by the Fraser River. The Thompson River meets the Fraser River at Lytton about 8 miles (13 km) west from the property.

The Cascade Mountains are lower and less rugged than the Coast Mountains and generally consist of rolling and rounded summits, which is the case at the higher elevations on this property.

Generally, southern and western exposures on the property tend to be more open and easier to traverse, whereas northern and eastern slopes, and ravines, are much more heavily wooded. The area of interest on the property is a combination of westerly and northerly facing slopes that in places are open and in places are difficult to negotiate. Where old growth logging has occurred new growth is represented by denser deciduous trees and in places dense underbrush makes it difficult to traverse.

Conifer species in the area include Douglas Fir, Balsam, Spruce, and Lodgepole Pine.

Outcrop is generally lacking throughout the area of interest, so trenching is required to access the bedrock for mapping and sampling. Exposed outcrop over the entire property is estimated at not more than 10% of the surface area.

Overburden found in the percussion drill hole program of 1993 ranged in depth from 10 feet to 130 feet.

SECTION 7.0 — REGIONAL GEOLOGY

The regional geology is more recently described in the Geological Survey of Canada: ***Geology of Hope and Ashcroft Map Areas, British Columbia*** by J.W.H. Monger and shown on Map 42-1989, Ashcroft, British Columbia, from which the salient features are shown on **Figure 3**.

As described by S.W. Smith, Geologist, in his 1993 Assessment Work Report, the property straddles the boundary between the older Upper Triassic Mount Lytton Complex on the west side and the younger Middle to Upper Cretaceous Spences Bridge Group on the east.

The oldest rocks which are part of the Mount Lytton Complex occupy the area to the west of the property and may underly the property to some extent. These are layered quartz-feldspathic orthogneisses, mafic to dioritic volcanics, and metasediments. Monger (2001, Field Trip Notes) states that the Mount Lytton Complex in this area is overlain stratigraphically by, and elsewhere faulted against continental arc and intraplate volcanics of the 104 Ma Spences Bridge Group. According to Gale (1992) in a personal communication with Monger, Monger believes the limy rocks on the property are part of the Mount Lytton Complex and whether they are part of this oldest unit or are somewhat younger is still to be determined.

The Mount Lytton Complex has been interpreted by Monger to be part of the roots of the Late Triassic Nicola arc. The complex is fault bounded, on the west by the Fraser River fault system, and on the east by normal faults along the Thompson River. The Mount Lytton Pluton that is part of the complex has been age-dated at 212 ± Ma (Parrish and Monger, 1992), which is very close to some dates reported from the central Guichon Batholith, which is located about 40 km to the northeast and contains the world-class Highland Valley ore bodies. Parrish and Monger interpret the Mount Lytton Complex and Guichon Batholith bodies to be part of the Upper Triassic magmatic arc complex that characterizes Quesnellia terrane, but state that they were probably emplaced at different structural levels, as suggested by their contrasting settings.

Monger speculates that the major structures that form the Guichon Batholith and the Mount Lytton Complex are related to early Mesozoic subduction/arc activity; those in the Guichon Batholith having formed in the upper part of the upper plate and those in the Mount Lytton Complex having formed in the lower part of the upper plate.

Gale (1993) believed the most interesting feature of the regional geology is the pronounced east-west structural grain of the Triassic rocks east of Lytton which appears to be abruptly terminated at its eastern end by one or more north-south faults along and parallel to the Thompson River. It is at the junction of these two strong structures that the Ashton Project is located. He also states that the series of north-south faults along the Thompson River are parallel to and probably similar in age to those along the Fraser River which are thought to be Early Tertiary in age.

Middle and Upper Cretaceous Spences Bridge Group rocks appear to unconformably overly rocks of the older Mount Lytton complex comprised of limy volcanics and limy sediments on the east side of the property. Here the Spences Bridge Group consists of an unaltered upper reddish coloured andesitic volcanic and may include locally felsic and mafic flows and pyroclastics along with sandstone, shale and conglomerate beds. A major fault passes through the Spences Bridge Group on the east central part of the property and/or may represent the boundary between the Mount Lytton Complex and the Spences Bridge Group.

However exploration work conducted on the property from 1994 through to 1999, and in 2004, indicates that the property geology, a component of the regional picture, appears to be distinctively different from its contiguous neighbours, the Mount Lytton Complex to the west and the Spences Bridge Group to the east yet similar to the rocks to the north of the property across the Thompson River which were mapped by Brown (1981) as layered quartzo-feldspathic rocks in contact with weakly foliated plutonic zones ranging from tonalite through to diorite to gabbro.

This similarity was noted by Reid (1995) as a result of his thin section studies of rock chips recovered from a drilling part of the intrusive complex on the property. Reid concluded that rock types similar to those that Brown identified north of the property also underlie the property.

Monger shows the rocks mapped by Brown to the north of the property as younger granodiorite-quartz monzonite intrusions of the Mount Lytton Batholith

Thin section work by Reid (1995) shows that the intrusive rocks on the property are similar to those identified by Brown north of the property. The intrusive complex may share some similarities to both the dioritic and amphibolitic intrusions in the Mount Lytton Batholith and to the tonalite intrusions found associated with the younger granodiorite-quartz monzonite intrusions to the northwest of the property across the Thompson River.

SECTION 8.0 - PROPERTY GEOLOGY & ALTERATION

8.1 General

Property surface geology is yet to be mapped in detail. Salient portions have been mapped only cursorily where sparse outcrop was available in the geochemically anomalous area. Logging the percussion drilling cuttings provided the first look at the complex geology in the subcrop area of interest. However, what the spatial and temporal relationships of the many intrusive phases identified is presently unknown because the percussion drilling was unable to provide this data, including all important structural data. The most comprehensive and reliable geological data to date is that which was provided by Reid (1992), from a single thin section study; by Gale (1994), logging the percussion drill cuttings of 7 holes; and by Read (1995) from a comprehensive thin section study of drill chips selected by Gale as a result of his drill hole logging effort.

The geology is largely unexposed on surface but from observations of limited outcrop exposure and percussion drill hole data is different from the geology which is contiguous with it to the east and to the west. Geological work by Gale and Read indicate the probable scenario that this local area was intruded by an integral tonalite and diorite parent intrusive complex and further intruded by a complex of quartz-diorite, diorite porphyry, albitite and gabbro.

This intrusive complex lies between the east edge of the Mount Lytton Batholith and a major fault structure to the east which is the west edge of the Upper Cretaceous Spences Bridge Group. The fault structure is the southern extension of a major fault that extends down the Thompson River canyon to the north projecting into the central part of the property.

Monger shows part of the Mount Lytton Complex to the west of the property as composed of layered quartz-feldspar rock, amphibolite and mylonite. Therefore the property intrusive complex appears to have distinctively different lithology.

J. W. Antal (1969) described the volcanic-sedimentary lithology as a monoclinic structure dipping 40 degrees to the east.

Geological observations reported by S.W. Smith, Geologist, in his 'Assessment Report', *Geological Mapping and Geological Sampling on the Ashton Property"* of 20 September, 1993' have now been superceded by new interpretations by Gale and Read, however Smith's observations of some of the diorite outcrop and skarnification are still valid and noteworthy.

Smith described one outcrop of the host volcanic-sedimentary rock succession on the east and southeast side of the mineral bearing intrusive complex as:

> *"The limestone varies from a clean white crystalline variety with a massive appearance to a thinly bedded grey silty variety. The limestone beds were noted to be from 0.5 to 5 m thick. Interbedded with the limestone was fine to medium-grained green volcanic tuff that was much wider in width. The volcanics were commonly limy. Locally these rocks were very strongly altered and fractured, with the strongest alteration seen in the vicinity of the old trenches in the northwestern portion of the Sheryl claim".* (now the Rebecca 2 claim)

Altered diorite found by this writer in surface outcrop at Line 5400 North, Station 2+50 West is dark-grey to black in colour and assayed 737 ppm copper. P.B. Read, Ph.D. (1990) reported the results of his petrographic study on this sample as follows:

> *"The original rock may have been a fine-grained pyroxene? diorite but this rock has been nearly obliterated by an alteration assemblage of tourmaline-epidote-calcite-chlorite-sphene-pyrite which is cut by a few albite-calcite veinlets. The tourmaline is a major part of the alteration assemblage and indicates the presence of significant volatiles in the solutions causing the alteration"*

Therefore the volatiles were most likely copper-rich and are believed to have been exsolved from a copper-rich fluid during magma crystallization during porphyry formation.

According to Smith (1993):

> *"hydrothermal alteration of the volcanics to the east and southeast was seen on a wide scale causing bleaching and quartz/carbonate veining within them. Epidote is the most common alteration mineral. Locally the diorite is so strongly altered that only epidote and magnetite can be seen. Secondary chlorite and calcite are also quite prevalent throughout the complex. The propylitic alteration (epidote, chlorite ± pyrite) identified in the volcanics and diorite provides surface indication that a significant porphyry style intrusive system underlies the area."*

The 1993, 7-hole percussion drilling program for each hole provided a suite of typical cuttings taken at 10-foot intervals. The cuttings were meticulously logged with the aid of a binocular microscope by Gale (1994), and this work was the first in-depth study of property geology and alteration. Gale observed that there were at least three (3) distinct types of mineralized and altered intrusives within the subcropping area of interest. The intrusives cited in his report conclusions included: quartz diorite, diorite, and gabbro. He also noted diorite-porphyry in the report details. Read's thin section work noted the presence of albite porphyry, tonalite, pyroxence gabbro, pyroxenite and hornblendite. Therefore the intrusive complex includes multiple igneous phases.

The percussion drilling was unable to provide any structural data or the relationship between intrusive phases.

The intrusives contain significant magnetite as shown Gale's descriptions, abbreviated by the writer.

PDH1; contains green coloured diorite with up to 10% magnetite.

PDH2; contains green coloured diorite and quartz diorite with 10-15% magnetite. The more felsic phases have low magnetite content.

PDH3; contains dark grey to white diorite with 5-10% magnetite. The hole contains magnetite rich gabbro with quartz-pyrite in fractures.

PDH4; no mention of magnetite is made. This hole contains 20 feet of fine to medium grained pink to red garnet replacing recrystallized limestone and 10 feet of calcite-marble.

PDH5; contains dark green diorite with up to 10% magnetite. This hole also contains coarse grained diorite-porphyry with abundant magnetite. The hole also contains 30 feet of red-green medium grained garnet rock with trace of pyrite and chalcopyrite. The bottom 200 feet of the hole successively from the top section contains garnet replacing limestone, a mixed calcite-rich diorite and pink marble and white marble, and a white marble with some coarse grained granite or pegmatite.

Part of Reid's (1995) petrographical study conclusions included:

> *"the drill chips indicate that pyroxene gabbro, pyroxenite, and their altered equivalents are as widespread as horneblende diorite, horneblendite, and their altered products. Gale's identifications (1994) of marble and calcsilicate skarn are verified and mean that metasedimentary rocks are another element that must be included in the north end of the Mount Lytton Complex".*

Gale stated that mineralization occurs both as disseminated zones and mineralized vein systems, probably along the predominant northerly trend of structures noted in the area. Alteration in the form of calcite flooding and quartz and calcite veining was noted in all of the southernmost holes, RC93-1 through 93-5 and therefore is widespread throughout the latter area.

Essentially the alteration noted in the drilled area around the large disseminated sulphide target found in the 1999 deep-probe IP survey represents the propylitic zone of a probable copper bearing porphyry within the core area of the disseminated sulphide body.

The drilling also shows that marblization and skarnification found on surface on the east side of the drilled area appears to increase easterly and southeasterly and to depth within the contact aureole of the diagnosed porphyry.

Skarnification with significant copper mineralization is found in surface outcrop along the old logging cut east of drill hole RCA93-5 and is also found sporadically where exposed in outcrop for more than 600 metres (2,000 feet) southeasterly from the edge of diagnosed Porphyry 1. The geochemical survey of 1969 also indicates narrow anomalous copper-in-soils zones striking northerly within this 600 metre interval to the southeast.

Monger (1989) mapped a major normal-fault that strikes about north-south and appears to pass near Station 400 of Line 100-South of Deep-Probe IP Survey 1. The fault extends northward to the Thompson River and coincides with it in undulating fashion with the northward extension of the river. The east side of the fault is down-thrown. No information on the fault's displacement is given.

Although speculation, a second major north-south striking normal-fault may lie between the west side of the intrusive complex and the Mount Lytton Batholith Complex in which case the property intrusive complex may be bounded on each side by major fault structures. The faulting has resulted in several parallel north-south shears and structural breaks within the altered area of interest and were sporadically noted in the limited exposed outcrop yet are most apparent from some of the strong north striking VLF-EM anomalies of which some are diagnosed as ionic conductors and some contain sulphides. Shear zones are forecast within the underlying intrusive complex and within the volcanic-sedimentary succession to the south and east of the intrusive complex.

Prospecting surface outcrop, by the writer in 2004, on the southwest side of Porphyry 1 resulted in the discovery of a large zone of intensely fractured and broken quartz-diorite which is hydrothermally altered (Reid, 2004, personal communication) with epidote and chlorite prominent, and with black vitreous crystals identified as tourmaline. This location is diagnosed as the fractured margin, or shoulder zone of the proximal intrusive porphyry. The stockwork-like fractures are filled with the low temperature zeolite mineral laumontite. This occurrence represents a westward extension of the known propylitic zone that overlies and surrounds Porphyry 1. This outcrop shows the superposition of both high temperature and low temperature hydrothermal activity.

To the south of the fractured and broken diorite shoulder zone outcrop, and contiguous with it, a partially exposed breccia zone with breccia clasts cemented with buff to pink coloured calcite. The calcite forms in vugs with a platy like appearance and appears to be hydrothermal; and may possibly be epithermal. A sample assayed 56.7% $CaCO_3$. The significance of the breccia and the origin of the calcite will have to await a planned geological mapping of the property.

8.2 Geological Features of Potential Significance for the Discovery of a Gold Deposit

The percussion drilling of the propylitic zone did intercept some anomalous gold as set out in the following table but the results cannot be accepted as representing the gold content of the samples assayed. The anomalous assays however do show that there is gold in the system.

Percussion Drill Holes, Anomalous Gold

Percussion Drill Hole	Interval Feet	Au ppb	Ti %	Ca %	Remarks
PDH1	350-360	70	0.27	5.2	Light coloured felsic diorite, abundant calcite in matrix and thin veinlets, less magnetite
PDH2	70-80	15	0.27	3.0	Diorite and quartz diorite with 10-15% magnetite. Several zones of felsic intrusive with low magnetite. Short sections of red hematite.
PDH2	310-320	190	0.24	3.7	Felsic intrusive with abundant red hematite
PDH3	50-60	15	0.19	5.5	Grey to white diorite with 5-10% magnetite, trace of quartz-calcite veinlets.
PDH3	70-80	60	0.28	2.7	Grey to white diorite with 5-10% magnetite, trace of quartz-calcite veinlets. Magnetite-rich gabbro with quartz-pyrite in fractures from 150-170 feet.
PDH3	310-320	165	0.22	3.9	Limy dark green diorite with numerous veinlets of calcite. Abundant coarse grained magnetite
PDH4	10-20	15	0.18	1.6	Green diorite with few calcite-pyrite veinlets
PDH4	230-240	40	0.04	1.4	Light coloured diorite with traces of calcite veinlets

The method of collecting drill chips from every 10-foot section of percussion drilled sampling interval was not considered suitable for collecting **fine-gold** because sludges and slimes were not collected; and hole recoveries were not accounted for. Percussion drilling unfortunately, did not allow any structural mapping nor could lithological, alteration and mineralogical features be assessed which precluded understanding the origin of the gold.

