MOBILE METAL ION (MMI) GEOCHEMICAL SOIL SURVEY 2

on the

ASHTON GROUP MINERAL CLAIMS

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

LATITUDE:	**50°14'52" NORTH**
LONGITUDE:	**121°23'45" WEST**
OWNERS:	**J.M. ASHTON, P. Eng.** **S.E. APCHKRUM**
OPERATORS:	**Houston Minerals Limited** **J. M. Ashton & Associates Ltd.** **S. E. Apchkrum**
AUTHOR:	**J.M. ASHTON, P. Eng.**
GEOPHYSICIST:	**D.G. MARK, P. Geo.**

CONTRACTOR: GEOTRONICS CONSULTING INC.

SUBMITTED: 30 August, 2007

Prepared by:
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for
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Vancouver, British Columbia
V6E 2K3

on behalf of the Owners

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Ashton Project

MOBILE METAL ION (MMI) GEOCHEMICAL SOIL SURVEY 2
on the
Ashton Group Mineral Claims

SECTION 1.0 — INTRODUCTION

The Ashton Project 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, partly associated with a mixed zone of hydrothermally altered volcanics and skarnification containing low grade copper minerals. A new multi-element soil survey conducted in 1993 re-discovered the copper anomaly. 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.

The copper anomaly was tested with a shallow-probe induced polarization survey which defined a moderately large circular chargeability anomaly more or less coincidental with the copper anomaly. In 1994, five (5) percussion drill holes were drilled into the zone of chargeability but encountered only very low grade copper averaging not more than 0.07% copper within propylitically altered rock. Two holes were also drilled off this structure

In 1995 a program of drill hole geological logging on a suite of percussion drill chips saved from the drilling was implemented followed by thin section petrographical work on selected samples from the hole logging. The results from this geoscientific effort showed that the area that was the focus of the drilling was pervasively altered and mineralized with very low grade copper which occurs as disseminations and veins believed to be deposited along northerly trending shear structures noted in the area; and that the target area was composed of an episodically mineralized intrusive complex of: tonalite, quartz-diorite, diorite, diorite porphyry, albitite, and gabbro. Widespread alteration in the form of calcite flooding, and quartz-carbonate, pyrite-chalcopyrite veining was noted in all of the holes drilled in the area of interest. Of particular interest was the quartz-carbonate pyrite-chalcopyrite stockworks found in the bottom of PDH93-3. These mineralised structures may be indicative of economic copper mineralization in close proximity or at depth. A large altered and mineralized diorite-porphyry dike was encountered in one of the drill holes.

Skarnification and marblization is found proximal to the intrusive complex in drill holes and at surface largely along the east and southeast contact aureole of diagnosed Porphyry 1 where the meta-sedimentary and meta-volcanic succession appears to predominate.

Petrography supported the findings of the geological work and concluded that in addition to the plutonic zones of tonalite (quartz-diorite) through to quartz-diorite, diorite and to gabbro that underlie the area of interest also includes their altered equivalents of pyroxene gabbro, pyroxenite, hornblende-diorite and horneblendite. Petrography also confirmed diorite-porphyry, and albitite (albite porphyry). Alteration facies include albitization, pervasive calcification, epidotization, chloritization, hematization, sericitization, sausseritization, marbleization, and skarnification.

It was the combined results of the geological logging, petrographical study, and the consulting geologist's discovery of a mineralized stockworks zone consisting of quartz-carbonate, pyrite-chalcopyrite veins and veinlets at the bottom 70 feet of PDH93-3 that motivated a reconnaissance **deep-probe** induced-polarization (IP) survey which was conducted in 1999. The deep-probe IP survey used a dipole-dipole array with an 'a' spacing of 100 metres and was surveyed down to 6-levels which provides a pseudosectional view of chargeability and resisitivity contrast down to about 1,400 metres (1,400 feet).

The IP survey delineated a large volume of chargeability that was partly embedded within or was below the shallow probe chargeability rind yet quite distinct from it as evidenced by a steep chargeability isopach gradient indicative of a phase change. This chargeability structure is diagnosed as Porphyry 1. This newly discovered target chargeability zone appears to come closest to surface in the vicinity of an extremely anomalous copper anomaly which has yet to be investigate. This vertical chargeability anomaly goes to the survey depth of 420 metres (1,400 feet) and is open to depth. It is diagnosed as a mineralised porphyry body.

The survey also identified a large conductive body along the east contact zone of the chargeability anomaly. This diagnosed sulphide body dips about 40° to the east which is conformable to a carbonaceous volcanic-sedimentary succession. This structure is diagnosed as a possible semi-massive to massive sulphide body. The top of the conductor is about 120 metres (400 feet) below surface. It goes to depth along its dip length to beyond 420 metres (1,400 feet) vertically below the surface. It has a probable width of 100 metres. Its strike dimension is unknown

Deep-Probe IP Survey 2, consistent with the 1999 deep-probe IP survey, was completed in 2004. It was designed to cross, from east to west, over a strong total field magnetic anomaly of 4,600 gammas discovered by a ground magnetic survey in 1990 . This anomaly has a half space dimension of about 500 metres north to south by 200 metres east to west.

The 2004 deep-probe IP survey resulted in the discovery of a second diagnosed porphyry deposit containing disseminated-sulphides located north of Porphyry 1. The discovery consists of two large concealed disseminated-sulphide limbs on either side of the long axis of the magnetic body, striking north, which is considered its core zone. The top of the east limb disseminated sulphide body is more deeply buried than the west limb. The two bilateral limbs and central magnetic core dip conformably about 50° to the west, to the depth measuring capability of the IP survey, or 420 metres below surface. This large structure is open to depth. The magnetic core with two bilateral disseminated sulphide limbs appears to be similar in spatial configuration to the gold-rich calc-alkaline Island Copper deposit and its many known Pacific-Rim analogues in which a central alteration zone of felsic porphyry containing hydrothermal magnetite was believed to be the "ore bringer".

Hence the deep-probe IP survey method has delineated two large disseminated-sulphide bodies diagnosed as porphyry deposits clustered within 300 metres from each other along what is interpreted to be linear zone of major structural weakness.

Several other coincident anomalous geological, geochemical, and geophysical features support the existence of these two porphyry bodies and the large conductive body, diagnosed as a massive sulphide deposit, along the east contact zone of Porphyry 1. These supporting features are described in earlier published assessment work reports.

A review of historical geochemistry including: a multi-element soils geochemical survey in 1993 over Porphyry 1 and multi-element rock-chip assays from the 1994 percussion drilling into the propylitic zone revealed a number of very-anomalous and extremely-anomalous arsenic assays. The arsenic in soils was particularly strong over the south contact aureole or shoulder zone of Porphyry 1 and appears to be a separate contiguous yet overlapping feature to the anomalous copper-in-soils anomaly which generally terminates at the diagnosed porphyry contact.

Accordingly, in 2004, a small lithogeochemical sampling program was conducted over the altered outcrop along the porphyry's south contact aureole and in the altered east contact aureole above the diagnosed massive sulphide body.

A representative rock sample taken from within Arsenic Anomaly 2 within the south contact aureole of Porphyry 1 on assay was found to contain **anomalous** epithermal gold pathfinder elements **Te**, **As**, **Sb**, **Hg**, **Se**, and **Ag.**

In 2006 this area of interest was tested by Mobile Metal Ion (MMI) Geochemical Survey 1 comprised of two parallel east-west oriented lines, Line 4500 and Line 4400 spaced 100 metres apart to the south of the contact aureole. The two metals of primary interest were arsenic and gold. The MMI survey discovered several strong arsenic anomalies that corresponded with the conventional arsenic in soils anomalies from the 1993 geochemical soil survey, and the newly discovered MMI gold anomalies corresponded with the MMI arsenic anomalies. 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 possibly 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 both the southern and eastern contact aureole of Porphyry 1.

Accordingly, as all of the gold and arsenic anomalies discovered in the 2006 MMI Survey were found to be open to the north and south it was considered essential to augment the 2006 Survey by expanding the MMI geochemical survey to the south. This report provides the results of MMI Geochemical Soil Survey 2 conducted in 2007 which expanded the 2006 survey to the south with three additional lines, Lines 4300, 4200 and 4100 which added to Lines 4500 and 4400 of the 2006 survey, bring the total area surveyed to 56 hectares.

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

SECTION 2.0 — SUMMARY & RECOMMENDATIONS

2.1 Summary

The anomalous MMI gold Response Ratio results found within the MMI survey area of the integral 2006 and 2007 MMI geochemical surveys between Lines 4500 and 4100 are significant. The MMI gold anomalies are shown in **Figure 16**.

The gold anomalies indicate, that in terms of probability, a gold-rich magmatic-hydrothermal system, probably the porphyry related low-sulphidation epithermal type, has deposited gold, possibly in economic concentrations within structural and other permeable zones along the south contact aureole of Porphyry 1 and the southern strike extension and eastern dip projections of Massive Sulphide Body H2; both diagnosed from a deep-probe IP survey completed in 1999.

Both target areas, the contact aureole and the strike and dip extensions of the massive sulphide body contain coincidental anomalous MMI arsenic Response Ratios and coincidental anomalous MMI gold Response-Ratios indicating that both of these targets, in terms of probability contain primary gold in place. The anomalous MMI gold zones uniquely and characteristically show that this magmatic-hydrothermal system produced and deposited gold at deposit sites at depth vertically below the respective anomalies.

As shown in **Figure 18** Copper Anomaly 2 which lies above the diagnosed porphyry copper deposit appears to be a separate porphyry related feature only, as this copper anomaly does not extend into the well defined gold zone along the porphyry's contact aureole.

Whereas Copper Anomaly 1 above the hanging wall of diagnosed Massive Sulphide Body H2, also shown in **Figure 18,** in all probability, is indicative of copper mineralization associated with this sulphide body. However as the strong MMI gold anomaly along the sulphide body's southern strike direction and eastern dip direction does not appear to have a copper association there could be some metal zonation occurring in this diagnosed sulphide body with its north end being copper rich and its south end being gold rich.

According to the geoscientists who developed the MMI technique and whom are most knowledgeable about its anomalous implications, the anomalous MMI gold Response Ratios along with supporting MMI silver Response Ratios as are shown in the enclosed Histograms for these elements, are indicative of **primary** gold mineralization in place, at an unknown depth, precisely below each respective gold anomaly.

The results support an earlier diagnoses made from the anomalous gold pathfinder elements, Te, As, Hg, Sb, Se, and Ag found in altered rock along the porphyry's south contact aureole that an epithermal gold mineralizing event, probably of the porphyry related low-sulphidation epithermal type, has occurred vertically below the sample site. As shown in **Figure 4**, "Composite Conventional Arsenic & Copper in Soils Geochemistry", and in **Figure 18**, "Anomalous Gold, Arsenic & Copper Relationship to Diagnosed Porphyry 1 & Diagnosed Massive Sulphide Body H2", the sample site is within the anomalous arsenic in soils zone within the southern contact aureole of diagnosed Porphyry 1.

The extremely anomalous tellurium at 200 ppb, or 200 times the average 1 ppb contained in the Earth's unaltered crust represents an almost certain diagnosis of an epithermal gold magmatic-hydrothermal mineralizing system where the mineral producing magma is the alkalic variety. As summarized by Jensen and Barton, 2000, gold deposits associated with alkaline rocks include high-grade, gold-rich epithermal deposits, porphyry type copper-gold deposits and several other deposit types more speculatively linked to alkaline magmatism.

A similar discovery of anomalous gold pathfinder elements in skarn and altered volcanics was made from two sample sites near what is believed to be the hydrothermal fluid outflow zone above the hanging wall of the underlying Massive Sulphide Body H2. Each sample was anomalous in tellurium at 210 ppb and 90 ppb respectively. The former sample was at the high end of the anomalous threshold in the elements Sb and Se whereas the latter sample was extremely anomalous in As and Se and anomalous in Hg. Without excluding the significance of the gold pathfinder elements, As, Sb, and Se; the tellurium itself is indicative of a probable gold-rich magmatic hydrothermal system at depth.

To add further support of the diagnoses made as a result of the conventional and MMI geochemistry that there is a high probability that we are dealing with two styles of intrusive related epithermal gold deposit; the **anomalous MMI zinc and lead,** shown in the histograms, stand out as proximal zoning features to the MMI gold anomalies which are the characteristic signatures of an intrusive related gold deposit.

As the conventional arsenic in soils anomalies coincide with the MMI arsenic Response Ratio anomalies along Line 4500 which in turn correspond with anomalous MMI gold Response-Ratios, in terms of probability, the conventional arsenic anomalies are indicative of underlying gold mineralization and represent the probable northern continuum of the large MMI gold anomaly identified by this MMI survey shown in **Figures 16 & 18**.

MMI copper Response-Ratios along Lines 4500 and 4400 within the southern contact aureole of the porphyry also appears to be mostly at the background or anomalous threshold level which closely agrees with the conventional copper-in-soils data. Hence the anomalous MMI gold area does not appear to have a significant copper association.

2.2 Recommendations

The following recommendations are made:

1. Geological mapping of the entire property is of high priority.

2. Given the success of the 2007 MMI geochemical survey having significantly expanded the anomalous MMI gold zone to the south where it remains open, extend the MMI survey at least another 500 metres to the south to Line 3600. The MMI survey should also be expanded to the north at least 1,400 metres from Line 4500 to include the area above diagnosed Porphyry 2.

3. As was the same recommendation made as a result of the 1999 deep-probe IP survey, 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 4,000 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 to include any necessary detailing. The results of this survey will provide a composite, integrated, and geophysically meaningful three-dimensional pseudosection of the intrusive complex and contact aureoles of each of the two diagnosed porphyries.

   Given the probability that this intensely altered area could also host 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, may identify these structures. Similarly clay alteration zones which are found proximal to both high and low suphidation mineralization have characteristic low resistivity signatures.

   The above IP coverage also includes diagnosed Porphyry 2, discovered by the 2004 reconnaissance deep-probe IP survey.

   The geological and mineralogical theme of the property is becoming most complex. Drill targets should be based upon the detailed deep-probe IP survey, detailed geological and alteration facies mapping and expanded MMI geochemical survey integral with the geological mapping and IP coverage.

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's 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 Thompson's 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 mineral claims are held by record in the name of J. M. Ashton, of Vancouver, British Columbia.

Mineral Claim	Tenure No.	Area in Hectares	Approximate Cells (C) or Units (U)	Expiry Date
Rebecca 2	369944	375.00	15U	17 July 2009
Cell Tenure	537356	186.01	7.44C	17 July 2010
Cell Tenure	537357	227.28	9.09C	17 July 2010
Cell Tenure	537358	144.62	5.79C	17 July 2013
Cell Tenure	537359	413.33	16.53C	17 July 2010
Cell Tenure	537360	62.00	2.48C	17 July 2010
	Total -	1,408.24		

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 highly anomalous copper in soils. 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. The 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, under the direction of J. M. Ashton, P. Eng. A prominent, distinct, magnetic anomaly north of Line 5200N on the baseline with its major axis striking north-south with a maximum amplitude response of 4,600 gammas (Nanoteslas) above background was discovered by the magnetic survey. 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 extremely 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 extremely anomalous copper anomaly. This conductor is estimated to be about 100 metres thick and dips about –40 degrees to the east conforming with a volcanic-sedimentary succession mapped by Antal at that location.

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, and in June 1993 carried out a 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 and the altered diorite sporadically exposed at surface. This ellipsoidal anomaly, indicative of disseminated sulphides, using the 7.5 millisecond chargeability isopleth covers about 32 hectares (80 acres). Its major axis strikes about 290° azimuth.

In 1994 Kingston Resources Ltd. drilled 5 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 of the chargeability anomaly. The hole cuttings were not logged. Kingston considered the drilling results disappointing, and 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 mineralised intrusives in the drilled area consisting of quartz-diorite, diorite, diorite-porphyry and gabbro in the high chargeability zone and significant skarnification and marblization to the southeast. He also noted pervasive and widespread carbonatization. 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 Reid 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 1993 Kingston shallow-probe chargeability anomaly discovery. 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 or massive-sulphide body at depth below a surface zone of intense hydrothermal alteration. 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, Mark conducted a total field magnetometer survey in the area to the south of the 1993 magnetometer survey between lines 5000 North and 4500 North which simply extends the 1993 coverage 500 metres to the south. A recent review of the 2001 magnetic data showed a sizeable, distinct, magnetic low in the hanging wall of the massive sulphide body. The surface area above the sulphide body is intensely hydrothermally altered.

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 at depth.

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 nearly identical to the Island Copper deposit and several gold rich varieties which have a similar geophysical signature throughout the Pacific-Rim.

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. A similar strong arsenic anomaly was found on surface above the diagnosed massive sulphide body.

Consequently, in 2006, a significant portion of the arsenic in soils area was tested by a Mobile Metal Ion (MMI) Survey comprised 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 of potential economic significance, the MMI survey showed that anomalous gold accompanied the arsenic in a nearly one to one correspondence. The anomalous gold MMI Response Ration 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 mineralising event at depth possibly 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 the southern and eastern contact aureole of diagnosed Porphyry 1.

Accordingly, as all of the gold and arsenic anomalies discovered in the 2006 MMI Survey were found to be open to the south it was considered essential to augment the 2006 Survey by expanding the MMI geochemical survey to the south. This report shows the results of the 2007 MMI Survey 2 which added three more survey lines to the south of the 2006 survey by adding survey lines 4300, 4200 and 4100.

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

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 easily accessible on old logging roads by foot from the main switchback road. Off-road travel requires extra exertion to negotiate the steep slopes.

The area of interest is part of the Cascade Mountains which are separated from the Coast Mountains to the west by the Fraser River. Thompson's River meets Fraser's 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 depth found in the percussion drill hole program of 1993 ranged from 10 feet to 130 feet.

SECTION 7.0 — REGIONAL GEOLOGY

The regional geology is 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. The salient features in the vicinity of the Ashton Project are shown in **Figure 3**.

S.W. Smith, Geologist, in his 1993 Assessment Work Report, describes the property as straddling 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 (calcareous) 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 copper 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.

Therefore as noted by Gale (1994) possibly copper-rich intrusive phases similar to those in the Guichon Batholith may also have formed in some intrusions in the Mount Lytton Complex.

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 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 quartz-diorite to diorite to gabbro.

This similarity was noted by Reid (1995) as a result of his thin section studies of rock chips recovered from drilling part of the property's intrusive complex. 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 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 across the Thompson River to the northwest.

SECTION 8.0 - PROPERTY GEOLOGY & ALTERATION

Surface geology is still to be mapped. 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.

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 east-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.

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

Geological observations reported by Smith, 1993, in his 'Assessment Report', *Geological Mapping and Geological Sampling on the Ashton Property"* 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 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. Read (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 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.

Reid's (1995) petrographical study conclusions included the following:

> *"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 predominent 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 from the large disseminated sulphide body identified from the 1999 deep-probe IP survey.

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 the disseminated sulphide body. The geochemical survey of 1969 also indicates narrow copper-in-soils anomalies striking northerly within this 600 metre interval to the southeast.

Monger (1989) mapped a major normal-fault that strikes 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 north strike of the river. The east side of the fault is down-thrown. Its displacement is unknown.

Speculatively, 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 intrusive complex may be bounded by major fault structures. Faulting has resulted in several north-south parallel shears and structural breaks within the target altered area and were sporadically noted in the limited exposed outcrop yet are most apparent from some of the strong north striking VLF-EM anomalies some which are diagnosed as ionic conductors.

Outcrop prospecting in 2004, west and south of diagnosed Porphyry 1, resulted in the discovery of a large zone of intensely fractured, broken and altered quartz-diorite. Alteration consists of epidote with chlorite prominent, and black vitreous crystals identified as tourmaline. This location appears to be above the large disseminated-sulphide body diagnosed as Porphyry Copper Deposit 1, found by the 1999 IP survey near its projected west extension. The stockwork fractures are filled with the low temperature zeolite mineral laumontite. This occurrence represents a significant westward extension of the known propylitic zone that overlies the disseminated sulphide body to the east and is diagnosed as the fractured margin, or shoulder zone of the proximal intrusive porphyry.

Another interesting structural feature contiguous with the quartz-diorite to the south is a breccia zone cemented with calcite that may be hydrothermal in orgin.

SECTION 9.0 – MMI GEOCHEMICAL SOIL SURVEY

9.1 Introduction

The following six personnel from Geotronics Consulting Inc. under the supervision of D. G. Mark, P. Geo. carried out Mobile Metal Ion (MMI) Geochemical Soil Survey 2 (MMI Geochemical Survey 2) which sampled grid lines 4300 North, 4200 North, and 4100 North. The baseline had been prepared in the 2006 MMI Survey hence facilitated the emplacement of the new survey grid lines.

MMI Geochemical Survey 2 is considered as an extension of the two-line MMI Geochemical Survey conducted in 2006 on Lines 4500 North and 4400 North. It was not necessary for J. M. Ashton, P. Eng. to accompany the field crew to the property for grid orientation purposes as Matt Fraser was fully familiar with the site of the work. Field work was conducted from May 8th to May 11th, 2007, inclusive:

The following personnel conducted the field survey:

Personnel	Job Description
1. J. M. Ashton, P. Eng.	Project Principal (did not attend the Field)
2. D. G. Mark, P. Geo.	Project Manager & Consultant
3. Matt Fraser	Party Chief & Soil Survey Technician
4. Noah Philips	Assistant Party Chief & Soil Survey Technician
5. Kevin Graber	Survey Helper, Grid Layout & Linecutter
6. Robert. Edgell	Survey Helper, Grid Layout & Linecutter
7. Andrew Edgell	Survey Helper, Grid Layout & Linecutter
8. Mark Hsiao	Survey Helper, Grid Layout & Linecutter

9.2 Grid-Line Preparation

9.2.1 Introduction

Part of the 2006 MMI Geochemical Survey work included re-establishing the baseline and survey line coordinates on the baseline in preparation for this survey and extension of new surveys both to the north and the south. Hence line coordinates for the 2007 MMI Survey had already been established for MMI Survey Lines 4300 North, 4200 North and 4100 North which facilitated the establishment of those grid lines during this survey.

9.2.2 2006 MMI Survey; Baseline Refurbishment & Location of Grid Lines

The baseline was surveyed with compass and chain prior to the 2006 MMI Geochemical survey. It is 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.

During the course of the 2006 MMI Survey, the baseline and grid-lines were tied into existing roads, trails, and existing property grid where found. The common legal corner post of the Rebecca 2 and Rebecca 3 mineral claims were located near Line 5000 North and the baseline and its relationship to the 2007 MMI Geochemical Survey 2 is shown in Figure 6.

4.2 km of gridline was prepared simultaneously as the MMI sampling took place. Steep mountainous slopes and bush did reduce working efficiency.

9.3 Background & Survey Objective

It was established in the 2006 MMI Geochemical Survey Report that two significant conventional arsenic in-soils-anomalies shown in **Figure 4**, and their resultant southward extensions as determined by the 2006 MMI survey could be representative of a primary halo effect, or pathfinder, to a blind epithermal gold deposits at depth.

To complement the arsenic soils anomaly, an altered rock sample taken from within Arsenic Anomaly 2 in 2004 was assayed for gold-pathfinder elements and returned extremely anomalous results in **tellurium**, **arsenic**, **antimony**, **mercury**, and **selenium**. These anomalous results are considered diagnostic of an epithermal gold mineralizing system underlying the area.

Arsenic Anomaly 1 in **Figure 4** is also considered very anomalous to extremely anomalous and is contiguous with very strong Copper Anomaly 1. It is also within the surface projection of the hanging wall of the diagnosed massive sulphide body which is located 120 metres below surface. Anomalous gold pathfinder elements Te and As are found within the highly altered surface hanging wall zone of the diagnosed massive sulphide body.

It is worth mentioning that tellurium abundance in mantle and crustal rocks are similar to gold, and according to Jensen and Barton, 2000, **Te** is a fundamental characteristic of alkaline-related hydrothermal systems being related to **alkaline magmatism**. They also cite "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"

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.

The two-line MMI survey conducted in 2006 resulted in the discovery of significant anomalous gold at surface along the southern contact aureole of diagnosed Porphyry 1 and in the hanging wall of diagnosed Massive Sulphide Body H2. All of the gold anomalies detected by the 2006 MMI survey were found to be open to the north and to the south. And because of the close correspondence between anomalous arsenic (conventional and MMI arsenic) the northward extension of anomalous gold has probably been delimited whereas the gold zones are open to the south. Hence it was considered prudent to extend the MMI Survey to the south by another 300 metres (1,000 feet).

