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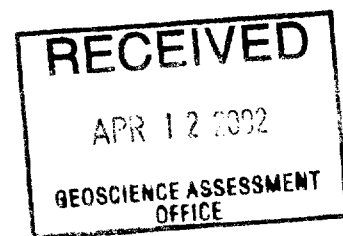
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# REPORT OF WORK 2000 SHAKESPEARE PROPERTY

Shakespeare Township

Ontario  
NTS 411/5

for  
URSA MAJOR MINERALS INCORPORATED



Toronto, Ontario  
June 5, 2001



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## 1.0 INTRODUCTION

The Shakespeare property consists of 28 patented and leased mining claims in Shakespeare Township, located 44 miles (70 km) west-southwest of Sudbury, Ontario. Access to the property is by boat from Agnew Lake Lodge to the north side of Agnew Lake then a further 1 mile (1.6 km) by bush trail to the Shakespeare Deposit.

The mineralized zone associated with the Shakespeare deposit lies entirely within a gabbro sill within quartzite and tonalite host rocks. The zone is exposed as a gossan at surface over a northeast strike length of 1800 feet (549 m) and varies in width from 79 to 200 feet (24 to 61 m) with an average of 100 feet (30 m). The deposit dips steeply to the north at approximately  $-80^{\circ}$  where it is in contact with the Mississagi quartzites. The mineralized zone forms a rusty area, the result of oxidation of disseminated sulphides, largely pyrrhotite. The total sulphide content for the mineralized zone is estimated at 5%. This mineralization consists of blebs and stringers of pyrrhotite, pyrite, chalcopyrite, cobaltite and pentlandite with minor gersdorffite.

The Shakespeare deposit has been estimated by Falconbridge Limited ("Falconbridge") to contain a near-surface Inferred Resource of 1.9 million tonnes grading 0.36% nickel, 0.42% copper, 0.44 g/t palladium, 0.40 g/t platinum and 0.23 g/t gold. The mineralization is open on strike and at depth.

During the summer and fall of 2000 Ursa Major Minerals Incorporated (Ursa Major) completed prospecting, geologic mapping, channel sampling, recut the previous Falconbridge grid, and completed magnetometer surveying and five IP/Resistivity test lines.

Ursa Major surface sampling confirms the precious metal values and indicates mineralization is wider at surface than previously indicated. Results of platinum, palladium, gold, nickel, copper, cobalt assays on 147 channel samples indicate a sulphide mineralized zone with widths up to 150 feet over a strike length of more than 1200 feet. The length weighted average assay value from 108 channel samples from the mineralized zone is 0.41 g/t palladium, 0.38 g/t platinum, 0.20 g/t gold, 0.36% copper, 0.23% nickel and 0.016% cobalt. These numbers confirm the previous Falconbridge results although the surface channel sample results are lower than the calculated resource grades. Additional work is required to determine if the lower nickel and copper values from channel samples are a result of surface weathering. Samples from L6W were also analyzed for rhodium returning assays averaging approximately 20 ppb.

Results of the magnetometer and IP geophysical surveys indicate that the known mineralized zone appears to be defined by strong IP chargeability, and low resistivity, and high magnetic trends. These geophysical features extend 1400 ft to the south east and 1000 ft to the northeast. The geophysical response to the northeast appears particularly strong. Grab sampling in this area has returned values as high as 145 ppb Au, 231 ppb Pt and 173 ppb Pd. Drilling has been completed between L2W to L29W while these geophysical trends and grab sampling results indicate the mineralization may continue to the east as far as L12E. These geophysical trends remain open along strike in both directions.

Ursa Major is also exploring high-grade PGM occurrences on the adjacent 86 claim unit Porter Township property where values in excess of 10 g/t PGM's in channel samples have been obtained. The Company considers that the Porter PGM occurrences are hosted in the same layered gabbro sill as the Shakespeare deposit. Ursa Major has total property holdings of 126 claim units in this area which cover over 15 kilometres of strike length along the mineralized layered gabbro intrusion.

The units of measurement used in this report are imperial as all the previous work completed on the property was carried out using imperial units of measurement. In order for consistency and to prevent any errors in converting units, imperial measurements will be used. Where applicable the imperial units have been converted into metric and reported in brackets, ie. 855 ft (310 m).

## 2.0 LOCATION ACCESS AND TOPOGRAPHY

The Shakespeare property consists of 28, patented and leased mining claims in Shakespeare Township, immediately north and east of Agnew Lake. The property is located 44 miles (70 km) west-southwest of Sudbury, Ontario (**Figure 1**). The closest towns are Webbwood, which is 5.5 miles southwest of the property, and Espanola, which is 7 miles southeast. The property is situated on N.T.S. 411 5 near Latitude 46°21'00"N and Longitude 81°49'47"W.

Access to the Shakespeare property is by a network of secondary all weather roads extending north from the Trans Canada Highway (Hwy # 17) from Webbwood to Agnew Lake Lodge, 6.5 miles (11 km). Then 1 mile (1.6 km) by boat to the north side of Agnew Lake and a further 1 mile (1.6 km) by bush trail to the zone.

The topography on the property is rugged with abrupt ridges and valleys ranging from 895 to 1250 feet and generally averaging about 1000 feet (300 m) above sea level. The average topographic relief is about 300 feet (90 m). Bedrock outcrops are common, and with the exception of areas of extensive drift cover, which constitutes a large part of the area.

The principal drainage channel is the Spanish River. The Spanish River and its tributaries drain the major part of the property. The part of the river near the property has been dammed up for hydroelectric power and has resulted in the creation of Agnew Lake. Numerous private cottages and several commercial tourist operators are located on Agnew Lake.

Much of the general area is cover by timber resources and is presently or soon to be logged, consisting of second growth birch, poplar, oak, maple, jackpine and spruce. Also, there are several farms in southern Shakespeare Township.

## 3.0 PROPERTY CLAIMS

A list of all staked, leased and patented mining claims is summarised in Appendix I.

Falconbridge Limited (Falconbridge) owns the 28 leased and patented mining claims in Shakespeare Township (**Figure 2**). Ursa Major can earn a 51% interest in the Shakespeare property from Falconbridge by issuing 150,000 shares and completing \$600,000 in exploration expenditures over a three year period. Ursa Major has the further option to increase its interest to 75% by issuing an additional 150,000 shares and completing an additional \$600,000 in exploration expenditure.



## 4.0 PAST WORK

The earliest known work on the property was by the Sudbury Shakespeare Gold Copper Syndicate in the 1920's. The syndicate carried out prospecting and trenching. In 1941, Frobisher Exploration staked the property. Frobisher carried out a plan table survey, geological mapping and diamond drilling.

Between 1942 and 1948, Falconbridge completed geological mapping, electromagnetic surveys, and 15 diamond drill holes. Falconbridge acquired the claims in 1947 and between 1949 to 1953, completed geological mapping, magnetometer surveys; radioactive surveys and 12 diamond drill holes totaling 6000 feet (1800 m).

Interest in the property was reactivated in 1985 as a result of improved metal price and in particular higher precious metal prices (Au, Pt and Pd). Falconbridge commissioned a number of economic and metallurgical studies on the property and conducted a 16 diamond drill hole program totaling 3,380 feet to intersect the near surface zone on 100-foot centers. In 1986, Falconbridge completed a drill program consisting of 4 holes totaling 5,304 feet. No further physical work has been undertaken since 1986.

Three resource calculations have been completed on the property. The most recent was completed by Falconbridge in 1985 and estimated the deposit to contain an Inferred Resource of 2,081,373 tons of 0.36% Ni, 0.42% Cu, 0.22 g/t Au, 0.40 g/t Pt, and 0.44 g/t Pd.

## 5.0 REGIONAL GEOLOGY

The regional geological setting has been well described by Card and Palonen (1976), Robertson (1976), Ginn (1961), Card (1965) and Vogel (1996). The description of the ore deposits in the belt and style of mineralization has also been well documented by Thompson (1985), and Lightfoot and Naldrett (1996). Detailed studies of the Shakespeare deposit has been described by Wolfe (1941), Davidson (1942), Lewis (1949), Lochhead (1951), Clarke (1985) and Thompson (1986). The following account presents a brief summary description of the main geological features and tectonic episodes affecting the southern margin of the Superior Structural Province.

The Dunlop-Shakespeare-Baldwin-Porter Township area located along the margin of the Superior Province in the central Ontario region of the Canadian Shield has had a prolonged evolutionary history involving the interaction between three structural provinces including the Superior, Southern and Grenville (**Figure 3**). **Figure 4** summarises the stratigraphic, tectonic and metallogenic events for this period of time during the Precambrian. The rocks in the area of Precambrian age, include Early Precambrian (Archean) felsic plutonic rocks of the Superior Province, and Middle Precambrian (Proterozoic) supracrustal rocks of the Huronian Supergroup of the Southern Province. Mafic intrusions of several ages cut the plutonic and supracrustal rocks.

The Early Proterozoic magmatic event includes the East Bull Lake suite of layered intrusions of which the better known East Bull Lake, Agnew Lake and River Valley are a part of. They typically occur near the boundary between the Archean Superior Province and the Early Proterozoic Southern Province, and appear to have been emplaced as large sills between the two provinces (**Figure 5**).

## 6.0 MINERAL POTENTIAL IN AREA

Within the area of interest a small amount of gold has been produced from one deposit, known as the Shakespeare Mine. Numerous occurrences of copper, nickel and PGE's also exist within the area. Copper and nickel bearing sulphide mineralization occurs in what has been described in the past as Nipissing Diabase and in Huronian metavolcanic and metasedimentary rocks. Various companies and individuals have explored these occurrences in the past.

Gold valued at \$38,327 (1976) was produced from the Shakespeare Mine between 1905 and 1907 (Card, 1976). The sulphide deposit, owned by Falconbridge, in northeastern Shakespeare Township has a significant resource potential for Cu, Ni, and PGE's. The potential of the other base metal occurrences in the mafic intrusions and Huronian metavolcanic and metasedimentary rocks is under going renewed attention.

During the late 1990's to the present, there has been an increased attention by junior and major mining companies to the PGE potential in the layered mafic intrusions in the area. This has been fuelled by the recent increase in commodity prices for platinum and palladium. The majority of the attention has been given to the basal sections of the East Bull Lake, Agnew Lake and River Valley intrusions. A number of PGE occurrences have been found in the area associated with the Agnew Lake Intrusion and what people have described as Nipissing Gabbro.

## 7.0 PROPERTY GEOLOGY

The property is underlain predominantly by a medium-grained quartz gabbro intrusion and the Huronian-aged Mississagi quartzite that strikes east-northeast and dip steeply to the north at approximately 80° (**Figure 6**). This intrusion has been interpreted by the Ontario Geological Survey (OGS) (Card, 1976) as Nipissing Diabase however Thompson, 1986 & Vogel, 1996 think the gabbro body maybe related to the layered mafic intrusive series of the Agnew Lake Intrusion.

The intrusion is predominantly quartz gabbro along the northern contact, with a gabbro central portion and meta-pyroxenite along the southern contact. The gabbroic rocks are dark grey, fine to medium grained and vary from massive to strongly sheared. Granophyre is locally present as patches and dikes. The gabbro rocks are composed of an hypidiomorphic equigranular aggregate of plagioclase, hornblende, quartz, biotite, ilmenite and apatite. Minor secondary minerals include actinolite, clinozoisite, epidote, chlorite, sericite, leucoxene and carbonate. On the property the intrusion can be traced along strike for a mile and is up to 1600 feet wide. The upper and lower contacts are with Huronian-aged Mississauga quartzite. The sedimentary unit is dominantly quartzite of varying purity.

Three faults cut the area which appear to be splays of the Hunter Lake Fault are visible as lineaments on aerial photos, though not so readily recognizable on the ground, with a number of small shear zones that are undoubtedly subsidiary to the main faults. The strike of the main faulting is generally northeast – southwest with a steep dip. The other major structural feature are the series of tight to moderately open, upright, complex folds whose axes trends east-northeast, west-southwest, in particular, the Porter Synclinorium to the north and Baldwin Anticlinorium to the south (Card, 1976). These folds effect all lithologies including the mafic intrusions (Agnew Lake and so-called Nipissing).

The Porter synclinorium is a doubly plunging structure whose axis plunges northeast in the west and southwest in the east. The structure consists of a series of en echelon anticlines and synclines that are disrupted by faults sub-parallel to the axis of the folds.

A zone of disseminated sulphide mineralization occurs 100 feet (30 m) south of the northern contact between the gabbro and the quartzite, and parallels the contact. The zone is exposed at surface in outcrop as a surface gossan.

### 7.1 Mineralization and Alteration of the Shakespeare Deposit

The mineralised zone associated with the Shakespeare deposit lies entirely within the gabbro exposed as a gossan at surface over a northeast strike length of 1800 feet (549 m) and varies in width from 79 to 200 feet (24 to 61 m) with an average of 100 feet (30 m). The deposit dips steeply to the north where it is in contact with the Mississagi quartzites.

The gossan forms a rusty area the result of oxidation of disseminated sulphides, largely pyrrhotite. Grab samples collected by Falconbridge on the western end of the gossan returned value for copper and nickel of 1% and 0.4% respectively. Samples collected in the same area by the author returned values of 0.28% and 0.31% copper and 0.28% and 0.10% nickel. The total sulphide content for the mineralised zone is estimated at 5%. This mineralization consists of blebs and stringers of pyrrhotite, pyrite, chalcopyrite, cobaltite and pentlandite with minor gersdorffite. The mineralization has a high ratio of nickel to nickel bearing sulphide (7%) and high ratio of precious metals (Au, Pt & Pd) to sulphides (Lochhead, 1951).

### 7.2 Past Drilling Programs of the Shakespeare Deposit

Five separate diamond drill programs have been completed on the property including 1942, 1948, 1951, 1985 and 1986 (Figure 8). These programs amount to 47 holes totaling 21,833 feet (6,655 m) and are summarised in Table 1 below.

**Table 1: Summary of Past Drilling, Shakespeare Deposit**

PROGRAM	NUMBER OF HOLES	FOOTAGE (ft)
1942	12	2,687
1948	3	4,462
1951	12	6,000
1985	16	3,380
1986	4	5,304
TOTAL	47	21,833

In 1942, twelve short holes totaling 2,687 feet were drilled on the Shakespeare deposit. These holes range in length from 40 to 445 feet. They were drilled for assessment work and to define the geology and grade of the deposit.

Three holes totaling 4,462 feet were drilled in 1948. These holes, number 13, 14 and 15 were drilled to a depth of 1050, 1862 and 1550 feet respectively. The drilling was used for assessment work requirements and to investigate the possibilities of enrichment with depth. They were drilled on section 13+00W, approximately midway along the strike of the ore zone.

In 1951, twelve short holes, numbered 16-27, totaling 6000 feet were completed. The length of the holes range from 300 to 630 feet. The initial objective was to check width and grade to a depth of 500 feet.

Sixteen holes totaling 3,380 feet were drilled in 1985. These holes were drilled to test the near surface resource and to evaluate the precious metal (Au, Pt and Pd) potential of the zone.

The last program in 1986 drilled 4 holes totaling 5,304 feet. This program's objective was to test the deposit at depth and along strike to the southwest. Since 1986, there has been no further drilling done on the property. Falconbridge has some skeletonized core from the 1985 and 1986 programs.

Drilling indicated the continuity of the mineralised zone, significant assays and associated values both along strike as well as at depth. The zone occurring along an 1800-foot (600 m) portion of the prospective mafic intrusion-metasedimentary contact (**Figure 7**) is reviewed in detail below.

The results from the Shakespeare deposit have been most significant in terms of continuity and the deposit has been traced by diamond drilling along strike for 2200 feet from 0+00W to 22+00W along a portion of the prospective mafic intrusion-metasedimentary contact (**Figure 7**). Also the drilling has tested to a vertical depth of 1200 feet.

Forty-one of 47 drill holes intersected the mineralized zone within the mafic intrusion above the structural overlying quartzite contact. The width of the mineralized zone varies from 3 to 261.8 feet in core length and averages 100 feet. The composite values for nickel and copper range from trace to 0.45% and 0.04% to 0.61% respectively. The composite values for the precious metal (Au, Pt and Pd) are only recorded for the 1985 and 1986 drill programs. The values for Au, Pt and Pd range from 0.11 to 0.30 g Au/t, 0.15 to 0.57 g Pt/t and 0.17 to 0.57 g Pd/t.

### 7.3 Resource Estimate for The Shakespeare Deposit

There has been three resource calculations done on the Shakespeare deposit in the past. These mineral inventories were based on the drilling that was completed at the time of the resource calculation. A series of 1inch=100 ft scale cross sections of the mineralised zone were constructed at 100 ft intervals. The cross sections were used to construct a longitudinal section for the mineralised zone on which the mineral inventory was estimated.

The most recent mineral inventory estimate is by Falconbridge in 1985. The resource is based on all the drilling done through 1985 (43 holes). The Shakespeare deposit is estimated to contain a global resource of 2,081,373 tons (1.9 million tonnes) with an average grade of 0.36% Ni, 0.42% Cu, 0.23 g Au/t, 0.40 g Pt/t and 0.44 g Pd/t. The following (**Table 2**) summarises the various resource calculations done for the deposit over the years.

**Table 2. Mineral Inventory of the Shakespeare Deposit**

Date	Calculation	Tonnage	Ni %	Cu %	Au g/t	Pt g/t	Pd g/t
Lochhead(1951) <sup>(1)</sup>	Maximum	3,273,000	0.34	0.40			
	Minimum	1,255,000	0.33	0.37			
Penstone (1974) <sup>(2)</sup>	1:1	2,869,000	0.33	0.36			
	0.5:1	2,195,000	0.33	0.36			
Falconbridge (1985) <sup>(3)</sup>	Global	2,081,373	0.36	0.42	0.22	0.40	0.44
	Open Pit	1,106,703	0.37	0.40	0.23	0.41	0.45

(1) **D. R. Lochhead (1951):** The two resource calculations have been made as follows, and based on the results of total drilling done to 1951. The first, or maximum, calculation takes in all of the known mineralization of ore grade down to the interpolated bottom of the ore shoot. To recover this material at the depths (+200 feet) involves a combination of open pit and underground mining with considerable stripping. The second resource calculation, a minimum tonnage has been calculated based on an open pit to 100-foot depth with inward sloping 80° walls. It was believed that this minimum tonnage represents the material that could be exploited cheaply.

(2) **M. E. Penstone (1974):** Two resource calculations have been done. The first using open pit mining method with the tonnage available at a 1:1 stripping ratio and the pit walls at 60°, with no allowance for dilution and maximum pit depth of 210 feet. The second is similar calculation with a stripping ratio of 0.5:1, no allowance for dilution and maximum pit depth of 190 feet.

(3) **Falconbridge (1985):** The two resource calculations were made as follows, based on the results of total drilling done to 1985. A tonnage factor of 10.6 cubic ft/ton and a cut-off of 0.25% Ni were used. The first is a global resource taking in all of the known mineralization down to the interpolated bottom of the ore shoot. The second calculation is based on open pit mining to a depth of 100 feet and pit walls at 60°. Precious metal (Au, Pt and Pd) values were only analyzed for the 1985 and 1986 drill programs.

## 8.0 2000 EXPLORATION PROGRAM

During the summer and early fall of 2000, Ursa Major completed grid cutting, reconnaissance and detailed geological mapping (1:5000), detailed channel sampling and magnetometer and IP/Resistivity surveys over the Shakespeare Deposit, Shakespeare Property.

The majority of the geological reconnaissance and detailed mapping was completed by G.T. Shore (M.Sc.) assisted by T. Mikel. Fieldwork was carried out during two intervals, 5-21 June, and 31 July-25 August, 2000. H. Tracaneli and R.A. Campbell (M.Sc.) assisted in detailed geologic mapping during the second interval.

M. Perkins completed a channel sampling program over the Shakespeare deposit on 400 ft intervals between 16 September to 8 November 2000, assisted by K. Rae and E. Robinson, to locate any possible PGM enriched layers within the mineralized zone.

### 8.1 Geologic Mapping

Detailed (1:5000) geology mapping of the property defined several lithological units comprising, quartzite, tonalite and the mafic intrusive, which can be divided into quartz gabbro, gabbro and meta-pyroxenite (tremolite-chlorite) from the north to the south..

#### 8.1.1 Mafic Intrusive Sill

The gabbroic sill that hosts the mineralized zone was found in the current mapping program to be a minimum of 1000 ft thick, and based on historical work 1600 ft thick, extending across the mapping area and dipping steeply to the north (~80°). The current grid did not cover the southern contact of the sediments and the gabbro. The mineralized zone occurs along the northern contact of the sill in quartz-gabbro. In the central part of the sill gabbro appears to

dominate with quartz gabbro increasing in content irregularly towards the south-west part of the grid. A meta-pyroxenite unit is located approximately 800 ft south of the northern gabbroic contact, extending parallel to the contact along the southern margin of the mapping grid. Contacts are generally highly irregular and diffuse with pods of gabbro and quartz-gabbro intermixed.

### **8.1.2 Gabbro to Quartz Gabbro:**

The majority of the lithology underlying the map area consists of amphibole (after pyroxene?) gabbro with up to 10% quartz locally. The rock is characteristically hard and dark green to black with <1% sulphides (mainly pyrrhotite) with chlorite altered amphibole. In general, mapping indicated that the mineralized zone contained noticeable quartz while the amount of quartz decreased south from the mineralized zone with a slight increase above the meta-pyroxenite contact. Slight gradations in quartz and amphibole content were apparent throughout the map area. The gabbro is massive with local zones of foliation related to development of faulting.

### **8.1.3 Meta-Pyroxenite (Tremolite-Chlorite Rock):**

This distinctive mappable unit occurs along the southern margin of the gabbroic sill and is traceable almost continuously across the property. The unit pinches and swells, but on average is 150 feet wide and is fault offset along its length. The unit is characterized by a fine-grained, homogeneous texture that consists predominantly of felty-textured amphibole laths (after pyroxene?), 10-25% plagioclase feldspar which occurs interstitial to the amphibole crystals, with no quartz. Feldspar abundance decreases towards the south. Where sulphides occur, they are generally pyrrhotite and make up less than 1% of the rock. The maximum PGE values from this unit from sampling to date is 13 ppb Pt and 13 ppb Pd. This unit is interpreted to represent an altered pyroxenitic layer at the bottom of the gabbroic sill.

### **8.1.4 Quartzite:**

The gabbro intrudes Huronian quartzites which are exposed to the north of the mineralized zone as a large vertical cliff. Cross-bedding in the quartzites suggest that paleotops are to the north and dips are approximately 50° to the north-west.