The source of this gold is at present unknown but it could be part of a telescoped epithermal system from a concealed porphyry. A significant diagnostic feature is the intense and widespread carbonatization pervading throughout the system reported by Gale, 1995, which may in part be related to the effects of epithermal alteration. The voluminous carbonatization shows a hydrothermal system with a considerable amount of carbon-dioxide involved. Hedenquist et al, 2000, states that: *the loss of* CO_2 *leads to the deposition of calcite*. Whereas Jensen & Barton, 2000, cite *"*CO_2 *concentration related to alkaline magmatism are variable but are typically described as moderate to high. These observations are also supported by the common presence of voluminous carbonate alteration"* and, *"The abundance of low-temperature carbonate alteration may be taken as additional evidence of boiling."*

Hence the system is a complex one and may be interpreted in several ways; but each interpretation indicates a potential mineral resource concealed at depth that could have economic significance.

According to Hedenquist, 2,000, *"alteration minerals can provide much information on the fluid source that developed them and he notes that the presence of adularia and calcite suggests relatively alkaline fluid perhaps generated from a neutral-pH fluid by the loss of* CO_2 *during boiling. Zeolites also indicate somewhat alkaline conditions and, along with occurrrene of epidote, provide evidence for relatively low gas contents in the fluid.* ***Calcite forms in place of zeolites from fluids of high*** CO_2 ***content. This observation of the presence of Ca minerals may be relevant if several properties are being compared, because it can be argued that indications of a high gas content are favourable for ore formation because this implies a high*** H_2S ***content and thus a high gold solubility."***

As several of the holes show titanium there is the possibility of the presence of ilmenite, $FeTiO_3$ which could play host to gold mineralization within structural permeablities. To date the petrographic work has not identified the presence of ilmenite; however if the titanium is present as ilmenite its content could be approximated by the formula:

%Ilmenite = %T x 3.2 where the Ti assay is in %.

According to Ramezani et al, 2001, at the Stog'er Tight Gold Prospect in Newfoundland gold mineralization is structurally controlled by a network of shear zones which are best developed in gabbro sills. Hydrothermal alteration has overprinted the gabbro and is indicative of epigenetic mineralization. Shear zones as channels for fluid percolation and fluid-rock reaction were preferentially developed in the gabbro. Chemical reaction between

Fe-Ti oxide phases from the gabbro and the hydrothermal fluid containing soluble gold-sulphur complex resulted in co-precipitation of pyrite and gold. The reaction which was diagnosed to have precipitated the gold was summarized as:

$$FeTiO_3 + 2AuHS^0 = FeS_2 + TiO_2 + 2Au_{(S)} + H_2O$$

Ilmenite pyrite rutile

This gold precipitating mechanism is cited because the Ashton Project environment contains a network of shear zones within the intrusive complex which may contain ilmenite with the magnetite which would make this environment a candidate for hosting structurally controlled gold zones; particularly at depth.

In 2004, a prospecting and sampling program in altered outcrop within the known conventional geochemical arsenic anomalies along the south contact aureole of Porphyry 1 and in the altered area above diagnosed Massive Sulphide Body H2 returned significant gold pathfinder elements. Proximal to Arsenic Anomaly 1 above Sulphide body H2 in a diagnosed hydrothermal outflow zone anomalous Te accompanied by anomalous arsenic selenium and mercury and anomalous arsenic and copper from two rock outcrops respectively. Assays returned values of 210ppb Te (210 x background) and 90 ppb Te (90 x background). According to Boyle, 1979, Te appears to be a nearly constant associate of gold in all types of deposits.

The best rock geochemical best was from a sample taken within Arsenic Anomaly 2 close to the south contact aureole of Porphyry 1. Assays returned the following anomalous epithermal gold pathfinder values: **Te (200 ppb),** [200 x normal @ 1 ppb]; **As (218 ppm),** [121 x normal @ 1.8 ppm]; **Hg (10,658 ppb),** [133 x normal @ 80 ppb]; **Sb (7.13 ppm)** [36 x normal @ 0.20 ppm]; **Se (16.9 ppm)** [338 x normal @ 0.05 ppm]; and **Ag (3.9 ppm)** [56 x normal @ 0.07 ppm]. [normal = average abundance in the Earth's unaltered Crust, as published by the Australasian Institute of Mining & Metallurgy].

On the basis of **relative mobility**, in the epithermal and mesothermal precious metals environment, the highly mobile group elements **Hg, As, Sb, Se, and Tl** will travel upward and outward and have large and near surface halos followed in succession with depth by Au and Ag with increasing Ag/Au ratio with depth. **Te** behaves similar to Sb and is also found in propylitic alteration zones.

These anomalous elements are considered to be epithermal gold-deposit pathfinders diagnostic of an epithermal gold mineralizing system produced from an alkalic magma concealed at depth. The **tellurium** pathfinder at 200 ppb; is 200 times background in the unaltered Earth's crust. Tellurium abundance in mantle and crustal rocks are similar to gold. According to Jensen and Barton, 2000, **Te** is a fundamental characteristic of alkaline-related hydrothermal systems. It is related to **alkaline magmatism** and is seen in some gold-rich porphyry copper deposits where they are characterized by telluride-rich mineralization, extensive carbonation, and voluminous K-metasomatism. Feldspar and carbonate-rich alteration appear to dominate.

A review of the rock-chip assays from all five percussion holes in the propylitic zone of Porphyry 1 over variable but significant widths returned anomalous assays in **As** and **Sb**. According to Polikarpochkin and Kitaev, 1971, in an epithermal environment primary supra-ore halos of arsenic, antimony, mercury and copper can be used in the search for blind deposits of epithermal gold because the halos of these elements project above the orebodies from some 200 to 300 metres. The highest As (and Sb) concentrations are at the upper end of the orebodies where marked wide halos prevail.

According to Boyle, 1979, **arsenic** exhibits a nearly universal enrichment in most types of hypogene gold deposits and there is a marked coherence between gold and arsenic during hypogene and supergene processes. Arsenic and antimony form broad halos around gold deposits and are fundamental pathfinders for locating concealed or blind gold orebodies.

Also of significance to this project are the findings published by Berger and Silberman, 1985, where the pathfinder elements As, Sb, Tl and Hg have the highest concentrations within the main fluid channels and are thus effective indicators of the foci of hydrothermal activity. They also state that no theoretical trace-element patterns or specific concentrations of selected pathfinder elements should be expected. However geochemical zoning can be determined for any given system on an empirical basis and then used as a guide to mineralization.

Hedenquist et al, 2000 summarized the significance of identifying hydrothermal fluid outflow channels or paleoflow channels with the following: "For epithermal deposits, as with other deposit of hydrothermal origin, one of the main challenges for exploration is to identify the location of the paleoflow channels, and to determine whether or not there is ore potential. From a practical point of view, the objective is to find ore, particularly high-grade ore, and understanding the controls on ore will make this job much easier."

Two large hydrothermal outflow zones were diagnosed as probable from the results of the combined MMI geochemical surveys that identified the large MMI gold anomaly south of Line 4500 North. This is a very large anomaly as it covers an area of 450,000 m^2. The full extent of this gold anomaly is shown in **Figure 16** and the MMI arsenic anomalies shown in **Figure 12** are diagnosed as hydrothermal fluid outflow zones to the associated gold mineralizing event. The west zone MMI arsenic anomaly has an area of about 88,000 m^2 and the east zone MMI arsenic anomaly has an area of about 150,000 m^2. It is this anomalous area that was the target of the 2009 total field magnetic survey and self-potential survey.

Also according to Jensen & Barton:

> "Alkaline **epithermal** systems are found in close spatial and temporal association with porphyry style mineralization where such juxtapositions of high and low temperature styles of alteration and mineralization are characteristic of telescoping hydrothermal systems"
>
> "Alkaline–related gold deposits include high-grade, low temperature epithermal deposits and low-grade, high-temperature base metal-rich deposits. Deposits include those with mafic to intermediate rock types"

The fundamental question yet to be answered here is the gold mineralization structurally controlled or lithologically controlled? or both.

Gold found in the intrusive in terms of probability will be structurally controlled where magmatic-hydrothermal fluids are focused into shears, fractures and dilation zones including the fractured margins of high level stocks; and could be high grade.

Whereas gold found within permeable lithology within the volcanic-sedimentary succession will be lithologically controlled but are governed by a combination of lithological and structural controls. Lithologically controlled gold deposits are formed when magmatic-hydrothermal fluids are focused along permeable host rocks, and could be expected to be of low or moderate grade. In this environment the gold could be found in both structures and permeable lithology. Consequently the magnetic survey over that large MMI gold anomaly might assist in interpreting the subcropping lithology.

SECTION 9.0 – Total Field Ground Magnetic Survey

9.1 Introduction

The following personnel from Geotronics Consulting Inc. under the supervision of D. G. Mark, P. Geo. pursuant to their job descriptions were involved in the total field magnetic survey and the self-potential survey. The field work was conducted on May 21^{st}, 22^{nd}, and 23^{rd} of 2009. Mobilization and demobilization occurred on the 20^{th} and 24^{th} of May.

Personnel	Job Description
1. J. M. Ashton, P. Eng.	Project Principal
2. D. G. Mark, P. Geo.	Project Manager & Consultant
3. Matt Fraser	Party Chief, operated Self-Potential instrumentation
4. Kevin Graber	Operated Magnetometer

The survey was designed to extend the 2001 magnetic survey to the south into the area of the large MMI gold anomaly discovered in the 2006 MMI survey and 2007 MMI survey which lies between line 4500 North and Line 4100 North.

Line 4500 North between 700 E to the baseline at 00 was re-surveyed to check the response of the new magnetometer with the old magnetometer used in the 2001 survey.

9.2 Grid-Line Preparation

The in-place grid for the 2006 and 2007 MMI Survey was used for both the Magnetometer Survey and the Self-Potential Survey.

It is noted that the 2009 magnetometer survey used **the exact** grid as was used for the 2006 and 2007 MMI soil survey where the grid was more carefully prepared and marked with durable station markers with line coordinates; whereas the 2001 survey was completed using compass and chain with stations marked with plastic flagging.

For the MMI surveys the baseline was cut out with axes and power saw and baseline stations marked every 25 metres with 60 cm wooden pickets with an aluminium tag stapled to each picket with baseline coordinates marked thereon. The baseline and grid were previously laid out in the direction of Astronomical North at an Azimuth of 00 degrees. The offset gridlines strike East from the Baseline at an Azimuth of 090 degrees and strike West from the Baseline at an Azimuth of 270 degrees.

MMI survey sampling lines were run out on an east west or west-east compass line and marked by blazing trees and attaching red flagging at appropriate intervals. Each sampling station was marked by a 60 cm wooden picket with an aluminium tag stapled to it with Line and Station coordinates marked on the tag. This grid was used for the 2009 magnetic survey and self-potential survey.

See **Figure 4** for the location of the 2009 survey grid with respect to the mineral claim locations. GPS readings were taken at the locations identified in the following tables:

Tables 9.2 GPS Readings

Line 4500 North
GPS Zone: 10U

Station	GPS Easting	GPS Northing
100W	0613980	5566925
125E	0614171	5566918
200E	0614246	5566916
400W	0613719	5566932
500E	0614507	5566898
500W	0613642	5566957
700E	0614683	5566888
700W	0613466	5566938

Line 4400 North
GPS Zone: 10U

Station	GPS Easting	GPS Northing
100W	0613971	5566851
200W	0613871	5566836
300W	0613795	5566835
400W	0613708	5566839
500W	0613617	5566837
550W	0613582	5566768
600W	0613541	5566847
700W	0613468	5566836
00(BL)	0614063	5566829

Magnetic Survey & Self Potential Reference Pot, Base Station
GPS Zone: 10U

Above Station	GPS Easting	GPS Northing
	613830	5567215

9.3 Background & Survey Objectives

The 2009 objective was to extend the 2001 total field magnetic survey south of Line 4500 North into the area of interest where the large MMI gold anomaly was discovered by MMI surveys undertaken in 2006 and 2007. Within this anomaly two significant MMI arsenic anomalies were diagnosed as hydrothermal outflow zones. The main hydrothermal outflow flues are shown in Figure 12, (in colour) "Diagnosed Hydrothermal Outflow Zones & Self Potential Anomaly 1 in Relation to the Total Field Magnetic Anomalies". This figure was drawn after the 2009 magnetic survey and is the integral magnetic map of the 2001 survey and the 2009 survey.

Note the magnetic low of minus 2,000 gammas below the mean of 56,000 gammas found on Line 4700 North and 4600 North at Stations 350 East. This location and surrounding area is diagnosed as a hydothermal outflow zone to diagnosed Massive Sulphide Body H2. This magnetic low is coincident with a low resistivity anomaly located in the hanging wall of Sulphide Body H2 found by the deep-probe IP resistivity survey. It is diagnosed as a clay alteration. Surface outcrop is also intensely hydrothermally altered and contains gold pathfinder elements. Hence at this location a magnetic low indicates hydrothermal alteration and similar magnetic lows might be expected within the MMI gold zone; particularly in the main flues of the Hydrothermal Outflow East Zone and Hydrothermal Outflow West Zone shown in **Figure 12**.

The magnetic survey of the anomalous MMI gold area would be expected to provide the following information:

1. the probable extension of the magnetite rich intrusive complex which plays host to diagnosed Porphyry 1 which intrudes the complex.
2. the location of magnetic lows which are expected in the hydrothermal outflow zones by the hydrothermal destruction of magnetite and conversion to hematite.
3. a magnetite rich K-silicate alteration zone of a deeper gold-rich alkalic porphyry beside Porphyry 1 below the large MMI gold zone. However the magnetic signature of a gold rich porphyry will vary depending on depth of emplacement.
4. the correspondence between magnetite of the intrusive complex and anomalous gold.

The intrusive complex contains gabbro, diorite, quartz-diorite, diorite porphyry and albite porphyry, all, except the albitite, of which contain magnetite in concentrations up to 15%.

As the magnetometer survey was conducted at the same time that a self-potential survey was being conducted the much slower self-potential survey governed the progress of the work and reduced significantly the planned area of coverage. Put simply, the project ran out time and budget and could not be completed as anticipated because of field conditions.

9.4 Instrumentation

The magnetic survey used two (2) Model G-856 proton precession magnetometers manufactured by Geometrics of San Jose, California. One of these units was used as a base station and the other was used as a portable field unit to measure the total magnetic field along each line surveyed. The instrument reads directly in nanoTeslas (nT) or gammas to an accuracy of 0.10nT±. Range is 20,000 nT to 90,000 nT. The operating temperature range is -20°C to +50°C; its gradient tolerance is up to 1,800 nT.

The magnetometer memory stores more than 5,000 readings in survey mode with each data point recording: time, date, station coordinates, total field magnetic response, and the quality of the recorded magnetic response. In base station mode the magnetometer stores up to 12,000 readings. The base station was used to record the diurnal variation as the survey progressed.

The portable magnetometer is complete with a magnetic sensor supported by a 1.5 metre aluminium pole; cable connected to the magnetometer unit. Hence each magnetic reading is consistently taken at 1.5 metres above ground surface.