9.4 Mobile Metal Ion (MMI) Geochemical Theory & Fundamentals

9.4.1 The Mobile Metal Ion (MMI) Geochemical Theory

Notwithstanding the modern conventional multi-element assaying techniques used to analyze soil for its metal content, use of the Mobile Metal Ion (MMI) survey technique appears to offer significant advances in being able to locate the locus of more deeply buried gold and other mineralization and its associated metal zoning. This is the attestation by the developers of the new technology. It would appear that this new technique when used in concert with other corroborating data could serve as an additional vector for the identification of an epithermal gold deposit which is the target sought in this survey.

Referring to the MMI Technical Bulletins provided by the developers of the MMI process, MMI Technology, a Division of Wamtech Pty. Ltd. of Australia, this unique method of analysis MMI is used to describe ions which have moved in the weathering zone that are only **weakly or loosely attached to surface soil particles**. Also according to the developers of the technique it has been proven using radioactive isotope geochemistry that these Mobile Metal Ions are transported from deeply buried mineral deposits to the surface. Geoscientists from around the world have been studying this phenomenon for many years. Research and case studies over known ore-bodies have shown that mobile metal ions accumulate in surface soils **above** mineralization indicating that the metals are derived from oxidation of the mineralization source.

Generally as the Mobile Metal Ions reach the surface they attach themselves weakly to the soil particles, and these specific ions are the ones measured by the MMI technique to find mineralization at depth. They are at very low concentrations and because the ions have recently arrived at surface they provide a **precise** "signal" of the location of underlying concentrations of minerals that could prove to be economically significant. Their lifetime in the ionic state at surface is very limited because they are subject to degradation and molecular binding or fixation into molecular forms by weathering but as long as the flow of ions is maintained, are detectable. Their limited lifetime precludes their detection by lateral circulation; accordingly they do not move away from the source of mineralization.

Hence *by **only** measuring the mobile metal ions in the surface soils, the MMI geochemistry is attested to produce very sharp anomalous responses **directly over the source of the mobile ions**.* The source would be diagnosed as mineralization at depth which emit metal ions characteristic of that mineralization.

9.4.2 Fundamentals

Testimonials from the originators of the MMI technique and those whom have had practical experience, and from the results of several case studies, attest to the **preciseness** of the technique; e.g., anomalous MMI responses of the responding elements are indicative of the of the presence of that element directly below the sample site location.

To explain the significance of silver responses accompanying gold responses Walter Grondin, Ph.D., (personal communication, 6 September, 2006) consultant to SGS Minerals, Toronto, explained that gold anomalies accompanied by silver are indicative of primary gold mineralization whereas gold anomalies only, in the absence of silver, are representative of remobilisation. Supergene enriched gold deposits provide case study examples of gold anomalies that are not accompanied by silver.

9.5 Survey & Sampling Procedures

9.5.1 Survey Procedure

The 2006 MMI Survey saw the refurbishment of a 1,400 metre section of the old south to north Baseline and included Baseline stations prepared for extending the MMI Survey further to the south. This section was cut out with axes and power saws. Baseline stations were marked every 25 metres with 60 cm wooden pickets with an aluminium tag stapled to each picket with the Baseline coordinates marked thereon.

The starting points for the 2006 MMI Geochemical Survey were at Baseline Stations 4400 North+00, and 4500 North+00 whereas the starting points for this 2007 MMI Geochemical Survey 2 were at Baseline Stations 4300 North+00, 4200 North+00, and 4100 North+00. 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. Survey lines were placed simultaneously as soil sampling was being carried out. Sampling stations occurred at 50 metre intervals along each survey line. At each sampling Station 60 cm wood pickets were driven into the ground with an aluminium tag stapled to it with the Line and Station coordinates marked on the tag.

The following table summarizes the sampling line statistics and the number of samples gathered on each line:

Table 9.5-1 Line & Sample Statistics

Line Number	Stations Surveyed From-To	Line Length (metres)	Number of Samples Dug
4300North	700 East – 700 West	1,400	29
4200North	700 East – 700 West	1,400	27
4100North	700 East – 700 West	1,400	28
	Totals -	**4,200**	84

Global position coordinates were read at identified Sampling Stations by means of a hand-held Garmin GPSMAP 76. The following GPS readings were recorded.

Tables 9.5.2 GPS Readings

Line 4300 North
GPS Zone: 10U

Station	GPS Easting	GPS Northing
700 W	0613467	5566754
500 W	0613638	5566759
300 W	0613825	5566748
150 W	0613923	5566757
B-L	0614034	5566771
250 E	0614270	5566768
500 E	0614458	5566734
700 E	0614677	5566753
950 E	0614881	5566715

Line 4200 North
GPS Zone: 10U

Station	GPS Easting	GPS Northing
400 E	0614079	5566633
200 E	0614213	5566646
B-L	0614043	5566646
150 W	0613923	5566757
B-L	0614034	5566771
250 E	0614270	5566768
500 E	0614458	5566734
700 E	0614677	5566753
950 E	0614881	5566715

Line 4100 North
GPS Zone: 10U

Station	GPS Easting	GPS Northing
B-L	0614046	5566553
150 E	0614171	5566550
300 E	0614301	5566555
400 E	0614397	5566535
550 E	0614522	5566526
700 E	0614672	5566515
1025 E	0614980	5566502
1075 E	0615007	5566488

9.5.3 Sampling Procedures

Soil sampling was carried out by experienced geotechnicians familiar with the sampling specifications set out by the Developers of the Mobile Metal Ion assaying technique.

At each sampling site the field procedure was to first remove the organic material from the surface (A_0 Layer) followed by digging a pit over 25 cm deep using a shovel. Sample material was then scraped from the sides of the pit over a measured depth interval varying between 10 centimetres to 25 centimetres. About 250 grams of sample was collected and placed into a plastic Zip-loc sandwich bag with the sample coordinates marked thereon.

Upon completion of the soil sampling survey, samples were packaged and sent to SGS Minerals at 1885 Leslie Street, Don Mills, Ontario. SGS Minerals is one of the two laboratories in the world licenced to assay samples in accordance the proprietary MMI assay technique. The other laboratory, who developed the MMI method, is ALS-CHEMEX located in Perth, Australia.

9.6 MMI Assaying

Details of the MMI Assaying technique are propriety, and accordingly, full details as to the assaying process cannot be given. However a general description of procedures is provided.

At SGS Minerals in Toronto the assaying procedure begins by weighing a 50 gram sample into a plastic vial fitted with a screw cap. A 50 ml aliquot of MMI-M solution is added to the sample and the vial is closed. Groups of vials are then placed in trays which are placed into a mechanical shaker and shaken for 20 minutes. There are eight MMI leachants currently available of which the MMI-M leachant represents the 42-element extraction.

The MMI-M solution is a neutral mixture of leachant solutions which have been specially developed to selectively release adsorbed ions from the soil substrate without attacking or influencing the natural mineralization of the soil or specific substrates. The leachate solution is applied to the sample for a 20 minute retention time which effectively collects loosely bound ions of any of the 42 elements on the soil substrate and holds the ions in solution. The ion-pregnant solution is allowed to sit overnight and subsequently centrifuged for 10minutes. The solution is then diluted to 20 times by volume which represents an overall dilution factor 200 times. This diluted solution is then transferred to plastic test tubes from which aliquots are taken for analyses on Inductively Coupled Plasma-Mass Spectrograph (ICP-MS) instrumentation.

Results from the ICP-MS instrumentation is processed automatically with the recovered assay data loaded into the Laboratory Information Management System (LIMS). Following quality control analysis the data results are available in software format or hardcopy.

9.7 Data Preparation

Data was prepared for interpretation purposes in accordance with the recommendations made in Wamtech Pty. Ltd's Version 5.04 of the MMI Manual for Mobile Metal Ion Geochemical Soils Surveys.

Two key sets of data are utilized for interpretation purposes. The first is determination of **"Background Value"** followed by determination of **"Response Ratio".**

Background Value is defined as the arithmetical average of the lowest quartile (25%)

population of assays of the element being assessed as to its probable significance.

Once the Background Value is known then each assay for that element is normalized in relationship to the Background Value to arrive at a **"Response Ratio"**

Response Ratio is defined by dividing the assay value of each element by the Background Value to arrive at a mixed number (an integer and a decimal component). Mixed numbers were rounded off to the nearest whole integer. Anomalous character was determined the relative magnitude of **Response Ratios.** An isopleth plot of Response Ratios provides areas of anomalous interest at a glance. Of the 42 or 13 elements assayed and results reported, 9 elements only, in two groups at each sample point along each line, are presented in hard-copy coloured histogram format. As and Au, elements of major interest, were plotted in contour format. The two groups are:
Group 1: **Cu, As, Ag,** and **Au.**
Group 2: **Cu, Ni, Pb, Zn, Mo,** and **Co.**

Affects of Larger Sample Population

The 2006 MMI Survey 1 sample population was 50 samples whereas the 2007 MMI Survey 2, which was a continuation of Survey 1, the sample population was 84 samples. The combined population was 134 samples. Consequently, for each population of elements the **Background Value** was recalculated. The Background Value is defined as the arithmetical average of the lowest quartile (25%) population of assays of the element being assessed.

For MMI gold results, the larger sample population resulted in a lower background value which had the effect of increasing the "Response Ratio" when the actual MMI assay was divided by its background value to arrive at the Response Ratio. Consequently the gold Response Ratios of the 2006 MMI survey previously shown in Histogram and Isopleth plot have all increased in value. Whereas for MMI arsenic results, the larger sample population did not affect the background values.

MMI arsenic was again plotted to show the extent of newly discovered anomalous arsenic contiguous with the conventional arsenic to the north. The conventional arsenic anomalies have only been re-surveyed on one line, Line 4500, and the correspondence between the conventional and MMI arsenic was found to be quite striking.

Whereas conventional geochemical assaying of soils will include metal content accumulated in the soils from both complex mechanical and chemical concentration from beyond the sample site, the MMI method measures only the upward dispersion of metal ions directly from the subcropping primary source of the metal.

According to Boyle, 1979, all investigators agree that As and Sb, **particularly As**, are the best universal indicators for gold. Current geoscience continues to attest to this fact.

MMI arsenic and MMI gold were plotted in isopleth format over the integral 2006 and 2007 MMI survey areas. Response Ratio isopleth boundaries were plotted based upon the rule of geometric progression with the isopleths separating the various anomalous categories.

9.8 MMI Survey Results

The following Background values are shown for the Ashton Project and a project near Afton Mines. The Background values were determined by arithmetically averaging the lower quartile (25%) of the assay values for each of the respective elements. They are a comparison of background values of the Ashton Project with the Afton camp and are provided because the information may have future statistical use. The Afton camp Background Values were measured in highly prospective altered ground contiguous to the former Afton Mines mineral property to the southwest.

Table 9.8-1; Background Assays of Selected MMI Elements

Item	Element	Ashton Project Average Assay Value of Lower Quartile (Background) of Sample Population [1]2006 Survey (ppb)	Ashton Project Average Assay Value of Lower Quartile (Background) of Sample Population [2]2007 Survey (ppb)	*Afton Area Average Assay Value of Lower Quartile of Sample Population or Background Value (ppb)
1.	Cu	1,374	680	575
2.	Au	0.108	0.05	0.096
3.	Ag	16	10.3	6.8
4.	[3]As	5	5	5
5.	Zn	75.39	83	32
6.	Mo	2.5	2.5	2.5
7.	Pb	25.39	10.3	5
8.	Co	31.31	16.6	18
9.	Ni	11.31	16.7	174

* Generally rounded off. Personal communication, D. G. Mark, P. Geo.

1- Population = 50 samples

2- Population = 134 samples which includes the 2006 MMI survey.

3- In the Afton area almost all of the arsenic sample population is at the Background level;
whereas at the Ashton Project, arsenic values are mostly in the three anomalous categories ranging from anomalous, to very anomalous, to extremely anomalous.

Generally the Ashton Project background values in Cu, Ag, Zn and Pb, are higher than the Afton area. Afton nickel backgrounds are very high compared with the Ashton Project.

9.9 Defining Anomalous Classes & Plotting Results

Defining anomalous character is a relative issue. A high **Response Ratio** under one set of geological and hydrothermal alteration conditions can be anomalous and warrants detailed follow-up as to the cause of the anomaly just as a low **Response Ratio** under another set of geological and alteration conditions can be anomalous and warrants detailed follow-up as to the cause of the anomaly. However where an anomaly coincides with another anomaly, or several anomalies including but not limited to well defined geophysical, geochemical, geological, and alteration features, the MMI method essentially becomes another supporting vector as to the likelihood or probability that the target is highly prospective for the commodity sought.

The following, with minor modifications to facilitate contouring, is generally in accordance with the Wamtech Pty. Ltd's (Wamtech) 2004, Version 5.04 MMI Manual.

After determining the Response Ratio of each target element a sample with a Response-Ratio of 2.5 units or less was arbitrarily chosen as background. Whereas the MMI Manual chooses 1.0 units as background.

Samples within the Response Ratio range from 2.5 units to 5.0 units are considered to be within the anomalous threshold; but this selection was made only for contouring purposes. Samples with response ratios greater than 5 units could be considered significant depending upon the regolith/landform characteristics of the area and the sample spacing used for the survey. Wamtech cautions: *that due to the greater contrast inherent in the MMI technique Response Ratios in general need to be greater than 2 to 5 times background before being considered "anomalous"*. If composite sampling has been employed **then Response Ratios greater than 5.0 may be highly significant**. Obviously, this may change depending upon the overall distribution and magnitude of Response Ratios in an area. For example some areas may have anomalous Au values at a Response Ratio of 10 units, whereas for another area the anomalous Au values may be those samples with a Response Ratio greater than 20.

The above is not too different to the ideas of Robert Boyle, 1979, where he cited average specific Background values in soils, weathered residiuum and glacial materials as Au, (5ppb); Ag, (0.1 to 0.5 ppm); Cu, (20ppm); As, (7ppm); plus a host of other elements. He stated that values above 10 ppb Au and 0.7 ppm Ag are generally anomalous and should prompt the prospector to investigate the cause. Anomalous values of the indicator elements cannot be stated with any assurance since the dispersion and enrichments characteristics of the various elements vary so widely. However, **consistent values of 2 or 3 times the**

average abundance of the figures given above should receive attention.

Therefore, as a first step to evaluate the results of the MMI survey, for precious metals potential, the two elements of interest, Au and As, were chosen, from the 9 separate element determinations made.

Isopleth plotting intervals to define anomalous levels were chosen using the method of **geometrical progression** which best fits Boyle's idea and the ideas given in the MMI Manual. Geometrical progression is a sequence of numbers in which the ratio of a term to its predecessor is always the same. In this case a succeeding group of numbers which defines an anomalous interval is always nominally twice the preceding interval according to the following table. All anomalous intervals were plotted on the basis of this table.

Table 9.9-1; Table of MMI Anomalous Classes & Frequencies for Au & As

Item	"Response Ratio" Class Boundaries	Anomalous Class	Frequency of Gold Assays	Frequency of Arsenic Assays
1.	0 – 2.5	Background	43	68
2.	2.6 – 5.0	Anomalous Threshold	14	19
3.	5.1 – 10.0	Anomalous	23	31
4.	10.1 – 20.0	Very Anomalous	19	7
5.	>20.1	Extremely Anomalous	35	9
		TOTALS -	**134**	**134**

As shown on the data sheets, all Response Ratios are reported to the nearest second decimal place. For plotting purposes Response Ratios were rounded off to the nearest whole integer.

Included in Table 9.9-1 are the frequencies of element populations for **Au** and **As** which are the pathfinder elements of primary interest for epithermal gold deposits. The purpose of the table is to provide, at a glance, the frequency distribution of the two pathfinder elements. Because Backgrounds have been raised from a 1.0 Response Ratio unit to 2.5 Response Ratio unit increases the anomalous threshold area and reduces the size of the anomalies. Nevertheless, the MMI gold anomalies are still large.

The following table was constructed for the purpose of defining the anomalous class boundaries for arsenic-in-soils assays determined from **conventional** assaying procedures. The conventional arsenic anomalies are part of the isopleth anomalous plots found in **Figure 4.**

Table 9.9-2; Conventional Assay, Arsenic in Soils, Anomalous Classes

Item	Class Boundaries Arsenic-in-Soils (ppm)	Anomalous Class
1.	0 – 7.0	[1] Background
2.	7.1 - 20	Anomalous Threshold
3.	20.1 - 40.0	Anomalous
4.	40.1 – 80.0	Very Anomalous
5.	>80.1	Extremely Anomalous

1 – According to Boyle, 1976

Figures 6 to 10 inclusive, are histogram plots of calculated Response Ratios for **Cu**, **As**, **Ag** and **Au** for all MMI Survey Lines: Lines 4500 and 4400 North from the 2006 Survey; and Lines 4300, 4200 and 4100 North from this 2007 Survey.

Figures 11 to 15 inclusive are histogram plots of calculated Response Ratios for **Cu**, **Ni**, **Pb**, **Zn**, **Mo**, and **Co** for all MMI Survey Lines: Lines 4500 and 4400 North from the 2006 Survey; and Lines 4300, 4200 and 4100 North from this 2007 Survey.

The histogram plots provide easily recognizable patterns of the relative magnitudes of Response Ratios for families of diagnostic elements and provide at a glance the areas of interest.

Figure 6 MMI Soil Sampling, Line 4500 North
Response Ratio Histogram for Au, As, Ag, & Cu

Figure 7 MMI Soil Sampling, Line 4400 North
Response Ratio Histogram for Au, As, Ag, & Cu

Figure 8 MMI Soil Sampling, Line 4300 North
Response Ratio Histogram for Au, As, Ag, & Cu

Figure 9 MMI Soil Sampling, Line 4200 North
Response Ratio Histogram for Au, As, Ag, & Cu

Figure 10 MMI Soil Sampling, Line 4100 North
Response Ratio Histogram for Au, As, Ag, & Cu

Figure 11 MMI Soil Sampling, Line 4500 North
Response Ratio Histogram for Cu, Ni, Pb, Zn, Mo, & Co

Figure 12 MMI Soil Sampling, Line 4400 North
Response Ratio Histogram for Cu, Ni, Pb, Zn, Mo, & Co

Figure 13 MMI Soil Sampling, Line 4300 North
Response Ratio Histogram for Cu, Ni, Pb, Zn, Mo, & Co

Figure 14 MMI Soil Sampling, Line 4200 North
Response Ratio Histogram for Cu, Ni, Pb, Zn, Mo, & Co

Figure 15 MMI Soil Sampling, Line 4100 North
Response Ratio Histogram for Cu, Ni, Pb, Zn, Mo, & Co

Figures 16 and 17 are isopleth plots of single element Response Ratios to demonstrate the extent and magnitude of the Au and As anomalous areas. The same figure is submitted in both colour and black and white.

Figure 16 Gold Assay Plan, MMI Geochemical Survey 2

Figure 17 Arsenic Assay Plan, MMI Geochemical Survey 2

Figure 18, Anomalous Gold, Arsenic, & Copper Relationship to Diagnosed Porphyry 1 & Diagnosed Massive Sulphide Body H2.

9.10 Discussion of Results

9.10.1 General

MMI **gold** and **arsenic** isopleth contours shown in **Figures 16 & 17** were plotted to show their anomalous extent relative to the southern contact aureole of Porphyry 1 and the underlying Massive Sulphide Body H2. **Copper** was not plotted because on all of the southernmost lines, Lines 4300 North, 4200 North and 4100 North, copper is below the anomalous threshold. Shown in Figure 18 there is little if any anomalous copper south of the large copper anomaly which overlies Porphyry 1 and the north end of Massive Sulphide Body H2.

The MMI gold and arsenic anomalies appear as distinct anomalies and do not appear to be related to the strong copper-in-soils anomaly that overlies diagnosed Porphyry Copper Deposit 1; however very strong MMI gold and arsenic anomalies appear to overly the southern strike extension of the diagnosed Massive Sulphide Body H2.

General consensus appears to support 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 stated in the MMI technical literature: *"Because the ions have recently arrived to the surface they provide a precise 'signal' on where ore-bodies are."* This sentence which uses "ore" instead of mineralization would better serve industry better if it were re-written to say: ***"Because the ions have recently arrived to the surface they provide a precise 'signal' on where mineralization in place will be found at depth".***

By measuring only mobile metal ions in the surface soils, MMI geochemistry will produce very sharp anomalous responses ***directly over the source of mobile metal ions.*** *The source of the mobile ions is mineralization at depth which emit metal ions of the assayed species.*

9.10.2 MMI Silver Response Ratios

As shown in the histograms, MMI silver Response-Ratios accompany **all** gold Response-Ratios. Accordingly, the underlying gold mineralization is diagnosed as primary.

9.10.3 MMI Gold & Arsenic Anomalies

MMI gold and arsenic anomalies from the 2006 and 2007 MMI Surveys are plotted integrally in **Figures 16** and **17. Figure 18** shows the relationship of conventional copper anomalies, MMI gold anomalies and conventional and MMI arsenic anomalies with underlying Porphyry 1 and the hanging wall zone of Massive Sulphide Body H2.

For Porphyry 1 the combined arsenic (conventional and MMI surveys) and MMI gold appear as a zoning feature along the southern contact zone of the porphyry yet whether it is a zoning feature to the porphyry at this time is not known. The gold zone may not be genetically related to the porphyry but could be a separate distinct feature related to a separate magmatic-hydrothermal mineralising system. The anomalous epithermal pathfinder elements discovered here support a separate epithermal event.

However the hanging wall of Sulphide Body H2 nominally from Station 300 East to between Station 400 East and 500 East from Line 4600 to Line 5000 contains anomalous copper. This area has not yet been surveyed for MMI gold but conventional Arsenic Anomaly 1 shown in **Figure 18** could have a gold association in which case Sulphide Body H2 may contain gold along with copper at its north end.

The anomalous MMI gold and arsenic along the southern strike extension and eastern dip extension of Sulphide Body H2 south of Line 4600, shown in Figure 18, is not anomalous in copper (either conventional or MMI copper) which indicates that if this zone is a continuum of Sulphide Body H2 metal zoning is apparent in this body with its north end being copper rich and south end being gold rich.

9.10.4 Massive Sulphide Body H2 Target

a) General

The diagnosed massive sulphide body discovered by the 1999 deep-probe IP survey, shown in plan view in **Figure 18**, has a thickness of 100 metres. It dips about minus 40° East and is believed to conform to a volcanic-sedimentary monoclinic succession along the east contact zone of Porphyry 1. Its dip length is more than 400 metres. Copper Anomaly 1 that has developed vertically above the hanging wall apex of this diagnosed massive-suphide body would appear to represent its surface geochemical expression. Accordingly, this sulphide body could be relatively copper rich at its north end proximal to Porphyry 1.

The sulphide body's total strike extent is presently unknown however a detailed deep-probe IP survey planned for the entire target area should provide detailed definition of this body.

However Copper Anomaly 1 between Lines 4500 North and 5000 North is at least 500 metres in strike length and appears open to the north. is now complemented by a coincidental MMI gold and arsenic anomaly from this 2007 survey that extends south to at least Line 4100 North which indicates its strike length could be 800 metres or more. The southern 500 metres of this zone is anomalous in gold and does not appear to contain significant copper; consequently this sulphide body could be copper rich at its north end and gold rich at its south end.

b) Gold Pathfinders Above Diagnosed Massive Sulphide Body H2

Conventional Arsenic Anomaly 1, located above the hanging wall of Sulphide Body H2 has an average content of **96 ppm As** which is **anomalous.** In association with the anomalous MMI gold it is diagnosed as a pathfinder signature to an **epithermal** gold mineralizing event at depth and is believed to be associated with Sulphide Body H2 which could therefore be a high-sulphidation epithermal copper-gold deposit. Alternatively it could be an epithermal precious metals pathfinder signature to a deeper magmatic-hydrothermal gold mineralizing system entirely.

The arsenic anomaly is about 110 metres in width and length is about 450 metres. Knowledge of this anomaly was one of the reasons for implementation of the 2006 MMI Geochemical Survey and this complementary follow up 2007 MMI Geochemical Survey.