### **8.1.5 Tonalite:**

A mappable unit of massive, grey, equigranular-textured biotite tonalite occurs along the northern margin of the gabbro. It was traced from the far east where it is approximately 150 m thick to the far west where it narrows considerably and may only occur as small dyke-like bodies approximately 2 m in width. The unit is characterized by 50% quartz, 20% biotite, and 30% feldspar. No sulphides were observed in the unit. Locally the tonalite varies in composition becoming more biotite rich and occasionally with up to 10-15% amphibole.

At the eastern end of the map area, the tonalite intrudes and locally assimilates the quartzite effectively splitting the map area into two large areas of quartzite, one to the north and one to the south of the Baseline. The contact/fault between the quartzites and the gabbroic sill was likely a locus for tonalite intrusion. Xenoliths of cross-bedded quartzites occur within the tonalite locally. Cross-cutting relationships between the tonalite and the gabbroic sill were not observed. This unit is interpreted to represent a felsic phase (granophyre) related to the gabbro that may have intruded the gabbro-sediment package during folding i.e. relatively late in the history of the area.

### 8.1.6 Contact Breccia:

The northern contact of the gabbro with the quartzite is poorly exposed, but several outcrops at the contact are characterized by complex breccia zones of quartzite xenoliths in a fine grained mafic matrix. The matrix to the breccia zone is fine-grained to aphanitic mafic material with 1-2% sulphides (chalcopyrite and pyrrhotite) and locally gossanous. Quartzite xenoliths are generally rounded and vary in size from millimetre fragments to metre-scale boulders.

## 8.2 PGE Mineralization

The main mineralized zone occurs at the north margin of a layered quartz gabbroic intrusion whose geometry and layering suggest a sill-like intrusion.

The mineralized zone occurs near the north margin (top) of the gabbroic body and is characterized by a well-developed gossan, locally well foliated gabbro and up to 10% sulphides (Cpy, Po) and anomalous PGEs (approximately 800 ppb Pd+Pt). The mineralized zone pinches and swells along its length but is approximately 100 feet wide and extends along strike (approximately E-W) for 1800 feet. To the east it is partially truncated by a pegmatitic felsic dyke likely genetically related to the gabbro while to the west it disappears below overburden. In general, the mineralized zone is faulted dextrally and sinistrally along its strike length with generally less than 5.0m offsets. Small pods and shoots of mineralized gabbro occur within non-mineralized gabbro, suggesting that the timing of mineralization was mainly post-emplacment of the main gabbro body.

Reports by previous workers interpreted the mineralization to be associated with shearing parallel to the quartzite contact, with the gabbro. In general, however, the main mineralized zone shows only localized shearing and the shearing is not at the contact, and in fact can be found up to 25 metres within the gabbro, south of the contact with the quartzite. As well, the shearing is less developed towards the east.

Large (1cm) blebs of pyrrhotite rimmed by chalcopyrite occur locally throughout the mineralized zone, although mainly towards the northern margin of the zone. This sulphide texture suggests a more primary mechanism for concentrating sulphides than late fluids associated with shearing. This information leads towards an interpretation that the mineralized zone represents a locally disrupted sulphide-rich layer occurring at the "top" of a gabbroic sill. Later magmatic movement and flow before the body was completely crystallized may be responsible for the local shearing and some remobilization of PGE bearing sulphides. The chilled appearance to the mineralized zone where it locally intrudes and brecciates quartzite suggests that the sulphide rich zone was at the top of the sill when it was formed.

At the eastern end of the map area, the gabbro is chilled against the quartzite and contains 1% sulphides - chalcopyrite and pyrrhotite. There is no well-developed gossan or zone of mineralization at this locality.

Although the contact between the gabbro and the quartzite is not always mineralized, not all of the contact zone was mapped. Further mapping at the eastern edge of the map area where the quartzite and gabbro are folded around by the large-scale "Z" fold should be undertaken. This area is also interesting because it represents a zone of intersection between folding and later, brittle regional scale

faulting (NE trending). Follow-up work is recommended along strike (to the east and off the property) where this mineralized "layer" might continue around the large "Z" fold.

Eighty seven grab samples were taken during the mapping program. The best results were obtained in sample GS-202(5+50W,0+50N) which returned results of 351 ppb Au, 722 ppb Pt, and 762 ppb Pd. Several other grab samples of the mineralized zone returned similar results and are summarized in **Table 3** below.

**Table 3: Grab Sampling Significant Results**

Sample #	Line	Station	Au (ppb)	Pt (ppb)	Pd (ppb)	Ni (%)	Cu (%)
GS-220	15+00W	0+30S	281	562	659	0.05	0.47
GS-193	8+75W	0+25S	411	623	623	0.25	0.53
GS-198	6+00W	1+00S	337	647	715	0.45	0.58
GS-202	5+50W	0+50N	351	722	762	0.34	0.50
GS-204	4+00W	0+50N	335	627	723	0.02	0.34
GS-250	2+00W	0+20S	263	483	607	0.43	0.58
AC-101	11+00E	4+00S	145	231	173	0.03	0.13

Grab sampling confirmed the presence of PGE mineralization through out the Shakespeare deposit and sample results from AC-101 above indicate the mineralization extends to the east at least 1000 ft past the known surface exposure.

Seven samples were analyzed for whole rock major element chemistry. One sample of metapyroxenite (GS-228), four gabbro/quartz gabbro samples (GS-234, 236, 237, and 239) and two "tonalite" samples (GS-216, 235) were analyzed.

Relative to the gabbroic rocks the metapyroxenite (GS-228) has relatively low SiO<sub>2</sub> (47.7%), Fe<sub>2</sub>O<sub>3</sub> (13.2%), Al<sub>2</sub>O<sub>3</sub> (9.15%), with high MgO (16.6%), Cr<sub>2</sub>O<sub>3</sub> (0.26%). From south to north, the gabbroic rocks show a decrease in SiO<sub>2</sub> (52.0 to 47.3%) and an increase in TiO<sub>2</sub> (0.78 to 2.36%) and Na<sub>2</sub>O (1.99 to 2.36%).

The two samples of "tonalite" have high SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, Na<sub>2</sub>O, K<sub>2</sub>O and low CaO, MgO, FeO, TiO<sub>2</sub> relative to the gabbroic rocks. One sample has higher K<sub>2</sub>O than Na<sub>2</sub>O suggesting that the rock may be more appropriately classified as granodiorite.

The metapyroxenite and southernmost gabbro sample have higher precious metal contents than other samples. The metapyroxenite contains 13 ppb Pt, 13 ppb Pd and 3 ppb Au. The southernmost gabbro has 11 ppb Pt, 13 ppb Pd and 4 ppb Au. The other gabbroic samples had Pt below detection limits, Pd ranging from 4 to 9 ppb and 1 to 3 ppb Au.



**Table 4: Locations Of Whole Rock Sampling**

Grab Sample	Line	Station	Rock Type
GS-216	11+00E	4+00N	Tonalite
GS-228	11+10W	7+50S	Meta-pyroxenite
GS-234	3+00W	0+10N	Gabbro
GS-235	1+00W	2+00N	Tonalite
GS-236	0+80E	0+00	Gabbro
GS-237	13+00E	2+57S	Gabbro
GS-239	11+00E	8+00S	Gabbro

### 8.3 Channel Sampling

The channel sampling program was undertaken in part to determine if any enriched PGM layers could be identified within the mineralized zone. Results of platinum, palladium, gold, nickel, copper, cobalt assays on 147 channel samples indicate a sulphide mineralized zone with widths up to 150 feet over a strike length of more than 1200 feet. The length weighted average assay value from 108 channel samples from the mineralized zone is 0.41 g/t palladium, 0.38 g/t platinum, 0.20 g/t gold, 0.36% copper, 0.23% nickel and 0.016% cobalt.

The channel samples were analyzed by XRAL Laboratories, Toronto, Ontario using fire assay for palladium, platinum and gold and ICP with multi-acid digestion for copper, nickel and cobalt. The sawn channel samples are nominally 3 ft. in length. Sampling gaps are due to lack of available outcrop. Sample certificates are included in Appendix IV.

Four Channels were cut across the mineralized zone at 400 ft intervals (**Map 2**). Stripping was restricted to limited hand trenching, and no washing was completed. The closest water can be found in a beaver swamp located south of the baseline between lines 25 and 27W. The water here is not overly deep (5-6 feet in places) but can provide enough water for washing, however the pond is approximately 500-600 ft west of the far west end of the mineralized zone and at least 25 ft lower elevation. The four intervals selected L2W, L6W, L10W and L14W were selected based on outcrop exposure and results from surface mapping and previous Falconbridge drilling (**Table 5**).

Section L14W provided a good intersection across highly sheared, altered and mineralized (up to 10% sulphides) quartz gabbro at the furthest west end of the mineralized zone before disappearing under thick overburden. Grab samples from this area contain over 1g/t Pt+Pd. Channel L14W extended from L14W, 55S to 69N with several gaps in the channel due to outcrop availability. A total of twenty (20) 3.0 ft samples totalling 60 ft of this 124 ft mineralized width were sampled and the results are summarized in **Table 6**, and Map2 (attached). Details of Channel Sample locations and results are included in Appendix III. The northern contact of the mineralization was not located.

Channel L10W indicated mineralization over 128 ft, L10W, 24S to 104N. As per L14W above outcrop availability restricted channel sampling access. 25 Samples (3 ft) were taken over two intervals, 24S-15N, and 89N-104N. Results are summarized in **Table 6**, and Map2 (attached). Details of Channel Sample locations and results are included in Appendix III.

Section L6W is located over several large areas of well-exposed mineralized quartz gabbro in the central section of the mineralized zone. This area contains well mineralized (5% sulphides) rock with

less pronounced shearing than the west end. Grab samples from this vicinity contain in excess of 0.5 g/t Pt+Pd, and mineralization on the surface is locally well developed. Decimetre to metre-scale pods of unmineralized quartz gabbro (although rusty on surface) occur within the mineralized zone and contain less than 0.1g/t Pt+Pd.

Channel L6W provided the most continuous channel sampling exposure of the sampling program. Mineralization extends from 55N to 99S, a 154 ft width of uninterrupted mineralization that remains open to the north. 51 channel samples were taken at 3 ft intervals resulted in an average of 0.20 g/t Au, 0.38 g/t Pt, 0.41g/t Pd, 0.39% Cu, 0.27% Ni And 0.02 % Co over the 154 ft interval (including gaps as 0 value). Results are summarized in **Table 6**, and Map2 (attached). Details of Channel Sample locations and results are included in Appendix III. The northern contact of the mineralization was not located due to overburden.

Section L2W is located over several large areas of well-exposed mineralized quartz gabbro, this time at the eastern end of the mineralized zone. The rock in this vicinity is well-mineralized (5% sulphides) and locally highly sheared. Grab samples taken from this area indicate PGE values near 1g/t Pt- Pd. This zone contains pods and lenses of unmineralized (although rusty on surface) quartz gabbro which show much lower contents of PGE (<0.1 g/t Pt+Pd). Channel L2W sampled the mineralized zone from 6N to 40S, an interval of 47 ft, but failed to determine the southern contact due to overburden thickness. Results are summarized in **Table 6**, and Map2 (attached). Details of Channel Sample locations and results are included in Appendix III.

**Table 5: Channel Sampling Location Drilling Information**

<b>Section</b>	<b>Grades from Drilling (Cu%, Ni%, Au, Pt, Pd g/t )</b>	<b>Drillhole Intersection (ft)</b>	<b>Drillholes on Section</b>	<b>Grab Samples on Section (GS-XXX)</b>
L14W	0.39, 0.42 0.22, 0.36, 0.44	84.5	#24, 85-11	146,147,151,152
L10W	0.34, 0.45 0.23, 0.45, 0.49	9.0	#16, 17, 18, 85-7	206
L6W	0.39, 0.38, 0.25,0.44, 0.50	128.0	#85-3	196,198,199,202
L2W	0.22-0.24	31.1	#23	250

**Table 6. Composite Intervals from Channel Sampling**

Line	From	To	Interval (feet)	Palladium (g/t)	Platinum (g/t)	Gold (g/t)	Copper %	Nickel %	Cobalt %
1400W	69N	54N	15	.50	.47	.24	.41	.22	.015
	49N	43N	6	.56	.50	.27	.37	.19	.013
	31N	25N	6	.38	.37	.16	.33	.13	.011
	19N	10N	9	.33	.36	.18	.16	.09	.008
	31S	55S	24	.43	.41	.20	.40	.25	.015
Mineralized zone is 124 feet wide and is open to north									
1000W	104N	66N	38**	.25	.27	.13	.20	.17	.014
	15N	24S	39	.39	.33	.17	.26	.14	.015
Mineralized zone is 128 feet wide									
600W	55N	21N	34**	.35	.31	.18	.37	.21	.014
	24N	99S	123*	.40	.37	.19	.37	.27	.018
Mineralized zone is 154 feet wide and is open to north and south									
200W	6N	27S	33	.50	.47	.23	.49	.25	.018
	36S	40S	6	.18	.30	.24	.24	.18	.012
Mineralized zone is 52 feet wide and is open to south									

\* includes one 3 foot sampling gap at zero grade

\*\* includes two 3 foot sampling gaps at zero grade

Channel Sampling results confirm the results determined by previous work by Falconbridge. PGM and gold results are comparable, however Ursa Major results on the copper and Nickel grades are less than those determined by Falconbridge Limited in the resource estimate of 1.9 million tonnes grading 0.36% nickel, 0.42% copper, 0.44 g/t palladium, 0.40 g/t platinum and 0.23 g/t gold. The length weighted average assay value from the 108 channel samples taken by Ursa Major from the mineralized zone is 0.41 g/t palladium, 0.38 g/t platinum, 0.20 g/t gold, 0.36% copper, 0.23% nickel and 0.016% cobalt. The results of the mapping and sampling indicate a sulphide mineralized zone with widths up to 150 feet over a strike length of more than 1200 feet.

Further work is required to determine if the lower nickel and copper values from channel samples are a result of surface weathering. Selected samples (L6W) were also analyzed for rhodium and returned assays averaging approximately 20 ppb (Appendix III).

#### 8.4 Magnetometer and Time Domain IP Surveying

During the summer Ursa Major recut the previous Falconbridge exploration grid (7.68 miles/12.4 km), and in the late fall JVX Limited completed magnetometer surveying over the grid, and five test lines of Spectral IP/Resistivity surveying. Results of their work are Attached in **Appendix V**.

Map 3 summarizes the Results of the magnetometer and IP surveys. Results of the survey are discussed in detail in their report (**Appendix V**) and summarized below in **Table 7**.

**Table 7: Exploration Targets defined by Geophysics**

Target	Line	Stn	Priority	Description
IP-1	L3E	100S	very high	very high MIP, long Tau, Mag. high
	L3W	BL0	high	high MIP, long Tau, Mag. High
	L21W	25N	high	high MIP, long Tau, Mag. High
IP-1N, IP-4	L3W	175N	high	high MIP, medium and long Tau, low res
	L3W	325N	moderate	moderate MIP, medium and long Tau, low res
IP-3	L15W	425S	moderate	moderate MIP, short Tau, high res

The mineralized zone appears defined by strong IP chargeability, and low resistivity. High magnetic trends (MH-1a to d) overlie known mineralization and appear to increase towards the north east end of the grid where outcrop exposure is limited by overburden. These geophysical features also persist for an additional 1400 ft to the southwest of the known mineralization.

An IP chargeability zone (IP-3) located at 4+00S, from L16W to L4W, is located immediately north of the meta-pyroxenite contact. There is little outcrop in this area and the anomaly may represent another layer of PGE mineralization. Drill hole S-15 located at L13+29W, 5+71S may have intersected this anomaly. The drill log indicates a chloritic schisted diorite from the casing to 493 ft with strong shearing over a 25 ft interval at 325 ft. There is no record of sampling in the area.

Several single line anomalies, such as IP-5 to 6 should be examined in the field to determine their causes. IP-2 appears associated with a strong magnetic high which may be caused by a pegmatitic-monzodiorite unit found in the area. Further field investigation is required to explain this anomaly.

Overall the magnetometer and time domain IP surveys were successful in defining and extending the known mineralization.

## 9.0 CONCLUSIONS

The 2000 work program on the Shakespeare Property successfully confirmed previous work completed over the property. Completion of grid cutting, detailed geological mapping, channel sampling and magnetometer and Time Domain IP geophysical surveying has extended the potential for mineralization expansion.

The Shakespeare deposit is currently estimated to contain a global mineral resource of 2,081,373 tons (1.9 million tonnes) with an average grade of 0.36% Ni, 0.42% Cu, 0.23 g Au/t, 0.40 g Pt/t and 0.44 g Pd/t. The 2000 channel sampling results confirm these results. The average of 108 channel samples taken by Ursa Major from the mineralized zone is 0.41 g/t palladium, 0.38 g/t platinum, 0.20 g/t gold, 0.36% copper, 0.23% nickel and 0.016% cobalt.

The Falconbridge resource is based on a 1600 ft long and 50 to 150 ft wide mineralized zone. Based on the 2000 geophysical survey the known mineralization appears defined strong IP chargeability, and low resistivity, and high magnetic trends. These geophysical features extend 1400 ft to the south east and 1000 ft to the northeast of the known deposit. The geophysical response to the northeast appears particularly strong. Drilling has been completed between L2W to L29W while geophysical

trends and grab sampling results indicate the mineralization may continue to the east as far as L12E. These geophysical trends remain open along strike in both directions.

A narrow IP chargeability anomaly at 4+00S, from L16W to L4W, is located immediately north of the meta-pyroxenite contact. There is little outcrop in this area but drill hole S-15 located at L13+29W, 5+71S may have intersected the anomaly as a chloritic schist/diorite. There is no record of sampling in the area of the anomaly.

## 10.0 RECOMMENDATIONS

The Shakespeare property of Ursa Major warrants further investigation south of the known deposit and along the favourable mafic intrusive-metasedimentary contact east and west of the deposit. The 1800 feet (600 m) of strike length along the prospective mafic intrusive-metasedimentary contact as well as the area 500 feet (150 m) below surface underlying the deposit should be the main priorities for further exploration programs.

Extending the current grid to the northeast, magnetometer and IP geophysical surveying, prospecting, geochemical soil surveying, geological mapping, stripping, and diamond drilling of geophysical and geochemical anomalies is recommended.



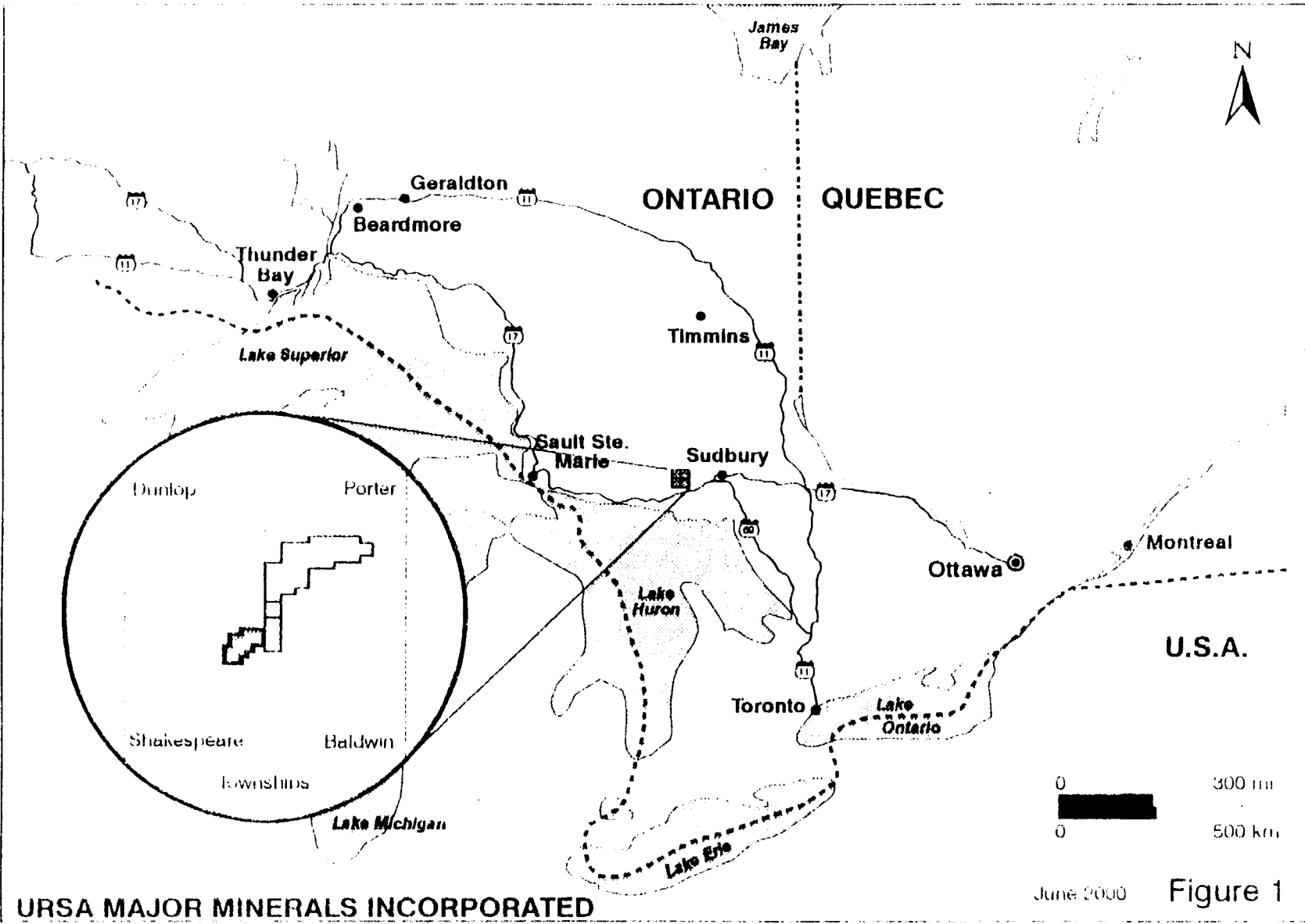
M.J.Perkins  
5 June 2001

## 11.0 SUMMARY OF EXPENSES

		<b>COST</b>
Mapping/ Prospecting	69.5 man days	\$12,734
Channel Sampling	38 man days	\$9,250
	Sub-total	<b>\$21,984</b>
Food/Accommodation		\$5,729
Hardware		\$1,368
Office		\$1,172
Transportation		\$2,118
Assays	246 samples	\$7,558
Grid Cutting	7.7 miles	\$3,838
Geophysics (JVX)		\$13,837
Report Preparation		\$5,000
Overhead 10%		\$6,260
	<b>Total</b>	<b>\$68,864</b>