2001 Total Field Magnetic Survey

The magnetometers used in this survey were the nuclear–precession type, Model GSM-9 Overhauser unit as manufactures by GEM Systems Inc of Richmond Hill, Ontario. Ths magnetometer was complete with a memory system capable of storing 8,000 data points with four dependent variables, total field magnetic response, x and y co-ordinates and time. These variable are entered manually with a membrane type keyboard.

The total field GSM-9 Overhauser recording unit is similar to the portable unit and was used as a base station to record the diurnal variation as the survey progressed. This instrument did not record continuously as it requires a second or more between readings to record a response of the time varying magnetic field. A uniform, smooth time varying characteristic curve for the diurnal variation is produced..

The GSM-9 units read directly in nanoTeslas the Earth's total magnetic field to an accuracy of 0.20nT± over an instrument range capability of 20,000 to 120,000 nT. Unit sensitivity is 0.05 nT. (1.0 nT = 1.0 gamma)

9.5 Procedure

In advance of proceeding with the survey the Pacific Geoscience Center at Victoria, British Columbia was consulted to determine whether the diurnal magnetic field in a disturbed or unstable mode, or relatively unaffected by solar activity. It was determined that the magnetic field would be relatively quite during the planned survey period.

The recording magnetometer was set up at an old bush road for easy access. The UTM coordinates were NADS 83 UTM, Easting 5567215, Northing 613830, Zone 10. This location was approximagely 400 metes north of the survey area

Magnetometer readings were taken every 25 metres along each survey line along the same grid prepared for the 2006 and 2007 MMI soil survey. An exception was on Line 4400 North between Station 0 and Station 700 West where the survey interval was 50 metres. Total survey distance covered was 2,100 metres

Table 9-1, Grid Statistics

Line	Stations Surveyed From-To	Length (m)	
4500 N	700E-700W	1,400	
4400 N	700W- Baseline 00	700	
	Total	2,100	

This existing grid was refurbished as necessary during the course of the survey.

Steep mountainous slopes covered with scree and/or talus with thick bush in places did reduce working efficiency to a greater extent than forecast..

9.6 Data Recovery & Compilation

The data from both the portable magnetometer and base-station magnetometer was input to a desktop computer. Through a Geosoft program the base station diurnal variation was correlated with the survey magnetic readings. 56,000 nT was subtracted from each recorded reading to give a residual total field magnetic profile for each line surveyed. A set of profiles for each line was plotted and a magnetic plan map was plotted with contours of 100 nT at a scale of 1:9,000.

Two magnetic plan maps were prepared, one in colour and one in black and white with discernable magnetic readings at each station.

Two profile plots were made on Line 4500 North between Station 700 East and the baseline at 00 to evaluate the variance of the 2001 magnetic survey and this 2009 magnetic survey.

9.7 Magnetic Theory, Some Practical Aspects

The magnetic field measured in the vicinity of geological structures within the Earth's crust has two component vectorial parts, and induced part which is dependent on the ambient magnetic field and a permanent magnetization or remnant part that is independent of the ambient field. The remnant field is dependent upon the magnetic history of the rock and is known as natural remnant magnetization (NRM).

The induced magnetization is parallel to the ambient magnetic field and its strength is proportional to this field. The constant of proportionality, μ, is known as the susceptibility; e.g., if a material is placed in the Earth's magnetic field of strength Ho it becomes magnetized according the relationship $ß = \mu H_0$. Where ß, the induced magnetization is a vector quantity and represents the magnetic flux density arising from the ambient magnetic field acting on the material. As long as the field is kept small, the strength of the magnetization induced is proportional to the field.

However the total magnetic field effect or induction effect in the presence of an external field must add the effect of the primary field Ho plus the magnetization M it induces in the geology.

$M \alpha Ho$ or, M is proportional to the primary field.

The constant of proportionality, the susceptibility μ equals 1 (unity) in free space.

Hence the total induced field is therefore related to the combination of the following:

$$\beta_T = \mu H_0 + \mu H_M$$

Natural remanent magnetization (NRM) is that magnetization which is fixed permanently in the rock as a result of several possible processes. It can take two forms; that which is parallel to the applied field and that which is not parallel to the applied field. NRM is formed in the direction of the applied field that was applied to the rock at the time of its formation.

NRM of most rocks lies in a direction quite different from the direction of the present Earth's magnetic field. The field changes from tike to time and indeed has collapsed and reversed its polarity numerous time throughout geological history. The geological terranes accreted to the North American continent formed several hundreds or thousands of miles from their present location and the magnetic field present at these remote locations could be in the reverse direction or even horizontal hence it is not an understatement that magnetization is one of the most complex properties that a geoscientists can study in rocks.

Induced magnetism requires the presence of an applied field whereas NRM does not. The most important mechanism to account for permanent magnetism in rock is Thermo-Remanent Magnetism (TRM). As rock cools in the Earth's ambient magnetic field it will spontaneously magnetize at or below the Curie temperature Tc (at and below 700°C) and the resultant magnetic field produced is generally aligned with the field present at that time in geological history that produced it. The magnetically susceptible elements in the rock, even in a weak primary magnetic field will acquire a strong and very stable remanent.

The major portion of natural remanent magnetization measured in igneous rocks appears to be due to TRM.

It is the presence of minor amounts of a few magnetic mineral species contained with rocks that commonly account for their magnetic characteristics. These few minerals are of considerable importance in magnetic surveying techniques.

Specific rock types are known to contain more magnetic minerals than others; hence magnetic anomalies can be indicative of these rock types with the consequence that the magnetic anomalies can be of assistance in mapping the position of subcropping geology. And, commonly economic minerals are found either in direct association with magnetic minerals or magnetic minerals accompany economic mineral deposits as zoning features.

For the purpose of understanding the relative effects of magnetic minerals and rocks on the Earth's ambient magnetic field the following are orders of magnitude of their respective average magnetic susceptibilities:

Average magnetic susceptibility of magnetic minerals

pyrrhotite = 125,000 units
ilmenite = 150,000 units
magnetite = 500,000 units

Average magnetic susceptibility of various rock types

sedimentary = 75 units
granite = 200 units
metamorphic = 350 units
porphyry = 5,000 units
gabbro, basalt,
& diorite = 6,000 to 7,000 units
pyroxenite = 10.500 units
peridotite = 13,000 units
andesite = 13,500 units

A review of the magnetic data obtained in the survey on Line 4500 North and Line 4400 North does not show any apparent correlation of a high or low magnetic response with the results of the MMI gold survey. As shown in **Figure 13**, the anomalous MMI gold areas apparently show no preferential association with either high or low magnetic anomalies which may indicate the gold zones are structurally controlled and the gold was deposited by boiling and/or mixing yet did not produce large envelopes of hydrothermal alteration.

It is still believed that the large MMI gold anomaly, which is integrally made up of several parallel gold zones, represents a porphyry related low sulphidation epithermal gold system concealed below surface. Boiling could be the depositing mechanism. The geochemical gold pathfinder elements found in Sample A04-102 indicate a gold rich alkalic porphyry which may be close to surface. As described by Jensen and Barton, 2000, hydrothermal magnetite is variably abundant in gold rich alkaline porphyries and is associated with both potassic and sodic assemblages. Accordingly, a gold rich alkalic porphyry close to the surface should be detectable by a magnetic survey. Yet an epithermal gold zone associated with the porphyry in this near surface structurally controlled igneous environment might have limited alteration in association however the alteration effects within the volcanic-sedimentary succession might have broad alteration effects because of the permeabilities nature of the potential hosts.

The ilmenite associated with the intrusive complex could be of interest at depth below a boiling or mixing zone where fluid rock reactions could precipitate gold.

SECTION 10.0 – Self-Potential Survey

10.1 Introduction

The magnetometer survey was conducted simultaneously with the self-potential (SP) survey. The much slower SP survey governed the progress of both surveys. The difficulty experienced with the SP survey was largely making suitable electrical contact with the ground on the scree or talus slopes encountered throughout the survey.

10.2 Background & Survey Objectives

The 2009 objective of the SP survey was to survey all of that area covered by existing grid line 4500 North to line 4100 North in which the a large MMI gold anomaly was discovered. The two areas of anomalous MMI arsenic were of particular interest as they are diagnosed as hydrothermal outflow zones or hydrothermal flues to the large concealed gold zone. They are shown in Figure 12.

This is the first self-potential survey conducted on the property, but historically, self-potential responses were always measured between electrodes when removing the natural or spontaneous voltage surveys when conducting the deep-probe induced polarization surveys. Several significant self-potential voltage effects were observed along the IP traverses using the differential method between electrodes. The largest anomaly recorded was at minus 336 milliVolts above diagnosed Massive Sulphide Body H2. Generally the area is electrically active with high order self-potential voltages recorded over sulphide bodies which are diagnosed by other coincidental geophysical and geochemical anomalies.

10.3 Instrumentation

The instrument used to measure the self-potential effect was a digital Model 77 Multimeter, Series II, as manufactured by John Fluke Mfg. Co. Inc. of Everett Washington. This unit is a high-impedance multimeter which has an input impedance greater than 10 mega-ohms. It is capable of operating accurately over an operating temperature range between 0°C to 50°C. Essentially the high impedance allows a self potential millivolt measurement without drawing any current from the source EMF, hence does not in any way bias the measured voltage. It has a 600 milliVolt DC range (negative and positive) with a 0.10 milliVolt resolution.

Sensing Electrodes

The voltage sensing electrodes were two pots made up of hollow cylindrical porcelain ceramic material with porous bottoms. The pots were filled with a saturated copper sulphate solution into which a solid copper electrode is suspended. The electrodes are fitted into a porcelain cap which screws into the cylinder. The electrode has an exposed threaded end which facilitates the connection of the end of an insulated flexible copper conductor. Hence when the pot is properly seated in the ground a continuous electrical connection is made from the Earth through the electrolyte to the suspended copper electrode to the multimeter. The conductive copper solution diffuses into the Earth and becomes electrically connected to the multimeter circuit.

10.4 Procedure

The reference pot (a non polarizing electrode) for the self-potential survey was set up at an old bush road proximal to the base station magnetometer to facilitate access for this survey and any future expanded survey. The UTM coordinates were NADS 83 UTM, Easting 5567215, Northing 613830, Zone 10. This location was approximately 400 metes north of the survey area.

In this survey one electrode was fixed at the base station while the other electrode moves to successive stations over the survey area. The advantage of this procedure is that the potential is measured continually with respect to a fixed reference point – at the same time small errors between the electrodes do not accumulate. The disadvantage is the long cable which is an additional factor which slows down the measurements. An advantage is that lower voltage broad anomalies are more easily detected using this method as opposed to the gradient method (e.g., moving two closely spaced pots along a survey line and measuring the relative potential difference between the two pots along a survey line.

The self-potential survey was carried out simultaneously as the magnetic survey progressed and along the same survey line.

When initiating the survey two procedures are required at the base station to assess the electrical compatibility of the two pots and to assess the voltage potential. Ideally this reference voltage should be as close to zero as practicable.

The two porous pots should be placed in the same hole in the ground side by side with the voltmeter connected between them; the reading should be less than 2 mV. If not, new saturated copper electrolyte solution should replace the old solution. To determine if the pot at the base station is in an anomalous area the procedure described by Burr, 1982, must be followed and relative adjustments made to all readings taken in the survey by the forward or measuring pot. These assessments must be made when the next phase of the self-potential survey is undertaken, e.g., to survey the entire target area between Line 4500 North and Line 4100 North. Any adjustments to the existing data can be made at that time.

In this survey two pots, a single reel of insulated flexible copper conductor, and the milliVolt input to the multimeter comprise the electrical equipment used to measure the self-potential effects at stations every 50 metres along each survey line. Over 1 km of 18 AWG insulated flexible copper conductor on a spool was used to connect the base station non-polarizing electrode with the positive terminal of the multimeter. The negative terminal of the multimeter was connected to the sensing electrode which was moved from station to station throughout the survey.

10.5 Compilation of Data

All milliVolt measurements taken at each survey station was manually input to a computer software program developed by Geosoft Inc. of Toronto, Ontario. Components of the Geosoft program were modified by Geotronics Consulting Inc for its own applications.

A profile map was plotted and a colour plan view was plotted and forms part of this report.

10.6 Self-Potential Theory, Some Practical Aspects

S. V. Burr, 1982, in his Paper "99" of the Ontario Ministry of Natural Resources cited the following abbreviated comment in his introduction "A Guide to Prospecting by the Self-Potential Method":

> ***"the self-potential (SP) or spontaneous polarization prospecting method is the best of the electrical geophysical methods" available for discovering sulphide deposits"***

According to Burr, the natural self-potential or spontaneous potential effect which occurs around sulphide bodies is considered to be the best of the electrical surveying methods because it is the only known geophysical technique which measures the primary field.

He also comments favourably in its use as tool for finding concealed gold deposits, e.g., "**Most gold deposits are not good conductors, but do contain some sulphides which can be detected by the SP method**."

SP does not respond to subsurface valleys, wet clays, shears, or faults and does not provide results which could lead to a false anomaly. The SP method responds to good conducting sulphides, both oxidizing and unoxidized bodies, graphite, and disseminated sulphides (non-conducting) if these sulphides are oxidizing.

The material presented in Burr's paper was derived by experience through field applications. He was involved in over 5000 Sp anomalies which were stripped or drilled and sated that he always found the source of the SP anomaly to be sulphides and/or graphite in the underlying rock.

Sherwin Kelly, 1957, described the Self Potential effect as *"the measurement of a primary electromotive force (EMF) field which is self generating due to a natural battery effect or galvanic cell in the earth caused by a conductive body immersed in an electrolyte."* From near the apex of the sulphide body (conductor), the electrical current travels down the conductor to some point at depth at the lower terminus of the body where it passes into wall rock. It spreads out into the county rock as it returns towards surface, finally to converge on the conductor apex to complete the electrical circuit. A negative polarity is created at the apex.

According to Kelly, "a rough correspondence often exists between the percentage of conductive sulphides present, and the maximum potential observable above a shallow sulphide body apex. A *potential of -50 milliVolts usually indicates about 5 percent total conductive minerals, or possibly less. Increasing content of conductive mineralization is suggested by higher potentials, and when potentials of –300 milliVolts and higher are recorded, it may be assumed that the causative body carries heavy sulphide mineralization, say 30 percent or more."*

A well mineralized conductive body **extending to great depths** will generate strong potentials. The negative (near surface) and positive (deep-lying) poles of this natural battery will be widely separated and the current will spread far into the country rock on its return to surface. This will produce a broad electrical field more or less above the mineral apex with noticeable increase in ground potentials, commencing as much as 300 feet, or so away from the apex in the wall rocks on either side. The potentials increase negatively from there to a maximum over the apex, where the sulphides come closest to the surface. The deeper the overburden covering the mineral body's upper negative pole, the smaller is the proportion of the electrical circuit observable at the surface to the total circuit. Deepening overburden therefore reduces the reactions recorded at surface and spreads them over a greater width. A sulphide body at greater than 400 feet depth may not produce a self-potential anomaly. A body of massive sulphides will yield a higher potential than a body of disseminated sulphides.

It is also known that Self-Potential anomalies of -150 milliVolts and greater often represent significant contents of semi-massive to massive sulphides. See **Figure SP-A,** "Surface and Drill Hole Self-Potential Response over Massive Sulphide Body at 300 Feet Depth" a textbook illustration by Telford et al, 1976, which shows a semi-massive to massive-sulphide deposit more than 150 feet thick, which was discovered below 300 feet depth as a result of a **strong**, -182 milliVolt anomaly detected at surface. The mineral content averaged more than 40% semi-massive sulphides in which intercalated sections of massive-sulphides, e.g., >50% sulphides were contained.