Rock sampling from isolated skarn intercalated with the altered volcanics and sediments in the vicinity of drill hole RCA93-5, west of Arsenic Anomaly 1 shown in **Figure 4**, above the hanging wall of Sulphide Body H2 returned assays that were anomalous in copper (>10,000 ppm) and **anomalous** in the gold-pathfinder element **Te (210 ppb).** This data provided the first substantive indication that the underlying sulphide body in terms of probabilities contains gold along with copper mineralization. Ettlinger et al, 1989, noted *"The presence of bismuth and/or* ***tellurium*** *in a skarn is regarded as indicative of high precious metals potential".*

A second rock sample taken from intensely altered volcanics in the surface alteration zone above the hanging wall of Sulphide Body H2 was found to be anomalous in **Te (90 ppb), As (77.9ppm), Se (2.10 ppm)** and **Cu (1,759 ppm)** and anomalous in Hg (590 ppb). The presence of the anomalous Te pathfinder indicates high precious metals potential at depth and strengthens the likelihood of an underlying epithermal mineralizing event.

c) MMI Gold Anomaly, Strike Extension of Massive Sulphide Body H2

Anomalous MMI gold along the southern strike extension of Massive Sulphide Body H2 covers an area about 500 metres (1,600 feet) wide, east to west, by at least 500 metres (1,600 feet) north to south and is open both to the north and the south.

Although a fundamental empirical approach the extremely anomalous MMI gold measured in the 2006 MMI Survey on Lines 4500 and 4400 along the southern strike extension of Massive Sulphide Body H2, and proximal to its discovery, averaged 27 MMI Response-Ratio units; whereas the extremely anomalous MMI gold measured in the 2007 MMI Survey on the three (3) southernmost lines, Lines 4300, 4200, and 4100, the most distal location along its southern strike direction averaged 93 gold Response-Ratio units which could indicate a threefold increase in gold content in this sulphide body at its southern end which supports the metal zoning idea in this body with its northern end being copper rich and its southern end being gold rich.

The anomalous MMI gold zone indicates that this magmatic-hydrothermal system produced and deposited gold, and the MMI gold anomalies are indicative of gold deposit sites at depth vertically below the respective anomalies according to the technical experts who developed the MMI assaying detection technique.

d) Associated MMI Arsenic Anomalies

An inspection of MMI arsenic anomalies shows arsenic as possibly occuping central zones with anomalous gold zoned around the arsenic and anomalous gold coincidently located below the arsenic. It is possible that these central zones could also represent hydrothermal fluid upflow and or outflow zones from the gold bearing magmatic-hydrothermal system that pervaded this area.

9.10.5 Anomalous MMI Gold Along Southern Contact Aureole of Porphyry 1

a) General

The contact aureole beyond the southern contact of Porphyry 1 could be the site of a Porphyry-Related Low Sulphidation Gold System. Structurally this known fractured and broken shoulder zone of the underlying porphyry could be an ideal host as a gold deposit site.

Corbett and Leach summarized it aptly in their description, abbreviated by the writer, of "Porphyry-Related Low-Sulphidation Systems":

"During the upsurge of gold exploration in the 1980's it became difficult to place many southwest Pacific gold deposits types in the existing classification 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 or mesothermal depths. Telescoping is common, and overprinting of alteration zonations may locally obscure the boundaries."

Their opening remarks included the following:

"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, fractured domes or dyke margins. This focusing of hydrothermal fluids provides an ideal geological and hydrogeological environment for the formation of porphyry-related low sulphidation epithermal gold systems." Fractured shoulder zones of porphyry intrusives qualify as favourable gold deposit sites. Accordingly this theme may now be apparent at the Ashton Project.

b) Gold Pathfinders Above South Contact Aureole of Porphyry 1

Conventional Arsenic Anomaly 2 located above the south contact aureole of Porphyry 1 has an average content of **78 ppm As** which is **anomalous.** In association with anomalous MMI gold it is diagnosed as a gold pathfinder signature to an epithermal mineralising event within the contact aureole at depth.

This anomaly is about 400 metres wide along Line 4500 North, extends about 300 metres to the north, at its maximum, and is open to the south. The 2007 MMI arsenic in soils results shows that it extends to Line 4200 hence it probably has a north south strike of about 600 metres.

A rock sample taken from intensely altered diorite in Arsenic Anomaly 2 in the contact aureole of Porphyry 1 was found to be anomalous in **Te (200 ppb), As (218 ppm), Se (16.9 ppm), Hg (10,658 ppb), Sb (7.13 ppm),** and **Ag (3.9 ppm).** The presence of the extremely anomalous Te pathfinder indicates high precious metals potential at depth. These anomalous pathfinders indicate that the upper part of an epithermal system is exposed.

c) MMI Gold Anomaly

Anomalous MMI gold along the southern contact aureole of Porphyry 1 covers an area about 850 metres (2,800 feet) wide, east to west, by at least 500 metres north to south and is open both to the north and the south.

Although a fundamental empirical approach the extremely anomalous MMI gold measured in the 2006 MMI Survey on Lines 4500 and 4400 close to the contact of Porphyry 1 averaged 46 MMI Response-Ratio units; whereas the extremely anomalous MMI gold measured in the 2007 MMI Survey on the three (3) southernmost lines, Lines 4300, 4200, and 4100 distal from the contact zone of Porphyry 1 averaged 38 gold Response-Ratio units which may indicate fairly equal distribution of gold in the area underlying the contact aureole of Porphyry 1.

The anomalous MMI gold zone indicates that this magmatic-hydrothermal system produced and deposited gold, and the MMI gold anomalies are indicative of gold deposit sites at depth vertically below the respective anomalies according to the technical experts who developed the MMI assaying detection technique.

d) Associated MMI Arsenic Anomalies

An inspection of MMI arsenic anomalies shows arsenic as possibly occupying the central zone with anomalous gold zoned around the arsenic and occupying sites below the arsenic.

It is possible that these central zones represent hydrothermal fluid upflow and or outflow zones from the gold bearing magmatic-hydrothermal system that pervaded this area.

As all the strong gold and arsenic anomalies adjacent to the diagnosed porphyry appear to have formed along the shoulder zone, the gold mineralization could be representative of a porphyry related low sulphidation epithermal gold system.

Cathles, 1978, showed examples of hydrothermal-fluid convection within the higher permeability fracture zone at an intrusive's edge. The fracture zone extends upward from the side of the intrusive into the shoulder zone. The width of this higher permeability fracture zone appears to be a function of the size of the intrusive heat source.

According to Corbett and Leach, 1996, major structures localize hydrothermal systems and by movement create dilational ore-hosting environments. It is common for magmatic-hydrothermal fluids and later magmatic-meteoric hydrothermal fluids to exploit fracture permeability in the shoulder zones of porphyry intrusives.

9.10.6 Target MMI Gold & Arsenic Anomalies

For the purposes of this MMI survey **gold**, and **arsenic** were for the most part, yet not exclusively, the target elements of interest because they forecast the probability of two gold mineralizing systems in association with what appears to be a complex magmatic-hydrothermal mineralizing system that underlies the area. The one system is found along the south contact aureole of Porphyry 1 and the other system appears associated with diagnosed Massive Sulphide Body H2. The presence of gold pathfinder elements above the two systems suggest epithermal gold mineralizing events.

The following isopleth maps were plotted to show the relationship of anomalous gold, arsenic and copper with the two underlying targets; Porphyry Copper 1 and Massive Sulphide Body H2.

Figure 16 MMI Soil Sampl ing, **Au** in Soils Geochemistry

Figure 17 MMI Soil Sampling, **As** in Soils Geochemistry

Figure 18, Anomalous Gold, Arsenic & Copper Relationship to Diagnosed Porphyry 1 & Diagnosed Massive Sulphide Body H2. This figure provides a summary of the spatial relationship of anomalies and previously diagnosed target mineral resources.

9.10.7 MMI Gold & Arsenic Correspondence

By inspection of the gold and arsenic isopleth plots there appears to be a positive correlation between anomalous MMI gold and anomalous MMI arsenic. To determine the statistical correlation coefficient, or the actual detailed linear relationship between the two variables it is necessary to mathematically calculate the actual correlation coefficient. Accordingly, an in-house study will be made to determine this coefficient.

Notwithstanding; at this locality, anomalous arsenic in terms of probability is also indicative of anomalous gold, and accordingly the arsenic may be considered as a gold pathfinder.

9.10.8 Other Potentially Significant Elements within the MMI Assay Data Set

The anomalous base metals, other than copper; e.g. nickel, lead, zinc, molybdenum, and cobalt, but not reviewed in detail in this report, could be of use for a more detailed study as to their potential significance; particularly metal zoning relationships of zinc and lead with gold. Accordingly, an in-house study is planned to evaluate this relationship.

Notwithstanding; by inspection of the histograms, both anomalous MMI zinc and lead stand out as proximal zoning features to the MMI gold anomalies. This combination of elements and spatial relationship is often the geochemical signature of an intrusive related gold deposit.

9.10.9 Summary

Anomalous MMI gold Response Ratio results discovered on Lines 4500N and 4400N in the two line 2006 multi-element MMI survey were considered significant, because in all probability, they are indicative of primary gold mineralization in place at an unknown depth precisely below each respective gold anomaly. The size of the gold anomalies could be indicative of the potential for large gold bearing structures.

The anomalous MMI gold appears to be associated with two distinct lithologies. On the western side of the survey area between Stations 500 West and 250 East to 300 East the 1999 deep-probe IP data shows an intrusive complex has in all likelihood been intruded by an altered and mineralised porphyry. Survey Lines 4500N and 4400N in this area are located along the south contact aureole, or shoulder zone, of the porphyry.

Whereas the eastern side of the survey area, between Stations 300E and 700E, consists of a hydrothermally altered volcanic-sedimentary succession, along the eastern contact of the porphyry, which strikes northerly and dips about 40 degrees east. It is within this succession at 120 metres below surface that a large conductive body, diagnosed as Massive Sulphide Body H2, conformable to the lithology, was detected by the 1999 deep-probe IP survey. Its top is close to Line 4800N between Stations 300E and 400E. It is within this zone of alteration along the southern strike direction of the massive sulphide body that the second significant anomalous MMI gold zone was discovered.

The 2006 MMI gold anomalies of both zones are open to the north and to the south, and both strike directions contain highly prospective hydrothermally altered lithology.

Consequently, the area to the south of the 2006 survey was chosen for the 2007 MMI survey for several reasons including that this area has never been subject to a geochemical survey; the other reasons include:

1. The western gold zone, or the contact aureole of Porphyry 1, prospective in its own right, is open to the south, is heavily altered, fractured, broken, and cemented with carbonate minerals.

2. The eastern gold zone, the southern strike extension and eastward dip extension of the diagnosed Massive Sulphide Body H2 is forecast to project into this area from interpretation of geophysical data, surface alteration, and the 2006 MMI geochemical survey which shows anomalous MMI gold and arsenic striking in this direction and open to the south.

The 2007 MMI Geochemical Survey 2 consisted of three additional survey lines, Lines 4300N, 4200N, and 4100N to the south of the 2006 survey. Anomalous MMI gold anomalies were found on each of the three lines within the contact aureole of Porphyry 1 and on the southern strike extension and eastward dip extension of diagnosed Massive Sulphide Body H2. The gold anomalies are open to the south between Stations 200W and 700E as shown in **Figures 16 & 18.**

Taken as a whole, e.g., if the gold zone represents one system only, and using the empirical approach, the MMI gold Response-Ratios were found to gain in strength and size from the 2006 survey area into the 2007 survey area towards the southeast. On this basis the two northernmost lines averaged **34 gold Response-Ratio units** from 19 extremely anomalous sample sites; whereas the three southernmost lines skewed to the southeast averaged **65 gold Response-Ratio units** from 26 extremely anomalous sample sites. By inspection of Figure 16, it can be seen that both amplitudes and size of the anomalies increase significantly to the southeast of the survey area.

Again using an empirical approach, but with the diagnosis that the eastern MMI gold zone is uniquely part of Massive Sulphide Body H2, the extremely anomalous MMI gold measured in the 2006 MMI Survey on Lines 4500N and 4400N along the southern strike extension of Massive Sulphide Body H2, yet proximal to its discovery at depth, averaged 27 gold Response-Ratio units; whereas the extremely anomalous MMI gold measured in the 2007 MMI Survey on the three (3) southernmost lines, Lines 4300N, 4200N, and 4100N, the most distal location along its southern strike direction averaged 93 gold Response-Ratio units which could indicate a threefold increase in gold content in this sulphide body at its southern end which supports the metal zoning idea in this body with its northern end being copper rich and its southern end being gold rich.

In considering the southern contact aureole of Porphyry 1 as a separate gold system empirically the extremely anomalous MMI gold measured in the 2006 MMI Survey on Lines 4500 and 4400 close to the porphyry's contact averaged 42 gold Response-Ratio units; whereas the extremely anomalous gold Response Ratios measured in the 2007 MMI Survey on the three (3) southernmost lines, Lines 4300N, 4200N, and 4100N distal from the contact zone averaged 38 gold Response-Ratio units which may indicate fairly equal distribution of gold underlying the contact aureole area.

The MMI survey may have discovered a significant gold bearing system proximal to the southern contact aureole of Porphyry Copper Deposit 1; and it also appears to have discovered a gold association with the southern strike extension and eastern dip extension of Massive Sulphide Body H2.

Peripheral gold mineralization around existing porphyry copper systems is a common occurrence in composite mineral systems. Gold, being a later event is more restricted in its emplacement and most often channelled into low pressure zones. In a porphyry environment, shoulder zone fracture permeability is considered to be a favourable deposit site for a porphyry-related low-sulphidation epithermal gold deposit.

The "gold zone" in the contact aureole has a large anomalous arsenic geochemical soil anomaly with coincident anomalous gold pathfinder elements; tellurium, arsenic, mercury, antimony, and selenium found in rock outcrop. These are well recognized pathfinder elements for epithermal and magmatic gold systems and indicate the exposed upper part of an epithermal mineralizing system. The tellurium supports the diagnosis of a gold producing alkalic magma.

Gold pathfinder elements are also found within the alteration zone in altered volcanics and in skarn in what is believed to be a hydrothermal fluid outflow zone above the hanging wall of diagnosed Massive Sulphide Body H2. The conventional arsenic in soils anomaly here, shown in **Figure 4,** proximal to this zone is itself a gold pathfinder when associated with gold geochemistry. Gold pathfinder elements from one rock sample site above the sulphide body's hanging wall contained anomalous arsenic, selenium, mercury and tellurium whereas a second sample site contained anomalous tellurium only. The presence of the anomalous tellurium indicates high precious metals potential at depth and strengthens the likelihood of an underlying epithermal gold mineralising event.

Notwithstanding, according to Mutschler and Mooney, 1993, local rock-geochemical anomalies in gold in the ppb level is the only universal geochemical guide to gold ore. Hence the extremely anomalous MMI gold anomalies with accompanying silver are indirect indicators of gold deposit sites at depth vertically and directly below the respective anomalies which is the consensus of the technical experts who developed the MMI assaying detection technique.

SGS Minerals of Toronto who developed the MMI technology provide the following interpretation of the Mobile Metal Ion mechanism: *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.*

To add further support of the diagnoses made as a result of the conventional and MMI geochemistry that there is a high probability that we are dealing with two styles of intrusive related epithermal gold deposit; the **anomalous MMI zinc and lead,** shown in the histograms, stand out as proximal zoning features to the MMI gold anomalies which are the characteristic signatures of an intrusive related gold deposit.

9.11 British Columbia Geoscience Paper 2007-7

According to Stephen Cook and Colin Dunn in their "Executive Summary" of British Columbia Geoscience Paper 2007-7, "A Comparative Assessment of Soil Geochemical Methods for Detecting Buried Mineral Deposits", the Mobile Metal Ion (MMI) assay method was shown to be successful in detecting concealed near surface epithermal style mineralization.

The geochemical data obtained from the study area also indicated that of all the methods evaluated, Enzyme Leach (EL) and MMI provide superior levels of base metals **contrast** over known gold mineralization and MMI showed **positive responses** for gold as well as several relevant base metals such as Zn, Pb, and Cd in near surface soils over the concealed gold veins.

Without limiting the generality of the foregoing, the MMI method also appears to offer several other positive diagnostic features that are mentioned in Geoscience Paper 2007-7 that may aid in the discovery of concealed gold deposits and other mineral deposits; yet which are beyond the scope of this report. The essential issue here is that the MMI method can successfully locate concealed gold mineralization below overburden cover which is another independent and credible testimonial to its effectiveness as a geochemical exploration tool.

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

Not to be excluded, although in the Stikinia Terrance, is the Galore Creek gold rich alkalic porphyry copper deposit.

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 an epithermal gold mineralising system at depth associated with an alkalic magmatic hydrothermal system.

Notwithstanding the porphyry potential, the newly discovered and apparently distinct MMI gold zone indicats the potential for the discovery of 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. The Ashton Project site is contiguous with the large Mount Lytton Batholithic Complex, a regional feature, to the west where diagnosed Porphyry's 1 and 2 have intruded along the margins of this regional feature.

The extremely anomalous gold results of the2007 Mobile Metal Ion (MMI) Geochemical Survey 2 shows in terms of probabilities there is significant gold in the system at depth over a large area in the shoulder zone of diagnosed Porphyry Copper Deposit 1 and that this deposit site appears to be favourable for the discovery of an alkalic porphyry-related low-sulphidation epithermal gold deposit.

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

To this date the nature of the "ore bringer" Porphyry 1 at the Ashton Project is not known because this target remains to be drilled as do the two large epithermal gold targets.

However an alkalic porphyry-related low-sulphidation epithermal gold deposit is more commonly found in the southwest Pacific and includes such notable examples; Corbett and Leach, 1996; as: Porgera, Ladolam, Kidston , Cadia, Batu Hijau, etc. in their many unique varieties of occurrence which includes: porphyry copper-gold systems, quartz-sulphide gold ± copper vein systems, carbonate-base metal gold systems, and epithermal quartz gold-silver systems.

Regionally however, both the Afton copper-gold deposit and the Galore Creek copper-gold are good examples of significant new gold-rich porphyry copper wealth found in similar environments.

The Afton Mine

The Afton Mine, discovered in the early 1970's is located about 60 miles east-northeast from the Ashton Project near the City of Kamloops, British Columbia. The original discovery pit was mined out. Afton is a gold rich alkalic porphyry deposit hosted by diorites. What is significant is that Afton has recently received an aggressive exploration program that resulted in the discovery of a significant 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. Today's in the ground value would be more than US$2.0 billion; 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. Today's in-the-ground value of the combined inventory would be close to US$9.0 billion.

Galore Creek

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. Today's in-the-ground value of this mineral inventory is estimated at more than US$23 billion.

Production is planned to begin in 2009 with a 65,000 tonne per day processing facility with annual production forecast at 432 million pounds of copper and 400,000 ounces gold.

SECTION 11.0 — COST STATEMENT

11.1 Summary

1.	Project Planning & Field Drawings	540.00
2.	Field Personnel	7,560.00
3.	Assaying	3,015.00
4.	Data Preparation	700.00
5.	Report & Drawing Preparation	6,004.00
	TOTAL $	**17,819.00**

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J. M. ASHTON

11.2 Project Planning & Field Drawings

1.	Project Scope & Discussions with D. G. Mark, P. Geo. of Geotronics Consulting Inc. 12 May; J. M. Ashton , P. Eng. 5 hours @ $60	300.00
2.	Drawings, E.B. Catapia 4 hours @ $60 -	240.00
	Sub-Total	**540.00**

11.3 Field Personnel

2.	MMI Geochemical Survey & Grid Emplacement Crew Mobilization/Demobilization to/from Property; 8th & 11th May, 2007 M. Fraser; N. Philips; K. Graber; R. Edgell; A. Edgell; M. Hsaio 6 Hours @ $210.00 per hour - (includes meals)	1,260.00
3.	MMI Geochemical Survey & Grid Emplacement Crew All in cost includes room & board, MMI Survey, GPS orientation, 4x4 vehicle, Survey supplies, & wages; May 8th to 10th, inclusive, 2007 M. Fraser; N. Philips; K. Graber; R. Edgell; A. Edgell, M. Hsaio 30 Hours @ $210.00 per hour	6,300.00
	Sub-Total	**7,560.00**

11.3 Assaying

Shipping of Samples -	75.00
Multi-element MMI assaying of soil samples	
84 samples @ $35.00 per sample -	2,940.00
Sub-Total	**3,015.00**

11.4 Data Preparation

D.G. Mark, P. Geo.	
10 hours @ $70.00 - **Sub-Total**	**700.00**

11.5 Report Preparation

1.	Jun, July, Aug, 2007 J.M. Ashton, P. Eng. 7 days @ $500 per day -	3,500.00
2.	CAD Drawing Preparation E.B. Catapia, C. Tech 18 hours @ $60.00	1,080.00
3.	Word Processing, Collation S. Apchkrum: 18 hours @ $45.00 -	810.00
4.	CAD Processing & Report Reproduction CAD Processing, Drafts, & Report & Drawing Reproduction	264.00
5.	Report Review D. Mark, P. Geo 5 hours @ $70 -	350.00
	Sub-Total	**6,004.00**

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

I, J. M. Ashton, of Suite 1750, 1177 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 30th day of August, 2007
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 39 years and have been active in the mining industry for the past 42 years.

5. The field work for the gridline preparation and Mobile Metal Ion (MMI) geochemical survey described in this report 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 concur with the MMI geochemistry and conventional geochemistry conclusions in this report.

PROFESSIONAL PROVINCE OF D.G. MARK BRITISH COLUMBIA GEOSCIENTIST

David G. Mark, P. Geo.