## 12.0 FIGURES

# SHAKESPEARE PROPERTY LOCATION



URSA MAJOR MINERALS INCORPORATED

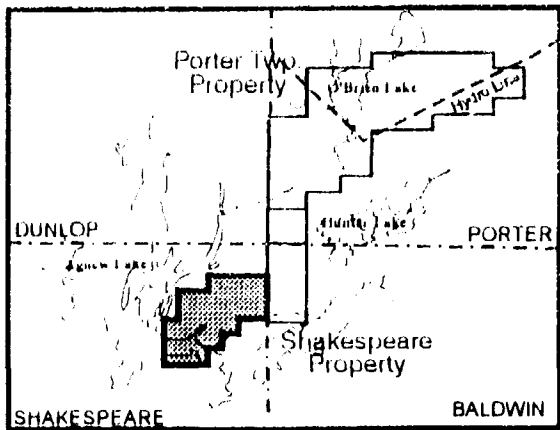
June 2000

Figure 1

SHAKESPEARE PROPERTY



# SHAKESPEARE PROPERTY MAP



DUNLOP  
SHAKESPEARE

PORTER  
BALDWIN

S36044	S36047	S36046	S36045
P	P	P	P
S36050	S36049	S36043	S35592
P	P	P	P
S36051	S36048	S35595	S35594
P	P	P	P
S36041	S36042	S35612	S35596
P	P	P	P
S36040	S35616	S35600	S35597
L	L	L	L
S35610	S35617	S35599	
L	L	L	

Legend  
P Patent Claims  
L Leased Claims

0 0.5 miles  
Scale

SHAKESPEARE PROPERTY

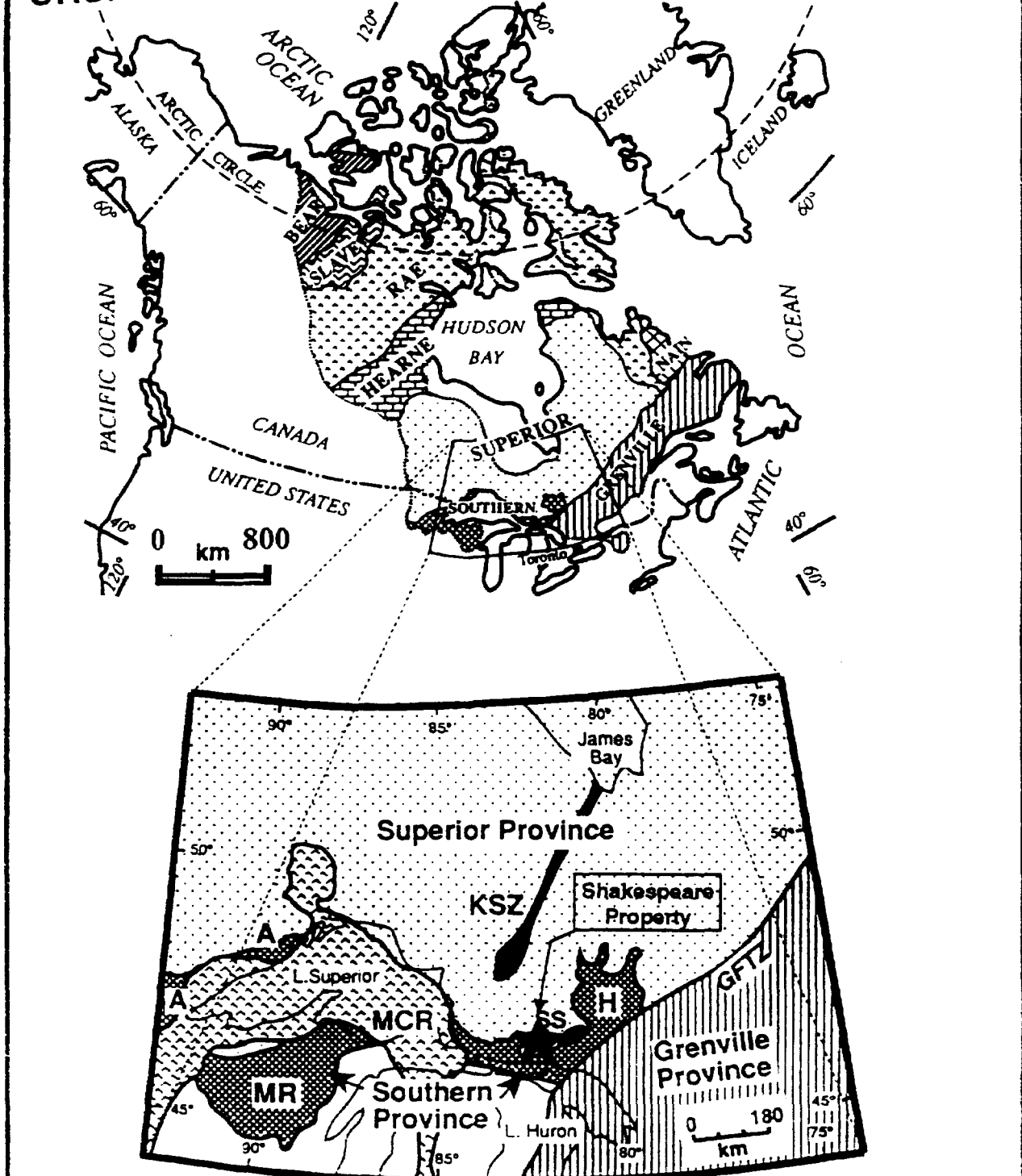
URSA MAJOR MINERALS INCORPORATED

June 2000 Figure 2

SHAKESPEARE PROPERTY

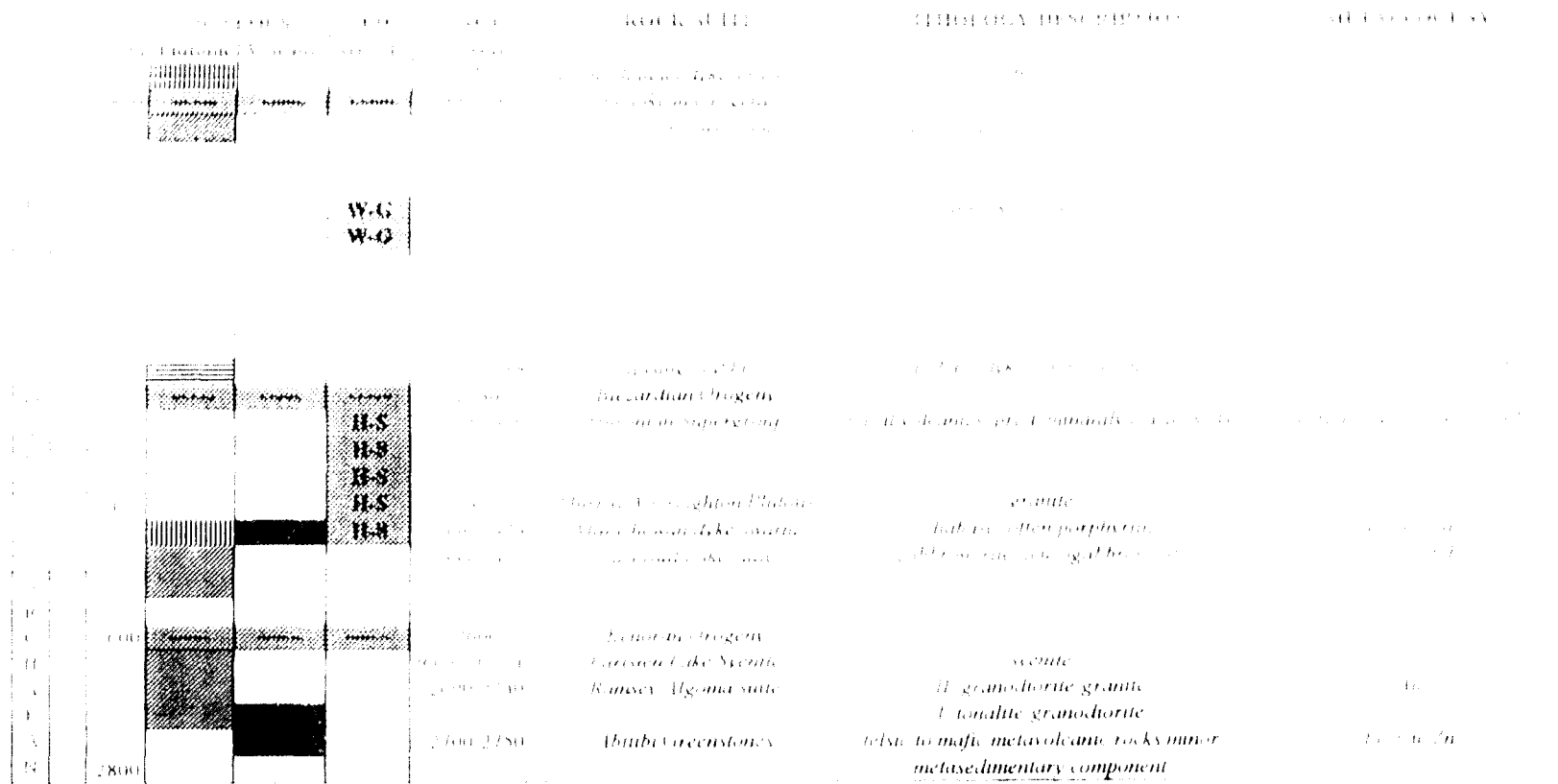
URSA MAJOR MINERALS INCORPORATED

June 2000



Major geological elements of the southern Canadian Shield.  
 A = Animikie Group. GFTZ = Grenville Front Tectonic Zone;  
 H = Huronian Supergroup. KSZ = Kapuskasing Structural Zone;  
 MR = Marquette Range Supergroup. MCR = Midcontinental  
 Rift System. SS = Sudbury Structure. After Card & Jackson I (1995) **Figure 3**

Geological map of the Shakespeare property, Ontario, Canada, showing the geological structure and the distribution of the various geological units.



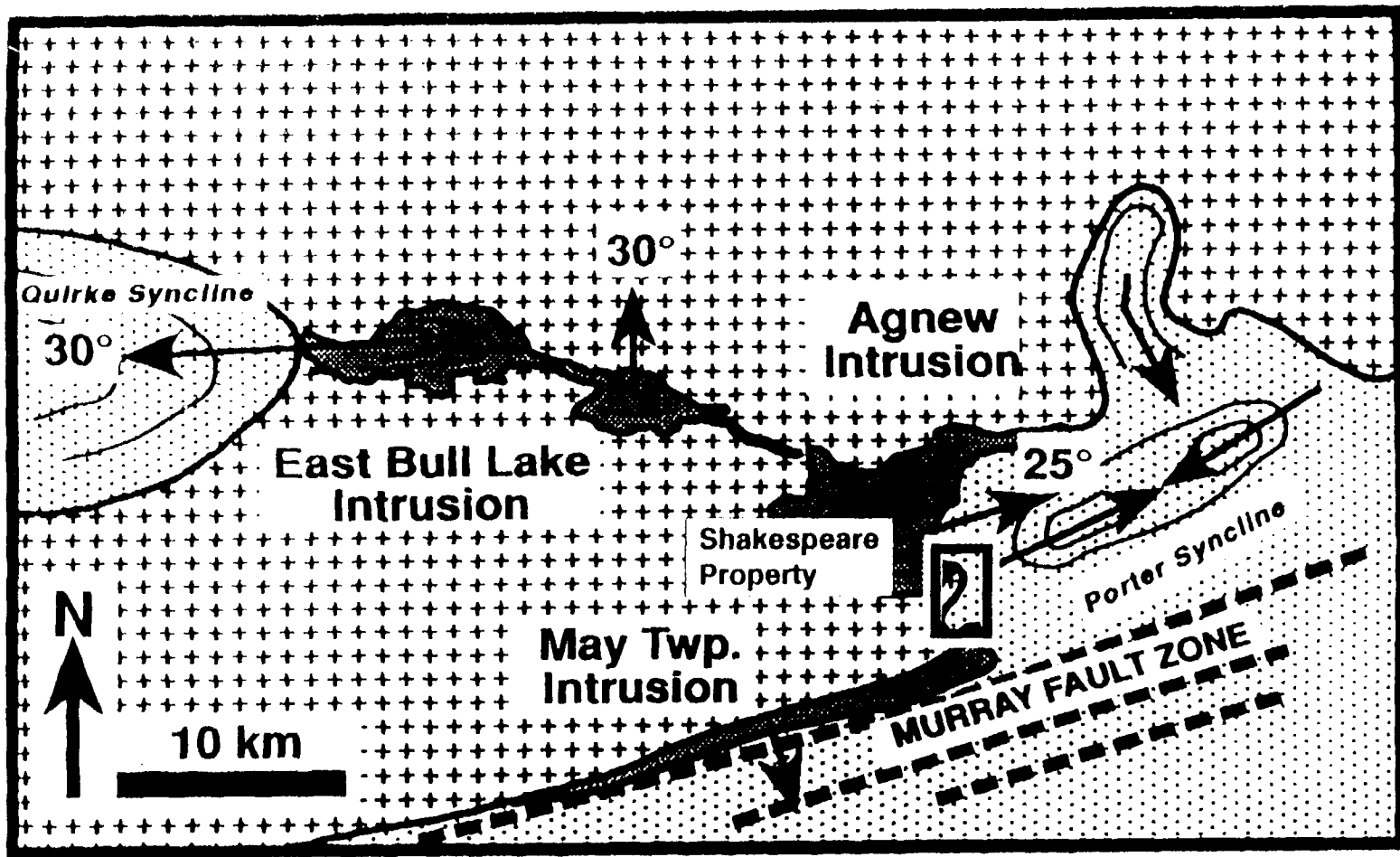
URSA MAJOR MINERALS INCORPORATED

Mineral Rights Reserved. All Rights Reserved. Registered in Ontario, Canada.

June 1980

Page 4

SHAKESPEARE PROPERTY



SHAKESPEARE PROPERTY

Regional structure and stratigraphic orientations of the Agnew, East Bull Lake, and May Township Intrusions with respect to the overlying Huronian Supergroup sediments. Arrow indicates stratigraphic younging along fold directions. After Vogel (1996)

**Problem Page**

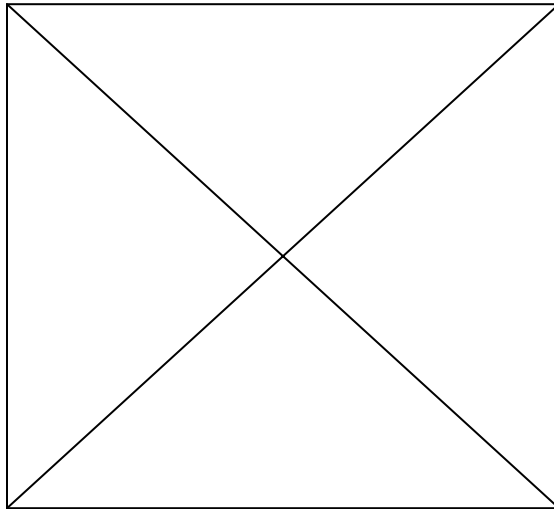
The original page in this document had a problem when scanned and as a result was unable to convert to Portable Document Format (PDF).

We apologize for the inconvenience.

**Problème de conversion de page**

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Nous regrettons tout inconvénient occasionné par ce problème.



### 13.0 REFERENCES

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**APPENDIX I**  
**CLAIM LIST. SHAKESPEARE PROPERTY**

## SCHEDULE "A"

to an Agreement made as of the 16 day of June , 2000, between Ursa Major International Inc. and Falconbridge Limited.

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### Shakespeare Township - Falconbridge Limited Property

<u>Parcel #</u>	<u>Lease #</u>	<u>Claim #</u>	<u>Lot</u>	<u>Con</u>	<u>Legal Description</u>
1421 LSWS	103328	S35597	02	V	NW ¼ of S ½
1421 LSWS	103328	S35599	03	V	SE ¼ of S ½
1421 LSWS	103328	S35600	03	V	NE ¼ of S ½
10558 SWS		S35609	03	V	SE ¼ of N ½
1421 LSWS	103328	S35616	03	V	NW ¼ of S ½
1421 LSWS	103328	S35617	03	V	SW ¼ of S ½
1421 LSWS	103328	S35618	04	V	SE ¼ of S ½
1421 LSWS	103328	S36040	04	V	NE ¼ of S ½
10569 SWS		S35592	02	VI	SE ¼ of S ½
10557 SWS		S35594	02	V	NE ¼ of N ½
10428 SWS		S35595	02	V	NW ¼ of N ½
10427 SWS		S35596	02	V	SW ¼ of N ½
10565 SWS		S35601	01	VI	SE ¼ of S ½
10567 SWS		S35602	01	VI	SW ¼ of S ½
10555 SWS		S35603	01	V	NE ¼ of N ½
10556 SWS		S35604	01	V	NW ¼ of N ½
10561 SWS		S35612	03	V	SE ¼ of N ½
10594 SWS		S36041	04	V	SE ¼ of N ½
10562 SWS		S36042	03	V	SW ¼ of N ½
10572 SWS		S36043	02	VI	SW ¼ of S ½
10571 SWS		S36044	02	VI	NW ¼ of S ½
10566 SWS		S36045	01	VI	NE ¼ of S ½
10568 SWS		S36046	01	VI	NW ¼ of S ½
10570 SWS		S36047	02	VI	NE ¼ of S ½
10563 SWS		S36048	03	V	NE ¼ of N ½
10559 SWS		S36049	03	VI	SE ¼ of S ½
10560 SWS		S36050	03	VI	SW ¼ of S ½
10564 SWS		S36051	03	V	NW ¼ of N ½

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Date: February 12/01



**APPENDIX II**  
**UTM COORDINATES FOR CUT GRID**

APPENDIX II  
UTM CO-ORDINATES FOR CUT GRID

LINE	STATION	UTM COORDINATES (NAD27)		NOTES
		NORTH	EAST	
L9+00W	BL 0+00	5133147	436124	
L9+00W	8+00S	5132938	436291	poor GPS
L7+00W	8+00S	5132974	436286	
L7+00W	BL 0+00	5133181	436179	
L5+00W	BL 0+00	5133204	436226	
L5+00W	7+90S	5133015	436355	
L3+00W	8+00S	5133059	436427	
L3+00W	BL 0+00	5133245	436279	
L1+00W	BL 0+00	5133282	436332	
L1+00W	8+30S	5133070	436464	
L1+00E	8+00S	5133121	436516	
L1+00E	BL 0+00	5133311	436387	
L3+00E	BL 0+00	5133341	436432	
L3+00E	8+00S	5133138	436568	
L5+00E	8+00S	5133172	436613	
L5+00E	BL 0+00	5133371	436482	
L7+00E	BL 0+00	5133413	436534	
L7+00E	8+00S	5133214	436676	
L9+00E	8+00S	5133243	436722	
L9+00E	BL 0+00	5133442	436586	
L11+00E	BL 0+00	5133472	436634	
L11+00E	8+00S	5133280	436773	
L13+00E	BL 0+00	5133540	436718	poor GPS
L13+00E	2+00S	5133471	436715	poor GPS
L13+00E	6+00N	5133668	436577	
L15+00E	6+00N	5133688	436643	
L17+00E	6+00N	5133709	436680	
L17+00E	BL 0+00	5133573	436781	
L17+00E	2+00S	5133526	436818	
L17+00E	4+10S	5133462	436848	contact between gabbro and quartzite
L15+00E	BL 0+00	5133540	436733	
L15+00E	2+00S	5133492	436762	
L15+00E	3+20S	5133449	436782	contact between gabbro and quartzite
L11+00E	6+00N	5133623	436543	
L9+00E	6+00N	5133583	436491	
L7+00E	6+00N	5133549	436442	

LINE	STATION	UTM COORDINATES (NAD27)		NOTES
		NORTH	EAST	
L5+00E	6+00N	5133519	436388	
L11+00W	BL 0+00	5133114	436078	
Geoff's Data (NAD 27)				
11+00W	8+00S	5132910	436207	
13+00W	8+00S	5132869	436155	
13+00W	0+00	5133086	436026	
15+00W	8+00S	5132848	436111	
15+00W	0+00	5133054	435977	
17+00W	8+00S	5132836	436044	
17+00W	0+00	5133011	435924	
19+00W	0+00	5132983	435864	
21+00W	8+00S	5132768	435948	
21+00W	0+00	5132951	435822	
23+00W	8+00N	5133119	435648	
23+00W	8+00S	5132737	435894	
23+00W	0+00	5132922	435755	
25+00W	8+00N	5133093	435594	
25+00W	0+00	5132859	435689	
27+00W	8+00N	5133066	435531	
27+00W	8+00S	5132642	435800	15m or worse accuracy
27+00W	0+00	5132903	435666	15m or worse accuracy
29+00W	8+00N	5133030	435486	15m or worse accuracy
29+00W	8+00S	5132602	435758	15m or worse accuracy
29+00W	0+00	5132827	435617	
31+00W	8+00N	5133010	435441	
31+00W	8+00S	5132567	435683	
31+00W	0+00	5132808	435580	
33+00W	8+00S	5132550	435639	
33+00W	0+00	5132769	435499	
11+00W	6+00N	5133263	435986	
13+00W	6+00N	5133219	435928	
13+00W	0+00	5133086	436026	
15+00W	6+00N	5133179	435881	
17+00W	6+00N	5133142	435837	
19+00W	6+00N	5133108	435778	
1+00E	6+00N	5133467	436292	
1+00W	6+00N	5133434	436249	
21+00W	8+00N	5133157	435700	
21+00W	0+00	5132951	435822	

LINE	STATION	UTM COORDINATES (NAD27)		NOTES
		NORTH	EAST	
3+00E	6+00N	5133486	436347	
3+00W	6+00N	5133396	436184	
5+00W	6+00N	5133391	436139	
7+00W	6+00N	5133329	436084	
9+00W	6+00N	5133299	436048	

**Drillhole GPS Data - Shakespeare Property (NAD27)**

GTS #	DDH #	UTM Easting	UTM Northing	Grid E	Grid N	Azimuth	Dip	Comments
1	85-6	436097	5133149	9W	57N	149	42	large casing
2	8	436070	5133161	9W	75N	144	45	small casing
3	85-7?	436074	5133208	10W	97N	150	42	large casing
4	10	436170	5133170	7W	31N	328	48	large casing
5	9	436163	5133204	7W	91N	151	45	large casing
6	85-3	436229	5133226	6W	50N	150	46	large casing
7	12	436241	5133228	5W	70N	340	30	small casing
8	14	436239	5133224	5W	92N	149	40	small casing
9	85-2	436255	5133248	4W	100N	154	48	large casing
10	85-1	436260	5133261	3W	86N	136	48	large casing
11	85-4	436291	5133278	2W	65N	153	43	large casing
12	5	436061	5133134	11W	95N	157	42	small casing
13	85-8	436050	5133142	11W	145N	159	47	large casing
14	?	436033	5133120	12W	120N	142	45	large casing
15	85-10	435994	5133121	13W	160N	146	44	large casing
16	13	435984	5133143	13W	278N	159	72	large casing
17	85-11	435961	5133062	14W	120N	145	42	large casing
18	7	435938	5133028	17W	20S	335	42	small casing
19	85-12	435959	5133007	16W	45S	339	45	large casing
20	85-15	435859	5132982	19W	BLO	337	51	large casing
21	85-14	435888	5132998	18W	12N	330	44	large casing
22	85-13	435929	5133033	17W	28N	340	?	large casing-moved