It is not to be forgotten that in 1924, that the "E" and "G" massive-sulphide orebodies at the giant Noranda Mine in Quebec were discovered using the Self-Potential method. Since then there have been several discoveries using this technique but for reasons not known to this writer, given its simplicity, diagnostic accuracy, and cost effectiveness; the self-potential measuring technique is not used widely today; as it should be.

At the Bell Copper deposit at Babine Lake before it was drilled, exploration included a self-potential survey. Near the centre of the shallow overburden covered mineral deposit above what was to become the open pit, a self-potential anomaly of minus 350 millivolts was discovered (Gavin Dirom, P. Eng., personal communication). When the deposit was drilled a zone of copper and iron bearing sulphides richer than the average grade of the deposit was discovered beneath the apex of the self-potential anomaly. This zone, which contained an average grade of about 0.95% copper was a breccia/stockworks zone about 200 feet in depth. The reason it gave such a strong SP anomaly was because the sulphides were electrically connected to depth such the entire body acted as one large equipotential surface.

SP anomalies, with almost certainty, indicate the presence of sulphides that range from disseminations to massive sulphides. However the interpretations are mainly qualitative; but supported by other coincidental geophysical and geochemical methods can increase the confidence of a favourable outcome.

10.7 Discussion of Results

The results from the self-potential survey indicates that with almost certain confidence a zone of sulphide mineralization is concealed at depth below Self-Potential Anomaly 1. In terms of probability its depth is less than 300 to 400 feet below surface. It could be a more shallow zone of disseminated sulphides or a deeper zone of semi-massive to massive-sulphides. It corresponds to a diagnosed hydrothermal outflow zone that is within, and associated with the West Zone MMI gold anomaly. It is located in one of the main hydrothermal flues of hydrothermal outflow associated with the gold zone as it is coincident with one of the highest order MMI arsenic anomalies of the MMMI survey.

The apex of **Self-Potential Anomaly 1** is plotted in **Figure 12** to show its relationship with the magnetic anomalies and diagnosed hydrothermal outflow zones including their main flues.

The apex of SP Anomaly 1 strikes to the northwest through Station 50 West on Line 4400 North an continues through Station 175 West on Line 4500 North. The anomaly has an average response of **minus 60 millivolts.** It is coincident with one of the diagnosed hydrothermal flues or outflow zones of Hydrothermal Outflow West Zone which is anomalous in arsenic; and proximal to strong MMI gold anomalies on both lines.

As shown in **Figure 10** the SP profiles show the strength and width of the SP anomalies discovered. On Line 4500 the electrical field effect from SP Anomaly 1 in all probability begins at the baseline at Station 00 and continues west to Station 375 West. On Line 4400 the field effect from the anomaly ends at about Station 150 West; its eastern boundary is open to the east where the survey terminated at Station 00 (the baseline). The apex of the sulphide body (where the body comes closest to surface) is located at approximately Station 175 West on Line 4500 North.

The location of the apex on Line 4400 is indeterminate because the SP effect is open to the east because the survey terminated at Station 00.

The depth of sulphides inducing this self-potential effect is presently unknown. However the deeper the apex of the body the more the SP effect will be attenuated at surface until the depth is too great for detection. The 375 metre (~1,200 feet) width of the SP anomaly may be an indication that the upper pole of the sulphides is deep but yet still in the range of detection of the self-potential method, or less than say 400 feet (120 metres). As stated the apex of the body on Line 4500 is located at Station 175 West. This anomaly could be deep with high sulphide content and a wide field effect or shallow and wide with a low sulphide content.

The results of the SP survey show that reasons for undertaking this survey were sound and that the concealed gold zones indicated by the diagnostic MMI gold survey may also be detectable by the SP method. No conclusions may yet be drawn until more diagnostic work is completed; except that in all probability disseminated sulphides in association with gold minerlization underlie this anomalous area at depth.

10.7 General Discussion

Geoscientific consensus supports the MMI theory that mobile metal ions accumulate in surface soils above mineralization with mobile metal ions migrating vertically and accumulating in the surface soils and accordingly as edited from the MMI technical literature: *"Because the ions have recently arrived to the surface they provide a precise 'signal' on where the mineralization is located at depth. By only measuring the mobile metal ions in the surface soils, MMI geochemistry will produce very sharp responses (anomalies) directly over the source of mobile metal ions. The source is mineralization at depth which emit metal ions which make up that mineralised body."*

General consensus is that the MMI assay technique is precise; and the area and strength of an MMI gold anomaly is a measure of its concealed size and relative gold concentration. Cook et al, 2007, in British Columbia Geoscience Paper 2007-7 concludes that the MMI assay method can detect and locate concealed near surface epithermal style gold mineralization.

Thus far, the geological and geochemical data from this sector within the influence of Porphyry 1 indicates coincident high-temperature hydrothermal alteration in the form of epidote, chlorite and tourmaline consistent with the porphyry environment. The calcite filled breccia zone is hydrothermal. However the combined group of gold pathfinder lithogeochemical signatures with tellurium and the nearby coincident strong anomalous gold MMI geochemistry coincidental with MMI arsenic geochemistry over a large area is consistent with an epithermal gold mineralising environment; probably of the low-sulphidation epithermal gold type. The anomalous pathfinder element tellurium is significant as it points to a gold rich magmatic-hydrothermal system of the alkalic class which are noted for producing world-class gold deposits.

According to Corbett and Leach, 1996, abbreviated by the writer, "During the upsurge of gold exploration in the 1980's it became difficult to place many southwest Pacific gold deposits types in existing classifications with the result that the group of gold deposits formerly described as epithermal were subdivided as porphyry-related low-sulphidation gold deposits according to crustal level of formation and relationship to the porphyry resource. The deposit types varied from the deepest porphyry levels to intermediate mesothermal, and to shallow epithermal levels. Telescoping is common, and overprinting of alteration zonations may locally obscure the boundaries."

"In magmatic arcs at continental margins, high level porphyry intrusives are emplaced into impermeable host rocks such as older plutons, sediments, and metamorphic basement rocks.

In these environments circulating hydrothermal fluids migrate along zones of permeability in competent host rocks provided by major structures and fracture permeabilities which include geological contacts, shears, dike margins, etc. This focusing of hydrothermal fluids within structurally controlled zones provides an ideal geological and hydrogeological environment for the formation of porphyry-related low-sulphidation epithermal gold systems." The above descriptions suit this geological environment and probable mode of gold deposition within this intrusive complex itself. In all probability, gold will be shear or fracture hosted. Whereas gold mineralization in the contiguous carbonaceous volcanic-sedimentary succession could manifest itself as replacement deposits provided structural conduits provide access to these potential deposit sites. This environment is also favourable for lithologically controlled gold deposits which if present may have large alteration zones in association.

SECTION 10.0 — EXPLORATION POTENTIAL

The tectonic environment is within the Quesnellia Terrane which is noted for its pre-accretion alkaline porphyry deposits which are notably gold rich and include the following gold-rich porphyry copper deposits:

Afton Mines
Ajax Mines
Mount Milligan
Mount Polley
Similco Copper Mountain

Another potential analogue is the Galore Creek gold-rich alkalic porphyry copper deposit located in the Stikinia Terrane.

The probability for the discovery of an alkalic porphyry system at the Ashton Project must now be considered as a result of the discovery of extremely anomalous **tellurium** in three strategic locations proximal to diagnosed Porphyry Copper Deposit 1. Diagnostically the tellurium and extremely anomalous gold pathfinders in the south contact aureole and east contact zone of Porphyry 1 are indicative of a concealed epithermal gold mineralizing system associated with an alkalic magmatic hydrothermal system.

The very large MMI gold anomaly discovered as a result of the 2006 MMI Soils Survey and the follow up 2007 MMI Soils Survey occupies an area of 450,000 m^2 south of Porphyry 1. General consensus indicates that MMI is uniquely precise and does indicate concealed gold mineralization where the area of an MMI gold anomaly is a measure of its concealed size and its anomalous strength is a measure of its relative gold concentration. This anomaly is diagnosed as a porphyry-related low-sulphidation gold system.

According to Corbett and Leach, 1996, in their chapter on Porphyry-Related Low-Sulphidation Gold Systems magmatic-meteoric hydrothermal circulatory systems circulate to depth along regional structures and intrusive contacts and/or permeable lithologies resulting in the deposition of low sulphidation gold systems in associated permeabilities or structural dilation zones.

In addition, a gold rich magmatic-hydrothermal system is evident in association with diagnosed Massive Sulphide Body H4 to the east of Porphyry 1 by both the anomalous gold pathfinder elements above this body and coincident and anomalous MMI gold results found along its southern strike and eastern dip extensions by the 2007 MMI survey.

To this date the nature of the "ore bringer" Porphyry 1 at this project is not known, nor is the origin of the large MMI gold anomaly known because both targets remain to be drilled.

According to Jensen and Barton, 2000, alkaline magmatic gold systems are considered very attractive exploration targets because they can represent large and high-grade gold deposits and they are environmentally favourable to mine. They have often been overlooked because of the often local, inconspicuous nature of the mineralization.

Cripple Creek (22.5 Moz Au), Ladolam (14.6 Moz Au (42.6 Moz contained Au) and Porgera (~12 Moz Au) are notable **giant** alkaline magmatic examples in production and reserves. Grassberg, a porphyry copper-gold deposit (48 Moz Au & 15 Mt of Cu metal) is noted because it has an alkaline magma affinity. Although all of these these systems except the latter are of moderate scale and smaller than their sub-alkaline counterparts they are commonly enriched with very high-grade gold.

Because gold commonly occurs in tellurides or pyrite it forms flour gold on oxidation and placers can be poorly developed or absent.

In many alkalic gold systems feldspar and carbonate alteration dominates as well as total sulphide content which provides mine-rock with excellent buffering potential that markedly reduces or eliminates the risk of acid mine drainage problems.

Two stand-out gold rich alkalic porphyry systems founding British Columbia are the Afton copper-gold deposit and the Galore Creek copper-gold deposit.

The Afton Mine located 60 miles east-northeast from the Ashton Project was discovered in the early 1970's. Afton is a gold rich alkalic porphyry deposit hosted by diorites. The original discovery pit is mined out. What is significant is that Afton has recently received an aggressive exploration program that resulted in the discovery of a new mineral resource expected to grow to three times the size of the original mined out resource. The new zone goes to depth and the deeper sections are much higher grade.

The mined out Afton deposit contained 30.84 million tonnes of ore at an average grade of 1.0% copper and 0.58 grams/tonne gold whereas the new deposit contains a measured, indicated, and inferred resource of 76 million tonnes grading 1.06% copper and 0.84 grams/tonne gold.

The Galore Creek alkalic gold-rich porphyry copper deposit is located about 100 miles northwest of Smithers, British Columbia. Discovered in 1955, it was only in recent years that the project was re-evaluated for its copper and gold potential. A feasibility study completed in 2006 showed proven and probable reserves at 540.7 million tonnes grading 0.557% Cu, 0.303 grams/tonne Au and 5.32 grams/tonne Ag. A higher grade yet smaller tonnage resource is currently under study.

SECTION 10.0 — COST STATEMENT

10.1 Summary

1.	Project Planning Field Drawings		790.00
2.	Mobilization & Demobilization		800.00
3.	Field Personnel Wages & Room & Board		3,000.00
4.	Geophysical Equipment		1,350.00
5.	Data Reduction & Preparation		840.00
6.	Report & Drawings Preparation		6,380.00
	TOTAL	**$**	**13,160.00**

10.2 Personnel

1.	Project Planning & Discussions with D. G. Mark, P. Geo. of Geotronics Consulting Inc. 1 May 2009; J. M. Ashton, P. Eng.	
	4 hours @ $70.00 -	280.00
	D. Mark; 3 hours @ $70.00 -	210.00
2.	CAD Drawings, E. Catapia	
	5 hours @ $60.00	300.00
	Sub-Total	**790.00**

10.3 Mobilization-Demobilization

Mobilization-Demobilization of Field Crew
20th & 24th May 2009
Matt Fraser, Kevin Graber
Vancouver to Lytton & Lytton to Vancouver

1. Wages –	420.00
2. Room & Board -	165.00
3. Truck Rental & Gasoline -	215.00
Sub-Total	**800.00**

10.4 Field Personnel

Magnetic Survey & Self Potential Survey
21st, 22nd, 23rd May 2009-08-15
Mattt Fraser, Kevin Graber
2 men 3 days (35 hours)

@ $1,000.00 per day	3,000.00
Sub-Total	**3,000.00**

10.5 Geophysical Equipment

Base Station Rental, 5 days @ $100.00 per day	500.00
Field Survey Magnetometer	
5 days @ $100.00 per day	500.00
Self-Potential Instrumentation & Equipment	
5 days @ $50.00 per day	250.00
2 Handheld Garmin GPS Receivers	
Project Rate	100.00
Sub-Total	**1,350.00**

10.6 Data Reduction, Preparation & Interpretation

D. G. Mark, P.Geo. 12 hours @ $70.00	**840.00**
Sub-Total	**840.00**

10.7 Report Preparation

1. May, June, July 2009 J. M. Ashton, P. Eng. 6½ days @ $560.00 per day	3,640.00
2. CAD Drawings & Data Tables E. B. Catapia 20 hours @ $60.00 per hour	1,200.00
3. Word Processing, Collation S. Apchkrum, 28 hours @ $45.00 per hour	1,260.00
4. CAD Processing & Report Reproduction CAD Processing, Drafts & Report & Drawing Reproduction	280.00
Sub-Total	**6,380.00**

SECTION 12.0 — CERTIFICATION OF J.M. ASHTON, P. Eng

I, J. M. Ashton, of Suite 911, 850 West Hastings Street, Vancouver, British Columbia, hereby certify that:

1. I am a Consulting Electrical Engineer and principal in J. M. Ashton & Associates Ltd., Consulting Electrical Engineers. I also provide professional services in mineral exploration as a Mineral Explorationist.

2. I am a graduate of the University of British Columbia with a B. A. Sc. in Electrical Engineering (1966).

3. I am a member in good standing, as a Professional Engineer, in the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

4. I am a member of the Canadian Institute of Mining and Metallurgy.

5. I have practised as: a Mineral Explorationist, performing significant work related to all aspects of mineral exploration with a focus on geophysics; and as consulting electrical engineer; since 1969.

6. This report was prepared by me.

J. M. Ashton, P. Eng.

Dated this 1st day of September, 2009
Vancouver, British Columbia

SECTION 13.0 – CERTIFICATION OF D. G. MARK, P. Geo.

I, David G. Mark, of the City of Surrey, in the Province of British Columbia, do hereby certify:

1. I am a consulting Geophysicist and principal of Geotronics Consulting Inc., with offices located at 6204 - 125th Street, Surrey, British Columbia.

2. I am a graduate of the University of British Columbia with a Bachelor of Science in Geophysics (1968).

3. I am a member in good standing, as a Professional Geoscientist, in the Association of Professional Engineers and Geoscientists of British Columbia.

4. I have been practising my profession for the past 36 years and have been active in the mining industry for the past 30 years.

5. The field work for the gridline preparation, the total field magnetometer survey, and the self-potential survey was carried out by qualified Geotronics Consulting Inc. personnel under my supervision as Project Manager.