Dated this 30th day of August, 2007
Vancouver, British Columbia

SECTION 14.0 REFERENCES

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FIGURES

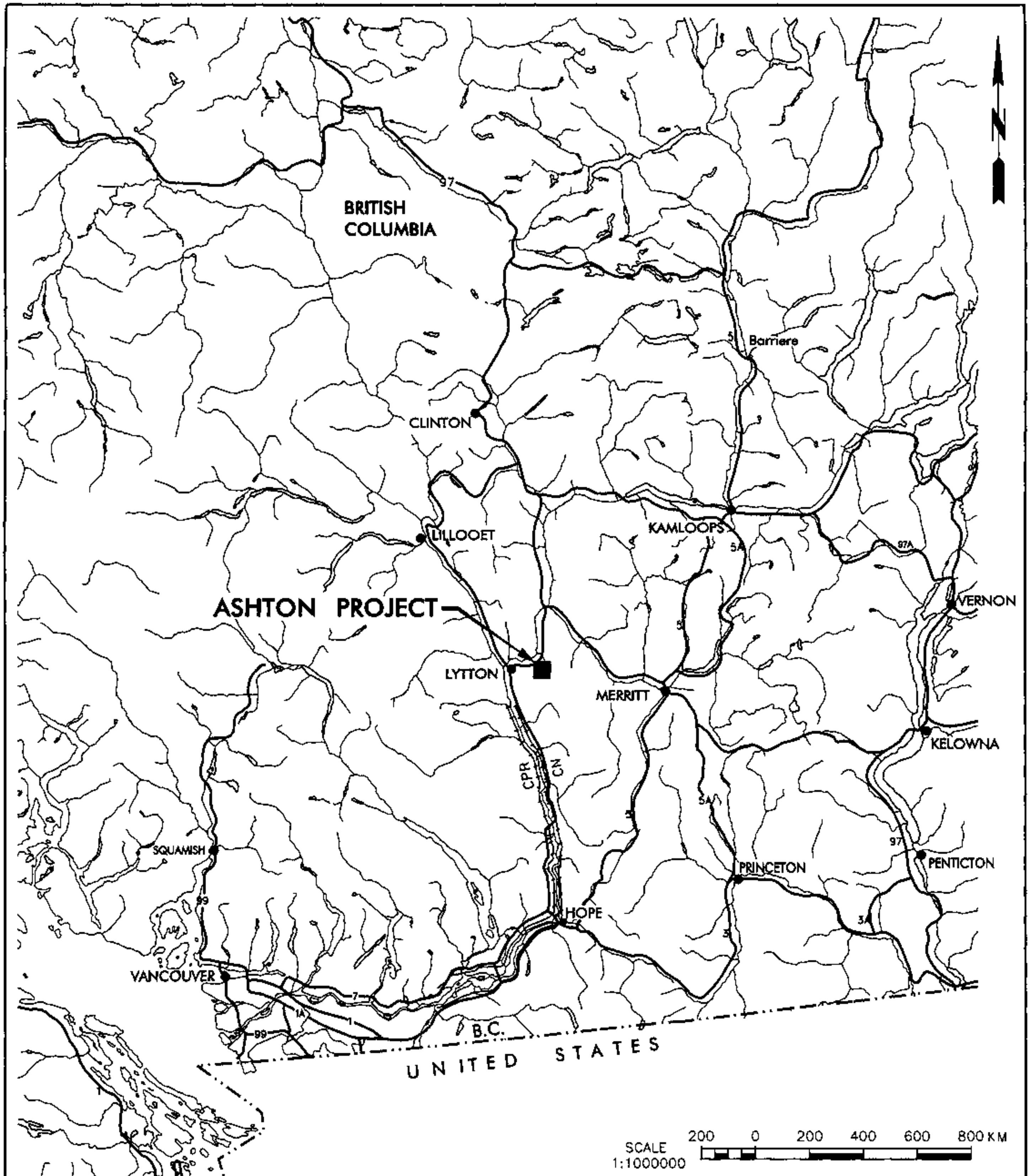


FIGURE 1

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

ASHTON PROJECT

PROPERTY LOCATION MAP

DRAWN : EBC	CHKD : EBC	DATE : MAY 2007

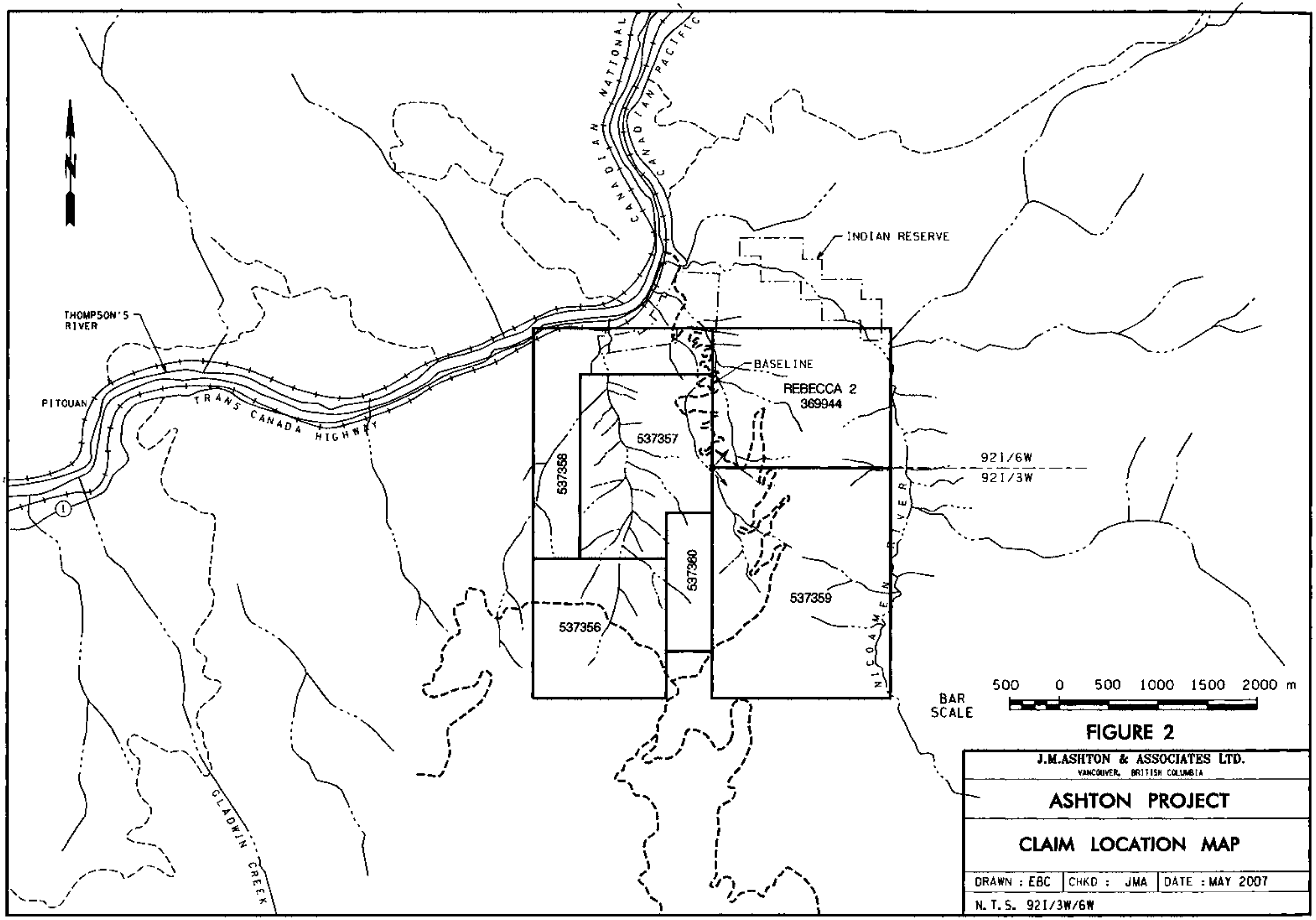


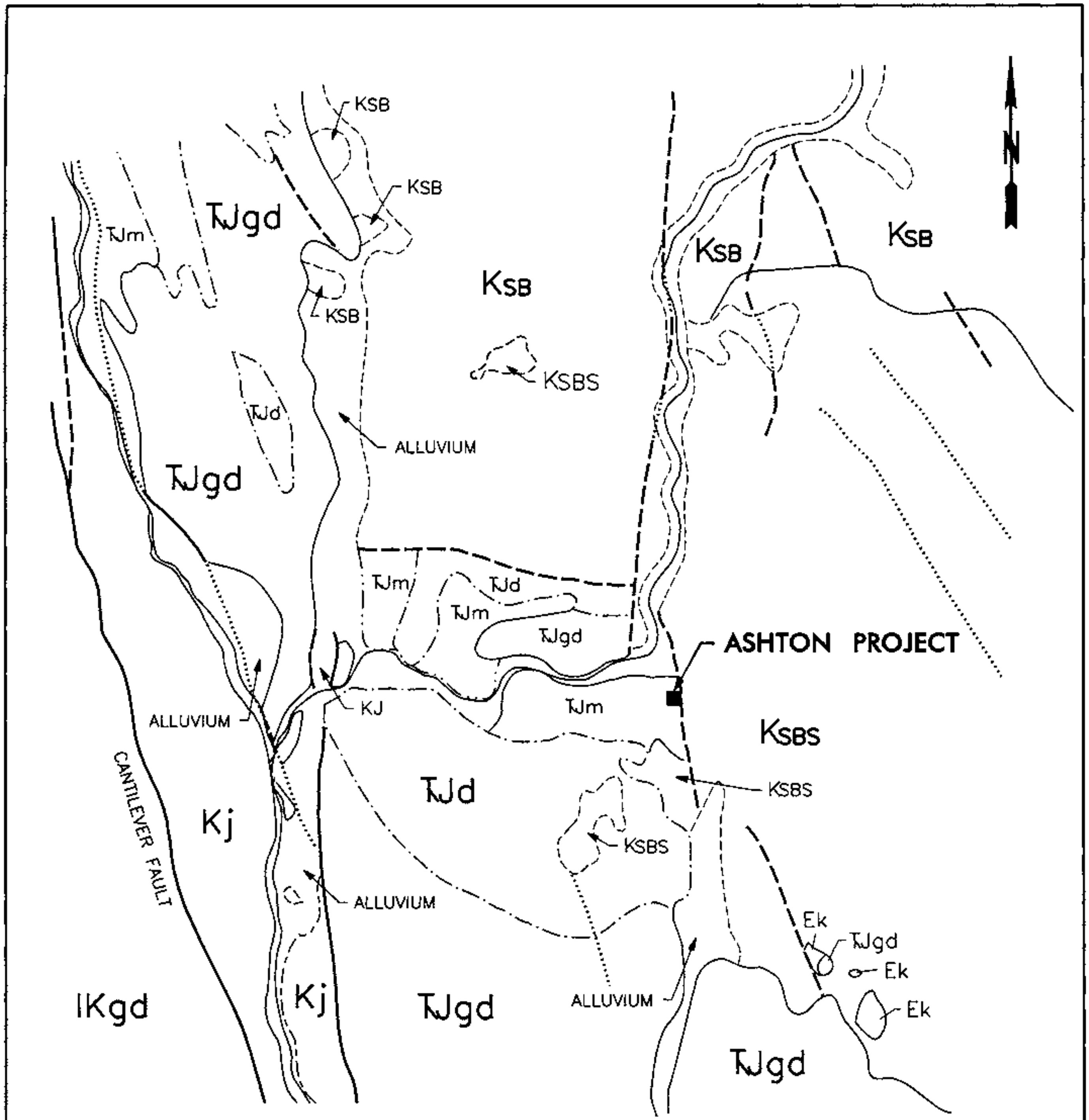
FIGURE 2

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

ASHTON PROJECT

CLAIM LOCATION MAP

DRAWN : EBC	CHKD : JMA	DATE : MAY 2007
N.T.S. 92I/3W/6W		



LEGEND

———	FAULT
– – – /	INFERRED FAULT

LATE CRETACEOUS

IKgd –GRANODIORITE, QUARTZ MONZONITE

SPENCES BRIDGE GROUP

KsB –FELSIC, MAFIC FLOWS AND SANDSTONE –SHALE

KsBs –MAFIC VOLCANICS –CONGLOMERATE

EARLY AND MIDDLE CRETACEOUS

JACKASS MOUNTAIN GROUP

KJ SANDSTONE, ARGILLITE, CONGLOMERATE

TRIASSIC AND/OR JURASSIC

TJd –DIORITE, AMPHIBOLITE MT. LYTTON COMPLEX

TJgd –GRANODIORITE, QUARTZ MONZONITE MT. LYTTON BATHOLITH

TJm –LAYERED QF ROCK, AMPHIBOLITE, MYLONITE MT. LYTTON BATHOLITH

SCALE 1:200000 — 4 0 4 8 km

FIGURE 3

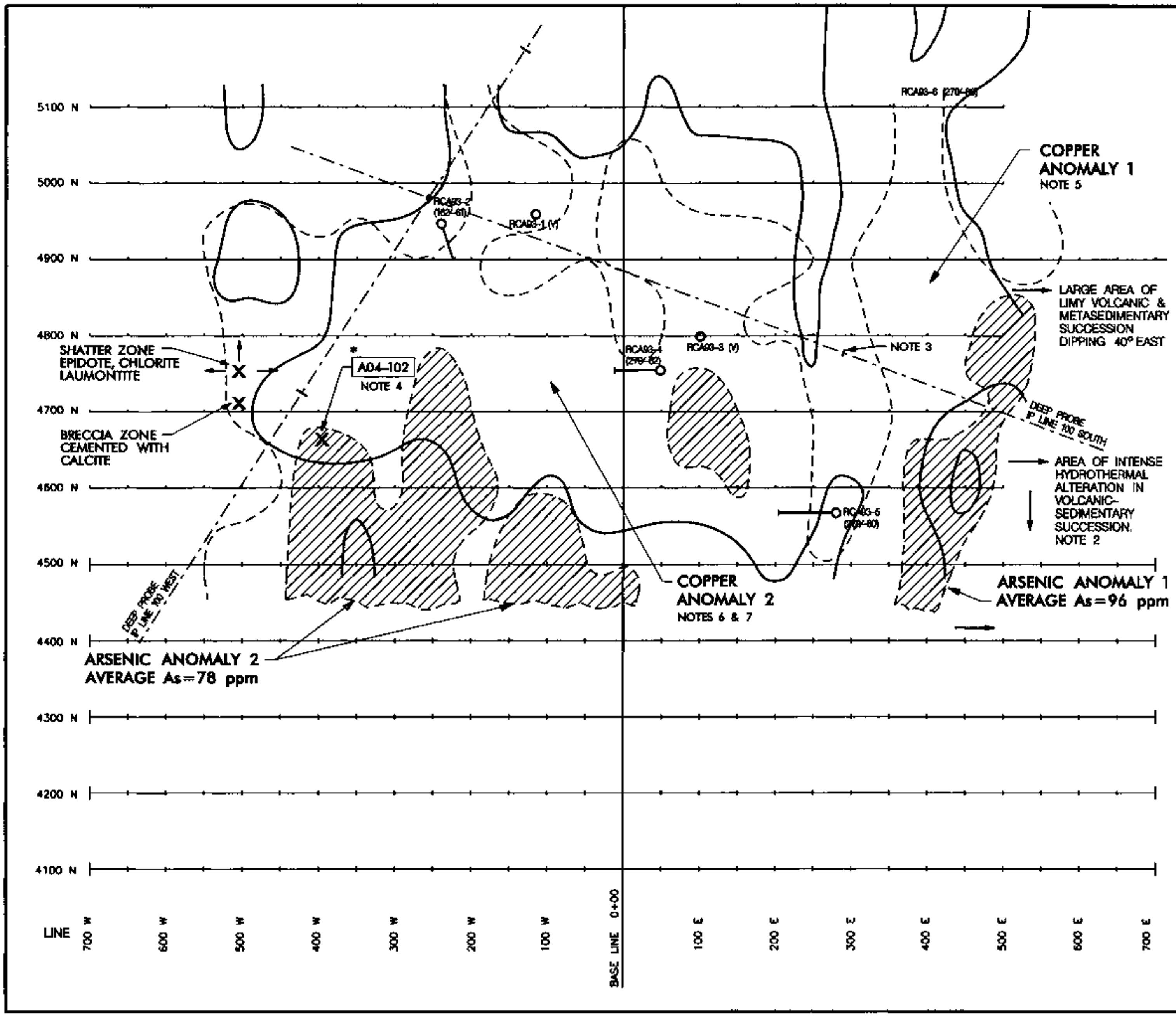
J.M.ASHTON & ASSOCIATES LTD.
VANCOUVER, BRITISH COLUMBIA

ASHTON PROJECT

REGIONAL GEOLOGY

DRAWN : EBC	CHKD : JMA	DATE : JUNE 2006

MODIFIED AFTER J.W.H.MONGER GSC MAP 42-1989



NOTES

1. AVERAGE ABUNDANCE IN SOILS OF EARTH'S CRUST = 7ppm As
2. AVERAGE ABUNDANCE IN UNALTERED IGNEOUS ROCKS = 2ppm As
3. TOP OF STRATABOUND MASSIVE SULPHIDE BODY H2 AT 120m DEPTH. DIAGNOSED BY IP RESULTS & MINUS 336 mV SP ANOMALY DIPS -40° EAST.
4. ROCK SAMPLE CONTAINING ANOMALOUS GOLD PATHFINDER ELEMENTS: Te,Se,Hg,As,Sb.
5. LINEAR COPPER ANOMALY 1 INTERPRETED AS SURFACE EXPRESSION OF DIAGNOSED MASSIVE SULPHIDE BODY H2.
6. COPPER ANOMALY 2 INTERPRETED AS SURFACE EXPRESSION OF DIAGNOSED PORPHYRY COPPER DEPOSIT 1.
7. ANOMALOUS VANADIUM IN SOILS COINCIDENT WITH COPPER.

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

LEGEND

Cu >200 ppm-1534 ppm ANOMALOUS TO EXTREMELY ANOMALOUS
OVERALL AVERAGE = 471 ppm
WEST SIDE TABULAR BODY AVG. = 414 ppm
EAST SIDE LINEAR BODY AVG. = 604 ppm

As >20.1-40 ppm ANOMALOUS

As >40->80 ppm VERY ANOMALOUS TO EXTREMELY ANOMALOUS

RCA93-5 (272/-60) PERCUSSION DRILL HOLE — DIP — AZIMUTH

(V) VERTICAL

FIGURE 4

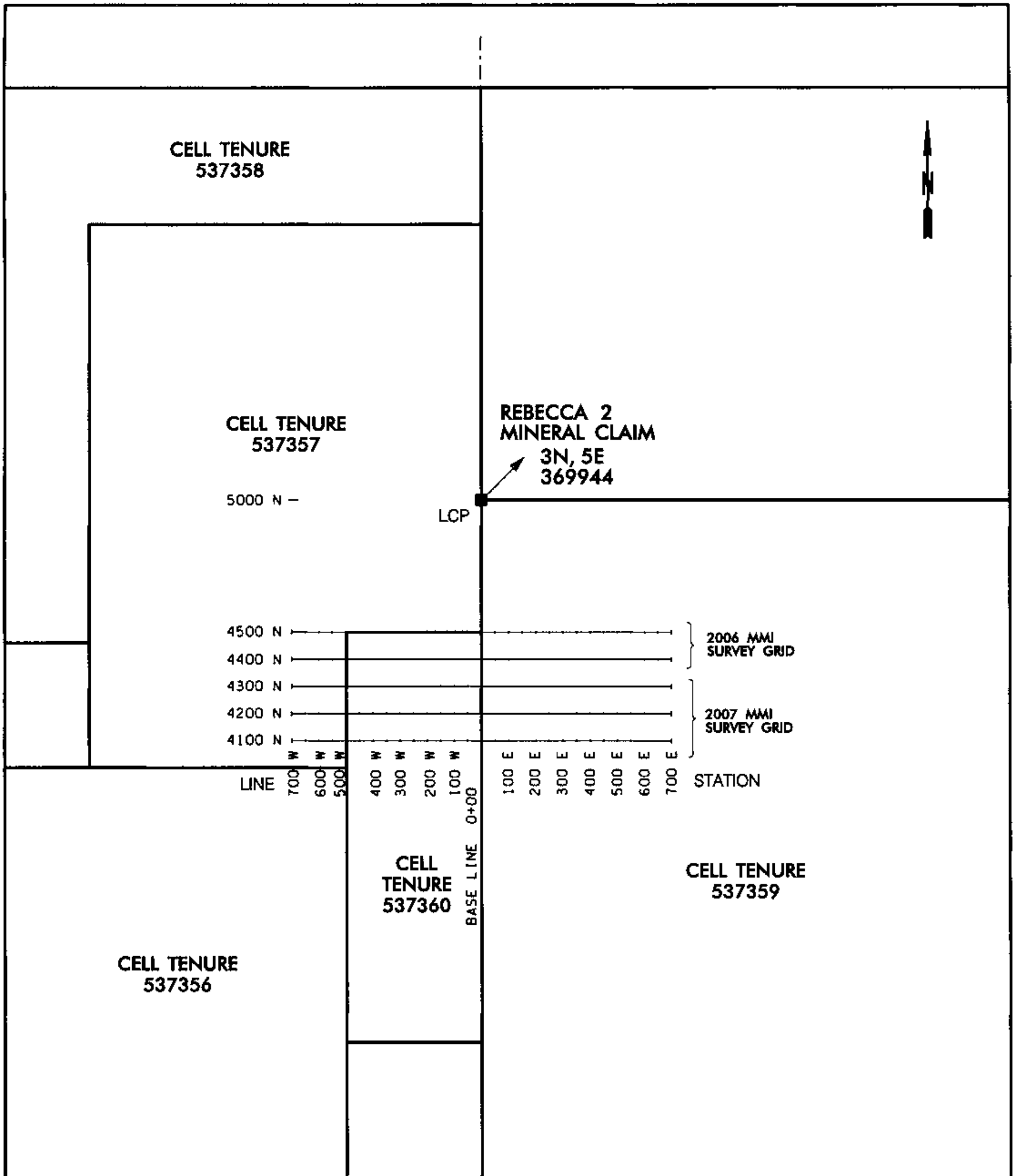
SCALE 1:5,000 — 50 0 50 100 150 200 METRES

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

ASHTON COPPER GOLD PROJECT

COMPOSITE CONVENTIONAL ARSENIC & COPPER IN SOILS GEOCHEMISTRY

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



NOTES

1. 2007 MMI SURVEY GRID LINES 4300N,4200N & 4100N FROM STATIONS 700E TO 700W
2. MEASUREMENTS BY COMPASS & CHAIN.

SCALE 1:20,000 — 200 0 200 400 600 800 m

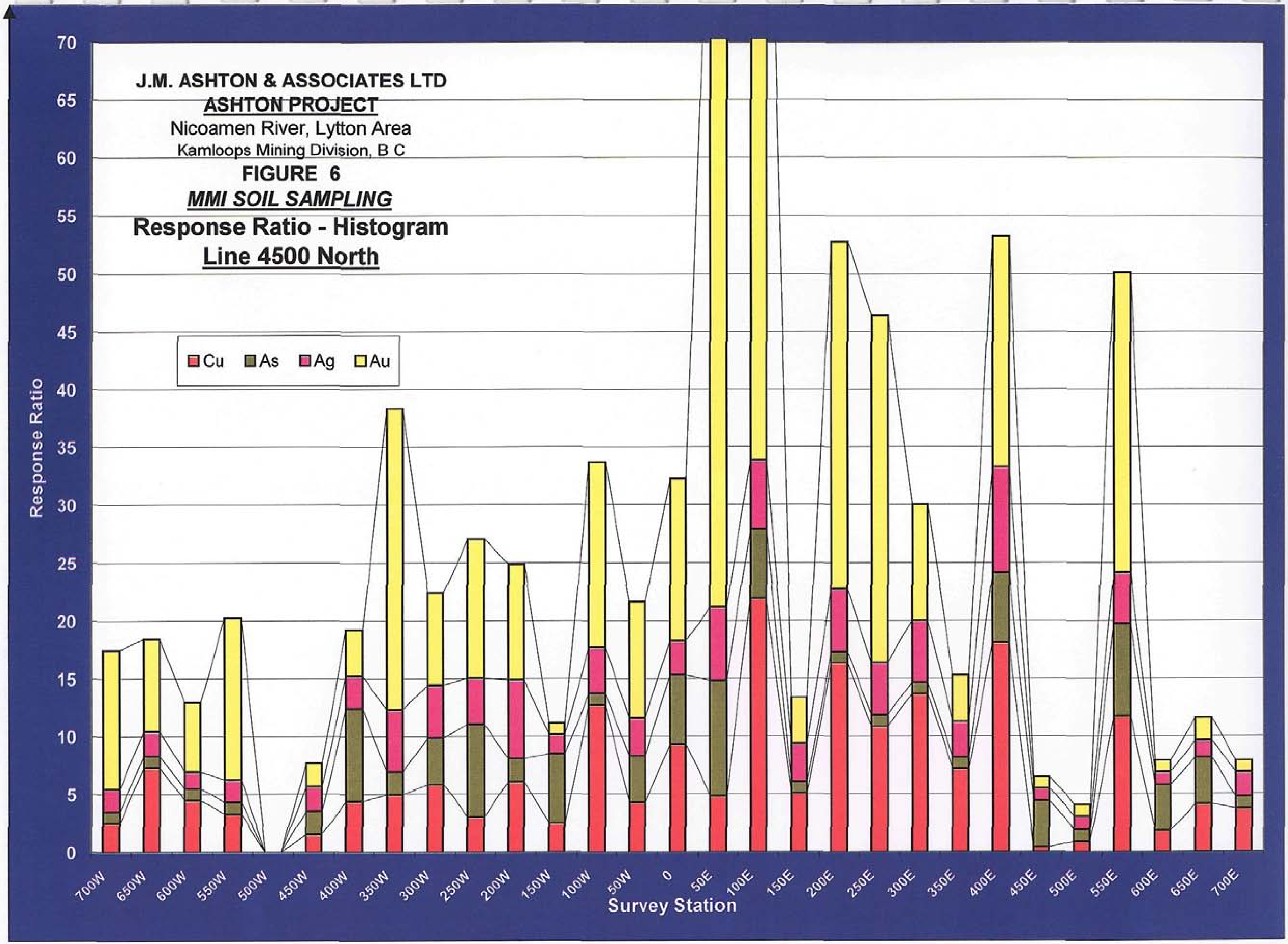
FIGURE 5

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

ASHTON PROJECT

2007 SURVEY GRID FOR MMI GEOCHEMICAL SURVEY 2

GEOLOGIST		SCALE	AS SHOWN
DRAWN	EBC	DATE	MAY 2007
CHECKED	JMA	REVISED	



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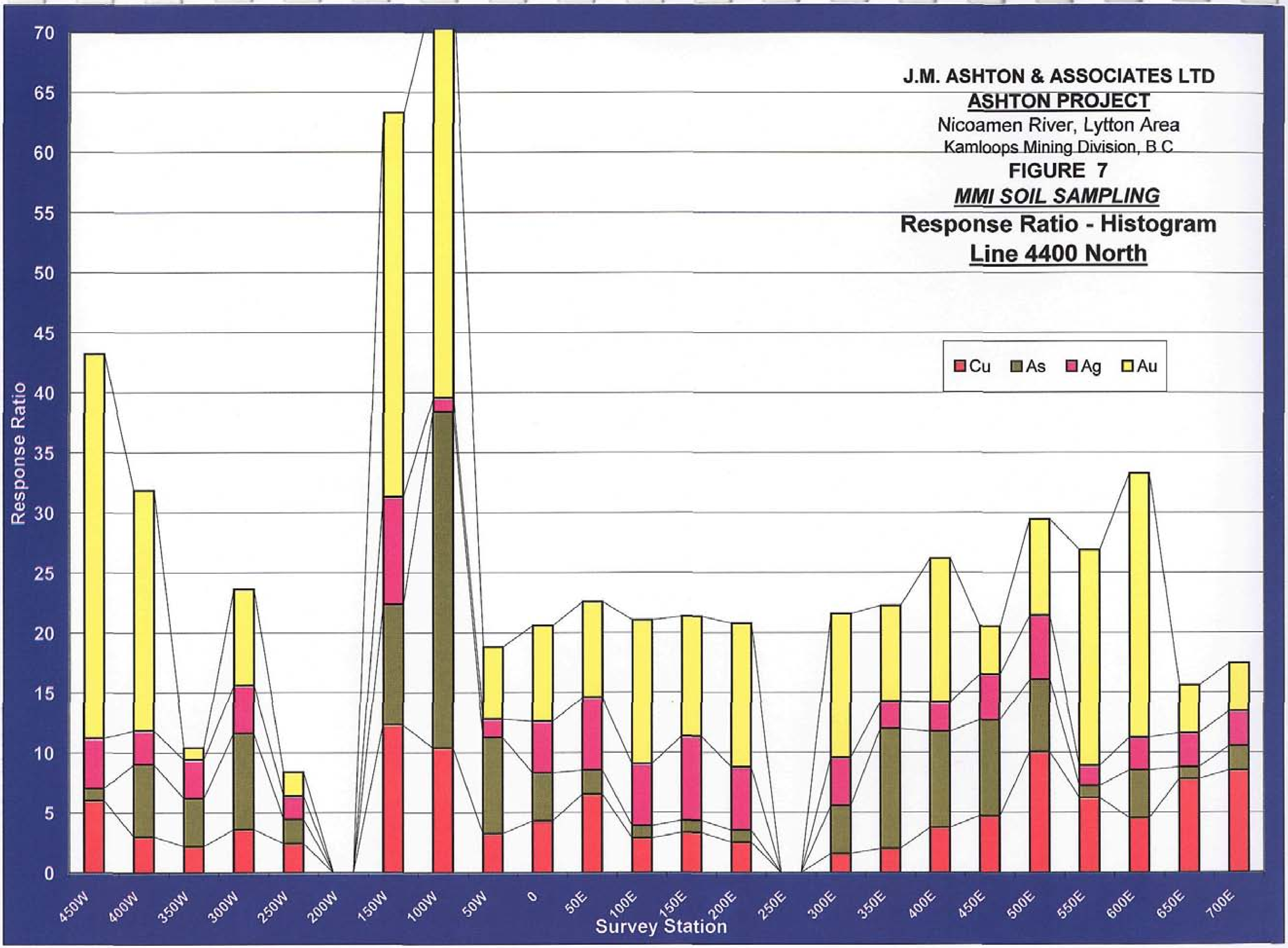