**APPENDIX III**  
**CHANNEL SAMPLING RESULTS**

APPENDIX III  
CHANNEL SAMPLING RESULTS

Line/stn	Sample	Au ppb	Pt ppb	Pd ppb	Cu %	Ni %	Co %
L14W 55S	231934	207	383	445	0.47	0.30	0.018
	231935	255	439	504	0.37	0.30	0.019
	231936	253	529	529	0.48	0.33	0.018
	231937	125	256	295	0.28	0.16	0.010
	231938	238	468	520	0.57	0.34	0.018
	231939	261	574	545	0.47	0.27	0.018
	231940	206	471	414	0.42	0.26	0.016
	L14W 31S	231941	91	177	211	0.17	0.05
L14W 10N	231942	179	349	311	0.14	0.08	0.007
TO	231943	193	331	302	0.15	0.10	0.008
19N	231944	183	413	373	0.18	0.10	0.008
L14W27N	231945	171	413	361	0.35	0.10	0.009
TO33N	231946	158	327	388	0.30	0.16	0.012
L14W 43N	231947	262	409	570	0.39	0.27	0.018
TO 46N	231948	275	583	549	0.35	0.11	0.008
L14W 56N	231949	362	653	569	0.52	0.20	0.013
TO	231950	220	435	456	0.38	0.23	0.017
	231995	215	336	501	0.47	0.36	0.022
	231996	229	446	536	0.37	0.15	0.011
69N	231997	193	474	459	0.32	0.18	0.012
L10w 24S	231982	180	248	403	0.20	0.08	0.006
To	231983	166	383	393	0.38	0.27	0.017
	231984	119	248	284	0.19	0.14	0.011
	231985	90	229	208	0.20	0.13	0.011
	231986	168	305	401	0.30	0.15	0.011
	231987	152	285	360	0.30	0.19	0.014
	231988	187	375	416	0.39	0.21	0.014
	231989	141	278	349	0.21	0.12	0.009
	231990	187	418	477	0.22	0.10	0.008
	231991	208	461	474	0.20	0.09	0.007
	231992	185	380	430	0.27	0.13	0.010
	231993	196	315	393	0.20	0.08	0.064
L10W 15N	231994	191	369	468	0.32	0.16	0.012
L10W 66N	231901	112	285	295	0.19	0.10	0.009
to	231902	169	392	412	0.52	0.28	0.018
	231903	144	407	307	0.33	0.27	0.019
	231904	120	433	206	0.15	0.11	0.009
	231905	232	312	374	0.35	0.36	0.022
	231906	130	173	176	0.17	0.26	0.017
	231907	172	221	219	0.21	0.25	0.017
89N	231908	237	568	389	0.22	0.23	0.019
	231909	190	300	362	0.31	0.20	0.016
	231910	122	269	259	0.17	0.14	0.013
	231911	182	345	466	0.16	0.19	0.027

Line/stn	Sample	Au ppb	Pt ppb	Pd ppb	Cu %	Ni %	Co %
104N	231912	43	103	83	0.07	0.04	0.004
167/55N	231900	252	505	531	0.45	0.28	0.019
1049N	231899	295	433	555	0.33	0.11	0.009
45N	231898	214	376	436	0.55	0.40	0.023
10	231897	195	316	361	0.44	0.23	0.015
36N	231896	21	62	56	0.02	0.03	0.007
33N	231895	199	427	380	0.79	0.22	0.018
10	231894	331	473	503	0.59	0.50	0.028
	231893	192	324	394	0.41	0.28	0.017
21N	231892	296	540	669	0.51	0.29	0.019
24N	231891	319	627	691	0.63	0.37	0.022
10	231890	313	629	669	0.31	0.13	0.010
	231889	259	599	600	0.42	0.23	0.018
12N	231888	189	405	384	0.37	0.23	0.016
3N TO	231886	280	520	615	0.58	0.47	0.028
3N	231887	224	402	460	0.53	0.42	0.026
3N	231884	108	244	248	0.30	0.19	0.014
10	231883	155	302	330	0.25	0.15	0.011
35	231885	259	493	532	0.67	0.51	0.029
35	231882	289	530	555	0.60	0.41	0.027
10	231881	258	473	512	0.57	0.34	0.022
	231880	48	106	108	0.08	0.05	0.008
	231879	149	289	336	0.36	0.18	0.014
	231878	33	90	102	0.10	0.05	0.009
	231877	202	51	53	0.02	0.02	0.005
	231876	213	387	419	0.37	0.25	0.017
	231875	321	582	672	0.62	0.44	0.026
	231874	268	487	553	0.61	0.41	0.024
	231873	317	559	694	0.55	0.32	0.023
	231872	263	491	565	0.54	0.43	0.021
	231871	29	57	72	0.02	0.04	0.007
45N	231870	201	410	471	0.44	0.35	0.020
45N	231869	87	207	225	0.14	0.10	0.010
10	231868	169	344	386	0.21	0.18	0.011
	231867	203	399	442	0.37	0.28	0.018
	231866	231	462	518	0.47	0.39	0.021
	231865	250	481	501	0.40	0.30	0.018
	231864	217	407	466	0.42	0.36	0.023
	231863	204	402	425	0.46	0.43	0.028
	231862	195	382	398	0.41	0.40	0.028
	231861	178	375	380	0.38	0.35	0.023
25N	231860	201	409	404	0.19	0.22	0.014
25N	231859	201	360	385	0.36	0.20	0.014
10	231858	198	344	404	0.43	0.30	0.018
	231857	143	273	302	0.32	0.23	0.016
	231856	148	273	315	0.30	0.24	0.016
	231855	161	300	331	0.34	0.24	0.016

Line/stn	Sample	Au ppb	Pt ppb	Pd ppb	Cu %	Ni %	Co %
93S	231854	291	502	515	0.53	0.40	0.023
	231853	37	112	91	0.08	0.06	0.008
	231852	177	310	317	0.34	0.26	0.015
L6W 99S	231851	165	392	342	0.42	0.30	0.018
L2W 6N	231961	231	426	511	0.53	0.32	0.020
TO	231960	249	492	507	0.55	0.29	0.020
	231951	240	401	500	0.55	0.30	0.021
	231952	198	382	447	0.52	0.26	0.020
	231953	197	407	462	0.57	0.21	0.017
	231954	225	409	504	0.53	0.33	0.024
15S	231955	244	439	538	0.58	0.35	0.023
15S	231956	210	868	491	0.39	0.16	0.013
	231957	286	530	641	0.46	0.14	0.013
	231958	248	421	516	0.31	0.14	0.011
27S	231959	199	375	441	0.38	0.23	0.015
L2W 36S	231967	218	304	379	0.36	0.26	0.015
TO 40S	231968	136	177	229	0.13	0.10	0.009
		<b>108</b>	<b>197</b>	<b>381</b>	<b>410</b>	<b>0.36</b>	<b>0.23</b>



**APPENDIX IV  
CERTIFICATES OF ANALYSIS**

FEB 19 2001



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1385 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

### CERTIFICATE OF ANALYSIS

**Work Order: 062618**

To: **URSA Major International**  
**Attn: Michael Perkins**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 12/02/01

Copy 1 to :

Copy 2 to :

P.O. No. : POH#061266  
Project No. : Shakespeare  
No. of Samples : 50 Rock  
Date Submitted : 25/01/01  
Report Comprises : Cover Sheet plus  
Pages 1 to 2

**Distribution of unused material:**

Pulps: Return.  
Rejects: Return.

Certified By :

for Dr. Hugh de Souza, General Manager  
XRAL Laboratories

### ISO 9002 REGISTERED

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 062618

Date: 12/02/01

**FINAL**

Page 1 of 2

Element.	Rh
Method.	FA301
Det. Lim.	10
Units.	ppb
N231851	15
N231852	16
N231853	< 10
N231854	22
N231855	17
N231856	15
N231857	20
N231858	21
N231859	29
N231860	21
N231861	23
N231862	19
N231863	19
N231864	19
N231865	23
N231866	22
N231867	17
N231868	17
N231869	< 10
N231870	20
N231871	< 10
N231872	21
N231873	17
N231874	15
N231875	23
N231876	14
N231877	< 10
N231878	< 10
N231879	< 10
N231880	13
N231881	19
N231882	24
N231883	16
N231884	12
N231885	16
N231886	22
N231887	19
N231888	13
N231889	20
N231890	20
N231891	25
N231892	17
N231893	46
N231894	25
N231895	26



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 062618

Date: 12/02/01

**FINAL**

Page 2 of 2

Element.	Rh
Method.	FA301
Det. Lim.	10
Units.	ppb

N231896	<10
N231897	17
N231898	23
N231899	14
N231900	22

*Dup N231851	12
*Dup N231863	16
*Dup N231875	26
*Dup N231887	27
*Dup N231899	17

NOV - 7 2000

**XRAL**

**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

## CERTIFICATE OF ANALYSIS

Work Order: 061489

To: **URSA Major International**  
Attn: **R. Sutcliff**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 02/11/00

Copy 1 to :

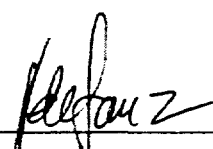
Copy 2 to :

P.O. No. :  
Project No. : SHAKEPEARE  
No. of Samples : 74 Rock  
Date Submitted : 11/10/00  
Report Comprises : Cover Sheet plus  
Pages 1 to 2

### Distribution of unused material:

Pulps: Return.  
Rejects: Return.

Certified By :

  
Dr. Hugh de Souza, General Manager  
XRAL Laboratories

**ISO 9002 REGISTERED**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable - = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 061489

Date: 02/11/00

FINAL

Page 1 of 2

Element. Method. Det. Lim. Units.	Au FA301 1 ppb	Pt FA301 10 ppb	Pd FA301 1 ppb	Cu ICP80 0.5 ppm	Ni ICP80 1 ppm	Co ICP80 1 ppm
N231974	8	27	43	278	186	52
N231975	3	10	40	333	147	54
N231976	5	13	32	282	189	52
N231977	3	11	26	242	166	48
N231978	11	<10	26	201	217	56
N231979	12	23	32	287	242	52
N231980	34	48	61	481	255	49
N231981	378	336	511	2550	2490	213
N231982	180	248	403	2010	802	60
N231983	166	383	393	3840	2650	166
N231984	119	248	284	1870	1360	108
N231985	90	229	208	2040	1320	114
N231986	168	305	401	2970	1460	112
N231987	152	285	360	3010	1890	143
N231988	187	375	416	3850	2080	139
N231989	141	278	349	2050	1170	89
N231990	187	418	477	2210	976	75
N231991	208	461	474	2030	851	69
N231992	185	380	430	2740	1250	98
N231993	196	315	393	1980	758	63
N231994	191	369	468	3190	1600	116
N231995	215	336	501	4660	3640	221
N231996	229	446	536	3710	1460	114
N231997	193	474	459	3160	1830	119
N231901	112	285	295	1900	997	88
N231902	169	392	412	5220	2810	183
N231903	144	407	307	3320	2680	185
N231904	120	433	206	1520	1050	91
N231905	232	312	374	3500	3590	223
N231906	130	173	176	1720	2600	168
N231907	172	221	219	2050	2540	174
N231908	237	568	389	2210	2300	185
N231909	190	300	362	3050	2030	164
N231910	122	269	259	1690	1350	134
N231911	182	345	466	1620	1890	267
N231912	43	103	83	694	444	37
N231913	6	21	17	45.5	70	33
N231914	4	17	16	58.8	46	42
N231915	20	50	50	213	104	34
N231916	249	468	576	3810	2760	162
N231917	40	88	95	865	468	47
N231918	72	189	156	1030	668	57
N231919	10	33	28	149	117	11
N231920	17	34	36	304	234	34
N231921	13	11	10	50.4	102	13



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 061489

Date: 02/11/00

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Page 2 of 2

Element.	Au	Pt	Pd	Cu	Ni	Co
Method.	FA301	FA301	FA301	ICP80	ICP80	ICP80
Det. Lim.	1	10	1	0.5	1	1
Units.	ppb	ppb	ppb	ppm	ppm	ppm
N231922	36	103	45	282	132	44
N231923	21	24	49	301	143	45
N231924	5	18	23	234	125	45
N231925	7	29	45	264	127	47
N231926	13	37	67	598	174	51
N231927	6	24	33	138	118	36
N231928	6	23	38	245	127	45
N231929	6	24	37	175	131	47
N231930	6	25	34	196	142	46
N231931	5	28	36	180	123	44
N231932	4	18	32	170	113	45
N231933	3	26	35	146	97	43
N231934	207	383	445	4700	3030	180
N231935	255	439	504	3700	3010	187
N231936	253	529	529	4780	3280	175
N231937	125	256	295	2770	1590	102
N231938	238	468	520	5730	3400	183
N231939	261	574	545	4710	2670	176
N231940	206	471	414	4170	2600	159
N231941	91	177	211	1670	512	47
N231942	179	349	311	1430	760	70
N231943	193	331	302	1500	1040	83
N231944	183	413	373	1810	1010	81
N231945	171	413	361	3470	981	87
N231946	158	327	388	3040	1590	124
N231947	262	409	570	3870	2650	181
N231948	275	583	549	3540	1130	79
N231949	362	653	569	5180	2030	134
N231950	220	435	456	3770	2250	166
*Dup N231974	9	28	39	282	177	49
*Dup N231986	167	313	341	2820	1430	111
*Dup N231901	115	285	249	1920	1010	89
*Dup N231913	4	16	14	49.9	77	35
*Dup N231925	7	34	41	267	122	45
*Dup N231937	111	213	280	2880	1600	99
*Dup N231949	337	608	593	5670	2160	140

NOV 10 2000



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

### CERTIFICATE OF ANALYSIS

**Work Order: 061344**

To: **URSA Major International**  
Attn: **R. Sutcliff**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 02/11/00

Copy 1 to :

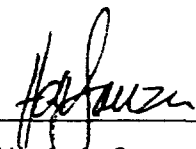
Copy 2 to :

P.O. No. :  
Project No. : SHAKESPEARE  
No. of Samples : 23 Rock  
Date Submitted : 02/10/00  
Report Comprises : Cover Sheet plus  
Pages 1 to 1

**Distribution of unused material:**

Pulps: Return.  
Rejects: Return.

Certified By :

  
\_\_\_\_\_  
Dr. Hugh de Souza, General Manager  
XRAL Laboratories

### ISO 9002 REGISTERED

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion





**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 061344

Date: 02/11/00

FINAL

Page 1 of 1

Element.	Au	Pt	Pd	Cu	Ni	Co
Method.	FA301	FA301	FA301	ICAY50	ICAY50	ICAY50
Det. Lim.	1	10	1	0.0	0.0	0.0
Units.	ppb	ppb	ppb	%	%	%
N231951	240	401	500	0.554	0.303	0.021
N231952	198	382	447	0.520	0.258	0.020
N231953	197	407	462	0.571	0.213	0.017
N231954	225	409	504	0.531	0.331	0.024
N231955	244	439	538	0.585	0.353	0.023
N231956	210	368	491	0.388	0.155	0.013
N231957	286	530	641	0.459	0.137	0.013
N231958	248	421	516	0.310	0.141	0.011
N231959	199	375	441	0.378	0.226	0.015
N231960	249	492	507	0.548	0.289	0.020
N231961	231	426	511	0.533	0.315	0.020
N231962	59	118	142	0.142	0.101	0.010
N231963	11	27	41	0.013	0.017	0.007
N231964	10	24	38	0.006	0.023	0.006
N231965	5	28	31	0.008	0.019	0.005
N231966	4	36	36	0.018	0.017	0.006
N231967	218	304	379	0.360	0.255	0.018
N231968	136	177	229	0.126	0.095	0.009
N231969	7	35	41	0.013	0.016	0.006
N231970	7	37	41	0.000	0.000	0.001
N231971	4	23	35	0.007	0.018	0.005
N231972	7	28	39	0.002	0.023	0.005
N231973	<1	<10	1	0.007	0.005	0.005
*Dup N231951	238	406	481	0.543	0.301	0.021
*Dup N231963	10	30	39	0.013	0.017	0.007

OCT 27 2000



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

## CERTIFICATE OF ANALYSIS

Work Order: 061266

To: **URSA Major International**  
Attn: **Michael Perkins**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 20/10/00

Copy 1 to :

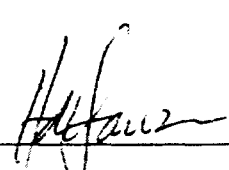
Copy 2 to :

P.O. No. :  
Project No. : **Shakespeare**  
No. of Samples : **50 Rock**  
Date Submitted : **26/09/00**  
Report Comprises : **Cover Sheet plus**  
**Pages 1 to 2**

### Distribution of unused material:

Pulps: Return.  
Rejects: Return.

Certified By :

  
\_\_\_\_\_  
Dr. Hugh de Souza, General Manager  
XRAL Laboratories

### ISO 9002 REGISTERED

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 061266

Date: 20/10/00

FINAL

Page 1 of 2

Element.	Au	Pt	Pd	Co	Cu	Ni
Method.	FA301	FA301	FA301	ICAY50	ICAY50	ICAY50
Det.Lim.	1	10	1	10	10	10
Units.	ppb	ppb	ppb	ppm	ppm	ppm
N231851	165	392	342	183	4160	2960
N231852	177	310	317	152	3400	2630
N231853	37	112	91	80	841	617
N231854	291	502	515	229	5300	4040
N231855	161	300	331	161	3420	2410
N231856	148	273	315	161	3010	2430
N231857	143	273	302	162	3270	2250
N231858	198	344	404	180	4250	2960
N231859	201	360	385	139	3630	2020
N231860	201	469	404	142	1880	2150
N231861	178	375	380	233	3820	3520
N231862	195	382	398	275	4090	3950
N231863	204	402	425	275	4560	4330
N231864	217	407	466	229	4200	3560
N231865	250	481	507	175	3940	2980
N231866	231	462	518	208	4710	3860
N231867	203	399	442	176	3670	2830
N231868	169	344	386	109	2140	1750
N231869	87	207	225	95	1400	1020
N231870	201	410	471	204	4410	3530
N231871	29	57	72	71	220	358
N231872	263	491	565	209	5410	4250
N231873	317	559	694	226	5480	3170
N231874	268	487	553	239	6080	4120
N231875	321	582	672	260	6200	4400
N231876	213	387	419	172	3690	2480
N231877	202	51	53	80	241	163
N231878	33	90	102	92	980	527
N231879	149	289	336	137	3550	1750
N231880	48	106	108	81	813	528
N231881	258	473	512	215	5660	3420
N231882	289	530	555	269	6030	4060
N231883	155	302	330	106	2470	1520
N231884	108	244	248	139	3020	1860
N231885	259	493	532	286	6680	5140
N231886	280	520	615	281	5840	4740
N231887	224	402	460	264	5260	4170
N231888	189	405	384	163	3710	2310
N231889	259	599	600	180	4150	2330
N231890	313	629	669	100	3100	1270
N231891	319	627	691	224	6290	3660
N231892	296	540	669	190	5090	2860
N231893	192	324	394	173	4140	2790
N231894	331	473	503	275	5900	4990
N231895	199	427	380	181	7860	2180



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A Division of SGS Canada Inc.