6. I provided data preparation services and technical consulting services to J. M. Ashton, P. Eng., pursuant to the preparation of this report.

7. I generally concur with the conclusions in this report.

David G. Mark, P. Geo.

Dated this 1st day of September, 2009.
Vancouver, British Columbia

SECTION 14.0 REFERENCES

Antal, J. W., November 25, 1969: Geology of T Claims; Assessment Report No. 2532.

Ashton, J. M., 30 August, 2007: Mobile Metal Ion (MMI) Geochemical Soil Survey 2 Report on the Ashton Group Mineral Claims; Assessment Report

Ashton, J. M., 22 September, 2006: Mobile Metal Ion (MMI) Geochemical Soil Survey Report on the Ashton Group Mineral Claims; Assessment Report

Ashton, J. M., 16 September, 2004: Deep-Probe Induced Polarization Survey 2 Report on the Ashton Group Mineral Claims; Assessment Report.

Ashton, J. M., September 24, 2001: Total-Field Magnetometer Survey Report on the Ashton Group Mineral Claims; Assessment Report.

Ashton, J. M., August 31, 1999: Deep-Probe Induced Polarization Survey Report on the Ashton Group Mineral Claims; Assessment Report.

Ashton, J. M., 26 August, 1994: Drilling Report on the Ashton Group Mineral Claims; Assessment Report.

Ashton, J. M., 30 August, 1990: VLF-EM & Magnetic Survey of the Burgoyne Group of Mineral Claims; Assessment Report.

Berger, B. R., Silberman, M. L., 1985, Relationships of Trace-Element Patterns to Geology in Hot-Spring-Type Precious Metals Deposits, **in** Reviews in Economic Geology, Volume 2, Geology & Geochemistry of Epithermal Systems **editors** Berger, B. M., & Bethke, P. M.

Boyle, R. W., 1979, The Geochemistry of Gold and its Deposits, Geological Survey of Canada, Bulletin 280, Energy, Mines and Resources Canada

Brown, D. A. (1981): Geology of the Lytton area, British Columbia; unpublished B.Sc. thesis, The University of British Columbia, Vancouver, British Columbia, 69 pages

Burgoyne, A. A., October 31, 1969: Copper Geochemical Soil Survey, Mineral Claims T1-T28. Assessment Report No. 2533.

Burr, S.V., 1982: A Guide to Prospecting by the Self-Potential Method, Ontario Geological Survey, Miscellaneous Paper 99, Ministry of Natural Resources, Ontario.

Carr, J. M., Reed, A. J., 1976: Afton: A Supergene Copper Deposit, **in** Porphyry Deposits of the Canadian Cordillera, The Canadian Institute of Mining and Metallurgy, Special Volume 15, 1976, p.376-387.

Cathles, L. M., 1978, Hydrodynamic Constraints on the Formation of Kuroko Deposits, **in** Mining Geology, Volume 28, pp257-265.

Cook, Stephen J., & Dunn, Colin E., 2007: A Comparative Assessment of Soil Geochemical Methods for Detecting Buried Mineral Deposits, 3Ts Au-Ag Prospect, British Columbia, Geoscience BC Paper 2007-7, Executive Summary

Corbett, G. J., Leach, T. M., 1996, Southwest Pacific Rim Gold-Copper Systems: Structure, Alteration, and Mineralization, Manual for an Exploration Workshop presented at Jakarta, August, 1996

Ettlinger, A. D., Ray, G. E., 1989, Precious Metal Enriched Skarns in British Columbia, An Overview and Geological Study, Paper 1989-3, Mineral Resources Division, Geological Survey Branch, Province of British Columbia.

Gale, R. E., April, 1992: Personal communication.

Gale, R. E., February 4, 1994: Logs of Drillhole-Cuttings, 1993 Reverse Circulation Drilling, Ashton Copper Prospect; unpublished report for 808 Exploration Services Ltd., 5 pages

Grondin, W., Personal Communication, 6 September, 2006.

Hedenquist, J. W., et al, 2000, Exploration for Epithermal Gold Deposits, **in** Hagemann, S. G., et al, editors, Gold in 2000, Reviews in Economic Geology, Volume 13, Society of Economic Geologists Inc.

Henley, R., 1996, Copper-Gold: Back to Basics, **in** Porphyry Related Copper & Gold Deposits of the Asia Pacific Region, Australia Mineral Foundation, Conference Proceedings, Cairns, 12-13 August, 1996.

Hildenbrand, T. G., 2001, Utility of Magnetic and Gravity Data in Evaluating Regional Controls on Mineralization: Examples from the Western United States **in** Richards, J. P. & Tosdal, R. M., editors, Structural Control on Ore Genesis, Reviews in Economic Geology, Volume 14, Society of Economic Geologists, Inc.

Induced Polarization, Applications and Case Histories, **editors:** Fink, J.B., Sternberg, B.K., McAlister, E. O., Wieduwult, W.K., & Special Editor S.H. Ward, Society of Exploration Geophysicists.

Jensen, E. P., & Barton, M. D., 2000, Gold Deposits Related to Alkaline Magmatism, **in** Hagemann, S. G., et al, editors, Gold in 2000, Reviews in Economic Geology, Volume 13, Society of Economic Geologists Inc.

Kelly, Sherwin F., 1957: Spontaneous Polarization, or Self-Potential Method **in** Methods and Case Histories in Mining Geophysics, edited by J.P. deWet, Canadian Institute of Mining and Metallurgy, Sixth Commonwealth Mining and Metallurgical Congress, p.53-59

Mark, D. G., June, July, September, 2006 June, July, 1999; Personal Communications.

Meinert, L. D., 1993, Igneous Petrogenesis and Skarn Deposits, **in** Kirkham, R. V., et al editors, Mineral Deposit Modeling: Geological Association of Canada, Special Paper 40, p. 569-583

Monger, J. W. H., 2001: Field Trip & Field Trip Notes of the Mount Lytton Complex and Contiguous Stratigraphy; Personal Involvement.

Monger, J. W. H., 1989: Geological Survey of Canada, Geology Map 42-1989 and accompanying notes.

Monger, J. W. H., June 1993: Personal Communication.

Mutschler, F. E., Mooney, T. C., 1993, Precious–Metal Deposits Related to Alkalic Igneous Rocks: Provisional Classification, Grade-Tonnage Data and Exploration Frontiers **in** Kirkham, R. V., Sinclair, W.D., Thorpe, R. I., and Duke, J. M., **eds.,** Mineral Deposit Modeling: Geological Association of Canada, Special Paper 40, p. 479-520

Parrish, R. R. and Monger, J. W. H., 1992: New U-Pb dates from southwestern British Columbia; in Radiogenic Age and Isotopic Studies: Report 5, GSC, Paper 91-2, p.87-108.

Polikarpochkin, V. V., & Kitzaev, N. A., 1971: Endogenic Halos of Epithermal Gold Bearing Deposits **in** Geochemical Exploration, Special Volume 11, 1971, Canadian Institute of Mining and Metallurgy

Ramezani, J., Dunning, G. R., & Wilson, M. R., 2001: Geologic Setting, Geochemistry of Alteration, and U-Pb Age of Hydrothermal Zircon from the Silurian Stog'er Tight

Gold Prospect, Newfoundland Appalachians, Canada, **in** Exploration Mining Geology, Vol 9, nos 3 and 4, pp. 171-188, CIM

Read, P. B., July, 2004: Personal communication on rock samples obtained from Ashton Copper-Gold Prospect

Read, P. B., 10 January, 1995: Petrography of Drill Chips from Holes RCA93-1 to RCA93-7, Ashton Property; unpublished report for J. M. Ashton, 10 pages.

Read, P. B., 1990: Petrography of Sample 54N 2+50W, Ashton Copper Property; unpublished report for J. M. Ashton, 3 pages.

Schroeter, T. G., 1995: Editor, Porphyry Deposits of the Northwestern Cordillera of North America Special Volume 46, Canadian Institute of Mining, Metallurgy and Petroleum

Smith, S. W., September 20, 1993: Geological Mapping and Geochemical Sampling on the Ashton Property, Assessment Report.

Telford, W. M., Geldart, L. P., Sheriff, R. E., & Keys, D. A., 1976: Applied Geophysics, Cambridge University Press

Wamtech Pty. Ltd, 2004, MMI Manual for Mobile Metal Ion Geochemical Soil Surveys, Version 5.04, MMI Technology, Bentley Australia

Williams, S. A., Forrester, J. D., 1995, Characteristics of Porphyry Copper Deposits **in** Price, F. W., Bolm, J. G., editors, Porphyry Copper Deposits of the American Cordillera, Arizona Geological Society, Digest 20

Figures

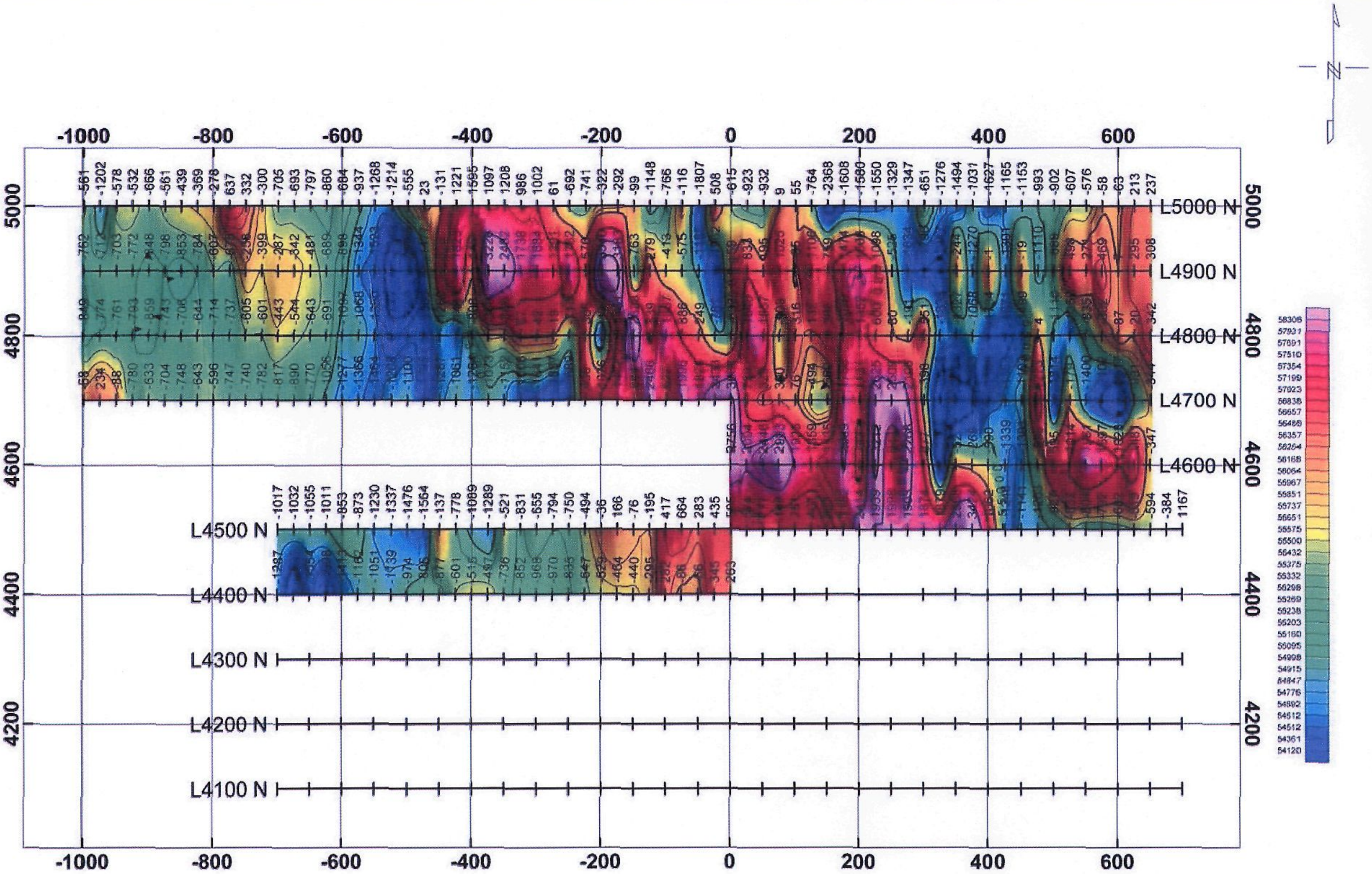


FIGURE 5

Survey Date:
July 2001 & May 2009

Instrumentation:
Proton Precession Magnetometer
2001 - GEM Systems Model GSM-19;
2009 - Geometrics, Model G-856

Contour Interval:
50 nT

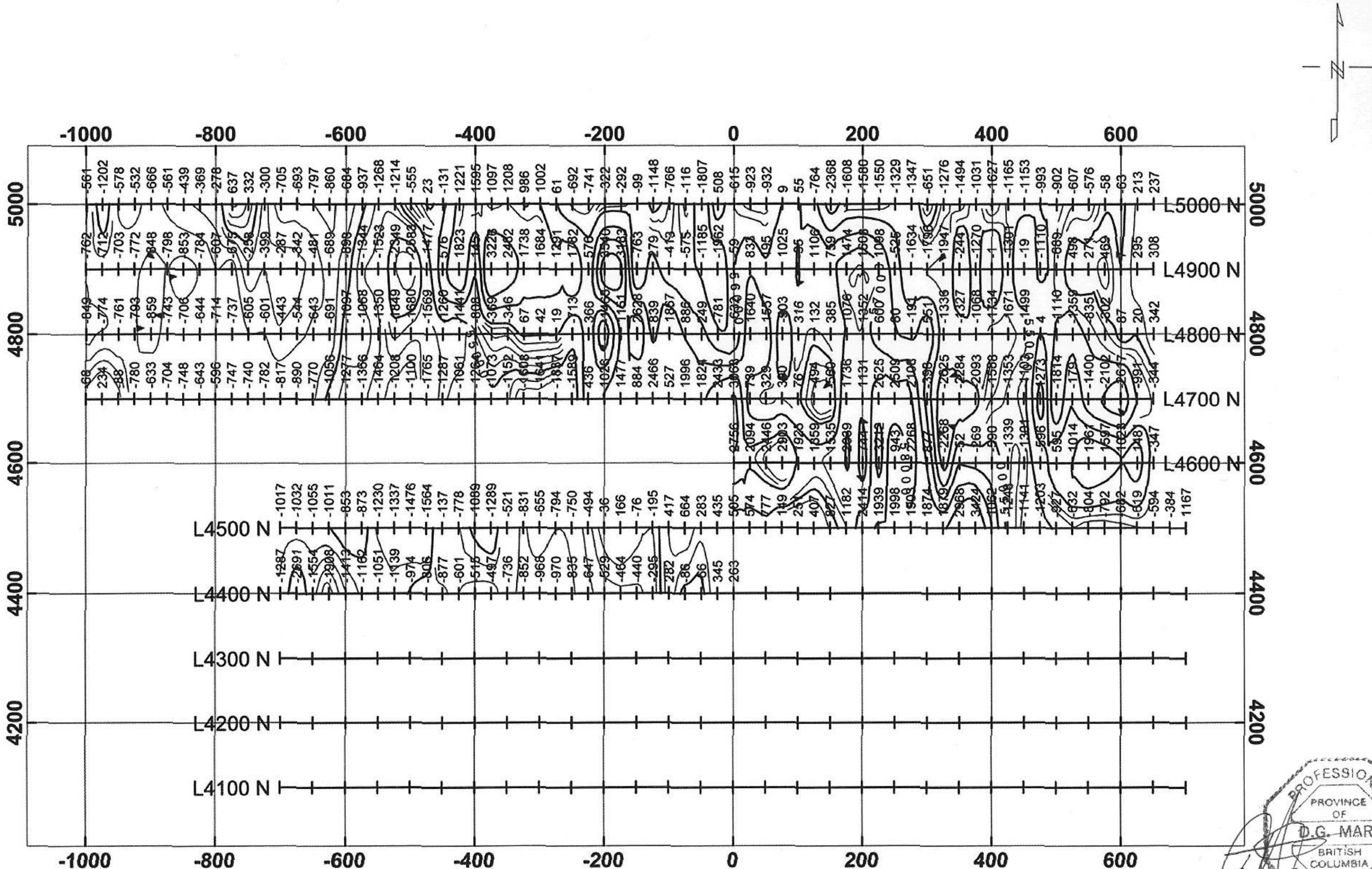
Scale 1:9000

100 0 100 200 300

metres

GEOTRONICS CONSULTING INC.
SURREY B.C.