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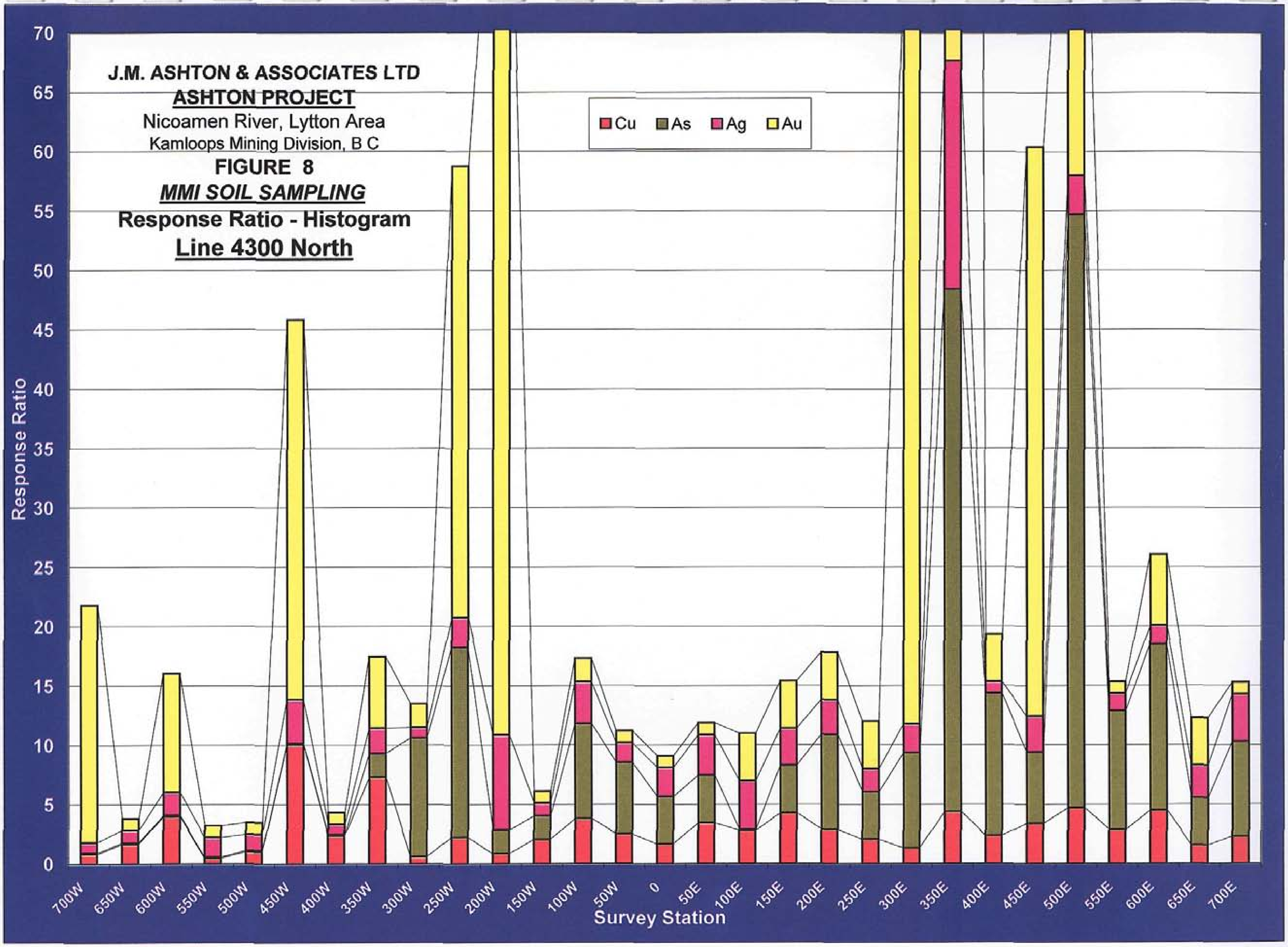

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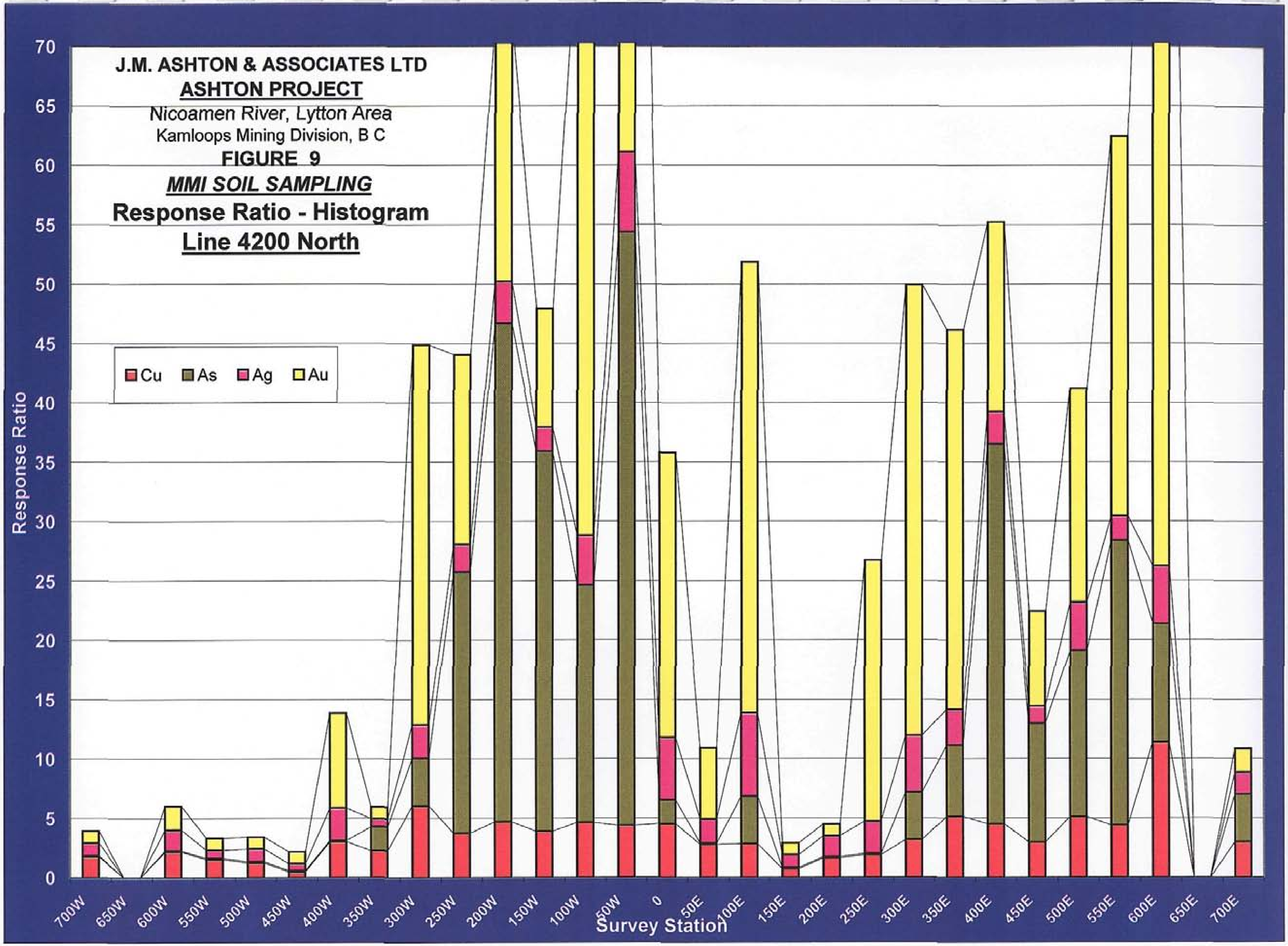

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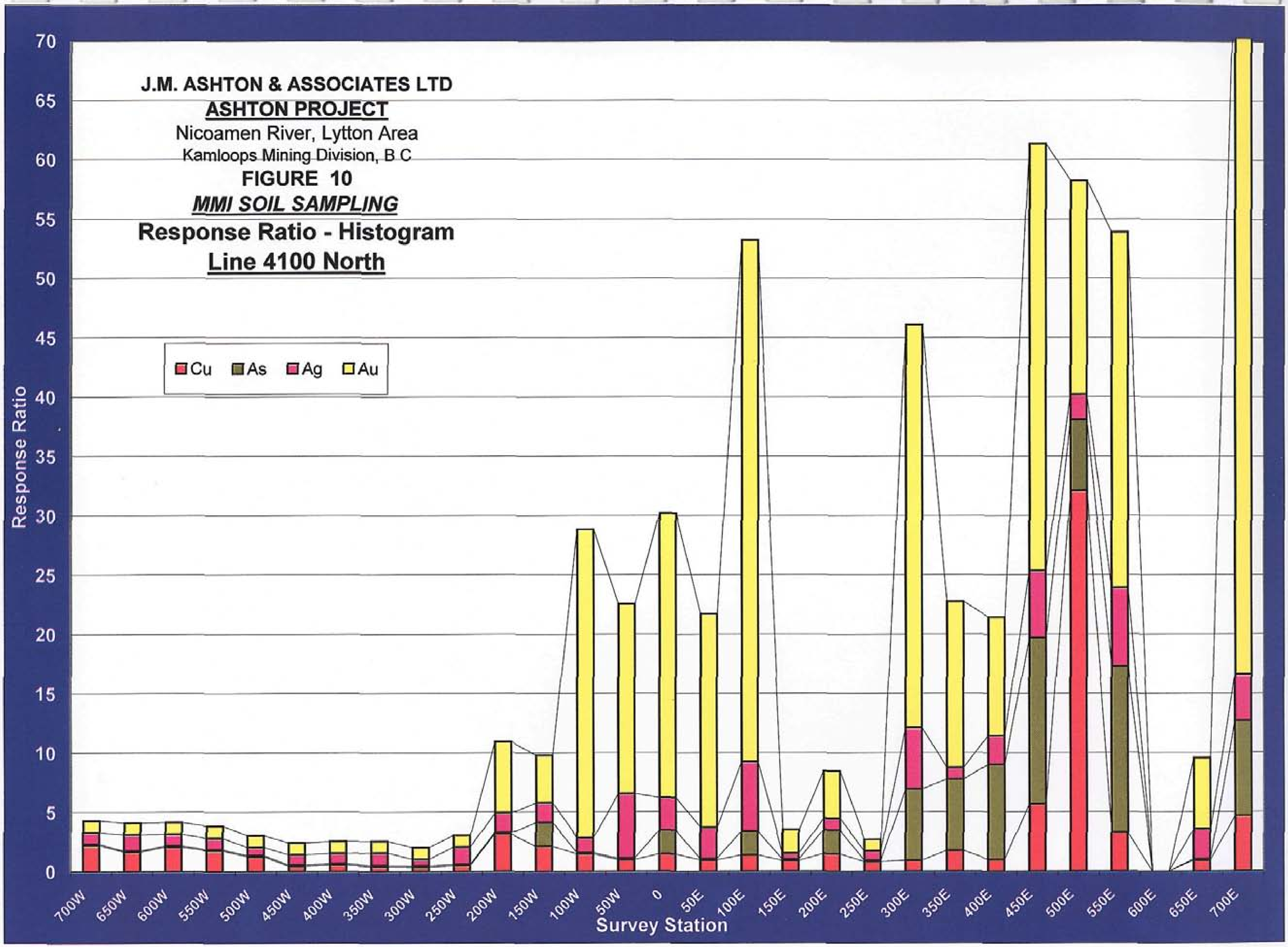

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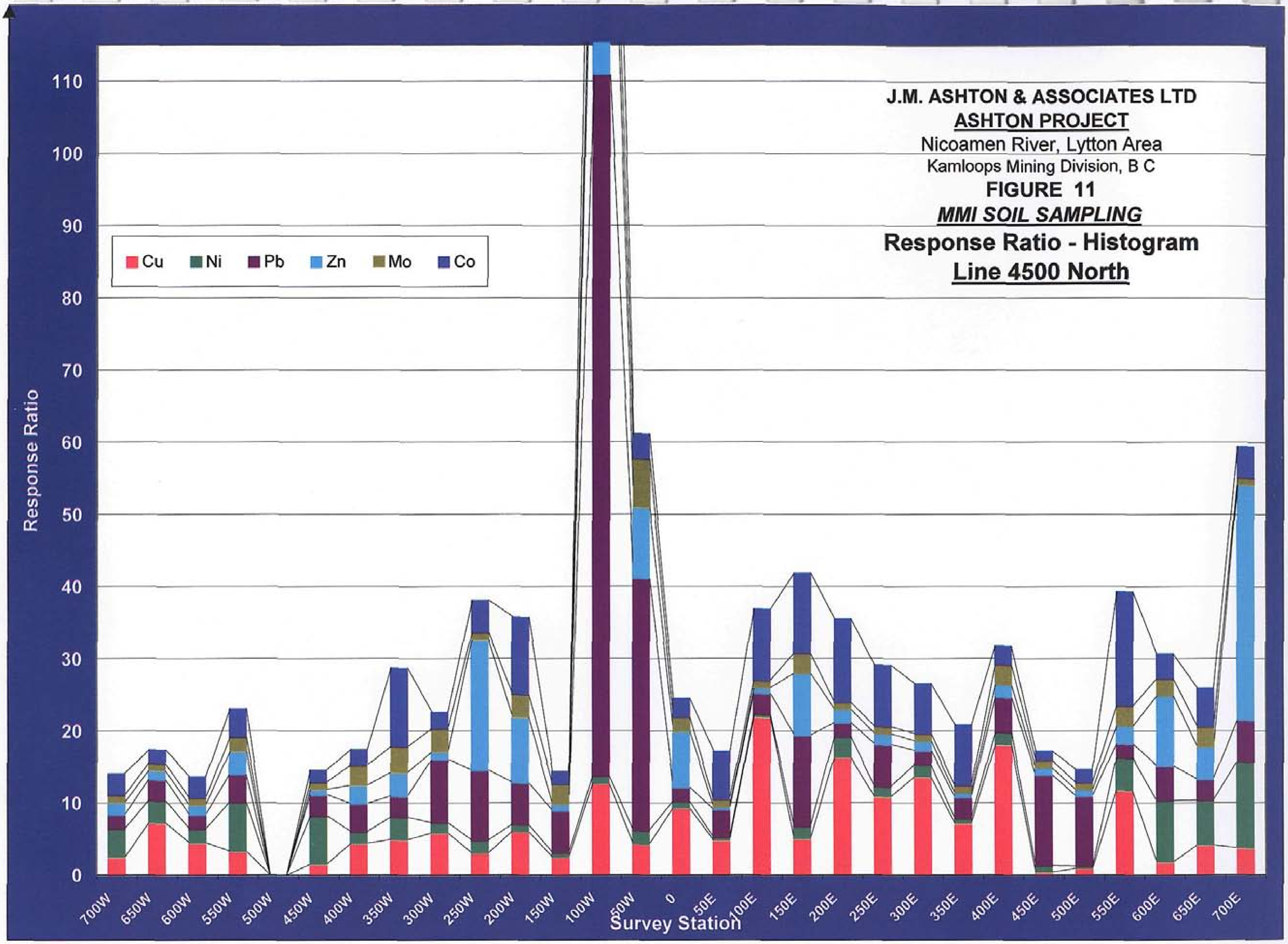

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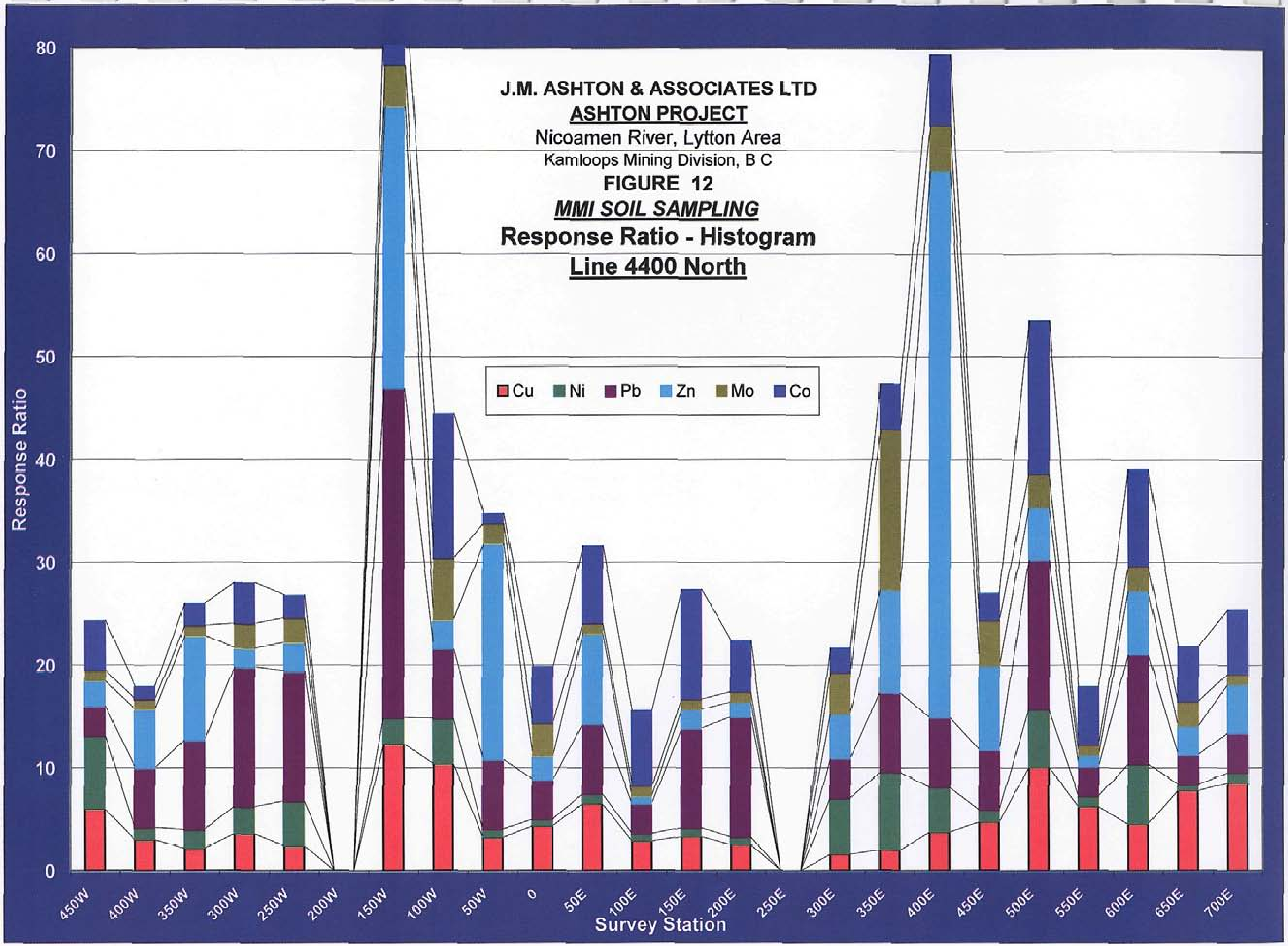

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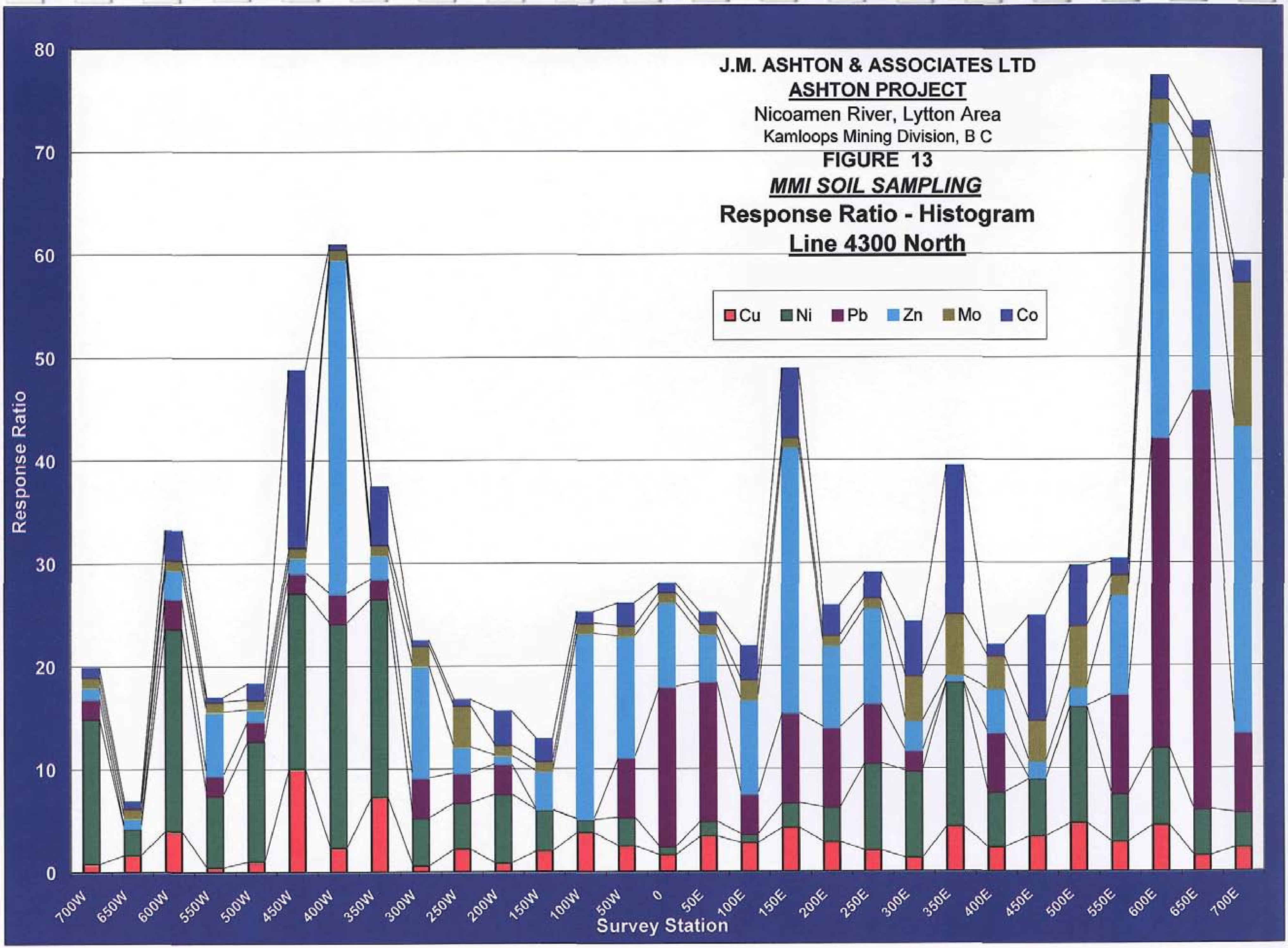