Work Order: 061266

Date: 20/10/00

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Element.	Au	Pt	Pd	Co	Cu	Ni
Method.	FA301	FA301	FA301	ICAY50	ICAY50	ICAY50
Det.Lim.	1	10	1	10	10	10
Units.	ppb	ppb	ppb	ppm	ppm	ppm
N231896	21	62	56	73	188	256
N231897	195	316	361	149	4440	2300
N231898	214	376	436	233	5470	4040
N231899	295	433	555	92	3250	1060
N231900	252	505	531	189	4520	2810
*Dup N231851	147	382	310	185	4300	2970
*Dup N231863	194	386	408	275	4560	4160
*Dup N231875	306	559	627	270	6240	4400
*Dup N231887	221	385	452	268	5170	4090
*Dup N231899	251	419	477	92	3140	1050

JUL 19 2000



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

### CERTIFICATE OF ANALYSIS

Work Order: 059937

To: **URSA Major International**  
Attn: **Geoff Shore**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 11/07/00

Copy 1 to : Richard Sutcliffe

Copy 2 to :

P.O. No. :  
Project No. : *Shakespeare*  
No. of Samples : 62 Rock  
Date Submitted : 21/06/00  
Report Comprises : Cover Sheet plus  
Pages 1 to 9

**Distribution of unused material:**

Pulps: RETURN SAME AS ABOVE  
Rejects: RETURN TO: 45 DOUGLAS RD. ANCASTER, ONT. L9C

Certified By :

  
Dr. Hugh de Souza, General Manager  
XRAL Laboratories

**ISO 9002 REGISTERED**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 059937

Date: 11/07/00

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Element	Au	Cu	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
GS 100	15	16	26	<0.5	0.05	0.92	1.26	0.04	0.35	0.39	1.6	0.08	42	54	166	2.13
GS 101	63	12	42	<0.5	0.04	0.60	0.90	0.09	0.37	0.22	4.2	0.08	31	78	125	3.22
GS 102	28	10	172	<0.5	0.01	0.04	0.09	<0.01	<0.01	0.02	<0.5	<0.01	7	155	144	2.27
GS 103	30	25	8	<0.5	0.05	0.55	0.88	0.04	0.18	0.68	2.6	0.10	51	56	223	2.04
GS 104	24	11	55	<0.5	0.09	0.86	1.60	0.03	0.66	0.59	3.0	0.10	79	55	248	2.79
GS 105	15	11	6	<0.5	0.06	1.03	1.73	0.03	0.73	0.49	2.7	0.09	71	73	276	3.06
GS 106	13	11	12	<0.5	0.06	1.17	1.75	0.04	0.36	0.46	2.5	0.06	62	69	318	3.24
GS 107	6	14	3	<0.5	0.01	0.08	0.27	<0.01	0.12	<0.01	<0.5	<0.01	6	106	21	0.83
GS 108	15	25	23	<0.5	0.06	0.78	1.06	0.03	0.08	0.67	2.8	0.08	37	36	260	1.74
GS 109	76	10	3	<0.5	<0.01	<0.01	0.02	<0.01	0.02	<0.01	<0.5	<0.01	10	134	14	1.50
GS 110	380	157	64	<0.5	0.03	0.54	0.73	0.02	0.08	1.13	2.1	0.07	49	26	180	1.59
GS 111	36	17	11	<0.5	0.04	0.92	1.15	0.04	0.16	0.33	2.2	0.07	52	54	188	2.35
GS 112	11	23	21	<0.5	0.03	1.40	2.14	0.04	0.80	0.31	2.0	0.12	76	42	372	4.85
GS 113	8	10	4	<0.5	0.05	0.80	1.26	0.05	0.34	1.26	3.1	0.14	79	46	279	2.76
GS 114	8	10	15	<0.5	0.03	0.51	0.59	0.02	0.26	0.55	2.0	0.10	30	155	97	1.21
GS 115	19	10	11	0.6	<0.01	0.14	0.40	0.02	0.02	0.31	<0.5	0.08	25	58	121	12.9
GS 116	9	11	23	<0.5	0.08	1.06	1.51	0.02	0.09	0.63	0.8	0.04	28	52	247	2.05
GS 117	13	20	10	<0.5	0.04	1.12	1.44	0.04	0.15	0.57	2.3	0.11	55	52	297	3.04
GS 118	6	19	11	<0.5	0.03	1.34	1.86	0.04	0.43	0.67	2.5	0.12	59	45	413	3.57
GS 119	6	20	14	<0.5	0.04	1.27	1.78	0.04	0.36	0.72	2.4	0.08	73	34	386	3.68
GS 120	72	29	25	<0.5	0.05	0.83	1.37	0.04	0.18	0.69	2.6	0.09	55	30	275	2.55
GS 121	188	352	120	<0.5	0.03	1.48	1.85	0.02	0.07	0.22	1.1	0.03	37	59	376	5.24
GS 122	14	10	9	<0.5	0.03	1.21	1.50	0.05	0.08	0.32	1.8	0.05	35	109	294	2.75
GS 123	254	255	266	<0.5	0.02	0.57	0.82	0.03	0.02	0.32	2.0	0.07	35	45	172	3.61
GS 124	11	10	13	<0.5	0.02	0.66	0.81	0.03	0.03	0.67	1.2	0.05	24	40	204	1.50
GS 125	14	21	32	<0.5	0.04	0.85	1.31	0.03	0.23	0.46	1.4	0.06	36	40	254	2.56
GS 126	54	10	4	<0.5	0.05	0.76	1.60	0.07	0.98	0.48	4.1	0.17	99	51	267	5.53
GS 127	13	10	5	<0.5	0.05	0.72	1.29	0.08	0.45	0.82	4.5	0.16	104	72	272	5.25
GS 128	27	10	4	<0.5	0.06	0.70	1.44	0.06	0.88	0.50	4.2	0.15	86	66	240	5.08
GS 129	12	10	4	<0.5	0.05	1.03	2.06	0.07	1.14	1.53	4.4	0.16	146	44	332	4.76



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Work Order: 059937

Date: 11/07/00

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Element. Method. Det. Lim. Units.	Au FA301 1 ppb	Pt FA301 10 ppb	Pd FA301 1 ppb	Be ICP70 0.5 ppm	Na ICP70 0.01 %	Mg ICP70 0.01 %	Al ICP70 0.01 %	P ICP70 0.01 %	K ICP70 0.01 %	Ca ICP70 0.01 %	Sc ICP70 0.5 ppm	Ti ICP70 0.01 %	V ICP70 2 ppm	Cr ICP70 1 ppm	Mn ICP70 2 ppm	Fe ICP70 0.01 %
GS-130	6	<10	5	<0.5	0.02	0.57	0.97	0.02	0.52	0.04	2.4	0.06	25	113	136	2.38
GS-131	6	35	16	<0.5	<0.01	2.37	2.00	0.02	0.03	0.14	1.0	0.05	50	472	309	2.64
GS-132	18	10	17	<0.5	0.06	1.23	1.60	0.02	0.28	0.40	1.3	0.07	35	58	221	2.24
GS-133	23	11	3	<0.5	0.05	0.47	1.17	0.09	0.72	0.56	3.5	0.14	34	66	218	3.62
GS-134	11	<10	3	<0.5	0.06	0.65	1.45	0.06	0.77	0.56	3.8	0.19	84	51	247	3.92
GS-135	13	<10	5	<0.5	0.08	0.79	1.55	0.05	0.76	0.62	3.5	0.13	78	48	266	3.50
GS-136	23	19	13	<0.5	0.08	1.14	1.95	0.04	1.24	0.42	2.9	0.13	84	58	239	3.95
GS-137	186	<10	5	<0.5	0.03	1.07	1.67	0.08	0.96	0.22	3.9	0.13	62	70	199	4.47
GS-138	45	<10	6	<0.5	0.05	0.71	1.18	0.07	0.67	0.15	6.7	0.11	64	76	118	4.11
GS-139	24	<10	10	<0.5	0.04	0.92	1.59	0.07	1.22	0.41	5.3	0.14	65	93	231	4.19
GS-140	17	<10	5	<0.5	0.03	0.97	1.51	0.04	1.13	0.16	3.7	0.10	41	100	189	2.38
GS-141	558	18	10	<0.5	0.03	0.26	0.34	0.03	0.07	0.84	<0.5	0.03	13	32	120	5.54
GS-142	9	30	36	<0.5	0.06	1.10	1.72	0.04	0.59	0.53	2.1	0.10	52	51	317	3.00
GS-143	12	12	4	<0.5	0.05	0.66	0.97	0.06	0.13	0.58	2.5	0.15	70	49	201	2.77
GS-144	55	229	362	<0.5	0.10	0.73	1.39	0.02	0.29	0.55	1.4	0.06	31	38	170	1.84
GS-145	6	32	43	<0.5	0.09	0.71	1.30	0.03	0.33	0.50	1.6	0.07	36	47	199	1.88
GS-146	12	28	38	<0.5	0.07	0.96	1.64	0.03	0.35	0.42	1.3	0.06	39	38	249	2.53
GS-147	193	410	467	<0.5	0.06	1.16	1.93	0.02	0.47	0.32	1.3	0.07	44	41	297	5.09
GS-148	16	34	37	<0.5	0.08	1.00	1.74	0.04	0.57	0.45	1.4	0.07	44	47	252	2.84
GS-149	238	611	500	<0.5	0.04	0.86	1.44	0.05	0.21	0.35	1.7	0.06	49	53	228	5.42
GS-150	484	573	499	0.5	<0.01	2.06	3.08	0.03	0.09	0.04	3.4	0.07	121	126	450	11.3
GS-151	119	433	174	<0.5	0.02	1.72	2.23	0.03	0.25	0.12	1.8	0.05	75	108	386	5.03
GS-152	16	48	42	0.5	0.04	1.39	2.27	0.04	1.33	0.35	3.3	0.14	114	102	372	5.37
GS-153	5	12	3	<0.5	0.04	1.14	1.78	0.09	0.63	0.72	2.9	0.17	96	37	315	3.84
GS-154	9	40	11	<0.5	0.03	1.77	1.87	0.04	0.21	0.25	2.6	0.06	80	35	281	3.08
GS-155	8	23	23	<0.5	0.22	0.86	2.13	0.03	0.34	1.03	1.9	0.06	36	32	156	1.81
GS-156	8	20	21	<0.5	0.10	1.17	1.73	0.03	0.18	0.81	2.3	0.08	43	40	194	2.45
GS-157	15	21	12	<0.5	0.02	2.03	1.78	0.02	0.32	0.18	1.2	0.06	50	319	174	3.06
GS-158	56	13	2	<0.5	0.06	0.35	0.79	0.11	0.23	0.68	4.6	0.09	17	65	164	2.89
GS-159	10	15	6	<0.5	0.08	0.80	1.50	0.04	0.58	0.61	2.7	0.09	54	36	225	2.64



**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 059937

Date: 11/07/00

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Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
GS 141a	3	<10	2	<0.5	0.04	1.25	1.88	0.10	0.57	0.70	2.7	0.16	91	51	398	4.04
GS 153a	188	80	68	<0.5	0.05	1.05	1.66	0.05	0.52	0.45	2.8	0.10	119	57	296	3.86
*Dup GS 100	14	11	24	<0.5	0.04	0.91	1.24	0.04	0.35	0.37	1.5	0.08	42	51	162	2.10
*Dup GS-112	11	22	20	<0.5	0.03	1.43	2.19	0.05	0.83	0.32	2.1	0.13	78	41	380	4.94
*Dup GS-124	7	11	9	<0.5	0.02	0.68	0.85	0.03	0.03	0.69	1.2	0.05	25	42	210	1.54
*Dup GS-136	17	16	16	<0.5	0.08	1.14	1.94	0.04	1.23	0.42	2.8	0.14	83	58	238	3.94
*Dup GS-148	17	36	34	0.5	0.07	0.97	1.68	0.04	0.56	0.41	1.7	0.06	42	47	243	2.77
*Dup GS 141a	3	11	3	<0.5	0.03	1.21	1.82	0.10	0.56	0.68	2.7	0.15	89	52	387	3.95





**XRAL Laboratories**  
A Division of SGS Canada Inc.

Work Order: 059937

Date: 11/07/00

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Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GS-100	18	49	67.0	20.2	<3	5.8	2.5	3.7	<1	0.2	<1	<10	<5	75	5.2	<10
GS-101	33	54	1370	20.6	<3	9.0	7.9	5.6	<1	0.7	<1	<10	<5	64	21.7	<10
GS-102	17	104	974	25.0	43	0.8	<0.5	2.1	<1	0.5	<1	<10	<5	5	<0.5	<10
GS-103	24	29	387	27.9	<3	7.6	4.6	4.2	<1	<0.2	<1	<10	<5	41	10.3	<10
GS-104	22	51	337	38.0	3	10.7	3.0	3.6	<1	<0.2	<1	<10	<5	159	5.9	<10
GS-105	18	32	119	40.2	<3	7.3	2.8	3.2	<1	0.2	<1	<10	<5	189	6.5	<10
GS-106	26	50	282	42.0	<3	6.6	2.5	2.1	<1	<0.2	<1	<10	<5	88	7.5	<10
GS-107	2	3	18.8	2.9	<3	1.3	<0.5	1.7	<1	0.2	<1	<10	<5	19	0.7	<10
GS-108	16	38	110	21.3	<3	10.0	3.3	3.4	<1	0.3	<1	<10	<5	17	5.5	<10
GS-109	446	7	4260	22.6	870	<0.5	0.5	1.9	10	3.1	<1	<10	<5	12	<0.5	<10
GS-110	28	93	660	20.7	24	7.7	2.5	3.6	<1	0.6	<1	<10	<5	23	3.4	<10
GS-111	24	46	632	26.3	4	6.2	3.4	3.7	<1	0.2	<1	<10	<5	29	7.1	<10
GS-112	38	40	248	41.3	<3	6.0	2.6	3.4	<1	0.3	<1	<10	<5	157	7.2	<10
GS-113	27	26	202	25.7	4	9.1	4.2	4.3	<1	0.2	<1	<10	<5	66	6.5	<10
GS-114	6	51	26.5	18.9	7	7.7	1.5	2.7	<1	<0.2	<1	<10	<5	30	5.2	<10
GS-115	315	76	319	7.8	<3	5.7	2.3	26.3	<1	1.0	4	<10	<5	1	10.6	<10
GS-116	20	50	83.4	22.5	<3	13.0	1.8	2.5	<1	0.3	<1	<10	<5	18	3.7	<10
GS-117	23	47	129	45.6	<3	8.7	3.9	4.0	<1	<0.2	<1	<10	<5	67	5.5	<10
GS-118	25	46	128	52.0	<3	10.2	3.5	4.5	<1	0.2	<1	<10	<5	93	4.3	<10
GS-119	26	46	93.8	45.3	<3	8.3	4.0	2.9	<1	0.4	<1	<10	<5	61	7.8	<10
GS-120	20	34	107	35.5	<3	8.3	3.5	3.9	1	<0.2	<1	<10	<5	35	5.7	<10
GS-121	157	2800	3780	74.3	69	4.3	1.5	0.7	<1	2.7	<1	<10	<5	15	4.3	<10
GS-122	20	138	1170	47.3	<3	7.4	11.5	5.4	<1	0.8	<1	<10	<5	15	34.6	<10
GS-123	52	533	7660	62.9	124	5.6	2.0	3.2	<1	4.4	<1	<10	<5	5	3.1	<10
GS-124	16	40	385	33.7	3	7.6	2.2	2.7	<1	0.3	<1	<10	<5	8	4.8	<10
GS-125	23	53	199	32.8	<3	5.9	2.3	2.9	<1	0.3	<1	<10	<5	39	5.1	<10
GS-126	32	22	383	35.3	43	5.1	5.9	5.4	<1	0.3	<1	<10	<5	289	11.6	<10
GS-127	17	20	466	35.6	10	7.2	8.7	9.7	<1	0.3	<1	<10	<5	108	22.5	<10
GS-128	16	16	527	28.8	22	6.4	6.5	6.0	<1	0.3	<1	<10	<5	223	13.4	<10
GS-129	33	20	229	33.0	<3	12.2	6.0	5.1	<1	0.2	<1	<10	<5	237	9.3	<10



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Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GS-130	9	17	69.4	61.7	<3	<0.5	4.0	4.5	<1	0.2	<1	<10	<5	88	6.4	<10
GS-131	20	108	9.7	32.5	<3	1.3	1.4	2.1	<1	0.3	<1	<10	<5	9	1.7	<10
GS-132	23	83	187	22.7	4	13.9	1.5	1.6	<1	0.3	<1	<10	<5	41	3.5	<10
GS-133	21	10	211	24.5	22	7.2	7.8	7.3	1	<0.2	<1	<10	<5	215	18.4	<10
GS-134	19	15	142	27.6	14	6.3	5.7	5.0	<1	<0.2	<1	<10	<5	238	12.1	<10
GS-135	33	30	133	31.6	41	7.7	5.6	5.0	<1	<0.2	<1	<10	<5	199	10.8	<10
GS-136	19	62	327	34.9	11	10.1	3.7	5.7	<1	<0.2	<1	<10	<5	249	4.9	<10
GS-137	16	12	314	29.6	<3	10.0	8.0	7.5	<1	0.3	<1	<10	<5	184	19.1	106
GS-138	22	22	465	20.6	<3	15.3	6.4	4.7	<1	0.2	<1	<10	<5	138	15.0	<10
GS-139	18	21	247	30.4	53	6.7	9.3	7.1	<1	0.4	<1	<10	<5	242	25.8	<10
GS-140	10	23	7.9	25.0	7	4.1	9.2	11.5	<1	0.3	<1	<10	<5	243	21.5	<10
GS-141	44	13	635	9.3	213	6.1	3.1	5.9	<1	0.3	<1	<10	<5	15	8.4	<10
GS-142	23	46	143	41.6	<3	10.4	3.2	2.0	<1	<0.2	<1	<10	<5	120	6.7	<10
GS-143	27	40	456	21.3	<3	7.1	5.0	4.7	<1	0.3	<1	<10	<5	27	7.1	<10
GS-144	25	96	227	21.9	15	16.6	2.0	2.2	1	0.5	<1	<10	<5	50	4.7	<10
GS-145	15	29	90.1	21.6	<3	13.3	2.0	2.3	<1	<0.2	<1	<10	<5	64	4.4	<10
GS-146	18	43	85.5	29.2	<3	10.9	1.9	2.8	<1	<0.2	<1	<10	<5	67	4.1	<10
GS-147	120	1550	3850	64.1	67	10.6	1.5	2.2	2	2.7	<1	<10	<5	91	3.7	<10
GS-148	26	82	462	35.3	<3	12.5	3.1	2.4	<1	0.5	<1	<10	<5	129	7.0	<10
GS-149	162	1740	4940	54.5	157	7.8	2.2	1.2	6	3.5	<1	<10	<5	48	5.9	<10
GS-150	34	411	3170	55.5	169	4.7	0.6	4.7	23	>10.0	11	<10	<5	18	2.7	<10
GS-151	45	494	894	41.8	<3	2.9	1.3	2.0	1	1.0	<1	<10	<5	54	3.9	<10
GS-152	69	510	1250	66.5	4	3.1	4.0	4.9	6	0.8	<1	<10	<5	272	15.5	<10
GS-153	25	38	148	45.4	<3	6.6	5.4	2.4	<1	0.4	<1	<10	<5	196	8.3	<10
GS-154	34	38	179	55.9	12	3.8	4.7	3.1	<1	0.2	<1	<10	<5	57	9.8	<10
GS-155	24	44	70.1	30.9	31	34.3	2.5	2.9	<1	<0.2	<1	<10	<5	76	4.9	<10
GS-156	31	53	33.7	25.0	42	15.1	2.7	2.9	<1	0.2	<1	<10	<5	36	7.0	<10
GS-157	33	176	208	29.3	31	5.2	0.8	2.8	<1	<0.2	<1	<10	<5	87	2.9	<10
GS-158	21	7	255	55.9	18	8.7	16.9	7.7	<1	<0.2	<1	<10	<5	58	29.0	<10
GS-159	20	30	211	33.1	7	10.8	3.9	3.5	<1	0.2	<1	<10	<5	135	8.0	<10



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Element.	Cu	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GS-141a	26	37	134	41.5	<3	5.9	5.9	3.7	<1	<0.2	<1	<10	<5	113	9.1	<10
GS-153a	43	350	687	49.1	<3	4.5	2.8	4.1	<1	0.8	<1	<10	<5	125	7.1	<10
*Dup GS-100	16	49	68.6	21.2	<3	5.5	2.5	3.3	<1	<0.2	<1	<10	<5	75	5.1	<10
*Dup GS-112	39	42	249	42.8	<3	6.2	2.7	3.5	<1	0.2	<1	<10	<5	163	7.6	<10
*Dup GS-124	17	40	387	34.7	<3	8.0	2.2	2.5	<1	0.3	<1	<10	<5	10	5.2	<10
*Dup GS-136	20	62	325	34.7	14	10.0	3.6	5.8	<1	0.3	<1	<10	<5	249	4.9	<10
*Dup GS-148	25	81	462	35.1	<3	12.2	3.4	2.8	2	0.6	<1	<10	<5	127	7.5	<10
*Dup GS-141a	25	36	132	42.3	<3	5.8	5.9	3.6	<1	<0.2	<1	<10	<5	112	8.8	<10



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Element.	Pb	Bi
Method.	ICP70	ICP70
Det. Lim.	2	5
Units.	ppm	ppm
GS-100	<2	<5
GS-101	6	*INF
GS-102	5	<5
GS-103	5	<5
GS-104	<2	<5
GS-105	3	<5
GS-106	<2	<5
GS-107	3	<5
GS-108	<2	<5
GS-109	209	*INF
GS-110	5	<5
GS-111	2	<5
GS-112	<2	<5
GS-113	<2	<5
GS-114	5	<5
GS-115	15	<5
GS-116	2	<5
GS-117	3	<5
GS-118	2	<5
GS-119	<2	<5
GS-120	3	<5
GS-121	4	*INF
GS-122	5	*INF
GS-123	9	*INF
GS-124	<2	<5
GS-125	4	<5
GS-126	3	<5
GS-127	<2	<5
GS-128	3	<5
GS-129	<2	<5



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Element.	Pb	Bi
Method.	ICP70	ICP70
Det. Lim.	2	5
Units.	ppm	ppm
GS-130	52	<5
GS-131	<2	<5
GS-132	<2	<5
GS-133	<2	<5
GS-134	<2	<5
GS-135	<2	<5
GS-136	<2	<5
GS-137	3	<5
GS-138	6	<5
GS-139	5	<5
GS-140	<2	<5
GS-141	5	<5
GS-142	4	<5
GS-143	4	<5
GS-144	<2	<5
GS-145	<2	<5
GS-146	2	<5
GS-147	<2	*INF
GS-148	<2	<5
GS-149	3	*INF
GS-150	10	*INF
GS-151	<2	<5
GS-152	<2	*INF
GS-153	3	<5
GS-154	6	<5
GS-155	5	<5
GS-156	4	<5
GS-157	<2	<5
GS-158	65	<5
GS-159	4	<5



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Element	Pb	Bi
Method	ICP70	ICP70
Det. Lim.	2	5
Units	ppm	ppm
GS-141a	<2	<5
GS-153a	4	<5
*Dup GS-100	<2	<5
*Dup GS-112	<2	<5
*Dup GS-124	<2	<5
*Dup GS-136	<2	<5
*Dup GS-148	<2	<5
*Dup GS-141a	2	<5

Work Order : 060849



**XRAL Laboratories**  
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*Pulps returned*

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

**ACKNOWLEDGEMENT OF ANALYTICAL REQUEST**

When referring to these samples, please quote:

Work Order No. 060849

TO:  
URSA Major International  
Attn: Geoff Shore  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

TEL : 416-864-0615  
FAX : 416-864-0620

We have received a shipment on 28/08/00

P.O. NO : *Shakespeare*  
PROJECT NO.:

WAYBILL NO.: 71418178985  
FROM :

SHIPPED VIA: Greyhound

**DISTRIBUTION OF UNUSED MATERIAL:**

Pulps: Discarded After 90 Days Unless Instructed!!!  
Rejects: Discarded After 90 Days Unless Instructed!!!

NUMBER OF SAMPLES: 22 SAMPLE TYPES: Rock

ESTIMATED DATE OF COMPLETION: 06/09/00

**ANALYTICAL REQUEST:**

Code	Description	Quantity
PC02	Crushing entire sample	22
PP02	Milling 200g in Cr steel	22
FA301	1AT Au Inst. Fire Assay	22
FA301	1AT Au Inst. Fire Assay	22
FA301	1AT Au Inst. Fire Assay	22
XRF102	Whole rock (majors + traces)	7
XRF102	XRF102 small smp# schg	7
ICP70	ICP, Aqua Regia	15

We thank you for your order.