J M ASHTON & ASSOCIATES LTD				
ASHTON PROJECT NICOAMEN RIVER, LYTTON AREA, KAMLOOPS MD, BC				
TOTAL FIELD MAGNETIC SURVEY PLAN INTEGRATED 2001 SURVEY & 2009 SURVEY				
DRAWN BY: DGM	JOB NO.: 09-01	NTS: 92I/3W,6W	DATE: May 09	FIG. NO.: GP-1



Survey Date:
July 2001 & May 2009

Instrumentation:
Magnetometer
GEM Systems Model GSM-19;
Proton Precession Magnetometer
Geometrics, Model G-856

Base:
56,000 nT (this value has been subtracted from each reading)

Contour Interval:
50 nT

Scale 1:9000

100 0 100 200 300

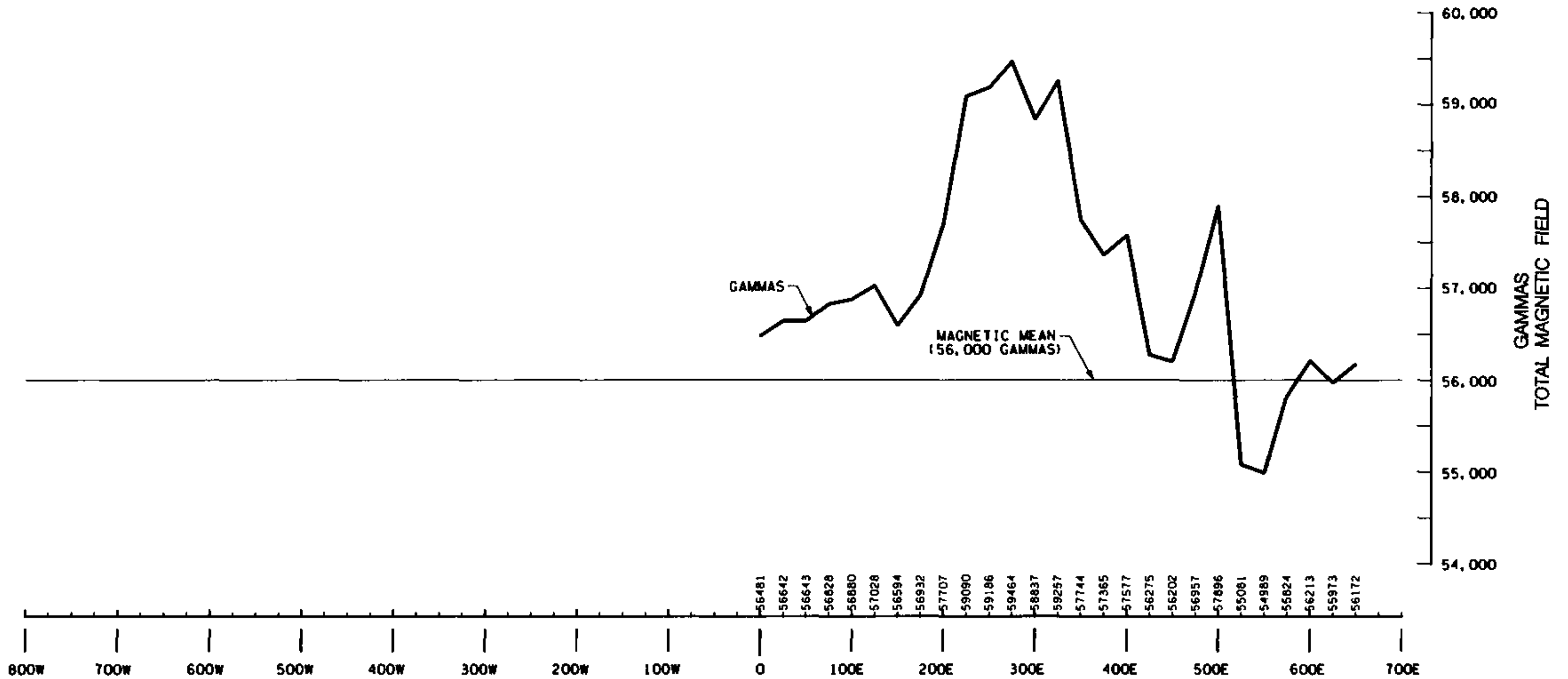
metres

GEOTRONICS CONSULTING INC.
SURREY B.C.

FIGURE 6

PROFESSIONAL GEOSCIENTIST PROVINCE OF BRITISH COLUMBIA D.G. MARK

J M ASHTON & ASSOCIATES LTD				
ASHTON PROJECT				
NICOAMEN RIVER, LYTTON AREA, KAMLOOPS MD, BC				
TOTAL FIELD MAGNETIC SURVEY PLAN INTEGRATED 2001 SURVEY & 2009 SURVEY				
DRAWN BY: DGM	JOB NO.: 09-01	NTS: 92I/3W,6W	DATE: May 09	FIG. NO.: GP-1



HORIZONTAL SCALE 1:5000

50 0 50 100 150 200 250 metres

LEGEND

TOTAL FIELD MAGNETIC PROFILE (GROUND SURVEY) IN GAMMAS (1 GAMMA - 1 NANOTESLA) 25m SAMPLING INTERVAL

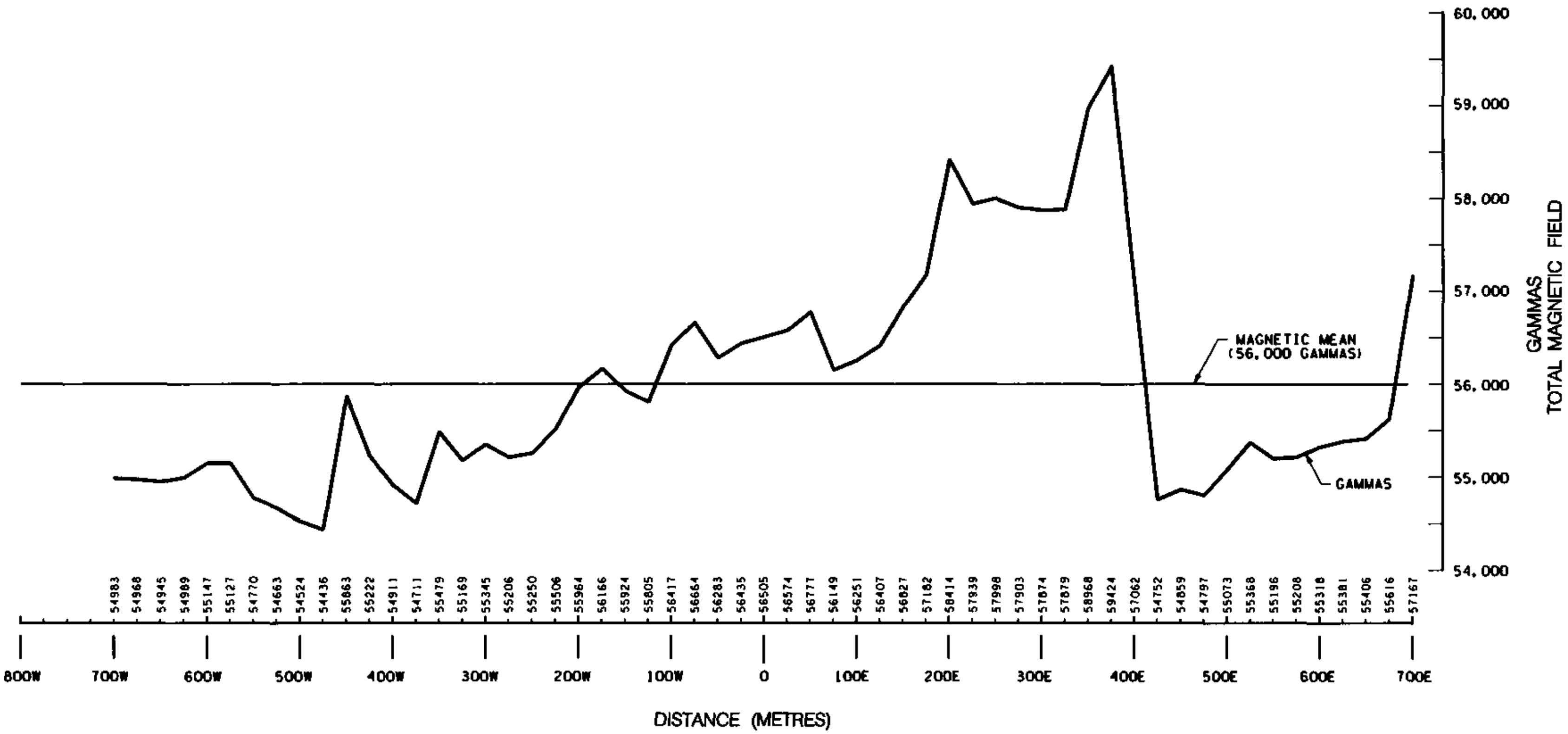
FIGURE 7

J.M.ASHTON & ASSOCIATES LTD.
VANCOUVER, BRITISH COLUMBIA

ASHTON PROJECT

SURVEY LINE 4500 NORTH
TOTAL FIELD MAGNETIC PROFILE
2001 SURVEY

BY:	JMA	SCALE :	AS SHOWN
DRAWN :	EBC	DATE :	JUNE 2009
CHECKED :	JMA	REVISED :	



HORIZONTAL SCALE 1:5000 — 50 0 50 100 150 200 250 metres

FIGURE 8

LEGEND

TOTAL FIELD MAGNETIC PROFILE (GROUND SURVEY) IN GAMMAS (1 GAMMA - 1 NANOTESLA)
25m SAMPLING INTERVAL

J.M.ASHTON & ASSOCIATES LTD.
CONSULTING ENGINEERS - VANCOUVER, B.C.