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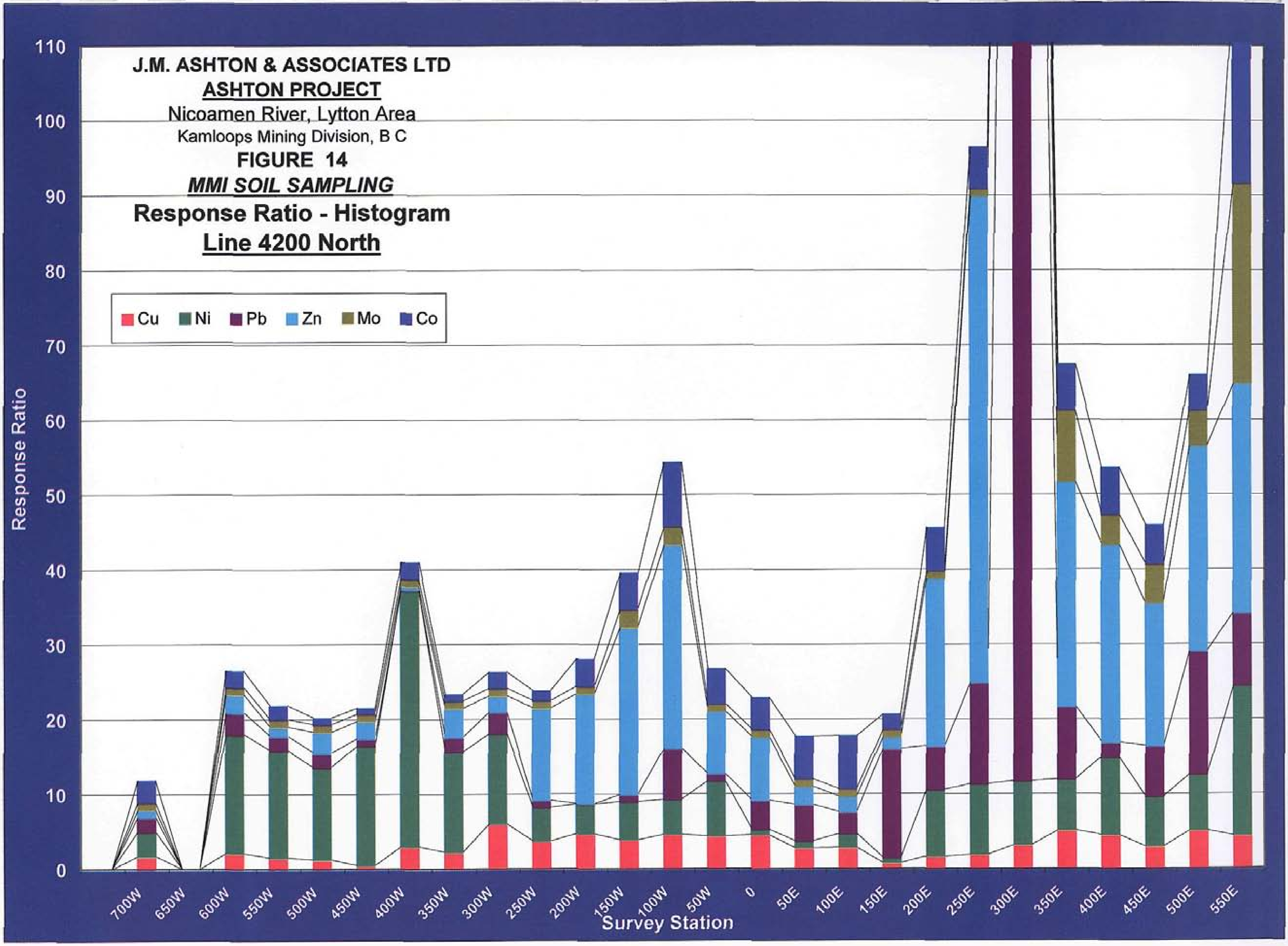

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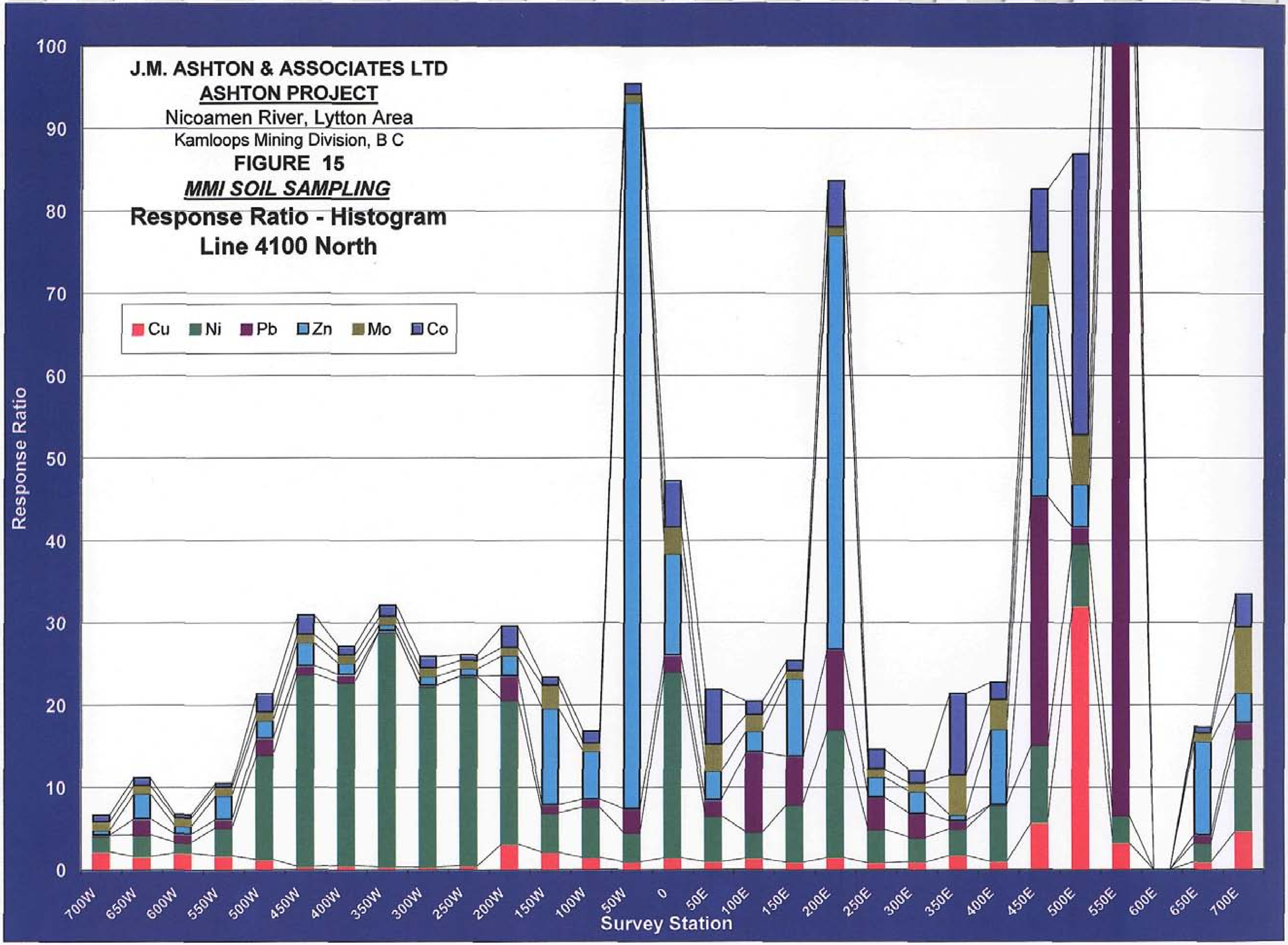

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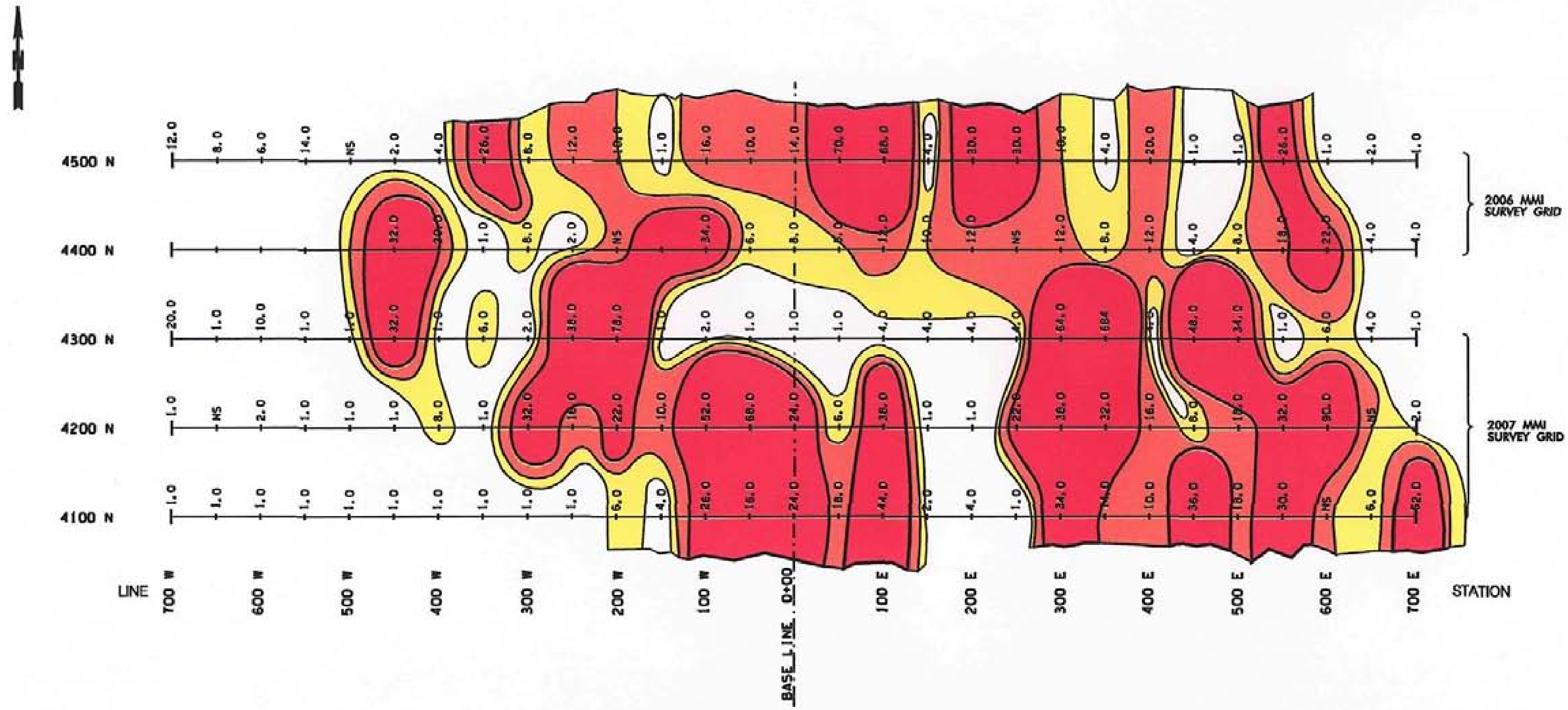


MMI SOILS LEGEND

'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 50 100 200 300 m

FIGURE 16

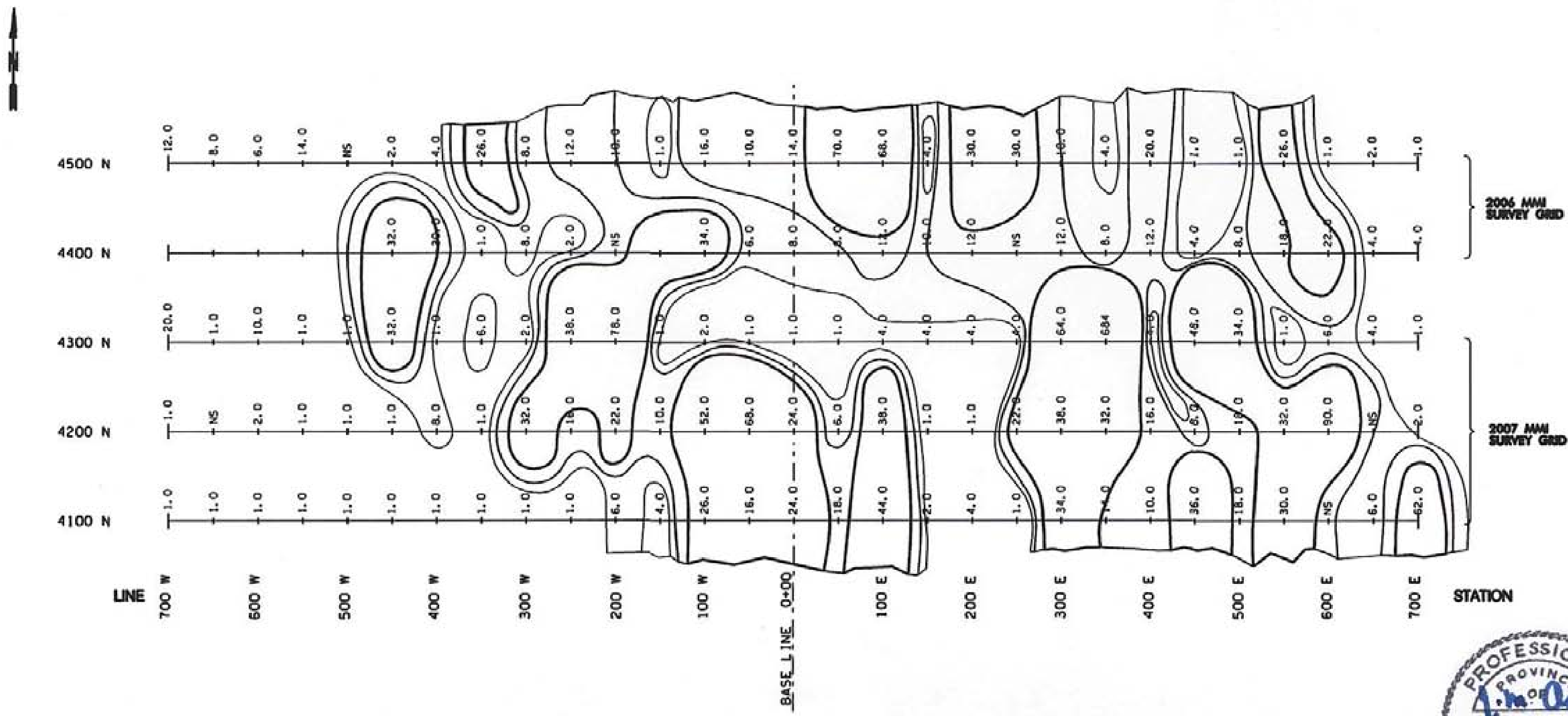
J.M.ASHTON & ASSOCIATES LTD.

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	



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. M. ASHTON

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 50 100 200 300 m

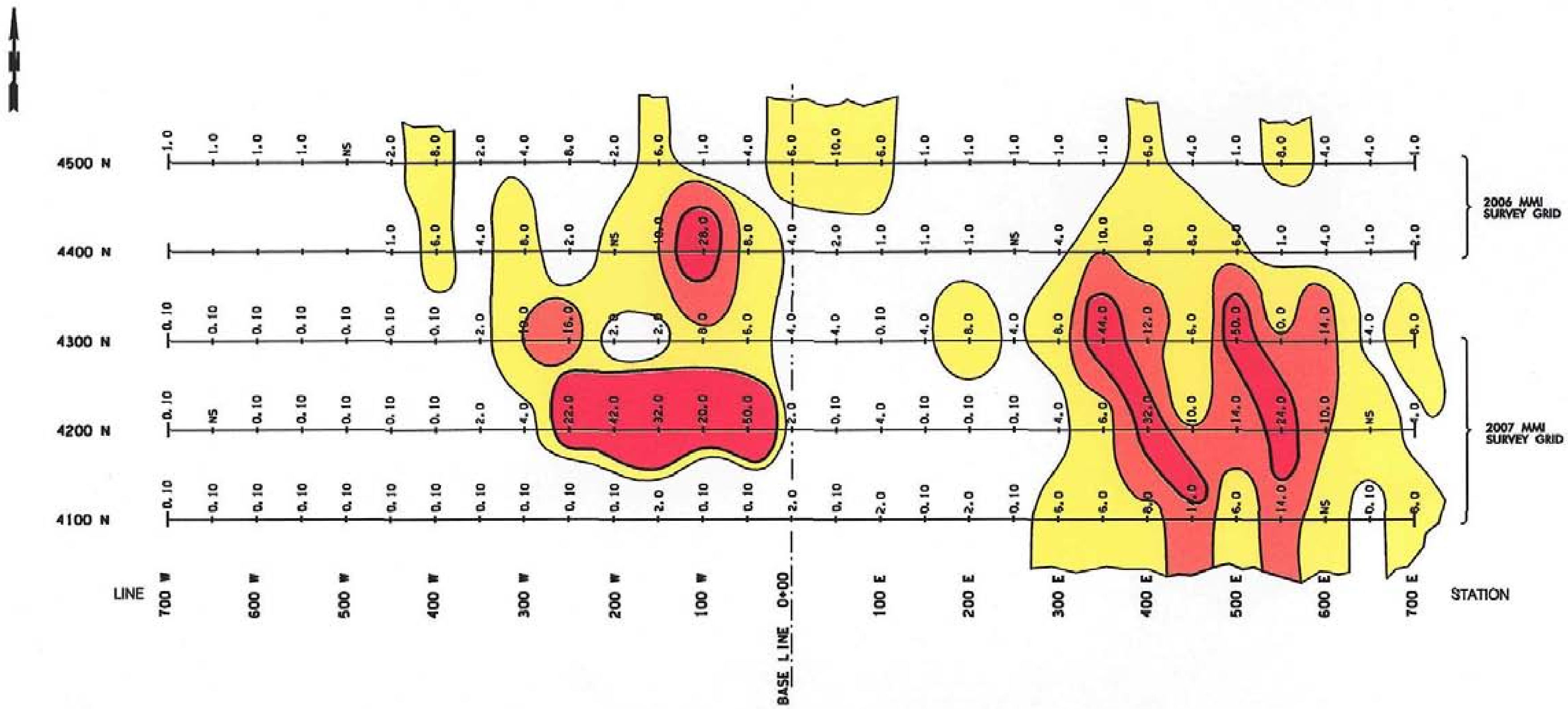
FIGURE 16

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	



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 ARSENIC ALL CLASSES

NOTES

1. LOWER QUARTILE As REFERENCE =5 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 50 100 200 300 m

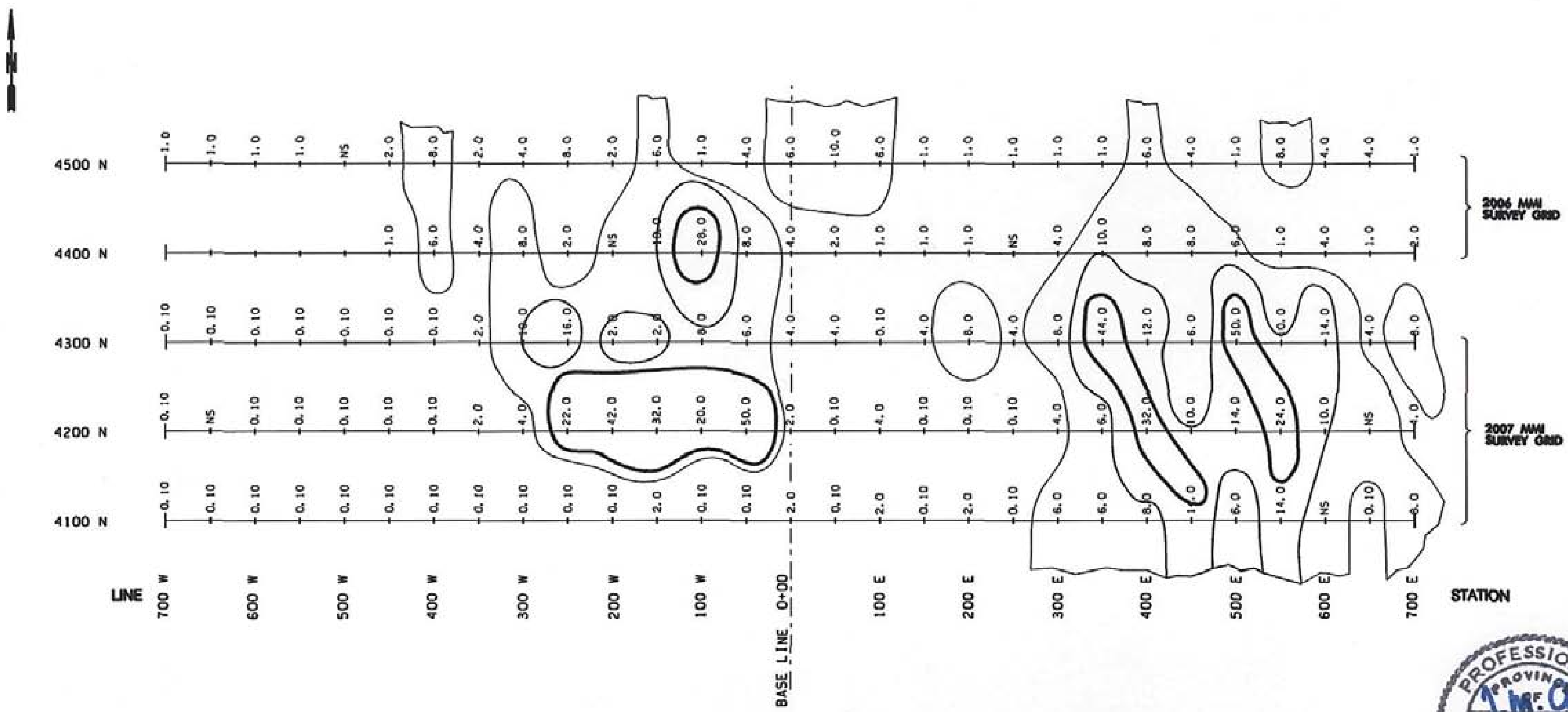
FIGURE 17

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

ASHTON PROJECT

ARSENIC ASSAY PLAN
MMI GEOCHEMICAL SURVEY 2

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



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. M. ASHTON

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 ARSENIC ALL CLASSES

NOTES

1. LOWER QUARTILE As REFERENCE = 5 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 50 100 200 300 m

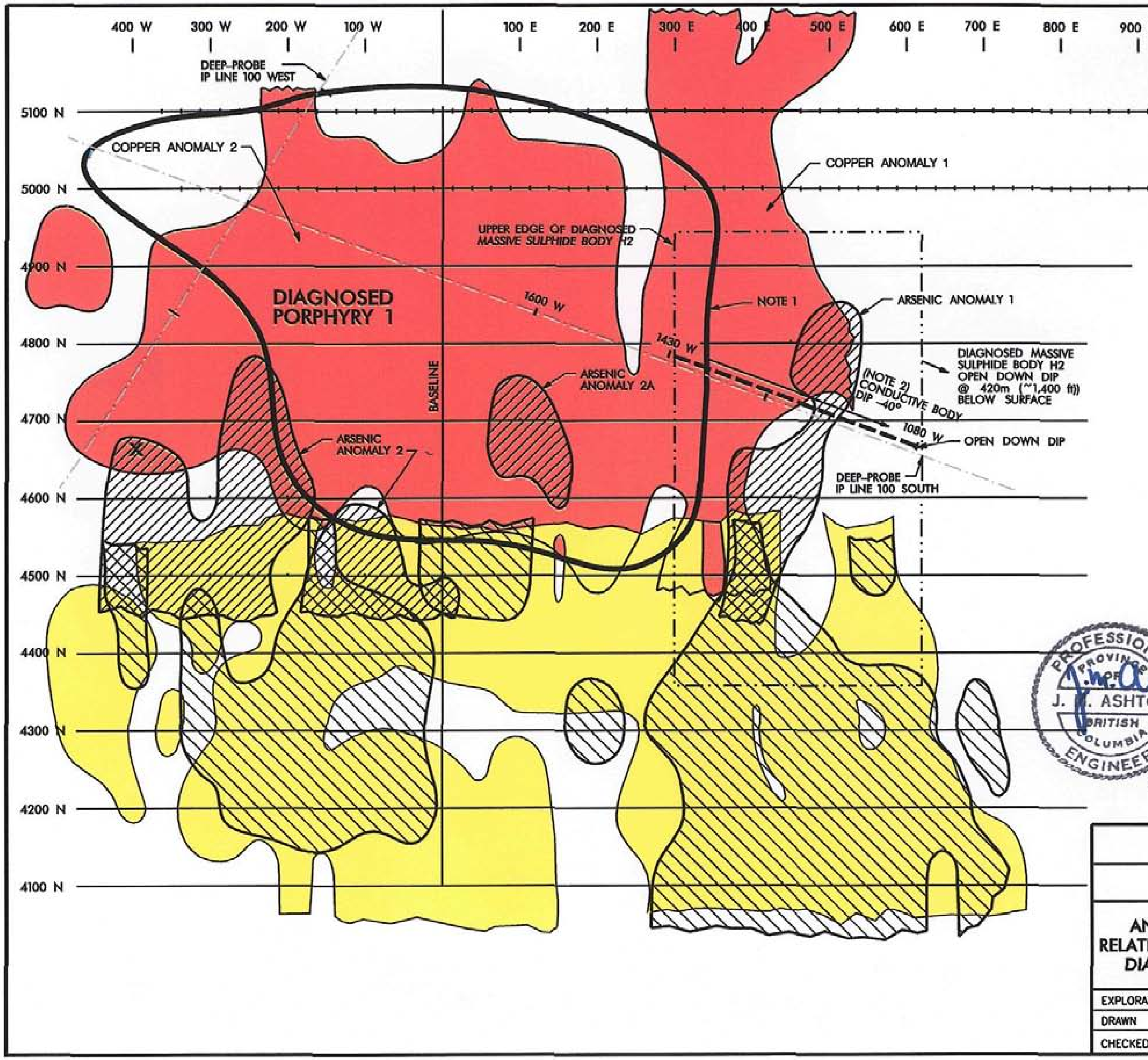
FIGURE 17

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

ASHTON PROJECT

ARSENIC ASSAY PLAN
MMI GEOCHEMICAL SURVEY 2

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



LEGEND

- ELECTRONIC CONDUCTOR
- x — 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 MMI CONVENTIONAL
- ARSENIC ANOMALY MMI GEOCHEMISTRY

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.