Bonnie White  
XRAL Laboratories

DATED: 29/08/00



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

**CERTIFICATE OF ANALYSIS**

**Work Order: 060849**

To: **URSA Major International**  
**Attn: Geoff Shore**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

**Date : 12/09/00**

Copy 1 to :

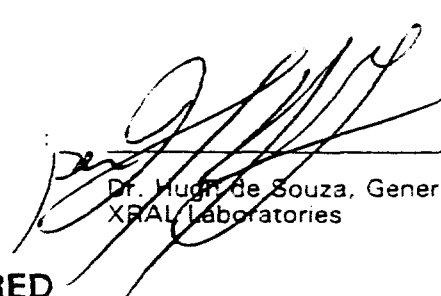
Copy 2 to :

P.O. No. :  
Project No. : *Shakespeare*  
No. of Samples : 22 Rock  
Date Submitted : 28/08/00  
Report Comprises : Cover Sheet plus  
Pages 1 to 4

**Distribution of unused material:**

**Pulps:** Discarded After 90 Days Unless Instructed!!!  
**Rejects:** Discarded After 90 Days Unless Instructed!!!

Certified By



Dr. Hugh de Souza, General Manager  
XRAL Laboratories

**ISO 9002 REGISTERED**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*NF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion





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Element	Au	Pt	Pd	SiO2	Al2O3	CaO	MgO	Na2O	K2O	Fe2O3	MnO	TiO2	P2O5	Cr2O3	LOI	Sum
Method	FA301	FA301	FA301	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102
Det. Lim.	1	10	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01A	0.01
Units	ppb	ppb	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%
AC 100	5	< 10	13	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
AC 101	145	231	173	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
AC 102	121	196	242	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 238	29	50	72	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 216	5	< 10	10	67.4	16.1	1.85	1.72	2.65	3.34	4.62	0.03	0.506	0.09	0.03	1.55	99.9
GS 228	3	13	13	47.7	9.15	8.03	16.6	0.92	0.16	13.2	0.22	0.585	0.06	0.26	3.05	99.9
GS 234	1	< 10	4	48.1	13.1	9.64	6.00	2.36	0.87	16.3	0.23	2.364	0.25	0.02	1.00	100.2
GS 235	6	< 10	8	58.8	18.6	2.12	3.55	5.08	2.24	6.29	0.05	0.824	0.06	0.03	1.95	99.7
GS 236	3	< 10	6	47.3	13.0	9.63	6.08	2.27	0.78	15.6	0.23	2.271	0.23	0.02	1.20	98.7
GS 237	3	< 10	9	53.8	12.2	9.28	5.23	2.44	0.19	13.2	0.17	1.844	0.20	0.02	1.40	100.0
GS 239	4	11	13	52.0	14.9	9.58	6.67	1.99	0.86	11.4	0.17	0.779	0.08	0.01	1.55	100.1
GS 240	4	< 10	14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 241	3	12	22	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 242	2	< 10	5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 243	4	< 10	14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 244	6	10	14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 245	4	11	14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 246	3	< 10	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 247	5	< 10	8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 248	11	30	12	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 250	263	483	607	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 251	167	372	337	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
*Dup AC-100	3	< 10	11	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
*Dup GS-241	2	16	17	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.



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Element.	Rb	Sr	Y	Nb	Ba	Zr	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V
Method.	XRF102	XRF102	XRF102	XRF102	XRF102	XRF102	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	2	2	2	2	20	2	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	ppm	%	ppm
AC-100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.03	0.80	1.23	0.08	0.18	0.43	1.6	0.09	57
AC-101	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.03	1.61	2.33	0.05	0.76	0.20	1.6	0.08	62
AC-102	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.10	0.78	1.50	0.03	0.28	0.43	1.5	0.05	38
GS-238	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.02	1.43	1.88	0.03	0.33	0.20	1.1	0.05	61
GS-216	113	83	26	13	528	179	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-228	9	46	12	3	21	66	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-234	32	142	30	17	222	123	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-235	82	123	19	13	320	140	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-236	29	170	31	15	232	120	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-237	10	258	26	27	52	125	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-239	41	195	18	5	165	66	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-240	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.02	1.04	1.00	0.02	0.16	0.33	0.9	0.04	28
GS-241	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.09	0.92	1.35	0.03	0.08	0.55	1.3	0.04	29
GS-242	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.04	1.72	2.07	0.03	0.07	0.13	7.9	0.05	103
GS-243	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.14	0.58	1.34	0.02	0.22	0.73	1.4	0.07	27
GS-244	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.13	0.52	1.21	0.03	0.21	0.65	1.4	0.06	28
GS-245	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.05	0.79	1.17	0.03	0.19	0.48	1.5	0.07	35
GS-246	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.06	0.72	1.12	0.02	0.13	0.44	1.1	0.05	27
GS-247	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.09	1.02	1.34	0.07	0.02	1.63	10.3	0.04	49
GS-248	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.02	1.74	1.63	0.02	0.44	0.16	0.7	0.05	45
GS-250	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.03	1.60	1.97	0.02	0.06	0.19	1.0	0.03	38
GS-251	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.03	1.38	1.88	0.02	0.52	0.16	1.2	0.04	83
*Dup AC-100	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.03	0.80	1.23	0.08	0.18	0.42	1.5	0.09	57
*Dup GS-241	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<0.5	0.09	0.91	1.34	0.03	0.08	0.54	1.3	0.04	29



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Element- Method- Det. Lim. Units.	Cr ICP70 1 ppm	Mn ICP70 2 ppm	Fe ICP70 0.01 %	Co ICP70 1 ppm	Ni ICP70 1 ppm	Cu ICP70 0.5 ppm	Zn ICP70 0.5 ppm	As ICP70 3 ppm	Sr ICP70 0.5 ppm	Y ICP70 0.5 ppm	Zr ICP70 0.5 ppm	Mo ICP70 1 ppm	Ag ICP70 0.2 ppm	Cd ICP70 1 ppm	Sn ICP70 10 ppm	Sb ICP70 5 ppm
AC 100	54	313	2.96	25	54	104	39.6	<3	6.9	3.7	4.7	2	<0.2	<1	<10	<5
AC 101	144	414	5.17	41	347	1320	52.9	<3	5.9	2.0	3.5	<1	1.2	<1	<10	<5
AC 102	67	217	3.26	57	728	2070	37.5	90	15.4	1.7	2.6	<1	1.7	<1	<10	<5
GS 238	121	355	3.82	54	346	774	54.7	37	4.0	1.9	3.1	<1	0.4	<1	<10	<5
GS 216	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS-228	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 234	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 235	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 236	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 237	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 239	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GS 240	199	179	1.54	14	52	59.1	17.6	<3	4.4	1.8	2.0	<1	<0.2	<1	<10	<5
GS 241	75	175	1.58	16	48	83.2	21.6	<3	15.9	2.0	2.6	<1	<0.2	<1	<10	<5
GS 242	177	241	3.17	19	47	30.6	38.6	<3	1.2	4.9	4.0	1	<0.2	<1	<10	<5
GS 243	59	162	1.24	12	34	95.1	18.6	<3	20.5	1.9	2.6	<1	<0.2	<1	<10	<5
GS-244	47	148	1.26	10	34	137	17.0	<3	18.2	2.2	3.2	<1	<0.2	<1	<10	<5
GS 245	47	242	1.88	16	39	101	25.5	<3	8.0	2.3	3.2	<1	<0.2	<1	<10	<5
GS 246	38	210	1.57	17	34	86.8	21.0	7	9.6	1.6	2.5	1	<0.2	<1	<10	<5
GS 247	82	358	2.43	13	41	369	42.8	<3	10.8	14.2	9.2	<1	<0.2	<1	<10	<5
GS 248	481	251	2.11	22	92	44.9	25.1	<3	1.6	1.4	2.3	<1	<0.2	<1	<10	<5
GS 250	85	430	6.56	272	4300	5830	104	129	3.2	1.2	<0.5	7	3.4	<1	<10	<5
GS 251	84	368	6.68	275	3330	3900	85.7	121	3.2	1.5	0.5	12	2.3	<1	<10	<5
*Dup AC-100	53	314	2.97	26	54	105	40.4	<3	6.9	3.5	4.0	<1	<0.2	<1	<10	<5
*Dup GS 241	73	172	1.56	15	48	82.5	20.9	<3	15.7	1.9	3.0	<1	0.2	<1	<10	<5



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Element.	Ba	La	W	Pb	Bi
Method.	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	0.5	10	2	5
Units.	ppm	ppm	ppm	ppm	ppm
AC 100	47	10.1	<10	3	<5
AC 101	145	8.3	<10	5	*INF
AC 102	57	4.4	<10	8	*INF
GS 238	60	7.4	<10	8	<5
GS 216	n.a.	n.a.	n.a.	n.a.	n.a.
GS 228	n.a.	n.a.	n.a.	n.a.	n.a.
GS 234	n.a.	n.a.	n.a.	n.a.	n.a.
GS 235	n.a.	n.a.	n.a.	n.a.	n.a.
GS 236	n.a.	n.a.	n.a.	n.a.	n.a.
GS 237	n.a.	n.a.	n.a.	n.a.	n.a.
GS 239	n.a.	n.a.	n.a.	n.a.	n.a.
GS 240	14	3.6	<10	<2	<5
GS 241	13	4.5	<10	4	<5
GS 242	13	11.8	<10	8	<5
GS 243	41	3.2	<10	<2	<5
GS 244	40	4.4	<10	2	<5
GS 245	29	4.2	<10	<2	<5
GS 246	23	3.1	<10	<2	<5
GS 247	6	25.0	<10	<2	<5
GS 248	33	3.6	<10	<2	<5
GS 250	11	4.6	<10	7	*INF
GS 251	100	7.6	<10	5	*INF
*Dup AC 100	47	10.3	<10	4	<5
*Dup GS 241	14	4.5	<10	3	<5

Work Order : 060810

*pulps returned*



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1085 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

**ACKNOWLEDGEMENT OF ANALYTICAL REQUEST**

When referring to these samples, please quote:

**Work Order No. 060810**

TO:  
URSA Major International  
Attn: Geoff Shore  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

TEL : 416-864-0615  
FAX : 416-864-0620

We have received a shipment on 23/08/00

P.O. NO :  
PROJECT NO.: *Shakespeare*

WAYBILL NO.: 07529/7148178753  
FROM :

SHIPPED VIA: OTM/GREYHOUND

**DISTRIBUTION OF UNUSED MATERIAL:**

Pulps: Discarded After 90 Days Unless Instructed!!!  
Rejects: Discarded After 90 Days Unless Instructed!!!

NUMBER OF SAMPLES: 43      SAMPLE TYPES: Rock

ESTIMATED DATE OF COMPLETION: 31/08/00

**ANALYTICAL REQUEST:**

Code	Description	Quantity
PG205	Drying, Crushing & milling ( hardened steel )	43
FA301	1AT Au Inst. Fire Assay	43
FA301	1AT Au Inst. Fire Assay	43
FA301	1AT Au Inst. Fire Assay	43
ICP70	ICP, Aqua Regia	43

We thank you for your order.

Bonnie White  
XRAL Laboratories

DATED: 25/08/00

SEP 18 2000



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

## CERTIFICATE OF ANALYSIS

Work Order: 060810

To: **URSA Major International**  
Attn: **Geoff Shore**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 12/09/00

Copy 1 to :

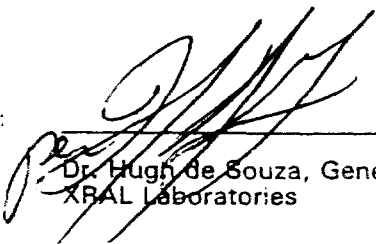
Copy 2 to :

P.O. No. : *Shakespeare*  
Project No. :  
No. of Samples : 43 Rock  
Date Submitted : 23/08/00  
Report Comprises : Cover Sheet plus  
Pages 1 to 6

### Distribution of unused material:

Pulps: Discarded After 90 Days Unless Instructed!!!  
Rejects: Discarded After 90 Days Unless Instructed!!!

Certified By :



Dr. Hugh de Souza, General Manager  
XRAL Laboratories

### ISO 9002 REGISTERED

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable -- = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



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Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
GS 189	4	21	12	0.9	0.05	1.39	1.75	0.04	0.81	0.81	5.9	0.09	80	113	445	3.44
GS 190	41	12	2	0.7	0.09	1.46	1.85	0.07	1.06	0.52	6.0	0.14	174	83	256	5.17
GS 191	4	20	22	<0.5	0.09	1.61	1.90	0.04	0.45	0.46	2.7	0.06	78	95	271	3.62
GS 192	6	16	17	<0.5	0.05	1.26	1.60	0.03	0.80	0.45	1.9	0.11	59	100	306	2.87
GS 193	411	623	623	<0.5	0.07	1.46	1.93	0.04	0.25	0.26	1.4	0.06	64	122	359	6.30
GS 194	205	385	421	<0.5	0.04	1.51	1.67	0.02	0.06	0.15	1.2	0.03	55	147	306	4.74
GS 195	11	27	33	<0.5	0.10	0.71	1.24	0.04	0.31	0.57	2.4	0.06	46	78	219	2.10
GS 196	194	361	504	<0.5	0.04	0.88	1.29	<0.01	0.17	0.14	1.4	0.06	42	50	192	4.48
GS 197	28	76	78	<0.5	0.07	2.00	2.10	0.04	0.05	0.24	2.2	0.03	69	215	334	3.28
GS 198	337	647	715	<0.5	0.06	1.03	1.59	0.03	0.33	0.28	1.3	0.04	45	54	273	5.89
GS 199	27	68	76	<0.5	0.07	0.99	1.54	0.03	0.30	0.33	1.0	0.04	36	60	256	2.58
GS 200	14	71	112	<0.5	0.09	0.78	1.32	0.02	0.44	0.44	1.4	0.05	34	59	220	2.02
GS 201	271	528	664	<0.5	0.04	0.99	1.42	0.01	0.27	0.19	0.9	0.04	39	45	284	5.11
GS 202	351	722	762	<0.5	0.03	1.35	1.87	0.03	0.20	0.13	1.3	0.08	75	100	335	7.11
GS 203	5	15	5	<0.5	0.07	0.86	1.39	0.09	0.41	0.63	2.9	0.10	87	48	265	2.72
GS 204	335	627	723	<0.5	0.07	0.92	1.57	0.04	0.30	0.31	2.1	0.07	58	67	288	4.97
GS 205	350	394	525	<0.5	0.07	0.66	1.14	0.03	0.31	0.34	1.2	0.05	38	37	192	4.17
GS 206	7	15	22	<0.5	0.08	1.15	1.61	0.03	0.25	0.61	1.8	0.05	45	71	351	2.90
GS 207	284	547	727	<0.5	0.04	1.16	1.70	0.03	0.39	0.21	1.2	0.05	53	59	322	6.21
GS 208	38	85	83	<0.5	0.08	0.96	1.40	0.07	0.19	0.45	2.0	0.10	70	91	325	3.56
GS 209	6	18	47	<0.5	0.05	1.11	1.54	0.02	0.18	0.43	1.2	0.04	39	57	358	2.83
GS 210	35	100	99	<0.5	0.07	1.05	1.48	0.03	0.15	0.36	1.2	0.03	33	59	301	2.63
GS 211	226	399	504	<0.5	0.05	1.13	1.57	0.03	0.30	0.17	0.8	0.06	40	46	315	5.12
GS 212	3	<10	2	<0.5	0.23	0.23	0.46	0.07	0.01	1.26	3.7	0.05	14	105	262	0.75
GS 213	3	<10	5	<0.5	0.03	1.59	1.98	0.03	0.47	0.12	3.0	0.04	58	184	205	2.97
GS 214	1	12	6	<0.5	0.03	1.53	1.84	0.03	0.21	0.30	5.4	0.02	60	174	289	2.85
GS 215	9	33	30	<0.5	0.09	1.12	1.76	0.04	0.67	1.14	2.2	0.08	65	73	405	3.20
GS 217	98	207	236	<0.5	0.05	1.56	2.04	0.03	0.40	0.28	1.6	0.06	74	141	376	4.37
GS 218	85	193	216	<0.5	0.07	0.63	1.19	0.03	0.33	0.36	1.4	0.05	36	28	172	2.67
GS 219	162	257	327	<0.5	0.03	1.81	2.54	0.03	0.53	0.11	2.1	0.11	108	239	477	6.42



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Element	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
GS 220	281	562	659	<0.5	0.07	0.93	1.60	0.04	0.42	0.26	1.0	0.06	52	60	241	5.28
GS 221	16	44	45	<0.5	0.08	1.09	1.64	0.04	0.21	0.44	1.8	0.05	55	77	298	2.83
GS 222	183	383	506	<0.5	0.07	1.01	1.52	0.03	0.08	0.41	1.2	0.04	42	45	259	4.10
GS 223	144	192	194	<0.5	0.07	0.95	1.58	0.03	0.49	0.41	2.9	0.06	72	108	298	5.47
GS 224	154	310	410	0.7	0.06	0.86	1.35	0.03	0.32	0.35	1.1	0.04	47	43	228	6.40
GS 225	194	400	473	<0.5	0.05	1.62	2.03	0.03	0.32	0.19	1.4	0.05	80	154	375	5.84
GS 226	109	204	272	<0.5	0.07	1.78	2.12	0.03	0.25	0.14	1.5	0.04	79	194	363	4.62
GS 227	38	88	96	<0.5	0.15	0.71	1.48	0.03	0.32	0.60	1.7	0.05	38	54	191	2.14
GS 229	5	99	66	<0.5	0.07	0.75	1.03	0.02	0.07	0.42	1.2	0.05	27	44	185	1.40
GS 230	49	49	55	<0.5	0.09	2.05	2.86	0.04	1.50	0.15	8.0	0.14	140	199	417	4.72
GS 231	2	<10	5	<0.5	0.03	0.75	1.34	0.04	0.19	0.07	0.8	0.02	18	52	130	2.46
GS 232	3	22	45	<0.5	0.07	0.93	1.21	0.02	0.08	0.45	1.2	0.04	25	84	194	1.62
GS 233	2	13	<1	<0.5	0.02	1.57	2.47	0.09	1.11	0.38	1.8	0.14	146	53	497	5.27
*Dup GS-189	3	15	9	<0.5	0.05	1.35	1.70	0.04	0.76	0.79	5.6	0.09	78	111	435	3.38
*Dup GS-201	270	524	627	<0.5	0.04	1.01	1.44	0.01	0.27	0.20	0.9	0.04	40	47	288	5.17
*Dup GS-213	3	11	7	<0.5	0.04	1.71	2.14	0.03	0.50	0.13	3.1	0.05	63	195	220	3.16
*Dup GS-226	105	196	253	<0.5	0.06	1.85	2.20	0.03	0.25	0.15	1.7	0.05	83	199	378	4.72



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Element- Method- Det Lim- Units-	Co ICP70 1 ppm	Ni ICP70 1 ppm	Cu ICP70 0.5 ppm	Zn ICP70 0.5 ppm	As ICP70 3 ppm	Sr ICP70 0.5 ppm	Y ICP70 0.5 ppm	Zr ICP70 0.5 ppm	Mo ICP70 1 ppm	Ag ICP70 0.2 ppm	Cd ICP70 1 ppm	Sn ICP70 10 ppm	Sb ICP70 5 ppm	Ba ICP70 1 ppm	La ICP70 0.5 ppm	W ICP70 10 ppm
GS 189	28	55	79.7	48.6	12	12.9	3.6	4.4	2	0.5	<1	<10	<5	83	4.5	<10
GS 190	32	25	459	30.9	<3	6.9	9.5	10.9	1	0.3	<1	<10	<5	118	15.2	<10
GS 191	33	57	164	31.4	<3	9.0	3.1	5.1	<1	0.2	<1	<10	<5	58	5.8	<10
GS 192	27	66	107	39.2	<3	6.9	3.0	4.6	<1	0.3	<1	<10	<5	90	4.7	<10
GS 193	164	2500	5310	76.3	234	6.9	1.7	2.8	1	3.3	<1	<10	<5	39	5.4	<10
GS 194	146	2140	4290	67.3	37	4.2	1.1	2.0	4	3.3	<1	<10	<5	13	5.7	<10
GS-195	17	100	149	27.2	<3	10.9	3.2	3.0	1	0.3	<1	<10	<5	66	6.2	<10
GS 196	195	2090	4090	51.1	208	3.5	0.9	1.7	5	1.8	<1	<10	<5	32	4.2	<10
GS 197	32	185	233	37.8	4	2.6	2.3	2.5	1	0.4	<1	<10	<5	15	8.2	<10
GS 198	279	4540	5760	82.0	131	7.0	1.9	<0.5	3	3.8	<1	<10	<5	70	6.4	<10
GS 199	28	218	489	32.0	<3	9.4	1.9	2.9	<1	0.6	<1	<10	<5	65	5.2	<10
GS 200	18	79	453	31.9	<3	11.7	1.8	3.2	<1	0.6	<1	<10	<5	103	4.6	<10
GS-201	190	3390	5010	76.4	17	4.6	1.1	0.6	<1	3.4	<1	<10	<5	46	3.3	<10
GS 202	19	252	4180	36.3	114	7.4	0.6	4.6	9	7.1	<1	<10	<5	36	3.5	<10
GS-203	17	47	422	41.2	<3	8.1	6.5	5.1	<1	0.8	<1	<10	<5	107	9.5	<10
GS-204	16	254	3440	36.6	23	12.7	1.7	4.5	<1	4.2	<1	<10	<5	74	6.1	<10
GS-205	94	2010	4440	64.2	<3	8.7	1.7	2.8	<1	2.7	<1	<10	<5	56	4.6	<10
GS 206	23	146	172	40.2	<3	9.3	2.9	4.3	<1	0.3	<1	<10	<5	46	5.9	<10
GS-207	223	3330	5600	87.7	72	3.9	1.6	1.7	<1	3.9	<1	<10	<5	82	5.8	<10
GS 208	42	389	1940	72.3	<3	7.2	3.3	5.6	2	1.0	<1	<10	<5	46	11.3	<10
GS 209	26	62	215	40.3	<3	5.7	1.5	4.0	<1	0.5	<1	<10	<5	33	3.9	<10
GS 210	33	278	531	37.6	<3	8.1	2.0	3.0	<1	0.8	<1	<10	<5	31	4.7	<10
GS 211	109	1400	3380	56.5	74	4.6	1.0	4.0	<1	2.6	<1	<10	<5	58	4.4	<10
GS 212	6	34	271	14.4	<3	6.8	10.8	8.2	1	0.5	<1	<10	<5	5	14.1	<10
GS-213	34	114	38.7	23.5	20	3.3	4.2	3.6	5	<0.2	<1	<10	<5	45	7.3	<10
GS-214	29	107	60.3	37.3	<3	5.8	6.7	4.6	3	<0.2	<1	<10	<5	27	12.7	<10
GS 215	25	44	108	47.7	3	11.6	3.7	5.2	1	0.4	<1	<10	<5	155	7.4	<10
GS-217	51	534	1830	46.6	23	6.1	1.4	2.5	3	1.7	<1	<10	<5	79	4.9	<10
GS-218	60	876	1580	35.5	<3	11.2	1.9	2.1	<1	2.1	<1	<10	<5	73	4.5	<10
GS-219	23	273	1350	45.2	19	8.7	0.8	5.1	6	2.0	<1	<10	<5	122	10.2	<10