ASHTON PROJECT

SURVEY LINE 4500 NORTH
TOTAL FIELD MAGNETIC PROFILE
2009 SURVEY

BY:	JMA	SCALE	AS SHOWN
DRAWN	EBC	DATE	JUNE 2009
CHECKED	JMA	REVISED	

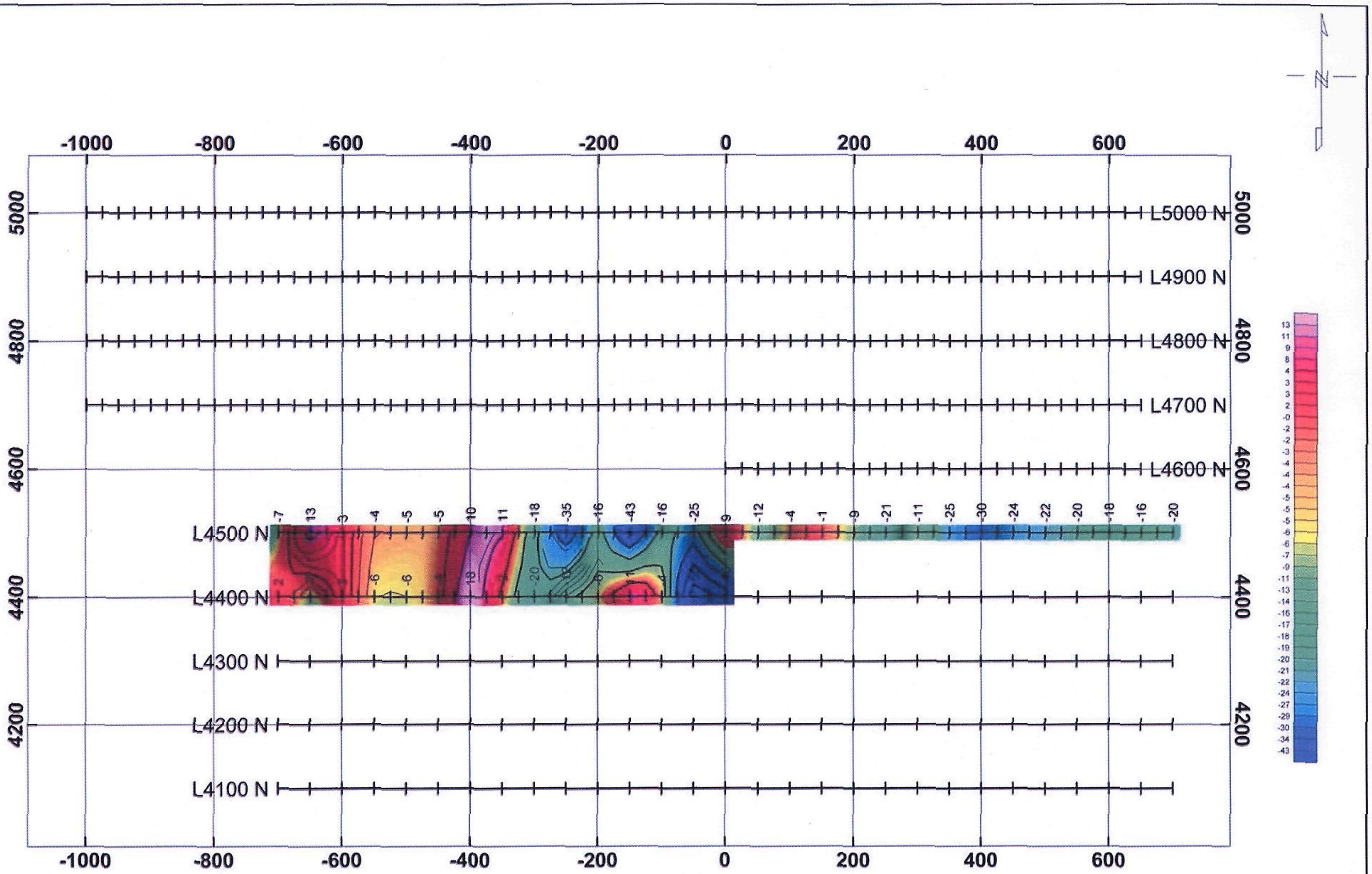


FIGURE 9

Survey Date:
May 2009

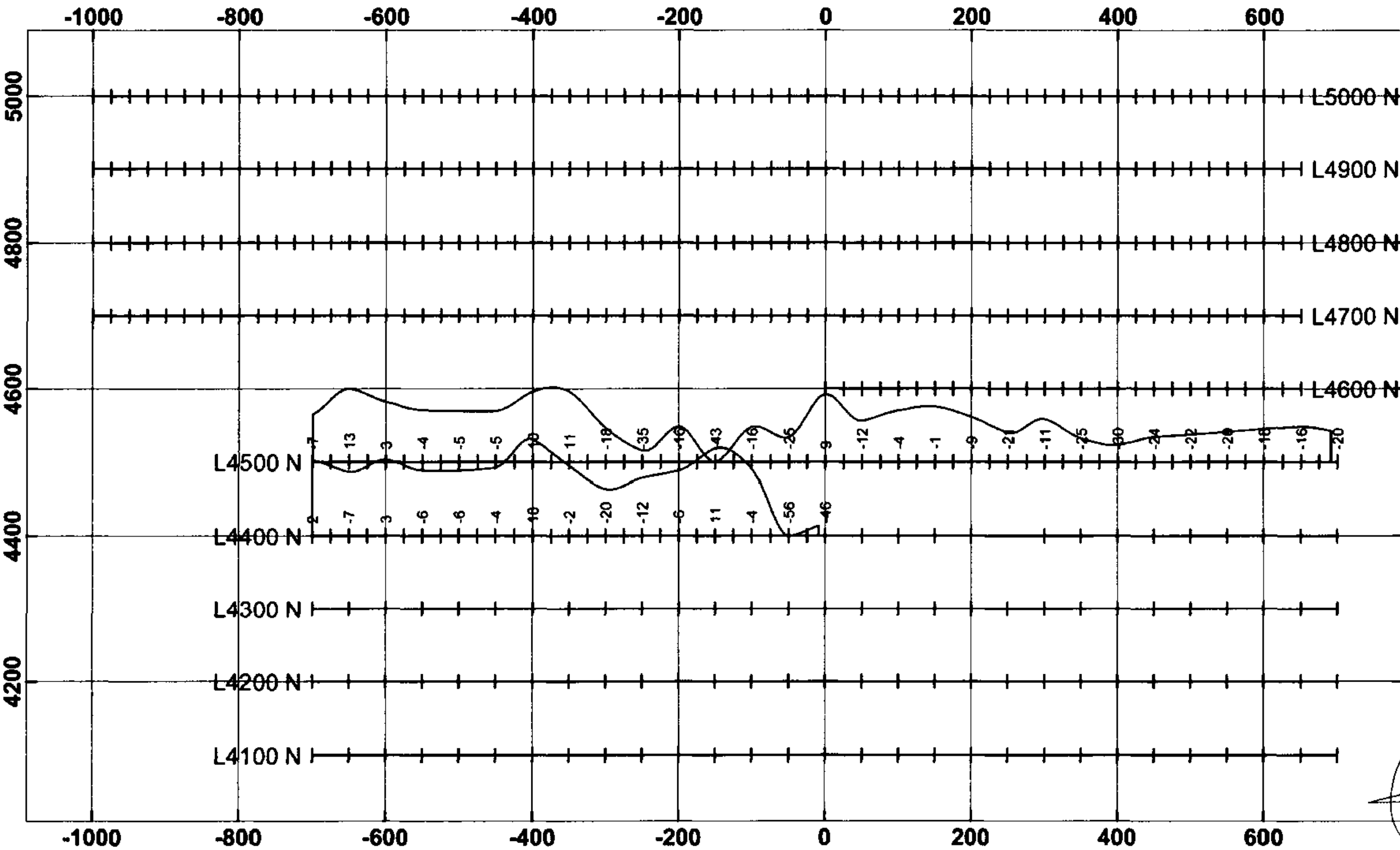
Instrumentation:
Fluke Multimeter, Model 77 II

Contour Interval:
50 mv

Scale 1:9000
100 0 100 200 300
metres

GEOTRONICS CONSULTING INC.
SURREY B.C.

J M ASHTON & ASSOCIATES LTD				
ASHTON PROJECT NICOAMEN RIVER, LYTTON AREA, KAMLOOPS MD, BC				
SELF–POTENTIAL SURVEY PLAN LINE 4500 N & LINE 4400 N				
DRAWN BY: DGM	JOB NO.: 09-01	NTS: 92I/3W,6W	DATE: May 09	FIG. NO.: GP-3



PROFESSIONAL
PROVINCE OF
D.G. MARK
BRITISH COLUMBIA
GEOSCIENTIST

NOTES

1. SP RESPONSES ROUNDED OFF TO NEAREST INTEGER.

LEGEND

-56 SP RESPONSE IN mV (-VE)

11 SP RESPONSE IN mV (+VE)

Survey Date:
May 2009

Instrumentation:
Fluke Multimeter, Model 77 II

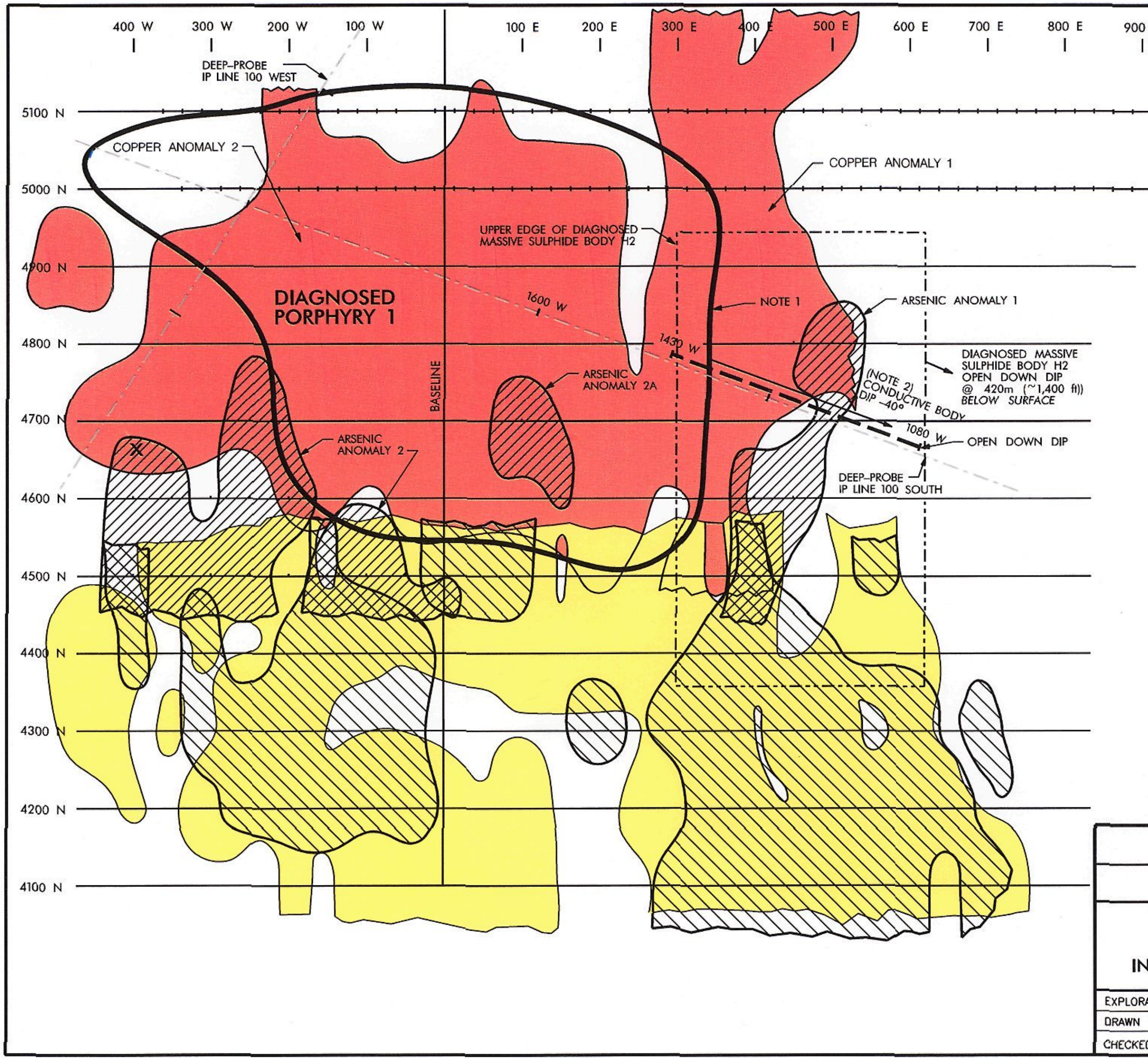
GEOTRONICS CONSULTING INC.
SURREY B.C.

Scale 1:9000

100 0 100 200 300
metres

FIGURE 10

J M ASHTON & ASSOCIATES LTD				
ASHTON PROJECT NICOAMEN RIVER, LYTTON AREA, KAMLOOPS MD, BC				
SELF-POTENTIAL SURVEY PROFILES LINE 4500 N & LINE 4400 N				
DRAWN BY: DGM	JOB NO: 09-01	NTS: 92I/3W,6W	DATE: May 09	FIG. NO.: GP-4



LEGEND

- ELECTRONIC CONDUCTOR
- × EXTREMELY ANOMALOUS GOLD PATHFINDER ASSAYS INDICATIVE OF *LOW-SULPHIDATION EPITHERMAL* GOLD SYSTEM ORIGINATING FROM ALKALIC MAGMA
- H2 EM CONDUCTOR HAWAII VLF STATION ANOMALY 2
- COPPER ANOMALY + ANOMALOUS VANADIUM
- MMI GOLD ANOMALY
- ARSENIC ANOMALY CONVENTIONAL GEOCHEMISTRY
- ARSENIC ANOMALY MMI GEOCHEMISTRY DIAGNOSED AS HYDROTHERMAL OUTFLOW ZONE

NOTES

1. PROBABLE OUTLINE PLAN DIMENSION OF PORPHYRY COPPER DEPOSIT 1. FROM INTEGRAL SHALLOW PROBE IP DATA & COPPER GEOCHEMICAL ANOMALY & DEEP PROBE IP SECTIONS.
2. PROBABLE PROJECTION TO SURFACE OF DIAGNOSED MASSIVE SULPHIDE BODY H2 WHICH DIPS -40° EASTERLY FROM SUBCROPPING UPPER EDGE OF ITS TABULAR STRUCTURE. TOP OF BODY AT 120m BELOW SURFACE.
3. SEE FIGURES 16 & 17 FOR MMI GOLD & ARSENIC ANOMALIES.

SCALE 1:7,500 — 50 0 50 100 150 200 250 METRES

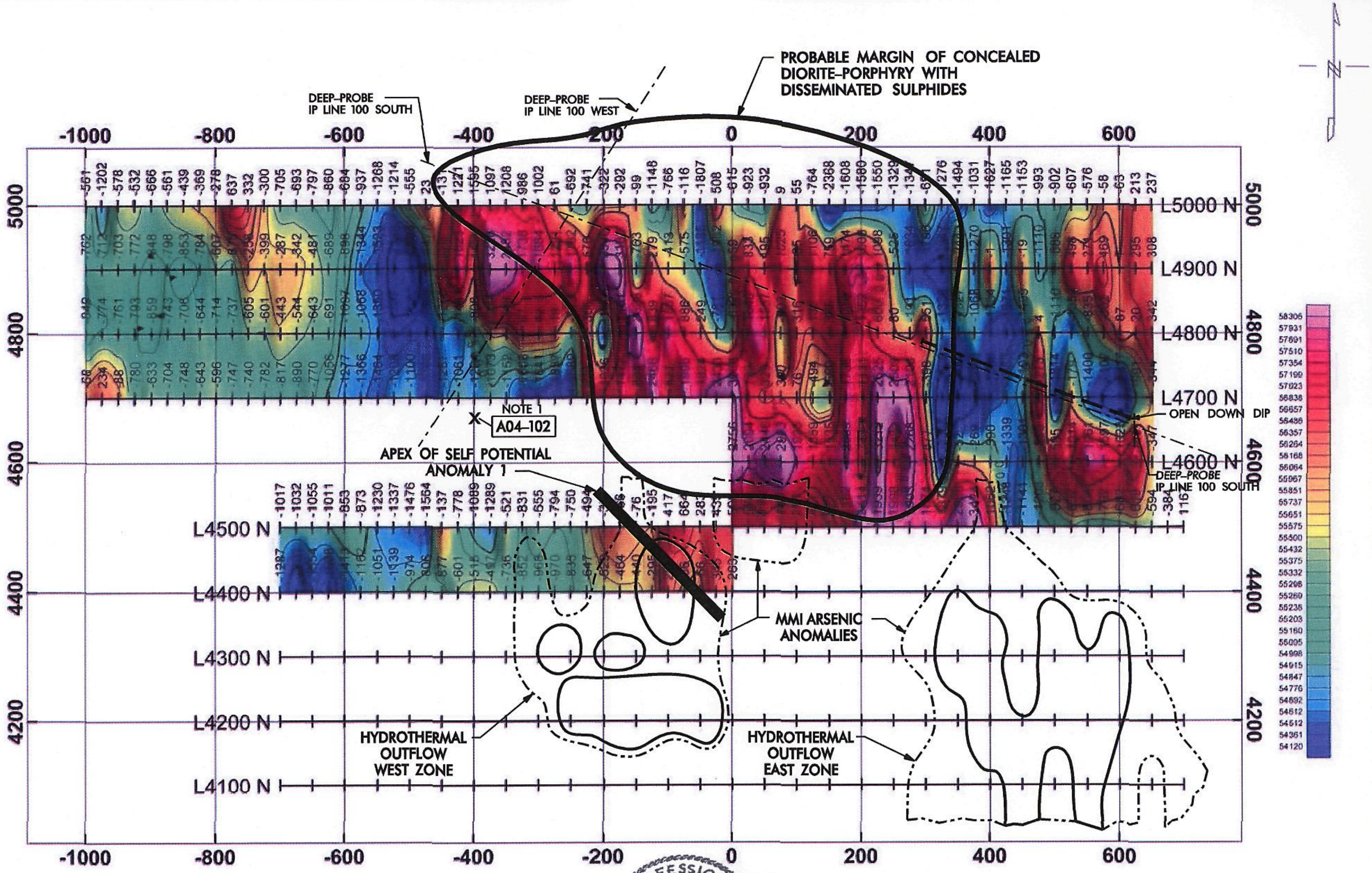
FIGURE 11

J.M.ASHTON & ASSOCIATES LTD.
VANCOUVER, BRITISH COLUMBIA

ASHTON PROJECT

MMI GOLD ANOMALY IN RELATION TO MMI ARSENIC ANOMALIES & INTERPRETED LOCATION OF PORPHYRY 1

EXPLORATIONIST	: JMA	SCALE	: AS SHOWN
DRAWN	: EBC	DATE	: AUGUST 2007
CHECKED	: JMA	REVISED	:



Survey Date:
July 2001 & May 2009

Instrumentation:
Proton Precession Magnetometer
2001 - GEM Systems Model GSM-19;
2009 - Geometrics, Model G-856