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

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

FIGURE 18

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

ASHTON PROJECT

ANOMALOUS GOLD, ARSENIC & COPPER RELATIONSHIP TO DIAGNOSED PORPHYRY 1 & *DIAGNOSED MASSIVE SULPHIDE BODY H2*

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

APPENDIX A

APPENDIX A

Calculated Response-Ratios of Elements Shown from Mobile Metal Ion (MMI) Geochemical Assay Data

Lines 4500 & 4400 (2006 MMI Survey)

Lines 4300, 4200, & 4100 (2007 MMI Survey)

			Cu	Zn	Mo	Pb	Au	Co	Ni	As	Ag	Cu	Zn	Mo	Pb	Au	Co	Ni	As	Ag
Line 4100																				
-700	4100 700W		1500	50	2.5	5	0.05	14	33	5	10	230	30	2.5	5	0.05	7	6	5	5
-650	4100 650W		1110	250	2.5	20	0.05	15	44	5	14	260	40	2.5	5	0.05	7	7	5	6
-600	4100 600W		1400	80	2.5	10	0.05	7	22	5	10	280	50	2.5	5	0.05	8	7	5	6
-550	4100 550W		1180	240	2.5	10	0.05	8	57	5	10	290	50	2.5	5	0.05	8	10	5	7
-500	4100 500W		850	180	2.5	20	0.05	37	213	5	7	320	50	2.5	5	0.05	8	11	5	7
-450	4100 450W		290	230	2.5	10	0.05	39	390	5	9	330	60	2.5	5	0.05	10	11	5	7
-400	4100 400W		370	110	2.5	10	0.05	18	371	5	9	330	60	2.5	5	0.05	11	12	5	8
-350	4100 350W		260	60	2.5	5	0.05	23	477	5	11	370	60	2.5	5	0.05	11	12	5	9
-300	4100 300W		230	90	2.5	5	0.05	23	367	5	6	410	60	2.5	5	0.05	12	12	5	9
-250	4100 250W		330	70	2.5	5	0.05	11	384	5	15	490	60	2.5	5	0.05	13	13	5	9
-200	4100 200W		2150	200	2.5	30	0.3	43	292	5	17	550	70	2.5	5	0.05	14	13	5	9
-150	4100 150W		1440	970	7	10	0.2	17	80	10	17	560	70	2.5	5	0.05	14	13	5	9
-100	4100 100W		1000	480	2.5	10	1.3	24	102	5	13	580	70	2.5	5	0.05	15	13	5	10
-50	4100 50W		660	7110	2.5	30	0.8	21	59	5	56	620	70	2.5	5	0.05	15	14	5	10
0	4100	0	990	1020	8	20	1.2	94	378	10	28	620	80	2.5	10	0.05	15	14	5	10
50	4100 50E		650	290	8	20	0.9	111	93	5	27	630	80	2.5	10	0.05	15	15	5	10
100	4100 100E		930	210	5	100	2.2	27	53	10	60	630	80	2.5	10	0.05	16	16	5	10
150	4100 150E		620	780	2.5	60	0.1	21	117	5	5	650	80	2.5	10	0.05	17	16	5	10
200	4100 200E		1000	4170	2.5	100	0.2	93	260	10	10	660	90	2.5	10	0.05	18	16	5	11
250	4100 250E		560	200	2.5	40	0.05	39	68	5	8	670	90	2.5	10	0.05	18	16	5	11
300	4100 300E		630	220	2.5	30	1.7	26	50	30	53	700	90	2.5	10	0.05	18	17	5	11
350	4100 350E		1190	60	12	10	0.7	165	54	30	10	840	90	2.5	10	0.05	19	17	5	11
400	4100 400E		670	760	9	5	0.5	35	114	40	25	850	90	2.5	10	0.05	21	18	5	11
450	4100 450E		3870	1930	16	310	1.8	128	158	70	58	900	90	2.5	10	0.05	21	20	5	11
500	4100 500E		21800	430	15	20	0.9	568	127	30	22	930	100	2.5	10	0.05	21	20	5	11
550	4100 550E		2220	1090	7	1250	1.5	59	56	70	68	990	100	2.5	10	0.05	21	21	5	11
650	4100 650E		630	940	2.5	10	0.3	12	39	5	26	1000	110	2.5	20	0.05	22	22	5	12
700	4100 700E		3180	300	20	20	3.1	67	187	40	40	1000	110	2.5	20	0.05	23	24	5	12
Line 4200												1040	110	2.5	20	0.05	23	24	5	13
-700	4200 700W		1180	80	2.5	20	0.05	49	55	5	11	1050	120	2.5	20	0.05	24	24	5	14
-600	4200 600W		1460	200	2.5	30	0.1	36	265	5	18	1050	120	2.5	20	0.05	25	27	5	14
-550	4200 550W		1040	100	2.5	20	0.05	31	239	5	7	1070	120	2.5	20	0.05	25	28	5	15
-500	4200 500W		840	230	2.5	20	0.05	15	206	5	11	1110	130	2.5	20	0.05	25	29	5	15
-450	4200 450W		330	190	2.5	10	0.05	13	267	5	6	1110	140	2.5	20	0.05	26	29	5	15
-400	4200 400W		2050	40	2.5	5	0.4	37	571	5	28	1130	140	2.5	20	0.1	27	30	5	15
-350	4200 350W		1530	320	2.5	20	0.05	15	224	10	7	1130	140	2.5	20	0.1	28	30	5	15
-300	4200 300W		4100	180	2.5	30	1.6	36	201	20	29	1180	150	2.5	20	0.1	29	31	5	16
-250	4200 250W		2530	1020	2.5	10	0.8	22	75	110	24	1180	150	2.5	20	0.1	30	32	5	16
-200	4200 200W		3190	1220	2.5	5	1.1	61	66	210	36	1190	150	2.5	20	0.1	31	33	5	17
-150	4200 150W		2640	1850	6	10	0.5	82	85	160	21	1230	150	2.5	20	0.1	31	33	5	17
-100	4200 100W		3140	2260	6	70	2.6	143	78	100	43	1290	170	2.5	20	0.1	34	39	5	17
-50	4200 50W		2960	690	2.5	10	3.4	78	123	250	69	1360	180	2.5	20	0.1	34	40	5	17
0	4200	0	3070	700	2.5	40	1.2	71	13	10	54	1380	180	2.5	20	0.2	35	43	5	17
50	4200 50E		1880	200	2.5	50	0.3	95	16	5	21	1390	190	2.5	20	0.2	36	43	5	17
100	4200 100E		1920	170	2.5	30	1.9	118	31	20	72	1400	190	2.5	20	0.2	36	44	5	18
150	4200 150E		490	130	2.5	150	0.05	34	12	5	11	1440	190	2.5	20	0.2	36	44	5	18
200	4200 200E		1110	1860	2.5	60	0.05	96	149	5	18	1460	190	2.5	20	0.2	36	46	5	19

250	4200	250E	1290	5390	2.5	140	1.1	92	157	5	28	1490	200	2.5	20	0.2	37	48	5	20
300	4200	300E	2150	2360	12	2530	1.9	128	143	20	49	1500	200	2.5	20	0.2	37	50	5	20
350	4200	350E	3480	2490	24	100	1.6	101	114	30	31	1510	200	2.5	30	0.2	37	52	5	20
400	4200	400E	3060	2190	10	20	0.8	105	174	160	28	1530	200	2.5	30	0.2	37	52	5	20
450	4200	450E	2010	1580	13	70	0.4	87	111	50	15	1550	200	2.5	30	0.2	37	53	5	20
500	4200	500E	3460	2270	12	170	0.9	78	125	70	42	1600	200	2.5	30	0.2	37	54	5	21
550	4200	550E	2980	2540	67	100	1.6	427	335	120	21	1600	210	2.5	30	0.2	38	55	5	21
600	4200	600E	7720	2490	6	140	4.5	181	343	50	50	1650	210	2.5	30	0.2	39	56	10	21
700	4200	700E	2020	90	12	5	0.1	53	62	20	19	1690	210	2.5	30	0.2	39	56	10	22
Line 4300												1700	220	2.5	30	0.3	40	57	10	22
-700	4300N	700W	550	90	2.5	20	1	15	236	5	9	1710	230	2.5	30	0.3	40	57	10	22
-650	4300N	650W	1130	80	2.5	5	0.05	11	43	5	11	1710	230	2.5	30	0.3	43	59	10	22
-600	4300N	600W	2710	230	2.5	30	0.5	47	329	5	20	1880	230	2.5	30	0.3	43	62	10	22
-550	4300N	550W	320	510	2.5	20	0.05	7	117	5	17	1900	230	2.5	30	0.3	43	66	10	23
-500	4300N	500W	700	90	2.5	20	0.05	25	196	5	14	1920	230	2.5	30	0.3	44	66	10	24
-450	4300N	450W	6820	120	2.5	20	1.6	287	286	5	38	1950	230	2.5	30	0.3	47	66	10	25
-400	4300N	400W	1600	2690	2.5	30	0.05	8	364	5	9	1960	240	2.5	30	0.4	49	68	10	25
-350	4300N	350W	4960	190	2.5	20	0.3	94	322	10	22	1960	240	2.5	30	0.4	49	73	10	25
-300	4300N	300W	410	900	5	40	0.1	8	78	50	9	2010	250	2.5	30	0.4	49	73	10	25
-250	4300N	250W	1510	210	10	30	1.9	10	75	80	26	2020	260	2.5	30	0.4	50	74	10	26
-200	4300N	200W	580	70	2.5	30	3.9	55	112	10	82	2050	270	2.5	30	0.4	53	74	10	26
-150	4300N	150W	1380	310	2.5	5	0.05	36	66	10	11	2050	290	2.5	30	0.4	54	75	10	27
-100	4300N	100W	2580	1500	2.5	5	0.1	18	21	40	36	2070	300	2.5	30	0.4	55	75	20	28
-50	4300N	50W	1710	980	2.5	60	0.05	37	46	30	17	2080	310	2.5	40	0.4	57	76	20	28
0	4300N	0	1130	680	2.5	160	0.05	14	13	20	25	2150	320	2.5	40	0.4	57	77	20	28
50	4300N	50E	2340	380	2.5	140	0.05	19	24	20	35	2150	320	2.5	40	0.5	59	78	20	28
100	4300N	100E	1900	760	5	40	0.2	54	14	5	42	2210	350	2.5	40	0.5	61	78	20	28
150	4300N	150E	2910	2140	2.5	90	0.2	111	40	20	32	2220	360	2.5	40	0.5	65	80	20	28
200	4300N	200E	1960	660	2.5	80	0.2	49	56	40	30	2250	370	2.5	40	0.5	66	85	20	29
250	4300N	250E	1390	770	2.5	60	0.2	40	141	20	20	2260	380	5	40	0.5	67	89	20	29
300	4300N	300E	900	240	11	20	3.2	87	141	40	25	2300	390	5	40	0.5	71	91	20	29
350	4300N	350E	2970	50	15	5	34.2	239	234	220	198	2340	420	5	40	0.5	72	93	20	29
400	4300N	400E	1600	350	8	60	0.2	18	89	60	10	2450	430	5	40	0.6	73	93	20	29
450	4300N	450E	2300	140	10	5	2.4	169	93	30	31	2530	470	5	40	0.6	74	94	20	30
500	4300N	500E	3190	150	15	5	1.7	97	189	250	34	2530	480	5	50	0.6	78	98	20	30
550	4300N	550E	1950	800	5	100	0.05	25	77	50	15	2540	510	5	50	0.6	78	102	20	30
600	4300N	600E	3050	2530	6	310	0.3	37	126	70	16	2580	510	6	50	0.6	81	102	20	31
650	4300N	650E	1050	1740	9	420	0.2	25	74	20	28	2640	640	6	60	0.6	82	104	20	31
700	4300N	700E	1550	2470	35	80	0.05	34	57	40	41	2710	660	6	60	0.7	82	111	20	32
Line 4400												2820	680	6	60	0.7	87	112	20	32
-450	4400N	450W	4090	200	2.5	30	1.6	81	119	5	43	2910	680	6	60	0.7	87	112	30	33
-400	4400N	400W	2050	470	2.5	60	1	21	20	30	29	2920	690	6	60	0.8	89	114	30	34
-350	4400N	350W	1490	840	2.5	90	0.05	36	30	20	33	2930	700	6	60	0.8	89	114	30	34
-300	4400N	300W	2450	150	6	140	0.4	66	44	40	41	2960	710	6	60	0.8	92	114	30	34
-250	4400N	250W	1650	230	6	130	0.1	37	73	10	20	2970	730	6	60	0.8	92	117	30	35
-200	4400N	200W										2980	750	7	60	0.9	93	117	30	36
-150	4400N	150W	8380	2270	10	330	1.6	132	43	50	92	2990	760	7	60	0.9	94	119	30	36
-100	4400N	100W	7060	230	15	70	1.7	234	74	140	12	3040	760	7	60	0.9	94	123	30	38
-50	4400N	50W	2210	1740	5	70	0.3	16	13	40	16	3050	770	7	70	0.9	94	125	30	39

0 4400N	0	2930	190	8	40	0.4	92	11	20	44	3060	780	7	70	1	95	126	30	40
50 4400N	50E	4440	730	2.5	70	0.4	125	16	10	62	3070	800	7	70	1	96	126	30	41
100 4400N	100E	1960	60	2.5	30	0.6	122	12	5	53	3080	800	7	70	1	97	127	30	41
150 4400N	150E	2260	150	2.5	100	0.5	178	14	5	72	3140	810	7	70	1.1	101	141	40	41
200 4400N	200E	1710	120	2.5	120	0.6	82	13	5	54	3180	830	8	70	1.1	104	141	40	41
300 4400N	250E										3190	840	8	80	1.1	105	142	40	41
300 4400N	300E	1070	360	10	40	0.6	40	91	20	41	3190	900	8	80	1.1	111	143	40	42
350 4400N	350E	1360	830	39	80	0.4	73	126	50	23	3200	940	8	80	1.2	111	149	40	42
400 4400N	400E	2540	4410	11	70	0.6	114	73	40	25	3270	970	8	90	1.2	111	149	40	43
450 4400N	450E	3200	680	11	60	0.2	44	20	40	39	3360	980	8	90	1.3	114	157	40	43
500 4400N	500E	6850	420	8	150	0.4	249	94	30	55	3430	1020	8	90	1.3	115	158	40	44
550 4400N	550E	4230	90	2.5	30	0.9	94	17	5	17	3460	1020	9	100	1.3	118	174	40	45
600 4400N	600E	3080	510	6	110	1.1	156	98	20	28	3480	1090	9	100	1.5	122	187	40	46
650 4400N	650E	5290	230	6	30	0.2	89	10	5	29	3870	1220	9	100	1.5	125	189	40	47
700 4400N	700E	5790	390	2.5	40	0.2	104	17	10	30	3980	1500	10	100	1.5	128	196	40	49
Line 4500N											4090	1500	10	100	1.6	128	200	40	50
-700 4500N	700W	1700	140	2.5	20	0.6	50	66	5	20	4100	1580	10	100	1.6	128	201	50	53
-650 4500N	650W	4950	100	2.5	30	0.4	31	52	5	22	4120	1740	10	100	1.6	132	206	50	53
-600 4500N	600W	3040	110	2.5	20	0.3	49	33	5	15	4230	1740	10	100	1.6	140	213	50	54
-550 4500N	550W	2250	260	5	40	0.7	65	114	5	20	4440	1850	11	110	1.6	142	224	50	54
-500 4500N	500W										4820	1860	11	120	1.6	143	234	50	55
-450 4500N	450W	1050	60	2.5	30	0.1	28	112	10	22	4870	1930	11	130	1.7	156	236	50	55
-400 4500N	400W	2990	210	7	40	0.2	37	27	40	29	4950	2140	11	130	1.7	165	239	50	55
-350 4500N	350W	3360	270	9	30	1.3	181	52	10	55	4960	2190	12	130	1.7	165	260	60	56
-300 4500N	300W	3980	90	8	90	0.4	38	24	20	47	5290	2260	12	140	1.7	169	265	70	56
-250 4500N	250W	2070	1500	2.5	100	0.6	74	30	40	41	5790	2270	12	140	1.8	178	267	70	58
-200 4500N	200W	4120	750	8	60	0.5	178	16	10	70	6320	2270	12	140	1.9	178	286	70	60
-150 4500N	150W	1690	70	7	60	0.05	29	11	30	17	6820	2360	13	140	1.9	181	292	70	61
-100 4500N	100W	8640	3320	20	1000	0.8	389	18	5	41	6850	2470	15	150	1.9	181	322	80	62
-50 4500N	50W	2920	810	17	360	0.5	57	32	20	34	7060	2490	15	150	2.2	185	329	100	65
0 4500N	0	6320	640	5	20	0.7	43	16	30	30	7380	2490	15	160	2.4	192	335	110	66
50 4500N	50E	3270	30	2.5	40	3.5	111	7	50	65	7720	2530	15	170	2.6	202	343	120	68
100 4500N	100E	14900	60	2.5	30	3.4	165	7	30	61	7980	2540	16	310	3.1	234	364	140	69
150 4500N	150E	3430	710	7	130	0.2	185	29	5	34	8380	2690	17	310	3.2	239	367	160	70
200 4500N	200E	11100	150	2.5	20	1.5	192	48	5	56	8640	2700	20	330	3.4	249	371	160	72
250 4500N	250E	7380	120	2.5	60	1.5	142	24	5	46	9280	3320	20	360	3.4	263	378	210	72
300 4500N	300E	9280	110	2.5	20	0.5	115	28	5	55	11100	4170	24	420	3.5	287	384	220	82
350 4500N	350E	4870	50	2.5	30	0.2	140	12	5	32	12300	4410	35	1000	3.9	389	390	230	92
400 4500N	400E	12300	140	7	50	1	43	29	30	94	14900	5390	39	1250	4.5	427	477	250	94
450 4500N	450E	280	80	2.5	130	0.05	21	15	20	11	21800	7110	67	2530	34.2	568	571	250	198
500 4500N	500E	620	70	2.5	100	0.05	30	6	5	12									
550 4500N	550E	7980	200	7	20	1.3	263	76	40	45									
600 4500N	600E	1230	800	6	50	0.05	57	142	20	11									
650 4500N	650E	2820	370	7	30	0.1	89	104	20	15	680	82.941	2.5	10.294	0.05	16.647	16.68	5	10.26
700 4500N	700E	2530	2700	2.5	60	0.05	72	200	5	22									
-250 4400N	250W-A	4820	190	11	30	1.7	202	102	230	66									
-450 4400N	450W-A	2080	320	2.5	40	1.1	128	149	5	29									

APPENDIX B

APPENDIX B

Mobile Metal Ion (MMI) Geochemical Assay Data for Elements Assayed

MMI Assay Data for 42 Elements Assayed; Lines 4500 & 4400 (2006 Survey)

MMI Assay Data for 13 Elements Assayed; Lines 4300, 4200 & 4100 (2007 Survey)