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Element. Method. Det. Lim. Units.	Cu ICP70 1 ppm	Ni ICP70 1 ppm	Cu ICP70 0.5 ppm	Zn ICP70 0.5 ppm	As ICP70 3 ppm	Sr ICP70 0.5 ppm	Y ICP70 0.5 ppm	Zr ICP70 0.5 ppm	Mo ICP70 1 ppm	Ag ICP70 0.2 ppm	Cd ICP70 1 ppm	Sn ICP70 10 ppm	Sb ICP70 5 ppm	Ba ICP70 1 ppm	La ICP70 0.5 ppm	W ICP70 10 ppm
GS 220	41	504	4650	38.3	99	13.4	1.4	3.5	9	4.1	<1	<10	<5	93	5.0	<10
GS 221	25	149	184	29.2	<3	8.4	2.7	3.5	1	0.3	<1	<10	<5	48	6.0	<10
GS 222	115	2380	3630	82.0	<3	8.8	1.9	1.3	<1	2.6	<1	<10	<5	17	4.4	<10
GS 223	179	1940	1580	58.7	121	5.2	2.7	3.3	9	0.9	<1	<10	<5	113	9.5	<10
GS 224	307	5540	6380	95.8	177	6.9	2.3	<0.5	7	3.9	<1	<10	<5	69	6.1	<10
GS 225	181	2550	2850	64.4	103	3.4	1.3	1.8	7	2.2	<1	<10	<5	58	4.9	<10
GS 226	53	649	2270	49.9	41	3.0	1.2	3.0	3	1.8	<1	<10	<5	45	6.0	<10
GS 227	30	405	732	23.1	<3	19.8	2.1	3.7	1	1.1	<1	<10	<5	69	4.6	<10
GS 229	13	49	79.5	17.1	<3	11.4	1.7	2.6	<1	0.3	<1	<10	<5	15	2.8	<10
GS 230	22	200	429	58.9	21	4.6	3.5	8.2	1	0.9	<1	<10	<5	166	4.5	<10
GS 231	14	37	45.5	19.1	3	1.2	9.2	4.6	2	0.2	<1	<10	<5	28	27.5	<10
GS 232	15	51	67.7	31.4	<3	11.8	1.7	2.2	<1	0.3	<1	<10	<5	19	3.6	<10
GS 233	29	32	75.6	68.5	<3	6.9	3.7	5.0	<1	0.3	<1	<10	<5	129	8.1	<10
*Dup GS-189	27	54	76.1	47.4	15	12.2	3.2	4.5	<1	0.3	<1	<10	<5	80	4.6	<10
*Dup GS-201	198	3440	5020	77.6	18	4.6	1.1	0.5	<1	3.6	<1	<10	<5	47	3.2	<10
*Dup GS 213	32	119	41.3	25.2	16	3.6	4.3	3.4	3	<0.2	<1	<10	<5	49	7.3	<10
*Dup GS-226	52	651	2270	49.3	43	3.4	1.4	3.2	3	2.1	<1	<10	<5	46	5.9	<10



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Element	Pb	Bi
Method	ICP70	ICP70
Det Lim.	2	5
Units	ppm	ppm
GS 189	6	< 5
GS 190	12	< 5
GS 191	4	< 5
GS 192	< 2	< 5
GS 193	2	*INF
GS 194	10	*INF
GS 195	3	< 5
GS 196	5	*INF
GS 197	< 2	< 5
GS 198	9	*INF
GS 199	8	< 5
GS 200	< 2	< 5
GS 201	9	*INF
GS 202	8	*INF
GS 203	< 2	< 5
GS 204	5	*INF
GS 205	6	*INF
GS 206	< 2	< 5
GS 207	7	*INF
GS 208	2	*INF
GS 209	2	< 5
GS 210	4	< 5
GS 211	6	*INF
GS 212	4	< 5
GS 213	2	< 5
GS 214	7	< 5
GS 215	3	< 5
GS 217	4	*INF
GS 218	7	*INF
GS 219	3	*INF

Work Order : 059937

**XRAL**XRAL Laboratories  
A Division of SGS Canada Inc.1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-3755  
Fax (416) 445-4152**ACKNOWLEDGEMENT OF ANALYTICAL REQUEST**

When referring to these samples, please quote:

Work Order No. 059937

TO:

URSA Major International  
Attn: Jeff Shore  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3TEL : 416-864-0615  
FAX : 416-864-0620

We have received a shipment on 21/06/00

P.O. NO : *Forster & Stakepeace*  
PROJECT NO.:WAYBILL NO.: 05677  
FROM :

SHIPPED VIA: Greyhound/OTM

**DISTRIBUTION OF UNUSED MATERIAL:**Pulps: **RETURN SAME AS ABOVE**  
Rejects: RETURN TO: 45 DOUGLAS RD. ANCASTER, ONT. L9C

NUMBER OF SAMPLES: 62 SAMPLE TYPES: Rock

ESTIMATED DATE OF COMPLETION: 04/07/00

**ANALYTICAL REQUEST:**

Code	Description	Quantity
PG205	Drying, Crushing & milling ( hardened steel )	62
FA301	1AT Au Inst. Fire Assay	62
FA301	1AT Au Inst. Fire Assay	62
FA301	1AT Au Inst. Fire Assay	62
ICP70	ICP, Aqua Regia	62

We thank you for your order.

Bonnie White  
XRAL Laboratories

DATED: 22/06/00

JUL 17 2000



**XRAL Laboratories**  
A Division of SGS Canada Inc.

1885 Leslie Street  
Don Mills, Ontario  
Canada M3B 3J4  
Telephone (416) 445-5755  
Fax (416) 445-4152

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### CERTIFICATE OF ANALYSIS

Work Order: 059937

To: **URSA Major International**  
Attn: **R. Sutcliff**  
100 Adelaide Street West  
Suite 405  
TORONTO  
ONTARIO M5H 1S3

Date : 11/07/00

Copy 1 to : Richard Sutcliffe

Copy 2 to :

P.O. No. : *Porter & Shakespeare*  
Project No. :  
No. of Samples : 62 Rock  
Date Submitted : 21/06/00  
Report Comprises : Cover Sheet plus  
Pages 1 to 9

**Distribution of unused material:**

Pulps: RETURN SAME AS ABOVE  
Rejects: RETURN TO: 45 DOUGLAS RD. ANCASTER, ONT. L9C

Certified By :

Dr. Hugh de Souza, General Manager  
XRAL Laboratories

**ISO 9002 REGISTERED**

Report Footer: L.N.R. = Listed not received I.S. = Insufficient Sample  
n.a. = Not applicable - = No result  
\*INF = Composition of this sample makes detection impossible by this method  
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion



**XRAL Laboratories**  
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Element.	Au	Pt	Pd	Ir	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
GS-100	15	16	26	<0.5	0.05	0.92	1.26	0.04	0.35	0.39	1.6	0.08	42	54	166	2.13
GS-101	63	12	42	<0.5	0.04	0.60	0.90	0.09	0.37	0.22	4.2	0.08	31	78	125	3.22
GS-102	28	<10	172	<0.5	0.01	0.04	0.09	<0.01	<0.01	0.02	<0.5	<0.01	7	155	144	2.27
GS-103	30	25	8	<0.5	0.05	0.55	0.88	0.04	0.18	0.68	2.6	0.10	51	56	223	2.04
GS-104	24	44	55	<0.5	0.09	0.86	1.60	0.03	0.66	0.59	3.0	0.10	79	55	248	2.79
GS-105	15	14	6	<0.5	0.06	1.03	1.73	0.03	0.73	0.49	2.7	0.09	71	73	276	3.06
GS-106	13	11	12	<0.5	0.06	1.17	1.75	0.04	0.36	0.46	2.5	0.06	62	69	318	3.24
GS-107	6	14	3	<0.5	0.01	0.08	0.27	<0.01	0.12	<0.01	<0.5	<0.01	6	106	21	0.83
GS-108	15	25	23	<0.5	0.06	0.78	1.06	0.03	0.08	0.67	2.8	0.08	37	36	200	1.74
GS-109	76	<10	3	<0.5	<0.01	<0.01	0.02	<0.01	0.02	<0.01	<0.5	<0.01	10	134	14	1.50
GS-110	380	157	64	<0.5	0.03	0.54	0.73	0.02	0.08	1.13	2.1	0.07	49	26	180	1.59
GS-111	36	17	11	<0.5	0.04	0.92	1.15	0.04	0.16	0.33	2.2	0.07	52	54	188	2.35
GS-112	14	23	21	<0.5	0.03	1.40	2.14	0.04	0.80	0.31	2.0	0.12	76	42	372	4.85
GS-113	8	<10	4	<0.5	0.05	0.80	1.26	0.05	0.34	1.26	3.1	0.14	79	46	279	2.76
GS-114	8	<10	15	<0.5	0.03	0.51	0.59	0.02	0.26	0.55	2.0	0.10	30	155	97	1.21
GS-115	19	<10	11	0.6	<0.01	0.14	0.40	0.02	0.02	0.31	<0.5	0.08	25	58	121	12.9
GS-116	9	11	23	<0.5	0.08	1.06	1.51	0.02	0.09	0.63	0.8	0.04	28	52	247	2.05
GS-117	13	20	10	<0.5	0.04	1.12	1.44	0.04	0.15	0.57	2.3	0.11	55	52	297	3.04
GS-118	6	19	11	<0.5	0.03	1.34	1.86	0.04	0.43	0.67	2.5	0.12	59	45	413	3.57
GS-119	6	20	14	<0.5	0.04	1.27	1.78	0.04	0.36	0.72	2.4	0.08	73	34	386	3.68
GS-120	72	29	25	<0.5	0.05	0.83	1.37	0.04	0.18	0.69	2.6	0.09	55	30	275	2.55
GS-121	188	352	420	<0.5	0.03	1.48	1.85	0.02	0.07	0.22	1.1	0.03	37	59	376	5.24
GS-122	14	<10	9	<0.5	0.03	1.21	1.50	0.05	0.08	0.32	1.8	0.05	35	109	294	2.75
GS-123	251	255	266	<0.5	0.02	0.57	0.82	0.03	0.02	0.32	2.0	0.07	35	45	172	3.61
GS-124	11	10	13	<0.5	0.02	0.66	0.81	0.03	0.03	0.67	1.2	0.05	24	40	204	1.50
GS-125	14	21	32	<0.5	0.04	0.85	1.31	0.03	0.23	0.46	1.4	0.06	36	40	254	2.56
GS-126	53	<10	4	<0.5	0.05	0.76	1.60	0.07	0.98	0.48	4.1	0.17	99	54	267	5.53
GS-127	13	<10	5	<0.5	0.05	0.72	1.29	0.08	0.45	0.82	4.5	0.16	104	72	272	5.25
GS-128	27	<10	4	<0.5	0.06	0.70	1.44	0.06	0.88	0.50	4.2	0.15	86	66	240	3.08
GS-129	12	<10	4	<0.5	0.05	1.03	2.06	0.07	1.14	1.53	4.4	0.16	146	44	332	4.76



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Element. Method. Det. Lim. Units.	Au FA301 1 ppb	Pt FA301 10 ppb	Pd FA301 1 ppb	Be ICP70 0.5 ppm	Na ICP70 0.01 %	Mg ICP70 0.01 %	Al ICP70 0.01 %	P ICP70 0.01 %	K ICP70 0.01 %	Ca ICP70 0.01 %	Sc ICP70 0.5 ppm	Ti ICP70 0.01 %	V ICP70 2 ppm	Cr ICP70 1 ppm	Mn ICP70 2 ppm	Fe ICP70 0.01 %
GS-130	6	<10	5	<0.5	0.02	0.57	0.97	0.02	0.52	0.04	2.4	0.06	25	113	136	2.38
GS-131	6	35	16	<0.5	<0.01	2.37	2.00	0.02	0.03	0.14	1.0	0.05	50	472	309	2.64
GS-132	18	10	17	<0.5	0.06	1.23	1.60	0.02	0.28	0.40	1.3	0.07	35	58	221	2.24
GS-133	23	11	3	<0.5	0.05	0.47	1.17	0.09	0.72	0.56	3.5	0.14	34	66	218	3.62
GS-134	11	<10	3	<0.5	0.06	0.65	1.45	0.06	0.77	0.56	3.8	0.19	84	51	247	3.92
GS-135	13	<10	5	<0.5	0.08	0.79	1.55	0.05	0.76	0.62	3.5	0.13	78	48	266	3.50
GS-136	23	19	13	<0.5	0.08	1.14	1.95	0.04	1.24	0.42	2.9	0.13	84	58	239	3.95
GS-137	186	<10	5	<0.5	0.03	1.07	1.67	0.08	0.96	0.22	3.9	0.13	62	70	199	4.47
GS-138	45	<10	6	<0.5	0.05	0.71	1.18	0.07	0.67	0.15	6.7	0.11	64	76	118	4.11
GS-139	24	<10	10	<0.5	0.04	0.92	1.59	0.07	1.22	0.41	5.3	0.14	65	93	231	4.19
GS-140	17	<10	5	<0.5	0.03	0.97	1.51	0.04	1.13	0.16	3.7	0.10	41	100	189	2.38
GS-141	558	18	10	<0.5	0.03	0.26	0.34	0.03	0.07	0.84	<0.5	0.03	13	32	120	5.54
GS-142	9	30	36	<0.5	0.06	1.10	1.72	0.04	0.59	0.53	2.1	0.10	52	51	317	3.00
GS-143	12	12	4	<0.5	0.05	0.66	0.97	0.06	0.13	0.58	2.5	0.15	70	49	201	2.77
GS-144	55	229	362	<0.5	0.10	0.73	1.39	0.02	0.29	0.55	1.4	0.06	31	38	170	1.84
GS-145	6	32	43	<0.5	0.09	0.71	1.30	0.03	0.33	0.50	1.6	0.07	36	47	199	1.88
GS-146	12	28	38	<0.5	0.07	0.96	1.64	0.03	0.35	0.42	1.3	0.06	39	38	249	2.53
GS-147	193	410	467	<0.5	0.06	1.16	1.93	0.02	0.47	0.32	1.3	0.07	44	41	297	5.09
GS-148	16	34	37	<0.5	0.08	1.00	1.74	0.04	0.57	0.45	1.4	0.07	44	47	252	2.84
GS-149	238	611	500	<0.5	0.04	0.86	1.44	0.05	0.21	0.35	1.7	0.06	49	53	228	5.42
GS-150	484	573	499	0.5	<0.01	2.06	3.08	0.03	0.09	0.04	3.4	0.07	121	126	450	11.3
GS-151	119	433	174	<0.5	0.02	1.72	2.23	0.03	0.25	0.12	1.8	0.05	75	108	386	5.03
GS-152	16	48	42	0.5	0.04	1.39	2.27	0.04	1.33	0.35	3.3	0.14	114	102	372	5.37
GS-153	5	12	3	<0.5	0.04	1.14	1.78	0.09	0.63	0.72	2.9	0.17	96	37	315	3.84
GS-154	9	40	11	<0.5	0.03	1.77	1.87	0.04	0.21	0.25	2.6	0.06	80	35	281	3.08
GS-155	8	23	23	<0.5	0.22	0.86	2.13	0.03	0.34	1.03	1.9	0.06	36	32	156	1.81
GS-156	8	20	21	<0.5	0.10	1.17	1.73	0.03	0.18	0.81	2.3	0.08	43	40	194	2.45
GS-157	15	21	12	<0.5	0.02	2.03	1.78	0.02	0.32	0.18	1.2	0.06	50	319	174	3.06
GS-158	56	13	2	<0.5	0.06	0.35	0.79	0.11	0.23	0.68	4.6	0.09	17	65	164	2.89
GS-159	10	15	6	<0.5	0.08	0.80	1.50	0.04	0.58	0.61	2.7	0.09	54	36	225	2.64



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Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
<i>Polder</i> <i>V.1.0</i> GS-141a	3	<10	2	<0.5	0.04	1.25	1.88	0.10	0.57	0.70	2.7	0.16	91	51	398	4.04
<del>GS-141a</del>	188	80	68	<0.5	0.05	1.05	1.66	0.05	0.52	0.45	2.8	0.10	119	57	296	3.86
*Dup GS-100	14	11	24	<0.5	0.04	0.91	1.24	0.04	0.35	0.37	1.5	0.08	42	51	162	2.10
*Dup GS-112	11	22	20	<0.5	0.03	1.43	2.19	0.05	0.83	0.32	2.1	0.13	78	41	380	4.94
*Dup GS-124	7	11	9	<0.5	0.02	0.68	0.85	0.03	0.03	0.69	1.2	0.05	25	42	210	1.54
*Dup GS-136	17	16	16	<0.5	0.08	1.14	1.94	0.04	1.23	0.42	2.8	0.14	83	58	238	3.94
*Dup GS-148	17	36	34	0.5	0.07	0.97	1.68	0.04	0.56	0.41	1.7	0.06	42	47	243	2.77
*Dup GS-141a	3	11	3	<0.5	0.03	1.21	1.82	0.10	0.56	0.68	2.7	0.15	89	52	387	3.95





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Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Su	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GS-100	18	49	67.0	20.2	<3	5.8	2.5	3.7	<1	0.2	<1	<10	<5	75	5.2	<10
GS-101	33	54	1370	20.6	<3	9.0	7.9	5.6	<1	0.7	<1	<10	<5	64	21.7	<10
GS-102	17	104	974	25.0	43	0.8	<0.5	2.1	<1	0.5	<1	<10	<5	5	<0.5	<10
GS-103	24	29	387	27.9	<3	7.6	4.6	4.2	<1	<0.2	<1	<10	<5	41	10.3	<10
GS-104	22	51	337	38.0	3	10.7	3.0	3.6	<1	<0.2	<1	<10	<5	159	5.9	<10
GS-105	18	32	119	40.2	<3	7.3	2.8	3.2	<1	0.2	<1	<10	<5	189	6.5	<10
GS-106	26	50	282	42.0	<3	6.6	2.5	2.1	<1	<0.2	<1	<10	<5	88	7.5	<10
GS-107	2	3	18.8	2.9	<3	1.3	<0.5	1.7	<1	0.2	<1	<10	<5	19	0.7	<10
GS-108	16	38	110	21.3	<3	10.0	3.3	3.4	<1	0.3	<1	<10	<5	17	5.5	<10
GS-109	446	7	4260	22.6	870	<0.5	0.5	1.9	10	3.1	<1	<10	<5	12	<0.5	<10
GS-110	28	93	660	20.7	24	7.7	2.5	3.6	<1	0.6	<1	<10	<5	23	3.4	<10
GS-111	24	46	632	26.3	4	6.2	3.4	3.7	<1	0.2	<1	<10	<5	29	7.1	<10
GS-112	38	40	248	41.3	<3	6.0	2.6	3.4	<1	0.3	<1	<10	<5	157	7.2	<10
GS-113	27	26	202	25.7	4	9.1	4.2	4.3	<1	0.2	<1	<10	<5	66	6.5	<10
GS-114	6	51	26.5	18.9	7	7.7	1.5	2.7	<1	<0.2	<1	<10	<5	30	5.2	<10
GS-115	315	76	319	7.8	<3	5.7	2.3	26.3	<1	1.0	4	<10	<5	1	10.6	<10
GS-116	20	50	83.4	22.5	<3	13.0	1.8	2.5	<1	0.3	<1	<10	<5	18	3.7	<10
GS-117	23	47	129	45.6	<3	8.7	3.9	4.0	<1	<0.2	<1	<10	<5	67	5.5	<10
GS-118	25	46	128	52.0	<3	10.2	3.5	4.5	<1	0.2	<1	<10	<5	93	4.3	<10
GS-119	26	46	93.8	45.3	<3	8.3	4.0	2.9	<1	0.4	<1	<10	<5	61	7.8	<10
GS-120	20	34	107	35.5	<3	8.3	3.5	3.9	1	<0.2	<1	<10	<5	35	5.7	<10
GS-121	157	2800	3780	74.3	69	4.3	1.5	0.7	<1	2.7	<1	<10	<5	15	4.3	<10
GS-122	20	138	1170	47.3	<3	7.4	11.5	5.4	<1	0.8	<1	<10	<5	15	34.6	<10
GS-123	52	533	7660	62.9	124	5.6	2.0	3.2	<1	4.4	<1	<10	<5	5	3.1	<10
GS-124	16	40	385	33.7	3	7.6	2.2	2.7	<1	0.3	<1	<10	<5	8	4.8	<10
GS-125	23	53	199	32.8	<3	5.9	2.3	2.9	<1	0.3	<1	<10	<5	39	5.1	<10
GS-126	32	22	383	35.3	43	5.1	5.9	5.4	<1	0.3	<1	<10	<5	289	11.6	<10
GS-127	17	20	466	35.6	10	7.2	8.7	9.7	<1	0.3	<1	<10	<5	108	22.5	<10
GS-128	16	16	527	28.8	22	6.4	6.5	6.0	<1	0.3	<1	<10	<5	223	13.4	<10
GS-129	33	20	229	33.0	<3	12.2	6.0	5.1	<1	0.2	<1	<10	<5	237	9.3	<10