Contour Interval:
50 nT

Scale 1:9000

100 0 100 200 300
metres

NOTES

1. ANOMALOUS GOLD PATHFINDER ELEMENTS ROCK SAMPLES.
2. SEE FIGURES 11 & 16 FOR EXTENT & LOCATION OF MMI GOLD ANOMALIES.

LEGEND

PROBABLE MAIN FLUES OF HYDROTHERMAL OUTFLOW

MODIFIED AFTER GEOTRONICS CONSULTING INC.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — J. M. ASHTON

FIGURE 12

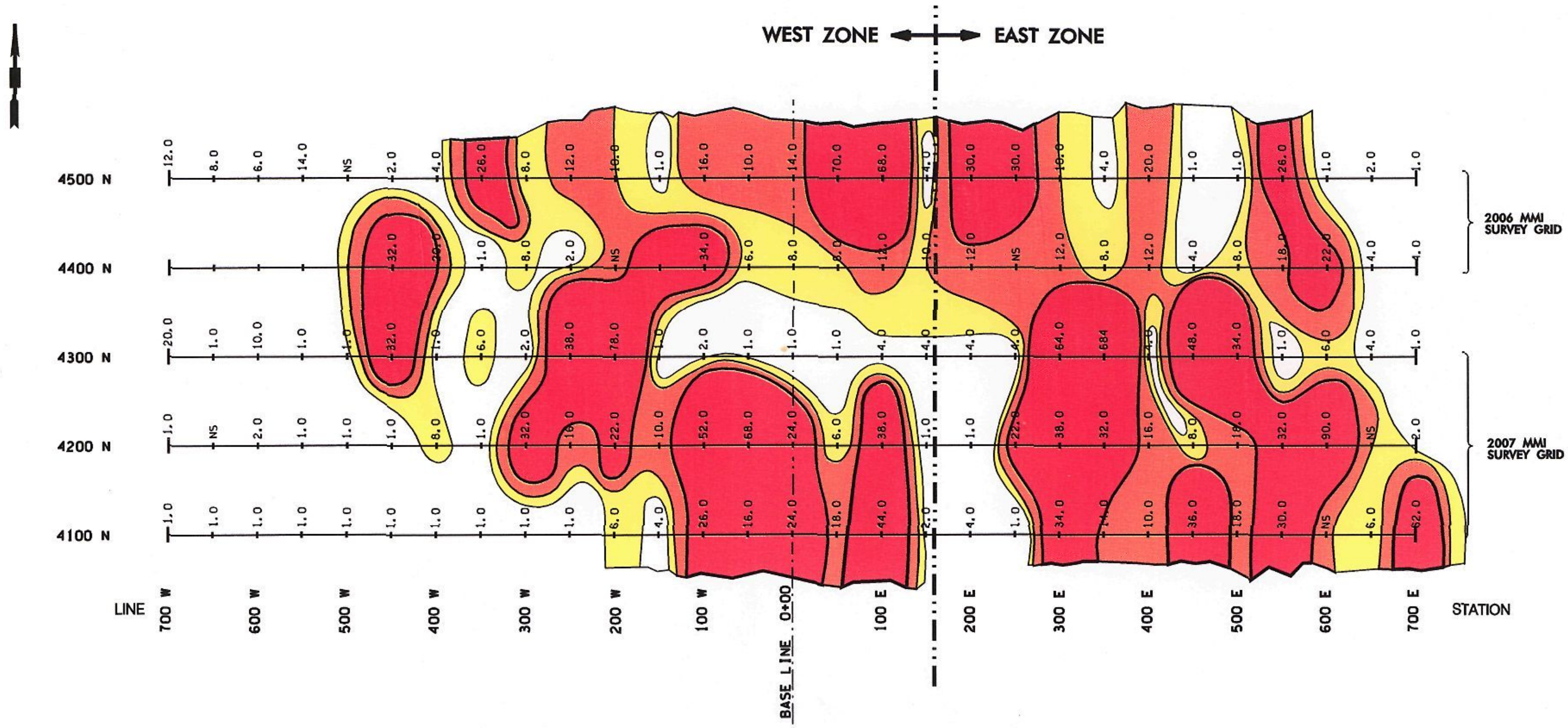
J M ASHTON & ASSOCIATES LTD

ASHTON PROJECT

NICOAMEN RIVER, LYTTON AREA, KAMLOOPS MD, BC

DIAGNOSED HYDROTHERMAL OUTFLOW ZONES & SELF-POTENTIAL ANOMALY 1 IN RELATION TO THE TOTAL FIELD MAGNETIC ANOMALIES

DRAWN BY:	JOB NO.:	NTS:	DATE:	FIG. NO.:
EBC		92I/3W.6W	May 09	



MMI SOILS LEGEND

'RESPONSE RATIO' CLASS BOUNDARIES	ANOMALOUS CLASS
0 – 2.5	BACKGROUND
2.6 – 5.0	ANOMALOUS THRESHOLD
5.1 – 10.0	ANOMALOUS
10.1 – 20.0	VERY ANOMALOUS
>20.1	EXTREMELY ANOMALOUS

NS – NO SAMPLE

5.1 ——— BOUNDARY OF ANOMALOUS GOLD ALL CLASSES

NOTES

1. LOWER QUARTILE Au REFERENCE =0.05 ppb
2. ACTUAL BACKGROUND DEFINED AS 0 – 1.0 RESPONSE – RATIO.
3. FOR PLOTTING PURPOSES ONLY, BACKGROUND = 0 – 2.5 UNITS. ENABLES IDENTIFICATION OF ANOMALOUS CLASSES BY GEOMETRIC PROGRESSION.

SCALE 1:5,000

50 0 50 100 150 200 m

FIGURE 16

J.M.ASHTON & ASSOCIATES LTD.
VANCOUVER, BRITISH COLUMBIA

ASHTON PROJECT

GOLD ASSAY PLAN
MMI GEOCHEMICAL SURVEY 2

CONTRACTOR	GEOTRONICS CONS INC.	SCALE	AS SHOWN
DRAWN	EBC	DATE	AUGUST 2007
CHECKED	JMA	REVISED	

Appendix A

APPENDIX 'A'

Integrated Total Field Magnetic Data from the 2001 Magnetometer Survey and the 2009 Magnetometer Survey &

Self-Potential Data from the 2009 Survey

Pages 1 & 2

Total Field Magnetic Data from the 2009 Magnetometer Survey & Self-potential Data from the 2009 Survey

Pages 1 through to 5

Total Field Magnetic Data from the 2001 Magnetometer Survey

Line	x	Mag	Sp		Line	x	Mag	Sp
Line 4400					Line 4900			
4400	-700	54713	2		4900	-1000	55238	
4400	-675	53309			4900	-975	55288	
4400	-650	54446	-7		4900	-950	55297	
4400	-625	54092			4900	-925	55228	
4400	-600	54587	2.5		4900	-900	55152	
4400	-575	54838			4900	-875	55202	
4400	-550	54949	-5.9		4900	-850	55147	
4400	-525	54861			4900	-825	55216	
4400	-500	55026	-6		4900	-800	55393	
4400	-475	55194			4900	-775	55325	
4400	-450	55123	-3.9		4900	-750	55742	
4400	-425	55399			4900	-725	55601	
4400	-400	55485	17.5		4900	-700	55713	
4400	-375	55503			4900	-675	55658	
4400	-350	55264	-2.3		4900	-650	55519	
4400	-325	55148			4900	-625	55311	
4400	-300	55032	-19.9		4900	-600	55102	
4400	-275	55030			4900	-575	54656	
4400	-250	55165	-11.5		4900	-550	54477	
4400	-225	55353			4900	-525	53651	
4400	-200	55471	-6.1		4900	-500	53417	
4400	-175	55536			4900	-475	54523	
4400	-150	55560	10.8		4900	-450	56576	
4400	-125	55705			4900	-425	57823	
4400	-100	56282	-4.3		4900	-400	56145	
4400	-75	55914			4900	-375	59226	
4400	-50	55934	-55.5		4900	-350	58482	
4400	-25	56345			4900	-325	57738	
4400	0	56263	-46.1		4900	-300	57684	
Line 4500					4900	-275	57291	
4500	-700	54983	-7.1		4900	-250	57782	
4500	-675	54968			4900	-225	56576	
4500	-650	54945	12.5		4900	-200	59540	
4500	-625	54989			4900	-175	59183	
4500	-600	55147	2.5		4900	-150	55237	
4500	-575	55127			4900	-125	56279	
4500	-550	54770	-3.8		4900	-100	55587	
4500	-525	54663			4900	-75	55425	
4500	-500	54524	-4.5		4900	-50	54815	
4500	-475	54436			4900	-25	54038	
4500	-450	55863	-4.5		4900	0	55941	
4500	-425	55222			4900	25	56833	
4500	-400	54911	10.3		4900	50	56195	
4500	-375	54711			4900	75	57025	
4500	-350	55479	10.5		4900	100	55965	
4500	-325	55169			4900	125	57106	
4500	-300	55345	-17.5		4900	150	56759	
4500	-275	55206			4900	175	57474	
4500	-250	55250	-34.7		4900	200	57608	
4500	-225	55506			4900	225	57098	

Line	x	Mag	Sp		Line	x	Mag	Sp
4500	-200	55964	-16		4900	250	55475	
4500	-175	56166			4900	275	54366	
4500	-150	55924	-43.1		4900	300	54204	
4500	-125	55805			4900	325	54053	
4500	-100	56417	-16.3		4900	350	55756	
4500	-75	56664			4900	375	54730	
4500	-50	56283	-24.7		4900	400	55999	
4500	-25	56435			4900	425	54699	
4500	0	56505	8.5		4900	450	55981	
4500	25	56574			4900	475	54890	
4500	50	56777	-12		4900	500	55311	
4500	75	56149			4900	525	56498	
4500	100	56251	-4		4900	550	56271	
4500	125	56407			4900	575	56469	
4500	150	56827	-1		4900	600	56007	
4500	175	57182			4900	625	56295	
4500	200	58414	-9		4900	650	56308	
4500	225	57939			Line 5000			
4500	250	57998	-20.9		5000	-1000	55439	
4500	275	57903			5000	-975	54798	
4500	300	57874	-10.5		5000	-950	55422	
4500	325	57879			5000	-925	55468	
4500	350	58968	-25.2		5000	-900	55334	
4500	375	59424			5000	-875	55439	
4500	400	57062	-30.3		5000	-850	55561	
4500	425	54752			5000	-825	55631	
4500	450	54859	-24		5000	-800	55722	
4500	475	54797			5000	-775	56637	
4500	500	55073	-22.32		5000	-750	56332	
4500	525	55368			5000	-725	55700	
4500	550	55196	-20.2		5000	-700	55295	
4500	575	55208			5000	-675	55307	
4500	600	55318	-18.1		5000	-650	55203	
4500	625	55381			5000	-625	55140	
4500	650	55406	-16.3		5000	-600	55316	
4500	675	55616			5000	-575	55063	
4500	700	57167	-20		5000	-550	54732	
Line 4600					5000	-525	54786	
4600	0	58756			5000	-500	55445	
4600	25	58094			5000	-475	56023	
4600	50	58446			5000	-450	55869	
4600	75	58903			5000	-425	57221	
4600	100	57925			5000	-400	57595	
4600	125	57359			5000	-375	57097	
4600	150	57535			5000	-350	57208	
4600	175	58039			5000	-325	56986	
4600	200	56744			5000	-300	57002	
4600	225	59212			5000	-275	56061	
4600	250	56943			5000	-250	55308	
4600	275	58268			5000	-225	55259	
4600	300	56877			5000	-200	55678	

Line	x	Mag	Sp		Line	x	Mag	Sp
4600	325	53732			5000	-175	55708	
4600	350	55948			5000	-150	55901	
4600	375	55731			5000	-125	54852	
4600	400	55410			5000	-100	55234	
4600	425	54661			5000	-75	55884	
4600	450	54699			5000	-50	54193	
4600	475	55404			5000	-25	56508	
4600	500	56595			5000	0	55385	
4600	525	57014			5000	25	55077	
4600	550	57961			5000	50	55068	
4600	575	57597			5000	75	56009	
4600	600	57023			5000	100	56055	
4600	625	57481			5000	125	55236	
4600	650	55653			5000	150	53632	
Line 4700					5000	175	54392	
4700	-1000	55932			5000	200	54420	
4700	-975	56234			5000	225	54450	
4700	-950	55912			5000	250	54671	
4700	-925	55220			5000	275	54653	
4700	-900	55367			5000	300	55349	
4700	-875	55296			5000	325	54724	
4700	-850	55252			5000	350	54506	
4700	-825	55357			5000	375	54969	
4700	-800	55404			5000	400	54373	
4700	-775	55253			5000	425	54835	
4700	-750	55260			5000	450	54847	
4700	-725	55218			5000	475	55007	
4700	-700	55183			5000	500	55098	
4700	-675	55110			5000	525	55393	
4700	-650	55230			5000	550	55424	
4700	-625	54944			5000	575	55942	
4700	-600	54723			5000	600	55937	
4700	-575	54634			5000	625	56213	
4700	-550	54536			5000	650	56237	
4700	-525	54792						
4700	-500	54900						
4700	-475	54235						
4700	-450	54713						
4700	-425	54939						
4700	-400	54736						
4700	-375	54927						
4700	-350	54848						
4700	-325	54392						
4700	-300	54359						
4700	-275	54163						
4700	-250	54411						
4700	-225	56436						
4700	-200	57026						
4700	-175	57477						
4700	-150	56884						
4700	-125	58466						

Line	x	Mag	Sp		Line	x	Mag	Sp
4700	-100	56527						
4700	-75	57996						
4700	-50	57824						
4700	-25	58433						
4700	0	59063						
4700	25	56739						
4700	50	56329						
4700	75	56390						
4700	100	56076						
4700	125	55506						
4700	150	55440						
4700	175	57736						
4700	200	57131						
4700	225	58525						
4700	250	58509						
4700	275	58108						
4700	300	55602						
4700	325	53375						
4700	350	53716						
4700	375	53907						
4700	400	54412						
4700	425	54647						
4700	450	54897						
4700	475	57273						
4700	500	54186						
4700	525	55821						
4700	550	54600						
4700	575	53898						
4700	600	53383						
4700	625	55009						
4700	650	55656						
Line 4800								
4800	-1000	55151						
4800	-975	55226						
4800	-950	55239						
4800	-925	55207						
4800	-900	55141						
4800	-875	55257						
4800	-850	55294						
4800	-825	55356						
4800	-800	55286						
4800	-775	55263						
4800	-750	55395						
4800	-725	55399						
4800	-700	55557						
4800	-675	55456						
4800	-650	55357						
4800	-625	55309						
4800	-600	54903						
4800	-575	54932						
4800	-550	54650						

Line	x	Mag	Sp		Line	x	Mag	Sp
4800	-525	54151						
4800	-500	54320						
4800	-475	54431						
4800	-450	54740						
4800	-425	54559						
4800	-400	55192						
4800	-375	55631						
4800	-350	55654						
4800	-325	56067						
4800	-300	56042						
4800	-275	56019						
4800	-250	55287						
4800	-225	56366						
4800	-200	54537						
4800	-175	57151						
4800	-150	58628						
4800	-125	56839						
4800	-100	57867						
4800	-75	56886						
4800	-50	56249						
4800	-25	55219						
4800	0	55368						
4800	25	57640						
4800	50	57557						
4800	75	55497						
4800	100	56316						
4800	125	56132						
4800	150	56385						
4800	175	57076						
4800	200	57352						
4800	225	56600						
4800	250	56080						
4800	275	55809						
4800	300	56551						
4800	325	54664						
4800	350	54673						
4800	375	54932						
4800	400	54266						
4800	425	54329						
4800	450	54501						
4800	475	56004						
4800	500	54890						
4800	525	54641						
4800	550	55165						
4800	575	55698						
4800	600	56087						
4800	625	56020						
4800	650	56342						