ANALYTE		Ag	As	Au	Bi	Ce	Co	Cu	Mo	Ni	Pb	U	W	Zn
DETECTION		1	10	0.1	1	5	5	10	5	5	10	1	1	20
UNITS		PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB
-700 4100N	700W	10	0.5	0.05	0.5	6	14	1500	2.5	33	0.5	5	0.5	50
-650 4100N	650W	14	0.5	0.05	0.5	22	15	1110	2.5	44	20	4	0.5	250
-600 4100N	600W	10	0.5	0.05	0.5	5	7	1400	2.5	22	10	1	0.5	80
-550 4100N	550W	10	0.5	0.05	0.5	7	8	1180	2.5	57	10	5	0.5	240
-500 4100N	500W	7	0.5	0.05	0.5	61	37	850	2.5	213	20	3	0.5	180
-450 4100N	450W	9	0.5	0.05	0.5	51	39	290	2.5	390	10	3	0.5	230
-400 4100N	400W	9	0.5	0.05	0.5	59	18	370	2.5	371	10	5	0.5	110
-350 4100N	350W	11	0.5	0.05	0.5	44	23	260	2.5	477	0.5	8	0.5	60
-300 4100N	300W	6	0.5	0.05	0.5	37	23	230	2.5	367	0.5	5	0.5	90
-250 4100N	250W	15	0.5	0.05	0.5	14	11	330	2.5	384	0.5	7	0.5	70
-200 4100N	200W	17	0.5	0.3	0.5	27	43	2150	2.5	292	30	3	0.5	200
-150 4100N	150W	17	10	0.2	0.5	29	17	1440	7	60	10	4	0.5	970
-100 4100N	100W	13	0.5	1.3	0.5	21	24	1000	2.5	102	10	3	0.5	480
-50 4100N	50W	56	0.5	0.8	0.5	13	21	660	2.5	59	30	2	0.5	7110
0 4100N	0	28	10	1.2	0.5	82	94	990	6	378	20	7	0.5	1020
50 4100N	50E	27	0.5	0.9	0.5	76	111	650	8	93	20	3	0.5	290
100 4100N	100E	60	10	2.2	0.5	22	27	930	5	53	100	4	0.5	210
150 4100N	150E	5	0.5	0.1	0.5	238	21	620	2.5	117	60	7	0.5	780
200 4100N	200E	10	10	0.2	0.5	124	93	1000	2.5	260	100	13	0.5	4170
250 4100N	250E	8	0.5	0.05	0.5	65	39	560	2.5	68	40	6	0.5	200
300 4100N	300E	53	30	1.7	0.5	2.5	26	630	2.5	50	30	4	0.5	220
350 4100N	350E	10	30	0.7	0.5	2.5	165	1190	12	54	10	5	0.5	60
400 4100N	400E	25	40	0.5	0.5	2.5	35	670	9	114	0.5	6	0.5	780
450 4100N	450E	58	70	1.8	0.5	2.5	128	3870	16	158	310	6	0.5	1930
500 4100N	500E	22	30	0.9	0.5	2.5	588	21800	15	127	20	18	0.5	430
550 4100N	550E	68	70	1.5	0.5	2.5	59	2220	7	56	1250	7	0.5	1090
600 4100N	600E													
650 4100N	650E	26	0.5	0.3	0.5	2.5	12	630	2.5	39	10	4	0.5	940
700 4100N	700E	40	40	3.1	0.5	8	67	3180	20	187	20	7	0.5	300
-700 4200N	700W	11	0.5	0.05	0.5	26	49	1160	2.5	55	20	6	0.5	80
-650 4200N	650W													
-600 4200N	600W	16	0.5	0.1	0.5	37	36	1460	2.5	265	30	7	1	200
-550 4200N	550W	7	0.5	0.05	0.5	98	31	1040	2.5	239	20	9	1	100
-500 4200N	500W	11	0.5	0.05	0.5	49	15	640	2.5	206	20	5	0.5	230
-450 4200N	450W	6	0.5	0.05	0.5	98	13	330	2.5	267	10	11	0.5	190
-400 4200N	400W	26	0.5	0.4	0.5	54	37	2050	2.5	571	0.5	15	0.5	40
-350 4200N	350W	7	10	0.05	0.5	12	15	1530	2.5	224	20	8	0.5	320
-300 4200N	300W	29	20	1.6	0.5	24	36	4100	2.5	201	30	6	0.5	180
-250 4200N	250W	24	110	0.8	0.5	5	22	2530	2.5	75	10	5	0.5	1020
-200 4200N	200W	36	210	1.1	0.5	5	61	3190	2.5	66	0.5	3	0.5	1220
-150 4200N	150W	21	160	0.5	0.5	2.5	82	2640	6	85	10	2	0.5	1850
-100 4200N	100W	43	100	2.6	0.5	2.5	143	3140	6	78	70	5	0.5	2260
-50 4200N	50W	69	250	3.4	0.5	2.5	78	2960	2.5	123	10	10	0.5	690
0 4200N	0	54	10	1.2	0.5	13	71	3070	2.5	13	40	3	0.5	700
50 4200N	50E	21	0.5	0.3	0.5	42	95	1880	2.5	16	50	4	0.5	200
100 4200N	100E	72	20	1.9	0.5	16	118	1920	2.5	31	30	4	0.5	170
150 4200N	150E	11	0.5	0.05	0.5	22	34	490	2.5	12	150	3	0.5	130
200 4200N	200E	18	0.5	0.05	0.5	62	96	1110	2.5	149	60	7	0.5	1860
250 4200N	250E	28	0.5	1.1	0.5	50	92	1290	2.5	157	140	7	0.5	5390
300 4200N	300E	49	20	1.9	0.5	65	128	2150	12	143	2530	7	0.5	2360
350 4200N	350E	31	30	1.6	0.5	2.5	101	3460	24	114	100	3	0.5	2490
400 4200N	400E	28	160	0.8	0.5	7	105	3060	10	174	20	4	0.5	2190
450 4200N	450E	15	50	0.4	0.5	2.5	87	2010	13	111	70	6	0.5	1560
500 4200N	500E	42	70	0.9	0.5	2.5	78	3460	12	125	170	5	0.5	2270
550 4200N	550E	21	120	1.6	0.5	2.5	427	2980	67	335	100	5	0.5	2540
600 4200N	600E	50	50	4.5	0.5	12	181	7720	6	343	140	6	0.5	2490
650 4200N	650E													
700 4200N	700E	19	20	0.1	0.5	9	53	2020	12	62	0.5	7	0.5	90
-700 4300N	700W	9	0.5	1	0.5	143	15	550	2.5	236	20	13	0.5	90
-650 4300N	650W	11	0.5	0.05	0.5	6	11	1130	2.5	43	0.5	2	0.5	80
-600 4300N	600W	20	0.5	0.5	0.5	67	47	2710	2.5	329	30	6	0.5	230
-550 4300N	550W	17	0.5	0.05	0.5	15	7	320	2.5	117	20	3	0.5	510
-500 4300N	500W	14	0.5	0.05	0.5	98	25	700	2.5	196	20	6	0.5	90
-450 4300N	450W	38	0.5	1.6	0.5	61	287	6820	2.5	286	20	6	0.5	120
-400 4300N	400W	9	0.5	0.05	0.5	52	8	1600	2.5	364	30	2	0.5	2690
-350 4300N	350W	22	10	0.3	0.5	62	94	4960	2.5	322	20	15	0.5	190
-300 4300N	300W	9	50	0.1	0.5	2.5	6	410	5	78	40	4	0.5	900
-250 4300N	250W	26	80	1.9	0.5	18	10	1510	10	75	30	3	0.5	210
-200 4300N	200W	82	10	3.9	0.5	2.5	55	580	2.5	112	30	7	0.5	70
-150 4300N	150W	11	10	0.05	0.5	24	38	1380	2.5	66	0.5	2	0.5	310
-100 4300N	100W	36	40	0.1	0.5	6	16	2580	2.5	21	0.5	2	0.5	1500
-50 4300N	50W	17	30	0.05	0.5	12	37	1710	2.5	46	60	3	0.5	980
0 4300N	0	25	20	0.05	0.5	31	14	1130	2.5	13	160	4	0.5	680

ANALYTE	Al	Ba	Ca	Cd	Cr	Dy	Er	Eu	Fe	Gd	La	Li	Mg	Nb	Nd	Pd	Pr	Rb	Sb	Sc	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Y	Yb	Zr
DETECTION	1	10	10	10	100	1	0.5	0.5	1	1	1	5	1	0.5	1	1	1	5	1	5	1	1	10	1	1	10	0.5	3	0.5	5	1	5
UNITS	PPM	PPB	PPM	PPB	PPB	PPB	PPB	PPB	PPM	PPB	PPB	PPB	PPM	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB

50	4300N	50E	35		20	0.05		0.5			25	19		2340									2.5			24	140																3	0.5			380	
100	4300N	100E	42		0.5	0.2		0.5			13	54		1900									5			14	40																5	0.5			760	
150	4300N	150E	32		20	0.2		0.5			37	111		2910									2.5			40	90																10	0.5			2140	
200	4300N	200E	30		40	0.2		0.5			53	49		1960									2.5			58	80																12	0.5			660	
250	4300N	250E	20		20	0.2		0.5			74	40		1390									2.5			141	60																6	0.5			770	
300	4300N	300E	25		40	3.2		0.5			25	87		900									11			141	20																2	0.5			240	
350	4300N	350E	198		220	34.2		0.5			2.5	239		2970									15			234	0.5																3	0.5			50	
400	4300N	400E	10		60	0.2		0.5			20	18		1600									8			89	60																1	0.5			350	
450	4300N	450E	31		30	2.4		0.5			2.5	169		2300									10			93	0.5																1	0.5			140	
500	4300N	500E	34		250	1.7		0.5			2.5	97		3190									15			189	0.5																1	0.5			150	
550	4300N	550E	15		50	0.05		0.5			22	25		1950									5			77	100																5	0.5			800	
600	4300N	600E	16		70	0.3		0.5			43	37		3050									6			126	310																8	0.5			2530	
650	4300N	650E	28		20	0.2		0.5			6	25		1050									9			74	420																6	0.5			1740	
700	4300N	700E	41		40	0.05		0.5			2.5	34		1550									35			57	80																8	0.5			2470	
-450	4400N	450W	43	2	5	1.6	1040	0.5	840	0.5	9	61	0.5	4090	57	45.6	7.1	3	48	11	2.5	141	2.5	<0.5	37	119	30	0.5	6	5	0.5	8	18	0.5	5310	0.5	7	0.5	0.5	<3	<0.5		6	0.5	227	39	200	5
-400	4400N	400W	29	25	30	1	240	0.5	500	50	17	21	0.5	2050	14	9.1	3.2	23	15	9	2.5	16	2.5	<0.5	24	20	60	0.5	5	44	0.5	21	9	0.5	1090	0.5	2	0.5	1.4	37	<0.5		6	0.5	71	8	470	40
-350	4400N	350W	33	13	20	0.05	530	0.5	660	40	31	36	0.5	1490	31	20.4	6.1	14	31	14	2.5	47	2.5	<0.5	44	30	90	0.5	8	26	0.5	18	17	0.5	1990	0.5	4	0.5	2.4	17	<0.5		7	0.5	160	19	840	43
-300	4400N	300W	41	12	40	0.4	200	0.5	750	20	18	66	0.5	2450	22	16.4	4.1	7	21	3	2.5	70	6	<0.5	22	44	140	0.5	4	14	0.5	9	11	0.5	2070	0.5	3	0.5	0.7	4	<0.5		3	0.5	118	15	150	22
-250	4400N	250W	20	21	10	0.1	1390	0.5	850	0.5	85	37	0.5	1650	50	36.3	9.2	13	51	42	2.5	72	6	<0.5	100	73	130	0.5	19	19	0.5	27	31	0.5	4070	0.5	6	0.5	3.8	8	<0.5		11	1	212	31	230	33
-200	4400N	200W																																														
-150	4400N	150W	92	15	50	1.6	120	0.5	930	110	2.5	132	0.5	8380	4	3.2	1.1	8	5	0.5	2.5	19	10	<0.5	2	43	330	0.5	0.5	14	0.5	10	2	0.5	1390	0.5	0.5	0.5	<0.5	8	<0.5		2	0.5	26	3	2270	26
-100	4400N	100W	12	36	140	1.7	190	0.5	1000	30	8	234	0.5	7060	15	10.5	3.3	13	13	2	2.5	32	15	<0.5	12	74	70	0.5	2	23	0.5	16	6	0.5	1240	0.5	2	0.5	<0.5	12		0.6	4	0.5	62	10	230	30
-50	4400N	50W	16	27	40	0.3	110	0.5	420	50	10	16	0.5	2210	4	2.4	1.2	15	6	7	2.5	15	5	<0.5	14	13	70	0.5	4	26	0.5	5	4	0.5	770	0.5	0.5	0.5	1.4	46	<0.5		8	0.5	20	2	1740	40
0	4400N	0	44	40	20	0.4	270	0.5	520	20	17	92	0.5	2930	13	9.3	3.2	12	14	7	2.5	35	8	<0.5	21	11	40	0.5	4	24	0.5	20	8	0.5	1710	0.5	2	0.5	1.4	22	<0.5		10	0.5	68	8	190	37
50	4400N	50E	62	20	10	0.4	470	0.5	640	40	49	125	0.5	4440	23	15.9	5.1	13	26	22	2.5	64	2.5	<0.5	51	16	70	0.5	10	10	0.5	23	15	0.5	3670	0.5	3	0.5	4.7	14	<0.5		5	0.5	118	14	730	35
100	4400N	100E	53	37	5	0.6	400	0.5	700	0.5	16	122	0.5	1960	19	12.5	5.1	8	20	7	2.5	51	2.5	<0.5	27	12	30	0.5	5	13	0.5	21	11	0.5	3610	0.5	3	0.5	0.9	12	<0.5		4	0.5	93	11	60	32
150	4400N	150E	72	88	5	0.5	450	0.5	390	30	29	178	0.5	2260	27	23.1	4.4	24	21	12	2.5	38	2.5	<0.5	32	14	100	0.5	7	62	0.5	63	12	0.5	1690	0.5	3	0.5	1.7	19	<0.5		6	1	154	22	150	48
200	4400N	200E	54	48	5	0.6	980	0.5	640	20	37	62	0.5	1710	38	28.3	7	14	35	23	2.5	57	2.5	<0.5	57	13	120	0.5	11	60	0.5	55	21	0.5	2250	0.5	5	0.5	2.4	17	<0.5		12	0.5	201	26	120	58
300	4400N	250E																																														
300	4400N	300E	41	3	20	0.6	210	0.5	960	20	7	40	0.5	1070	16	14.1	2	5	13	3	2.5	111	10	<0.5	14	91	40	0.5	3	16	0.5	7	6	0.5	1900	0.5	2	0.5	1.9	<3	<0.5		8	0.5	73	14	360	8
350	4400N	350E	23	7	50	0.4	160	0.5	940	50	10	73	0.5	1360	5	3.7	1.3	7	6	0.5	2.5	94	39	<0.5	7	126	80	0.5	2	76	0.5	6	4	0.5	1460	0.5	0.5	0.5	1.9	13	<0.5		4	0.5	27	4	830	26
400	4400N	400E	25	17	40	0.6	210	0.5	720	60	33	114	0.5	2540	31	24.7	5.5	15	30	18	6	109	11	<0.5	45	73	70	0.5	8	16	0.5	32	16	0.5	2130	0.5	4	0.5	4.5	16	<0.5		6	0.5	170	25	4410	33
450	4400N	450E	39	45	40	0.2	210	0.5	630	60	9	44	0.5	3200	7	5.6	1.6	17	7	4	2.5	48	11	<0.5	9	20	60	0.5	2	35	0.5	19	4	0.5	1560	0.5	0.5	0.5	0.9	22	<0.5		4	0.5	39	5	660	32
500	4400N	500E	55	14	30	0.4	370	0.5	820	20	9	249	0.5	6850	11	9.5	1.7	9	8	5	2.5	94	8	<0.5	11	94	150	0.5	3	9	0.5	14	4	0.5	4390	0.5	1	0.5	1.2	6	<0.5		4	0.5	63	9	420	20
550	4400N	550E	17	33	5	0.9	380	0.5	790	0.5	30	94	0.5	4230	29	21.5	5.9	21	30	16	12	53	2.5	<0.5	48	17	30	0.5	9	8	0.5	65	16	0.5	5660	0.5	4	0.5	1.5	16	<0.5		3	0.5	146	21	90	32
600	4400N	600E	28	19	20	1.1	680	0.5	1080	30	25	156	0.5	3080	20	14	3.8	12	20	9	2.5	49	6	<0.5	28	98	110	0.5	5	26	0.5	15	11	0.5	2370	0.5	3	0.5	2.5	12	<0.5		7	0.5	102	13	510	34
650	4400N	650E	29	19	5	0.2	820	0.5	580	10	65	69	0.5	5290	25	17.3	7.1	14	28	27	2.5	56	6	<0.5	58	10	30	0.5	11	45	0.5	50	17	0.5	5930	0.5	3	0.5	3.1	13	<0.5		8	0.5	121	14	230	42
700	4400N	700E	30	14	10	0.2	1060	0.5	720	30	56	104	0.5	5790	27	20.2	6.4	13	30	26	2.5	88	2.5	<0.5	57	17	40	0.5	11	20	0.5	39	17	0.5	6250	0.5	4	0.5	3.2	9	<0.5		6	1	129	18	390	29
-700	4500N	700W	20	3	5	0.6	510	0.5	630	0.5	2.5	50	0.5	1700	21	17	2.8	3	17	2	2.5	119	2.5	<0.5	13	66	20	0.5	3	7	0.5	5	7	0.5	3880	0.5	2	0.5	1	3	<0.5		4	0.5	83	15	140	6
-650	4500N	650W	22	26	5	0.4	380	0.5	710	10	5	31	0.5	4950	9	7.4	1.8	7	8	4	2.5	78	2.5	<0.5	11	52	30	0.5	3	47	0.5	9	5	0.5	2150	0.5	1	0.5	1.2	7	<0.5		2	0.5	41	7	100	12
-600	4500N	600W	15	4	5	0.3	670	0.5	830	0.5	12	49	0.5	3040	13	9.6	2.4	5	10	5	2.5	67	2.5	<0.5	13	33	20	0.5	3	7	0.5	11	5	0.5	6060	0.5	1	0.5	1.7	<3	<0.5		2	0.5	45	10	110	8
-550	4500N	550W	20	3	5	0.7	420	0.5	800	0.5	23	65	0.5	2250	49	39.8	7.4	4	42	15	2.5	92	5	<0.5	52	114	40	0.5	9	16	0.5	6	21	0.5	2940	0.5	6	0.5	3	<3	<0.5		4	1	186	38	260	10
-500	4500N	500W																																														
-450	4500N	450W	22	2	10	0.1	570	0.5	800	10	18	28	0.5	1050	42	30.7	6.4	4	41	14	2.5	161	2.5	<0.5	51	112	30	0.5	8	5	0.5	8	20	0.5	3260	0.5	5	0.5	1.1	<3	<0.5		14	0.5	176	27	60	15
-400	4500N	400W	29	16	40	0.2	280	0.5	730	20	18	37	0.5	2990	48	34.2	8.3	14	44	7	2.5	44	7	<0.5	44	27	40	0.5	7	23	0.5	38	22	0.5	1270	0.5	6	0.5	0.8	8	<0.5		3	0.5	263	32	210	30
-350	4500N	350W	55	18	10	1.3	130	0.5	570	40	22	181	0.5	3380	30	24.9	4.1	5	23	1	2.5	49	9	<0.5	18	52	30	0.5	3	13	0.5	14	11	0.5	1800	0.5	3	0.5	0.8	<3	<0.5		3	0.5	145	25	270	12
-300	4500N	300W	47	23	20	0.4	300	0.5	650	0.5	19	38	0.5	3980	40	27.3	7.5	14	38	11	2.5	29	6	<0.5	44	24	90	0.5	7	50	0.5	39	20	0.5	950	0.5	5	0.5	1.3	12	<0.5		7	0.5	218	24	90	36
-250	4500N	250W	41	15	40	0.8	240	0.5	800	20	2.5	74	0.5	2070	5	4	0.6	7	4	0.5	2.5	16	2.5	<0.5	0.5	30	100	0.5	0.5	39	0.5	5	1	0.5	2130	0.5	0.5	0.5	<0.5	7	<0.5		3	0.5	23	4	1500	26
-200	4500N	200W	70	11	10	0.5	380	0.5	630	20	20	176	0.5	4120	13	8.7	3.4	8	14	7	2.5	72	8	<0.5	21	16	60	0.5	4	11	0.5	14	8	0.5	2890	0.5	2	0.5	1.5	11	<0.5		6	0.5	71	8	750	32
-150	4500N	150W	17	52	30	0.05	320	0.5	390	20	34	29	0.5	1690	16	11.5	4.3	28	17	16	2.5	31	7	<0.5	34	11	60	0.5	7	48	0.5	34	11	0.5	1300	0.5	2	0.5	2.4	32	<0.5		5	0.5	85	10	70	41
-100	4500N	100W	41	17	5	0.8	1130	0.5	660	40	41	389	0.5	8640	22	17	4.6	9	24	23	2.5	66	20	<0.5	45	18	1000	0.5	9	43	0.5	21	14	0.5	8320	0.5	3	0.5	1.4	7	<0.5		10	0.5	115	16	3320	31
-50	4500N	50W	34	17	20	0.5	400	0.5	690	40	34	57	0.5	2920	62	47.5	8.1	9	56	17	6	103	17	<0.5	64	32	360	0.5	10	16	0.5	8	27	0.5	2640	0.5	8	0.5	4.4	15	<0.5		5	0.5	342	47	810	35
0	4500N	0	30	14	30	0.7	160	0.5	680	70	2.5	43	0.5	6320	3	2.3	1	9	3	0.5	2.5	8	5	<0.5	0.5	16	20	0.5	0.5	18	1	8	1	0.5	770	0.5	0.5	0.5	<0.5	8	<0.5		1	0.5	18	2	640	30
50	4500N	50E	65	52	50	3.5	180	0.5	500	0.5	12	111	0.5	3270	14	9.8	4.5	7	14	5	2.5	13	2.5	<0.5	16	7	40	0.5	3	20	0.5	20	7	0.5	1170	0.5	2	0.5	0.7	13	<0.5		4	0.5	81	8	30	32
100	4500N	100E	61	51	30	3.4	250	0.5	400	10	20	165	0.5	14900	10	6.7	2.9	11	11	10	2.5	21	2.5	<0.5	20	7	30	0.5	4	30	1	20	7	0.5	1030	0.5	1	0.5	1.2	14	<0.5		6	0.5	52	6	60	36
150	4500N	150E	34	24	5	0.2	1410	0.5	730	20	19	185	0.5	3430	29	25.8	3.5	8	22	11	2.5	58	7	<0.5	27	29	130	0.5	6	35	0.5	30	10	0.5	4520	0.5	3	0.5	0.9	4	<0.5		7	0.5	129	25	710	25
200	4500N	200E	56	3	5	1.5	550	0.5	780	0.5	12	192	0.5	11100	30	28.9	3.6	6	20	5	2.5	88	2.5	<0.5	17	48	20	0.5	3	19	0.5	38	8	0.5	3370	0.5	3	0.5	0.7	<3	<0.5		3	0.5	136	31	150	11
250	4500N	250E	46	39	5	1.5	680	0.5	620	0.5	28	142	0.5	7380	25	17.8	5.5	14	26	19	2.5	77	2.5	<0.5	49	24	60	0.5	9	31	0.5	59	16	0.5	3110	0.5	3	0.5	1.9	16	<0.5		9	0.5	125	15	120	55
300	4500N	300E	55	8	5	0.5	410	0.5	770	0.5	48	115	0.5	9280	27	17	8.5	8	37	28	2.5	105	2.5	<0.5	62	28	20	0.5	14	11	0.5	35	25	0.5	4470	0.5	4	0.5	2.3	6	<0.5		6	0.5	129	14	110	33
350	4500N	350E	32	31	5	0.2	460	0.5	580	0.5	27	140	0.5	4870	15	9.5	4.3	15	17	10	2.5	55	2.5	<0.5	32	12	30	0.5	6	43	0.5	53	12	0.5	2670	0.5	2	0.5	1.8	14	<0.5		4	0.5	70	8	50	38
400	4500N	400E	94	23	30	1	230	0.5	870	20	7	43	0.5	12300	13	9.5	2.9	16	13	4	2.5	53	7	<0.5	16	29	50	0.5	3	26	0.5	25	7	0.5	1510	0.5	2	0.5	0.6	17	<0.5		3	0.5	77	9	140	33
450	4500N	450E	11	86	20	0.05	190	0.5	290	0.5	38	21	0.5	280	11	7.8	2.3	31	11	14	2.5	18	2.5	<0.5	29	15	130	0.5	6	45	0.5	40	6	0.5	690	0.5	1	0.5	1.9	69	<0.5		4	0.5	55	7	60	50
500	4500N	500E	12	64	5	0.05	330	0.5	330	10	20	30	0.5	620	9	6.5	1.8	15	9	8	2.5	29	2.5	<0.5	17	6	100	0.5	4	52	0.5	34	6	0.5	660	0.5	1	0.5	1.1	19	<0.5		3	0.5	45	6	70	36
550	4500N	550E	45	10	40	1.3	400	0.5	920	30	2.5	263	0.5	7980	6	4.7	0.9	8	5	0.5	2.5	78	7	<0.5	4	76	20	0.5	1	37	0.5	17	3	0.5	2440	0.5	0.5	0.5	<0.5	7	<0.5		5	0.5	27	5	200	11
600	4500N	600E	11	16	20	0.05	940	0.5	750	20	81	57	0.5	1230	54	33.7	11	19	56	31	6	84	6	<0.5	99	142	50	0.5	16	41	0.5	29	36	0.5	1950	0.5	7	0.5	3.6	24	<0.5		4	0.5	227	30	800	38
650	4500N	650E	15	9	20	0.1	1040	0.5	840	20	38	89	0.5	2820	39	29.3	5.5	9	33	12	2.5	70	7	<0.5	45	104	30	0.5	8	26	0.5	16	17	0.5	2580	0.5	5	0.5	1.2	5	<0.5		8	0.5	155	26	370	22
700	4500N	700E	22	14	5	0.05	1150	0.5	650	60	38	72	0.5	2530	36	31.2	4.3	10	25	14	2.5	47	2.5	<0.5	34	200	60	0.5	7	52	0.5	38	13	0.5	2370	0.5	4	0.5	1.4	3	<0.5		4	0.5	134	32	2700	28
-250	4400N	250W-A	66	11	230	1.7	180	0.5	1120	10	2.5	202	0.5	4820	9	7.3	1.6	10	8	0.5	2.5	49	11	<0.5	6	102	30	0.5	1	10	2	13	4	0.5	2260	0.5	1	0.5	0.5	10	<0.5		3	0.5	43	7	190	26
-450	4400N	450W-A	29	2	5	1.1	1070	0.5	790	20	11	128	0.5	2060	65	61.1	6.6	3	48	9	2.5	131	2.5	<0.5	31	149	40	0.5	5	17	0.5	9	16	0.5	5000	0.5	7	0.5	0.7	<3	<0.5		6	0.5	244	57	320	2.5