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Element.	Cu	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GS-130	9	17	69.4	61.7	<3	<0.5	4.0	4.5	<1	0.2	<1	<10	<5	88	6.4	<10
GS-131	20	108	9.7	32.5	<3	1.3	1.4	2.1	<1	0.3	<1	<10	<5	9	1.7	<10
GS-132	23	83	187	22.7	4	13.9	1.5	1.6	<1	0.3	<1	<10	<5	41	3.5	<10
GS-133	21	10	211	24.5	22	7.2	7.8	7.3	1	<0.2	<1	<10	<5	215	18.4	<10
GS-134	19	15	142	27.6	14	6.3	5.7	5.0	<1	<0.2	<1	<10	<5	238	12.1	<10
GS-135	33	30	133	31.6	41	7.7	5.6	5.0	<1	<0.2	<1	<10	<5	199	10.8	<10
GS-136	19	62	327	34.9	11	10.1	3.7	5.7	<1	<0.2	<1	<10	<5	249	4.9	<10
GS-137	16	12	314	29.6	<3	10.0	8.0	7.5	<1	0.3	<1	<10	<5	184	19.1	106
GS-138	22	22	465	20.6	<3	15.3	6.4	4.7	<1	0.2	<1	<10	<5	138	15.0	<10
GS-139	18	21	247	30.4	53	6.7	9.3	7.1	<1	0.4	<1	<10	<5	242	25.8	<10
GS-140	10	23	7.9	25.0	7	4.1	9.2	11.5	<1	0.3	<1	<10	<5	243	21.5	<10
GS-141	44	13	635	9.3	213	6.1	3.1	5.9	<1	0.3	<1	<10	<5	15	8.4	<10
GS-142	23	46	143	41.6	<3	10.4	3.2	2.0	<1	<0.2	<1	<10	<5	120	6.7	<10
GS-143	27	40	456	21.3	<3	7.1	5.0	4.7	<1	0.3	<1	<10	<5	27	7.1	<10
GS-144	25	96	227	21.9	15	16.6	2.0	2.2	1	0.5	<1	<10	<5	50	4.7	<10
GS-145	15	29	90.1	21.6	<3	13.3	2.0	2.3	<1	<0.2	<1	<10	<5	64	4.4	<10
GS-146	18	43	85.5	29.2	<3	10.9	1.9	2.8	<1	<0.2	<1	<10	<5	67	4.1	<10
GS-147	120	1550	3850	64.1	67	10.6	1.5	2.2	2	2.7	<1	<10	<5	91	3.7	<10
GS-148	26	82	462	35.3	<3	12.5	3.1	2.4	<1	0.5	<1	<10	<5	129	7.0	<10
GS-149	162	1740	4940	54.5	157	7.8	2.2	1.2	6	3.5	<1	<10	<5	48	5.9	<10
GS-150	34	411	3170	55.5	169	4.7	0.6	4.7	23	>10.0	11	<10	<5	18	2.7	<10
GS-151	45	494	894	41.8	<3	2.9	1.3	2.0	1	1.0	<1	<10	<5	54	3.9	<10
GS-152	69	510	1250	66.5	4	3.1	4.0	4.9	6	0.8	<1	<10	<5	272	15.5	<10
GS-153	25	38	148	45.4	<3	6.6	5.4	2.4	<1	0.4	<1	<10	<5	196	8.3	<10
GS-154	34	38	179	55.9	12	3.8	4.7	3.1	<1	0.2	<1	<10	<5	57	9.8	<10
GS-155	24	44	70.1	30.9	31	34.3	2.5	2.9	<1	<0.2	<1	<10	<5	76	4.9	<10
GS-156	31	53	33.7	25.0	42	15.1	2.7	2.9	<1	0.2	<1	<10	<5	36	7.0	<10
GS-157	33	176	208	29.3	31	5.2	0.8	2.8	<1	<0.2	<1	<10	<5	87	2.9	<10
GS-158	21	7	255	55.9	18	8.7	16.9	7.7	<1	<0.2	<1	<10	<5	58	29.0	<10
GS-159	20	30	211	33.1	7	10.8	3.9	3.5	<1	0.2	<1	<10	<5	135	8.0	<10



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Element	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det. Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GS-141a	26	37	134	41.5	<3	5.9	5.9	3.7	<1	<0.2	<1	<10	<5	113	9.1	<10
<del>GS-141a</del>	43	350	687	49.1	<3	4.5	2.8	4.1	<1	0.8	<1	<10	<5	125	7.1	<10
*Dup GS-100	16	49	68.6	21.2	<3	5.5	2.5	3.3	<1	<0.2	<1	<10	<5	75	5.1	<10
*Dup GS-112	39	42	249	42.8	<3	6.2	2.7	3.5	<1	0.2	<1	<10	<5	163	7.6	<10
*Dup GS-124	17	40	387	34.7	<3	8.0	2.2	2.5	<1	0.3	<1	<10	<5	10	5.2	<10
*Dup GS-136	20	62	325	34.7	14	10.0	3.6	5.8	<1	0.3	<1	<10	<5	249	4.9	<10
*Dup GS-148	25	81	462	35.1	<3	12.2	3.4	2.8	2	0.6	<1	<10	<5	127	7.5	<10
*Dup GS-141a	25	36	132	42.3	<3	5.8	5.9	3.6	<1	<0.2	<1	<10	<5	112	8.8	<10



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Element.	Pb	Bi
Method.	ICP70	ICP70
Det. Lim.	2	5
Units.	ppm	ppm
GS-100	<2	<5
GS-101	6	*INF
GS-102	5	<5
GS-103	5	<5
GS-104	<2	<5
GS-105	3	<5
GS-106	<2	<5
GS-107	3	<5
GS-108	<2	<5
GS-109	209	*INF
GS-110	5	<5
GS-111	2	<5
GS-112	<2	<5
GS-113	<2	<5
GS-114	5	<5
GS-115	15	<5
GS-116	2	<5
GS-117	3	<5
GS-118	2	<5
GS-119	<2	<5
GS-120	3	<5
GS-121	4	*INF
GS-122	5	*INF
GS-123	9	*INF
GS-124	<2	<5
GS-125	4	<5
GS-126	3	<5
GS-127	<2	<5
GS-128	3	<5
GS-129	<2	<5



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Element.	Pb	Bi
Method.	ICP70	ICP70
Det. Lim.	2	5
Units.	ppm	ppm
GS-130	52	<5
GS-131	<2	<5
GS-132	<2	<5
GS-133	<2	<5
GS-134	<2	<5
GS-135	<2	<5
GS-136	<2	<5
GS-137	3	<5
GS-138	6	<5
GS-139	5	<5
GS-140	<2	<5
GS-141	5	<5
GS-142	4	<5
GS-143	4	<5
GS-144	<2	<5
GS-145	<2	<5
GS-146	2	<5
GS-147	<2	*INF
GS-148	<2	<5
GS-149	3	*INF
GS-150	10	*INF
GS-151	<2	<5
GS-152	<2	*INF
GS-153	3	<5
GS-154	6	<5
GS-155	5	<5
GS-156	4	<5
GS-157	<2	<5
GS-158	65	<5
GS-159	4	<5



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Element.	Pb	Bi
Method.	ICP70	ICP70
Det Lim.	2	5
Units.	ppm	ppm
GS-141a	<2	<5
GS-141b	4	<5
*Dup GS-100	<2	<5
*Dup GS-112	<2	<5
*Dup GS-124	<2	<5
*Dup GS-136	<2	<5
*Dup GS-148	<2	<5
*Dup GS-141a	2	<5

**APPENDIX V**  
**JVX - IP AND MAGNETOMETER SURVEY REPORT**

**APPENDIX VI**  
**DDH CORE AVAILABILITY**



### Core Availability

On June 20, 2000, Geoff Shore visited the Falconbridge Limited Core Repository accompanied by Travis Mikel. Dean McEachern of Falconbridge Exploration provided assistance at the core shack. The objective of the visit was to locate core from previous Shakespeare property drilling programs and document core completeness and feasibility for future sampling.

### Core Located

<i>Year</i>	<i>Holes Located</i>	<i>State of Core</i>
1942	S-1, 2, 3, 4, 5, 7, 9, 10, 11, 12	<ul style="list-style-type: none"><li>- box labels difficult to read and many boxes missing - &lt;50% core in most cases</li><li>- core is AXT (xray) and has been quartered in many holes - not much core left for sampling</li><li>- difficult to compile a contiguous section due to incomplete core and poor labelling</li></ul>
1948	S-13	<ul style="list-style-type: none"><li>- most complete hole -566ft to 1049 ft was reconstructed and is contiguous</li><li>- most core split - some quartered</li><li>- sampling tags with depth markings located in the core box were used to reconstruct core sequence where labels were missing</li></ul>
1951	None	
1985	None	<ul style="list-style-type: none"><li>- was stored at the Lockerby Mine site - - has not been located since decommissioning of Lockerby Mine</li></ul>
1986	None	<ul style="list-style-type: none"><li>- was stored at the Lockerby Mine site - - has not been located since decommissioning of Lockerby Mine</li></ul>



41I05SW2009 2.23306

SHAKESPEARE

020

**LOGISTICAL and INTERPRETIVE  
REPORT  
ON  
SPECTRAL IP/RESISTIVITY and MAGNETOMETER  
SURVEYS**

**CONDUCTED ON THE  
FALCONBRIDGE OPTION PROPERTY  
AGNEW LAKE AREA, SHAKESPEARE TWP.  
NE ONTARIO**

**NTS 41 I/5**

**FOR**

**URSA MAJOR MINERALS INC.**

**JVX Ltd.**

**LOGISTICAL and INTERPRETIVE  
REPORT  
ON  
SPECTRAL IP/RESISTIVITY and MAGNETOMETER  
SURVEYS  
CONDUCTED ON THE  
FALCONBRIDGE OPTION PROPERTY  
AGNEW LAKE AREA, SHAKESPEARE TWP.  
NE ONTARIO  
NTS 41 I/5**

For:

**Ursa Major Minerals Inc.**  
Suite 405, 100 Adelaide Street West  
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M5H 1S3

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Fax: (416) 864-0620

Attention: Mr. Richard Sutcliffe

By:

**JVX Ltd.**  
60 West Wilmot Street, Unit #22  
Richmond Hill, Ontario  
L4B 1M6

Tel: (905) 731-0972

Fax: (905) 731-9312

Contact: Mr. Blaine Webster

JVX Ref: 0-49 -Ursa

November 2000

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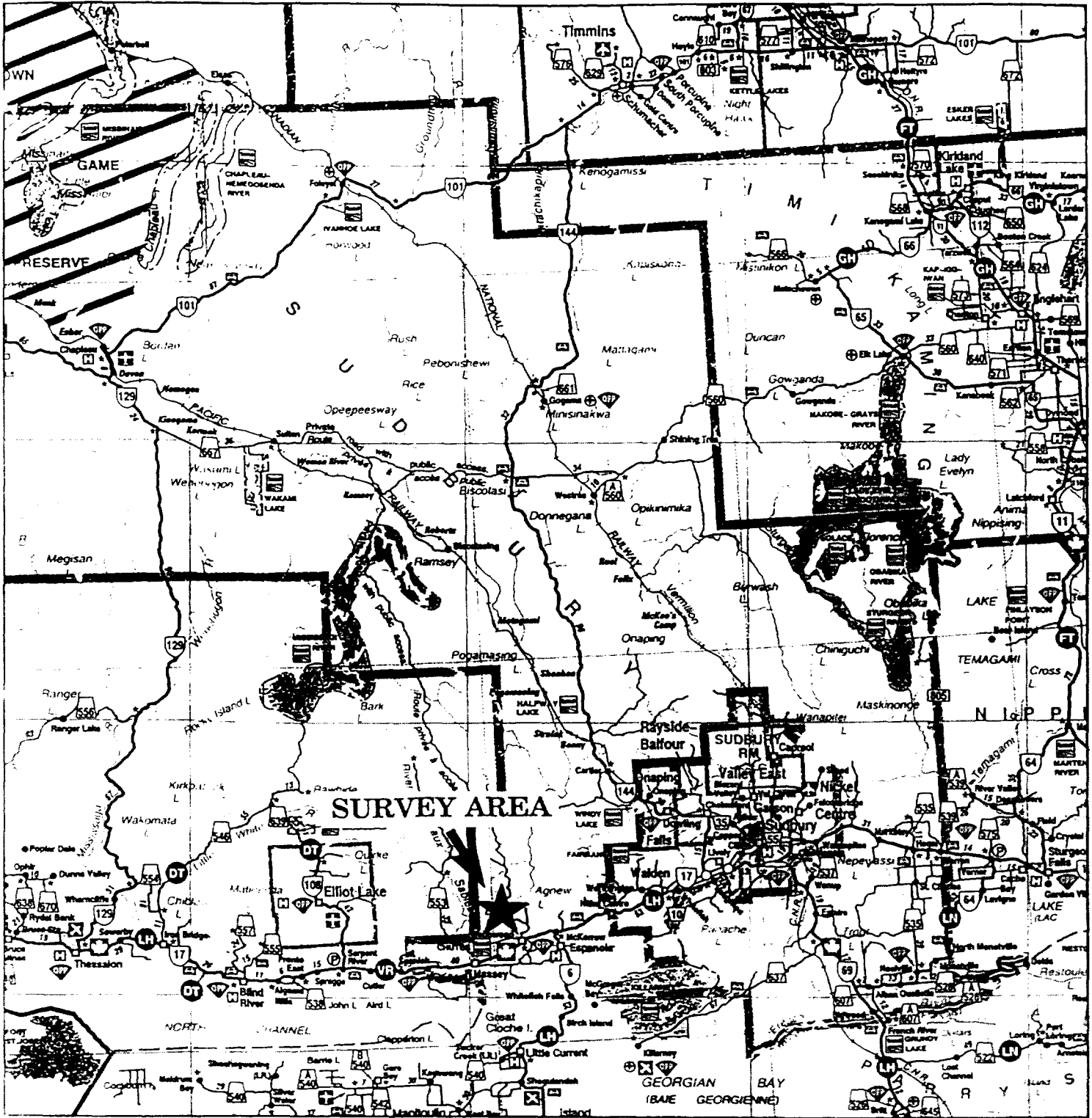
## 1. INTRODUCTION

JVX Ltd. conducted Time-Domain *Spectral* Induced Polarization (IP)/Resistivity and Magnetometer surveys from October 13 through October 17, 2000 on behalf of Ursa Major Minerals Inc. The work was positioned on the Falconbridge Option Property, which is located in the Agnew Lake area, Shakespeare Twp., Northeastern Ontario. The property is located approximately 60 kilometres west of Sudbury. The survey location is shown in Figure 1 and the survey grid with claims is shown in Figure 2.

The purpose of the surveys was to delineate disseminated sulphide zones in intrusives and determine areas favourable for platinum group metals. The magnetic survey was done to locate magnetic horizons associated with intrusives and to help interpret geologic structures.

The grid covered the following claims:

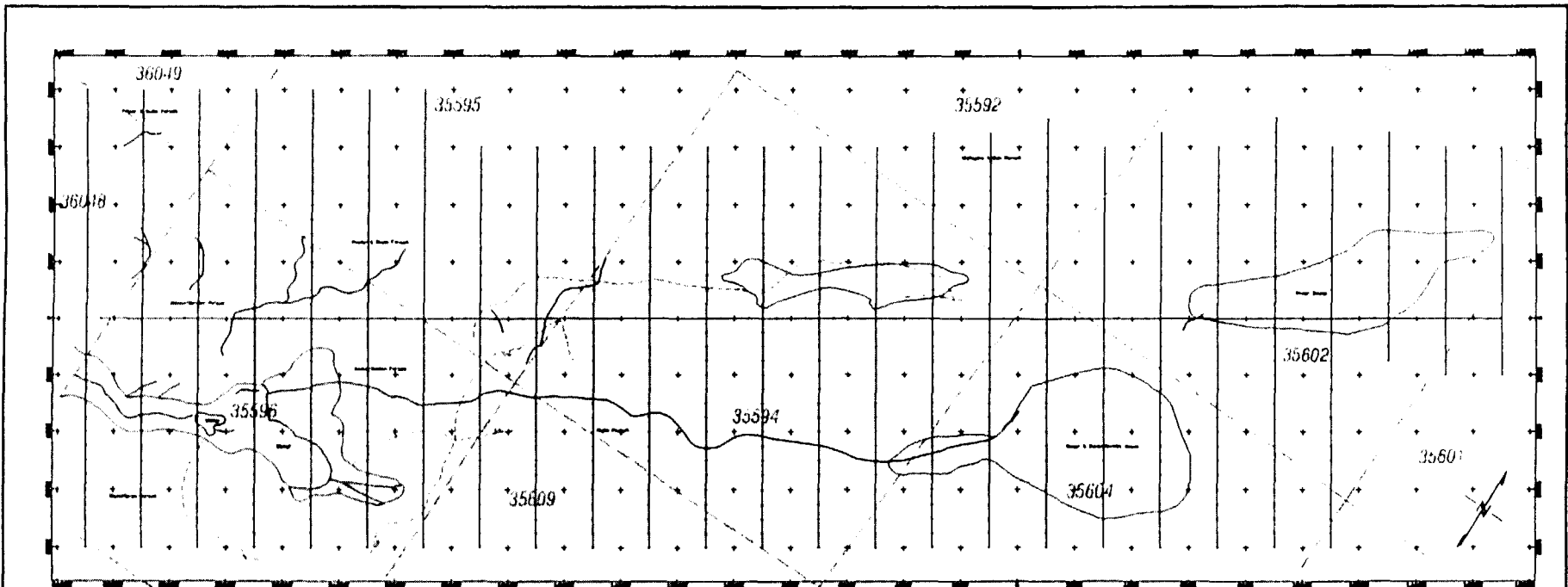
35592	35594	35595	35596	35601
35602	35604	35609	36048	36049



**LOCATION MAP**  
**URSA MAJOR MINERALS INC.**  
**FALCONBRIDGE OPTION PROPERTY**  
 Agnew Lake Area, Shakespeare Twp.  
 Sudbury Mining Division, NE Ontario  
 N.T.S. 41 U5  
**GROUND GEOPHYSICAL SURVEY**  
 Scale 1 : 1,600,000

Surveyed by JVX Ltd.  
 October 2000





**GRID / CLAIM MAP**  
**URSA MAJOR MINERALS INC.**  
**FALCONBRIDGE OPTION**  
 Agnew Lake Area, Shakespeare Twp., Ontario  
 NTS 41 I/5

2. SURVEY SPECIFICATIONS and PRODUCTION SUMMARIES

<b>IP/Resistivity</b>	
Transmitter	Scintrex IPC-7 2.5 kW
Receiver	Scintrex IPR-12
Array Type	pole-dipole
Transmit Cycle Time	2 sec
Receive Cycle Time	2 sec
Number of Potential Electrode Pairs	6
Electrode Spacing	75 ft.
Number of Lines Surveyed	7 lines
Survey Coverage	8775 ft.

Table 1: Specifications for the IP/Resistivity Surveys

<b>Magnetics</b>	
Magnetometer	Scintrex IGS and GSM-19
Mode	Total Field
Type	Proton Precession
Nominal Reading Interval	50 ft.
Number of Lines Surveyed	26 lines & 1 Base Line
Survey Coverage	7.68 miles

Table 2: Specifications for the Magnetics Survey

J V X

Line	Array "a"-spacing	From Station	To Station	Distance (ft.)	No. of Readings
2900W	75 ft.	800S	775N	1575	20
2100W	75 ft.	800S	400N	1200	15
1500W	75 ft.	800S	400N	1200	14
900W	75 ft.	800S	400N	1200	13
300W	75 ft.	800S	400N	1200	12
300E	75 ft.	800S	400N	1200	14
700E	75 ft.	800S	400N	1200	15
<b>Total</b>				<b>8775 ft.</b>	<b>103</b>

Table 3: Summary for Pole-Dipole IP/Resistivity

Line	From Station	To Station	Distance (ft)	No. of Readings
3300W	800N	800S	1600	33
3100W	800N	800S	1600	33
2900W	800N	800S	1600	33
2700W	800N	800S	1600	30
2500W	800N	800S	1600	30
2300W	800N	800S	1600	33
2100W	800N	800S	1600	33
1900W	600N	800S	1400	29
1700W	600N	800S	1400	29
1500W	600N	800S	1400	29
1300W	600N	800S	1400	29
1100W	600N	800S	1400	29
900W	600N	800S	1400	29
700W	600N	800S	1400	29
500W	600N	800S	1400	29
300W	650N	800S	1450	30
100W	650N	800S	1450	30
100E	700N	0	700	31
300E	600N	800S	1400	29
500E	650N	800S	1450	30
700E	600N	800S	1400	29
900E	700N	800S	1500	32
1100E	600N	800S	1400	29
1300E	650N	150S	800	17
1500E	600N	200S	800	17
1700E	600N	200S	800	17
BL0	3300W	1700E	5000	100
<b>Total</b>			<b>40,550 ft</b>	<b>848</b>

Table 4: Summary for Magnetics

### 3. PERSONNEL

John Marsh (Senior Geophysical Technician, Party Chief):

Mr. Marsh acted as Party Chief and was responsible for day-to-day field operations and overall data quality.

Steve Charbonneau (Geophysical Technician):

Mr. Charbonneau operated the IPR-12 receiver and assisted Mr. Marsh with the day-to-day field operations.

(3) Three technicians were employed to perform the fieldwork.

Gordon Hume (Geophysical Technician):

Mr. Hume carried out the Magnetometer survey.

John Gilliatt (Geophysicist):

Mr. Gilliatt processed and plotted the data and is responsible for data storage. He also liaised with the field party chief.

Ms. Dagmar Piska / Ms. Vaso LyMBERIS (Draftspersons):

Ms. Piska and Ms. LyMBERIS assisted with the plots, carried out the drafting on the figures/plates and assembled this report.

Joe Mihelcic (Geophysicist):

Mr. Mihelcic wrote the interpretation of the data presented in this report.

Blaine Webster (President):

Mr. Webster provided overall supervision of the survey.

#### 4. FIELD INSTRUMENTATION

JVX supplied the geophysical instruments specified in Appendix A.

##### 4.1 IP TRANSMITTER

The **Scintrex IPC-7/2.5 kW Time Domain Transmitter** was used. The transmitter generates square wave current output with a period of 4, 8, or 16 seconds. A digital multimeter in series with the transmitter is used to measure the magnitude of the current output.

##### 4.2 IP RECEIVER

The **Scintrex IPR-12 Time Domain Receiver** was used. This unit sample the voltage decay curve as measured by the potential electrodes at different points in time. Readings are repeated until they converge to within a tolerance level, and the data are stored in solid-state memory. Spectral parameters *Tau* and *M-IP* are also calculated and recorded automatically

##### 4.2.1 The Pole-dipole Array

The "pole-dipole" survey configuration was used over the ground survey lines. This array consists of one current electrode  $C_1$  and seven potential electrodes,  $P_1$  to  $P_7$  connected to the receiver by means of the "Snake" (field cable). The infinity current location  $C_2$  is maintained at a large distance from the grid. This distance is about 10 times the potential electrode spacing "a" times 6 (the maximum number of "n" used in the pole-dipole survey).

##### 4.3 MAGNETOMETERS

The **Scintrex Envi-mag system** and **GSM-19 Proton Magnetometer System** were used. This is a proton precession system. Readings are recorded digitally and downloaded to a computer. Diurnal corrections were also carried out using base station data collected at the same time from a magnetically "quiet" area.

## 5. DATA PROCESSING

After being transferred to a field computer at the end of each survey day, the data were examined, corrected, and organized by the instrument operator. The results were plotted on a

- ♦ STAR NX-80 colour dot-matrix printer

These plots were used to monitor progress and data quality, and to make an initial interpretation. Thus survey parameters and design were altered when necessary.

### 5.1 IP AND RESISTIVITY

The data were sent by courier or e-mail to the head office of JVX in Richmond Hill, Ontario. They were processed and results were plotted on the following printers as was necessary:

- ♦ HEWLETT PACKARD DESIGNJET 750C 36 inch colour plotter
- ♦ HEWLETT PACKARD 5L Laser printer

The processing procedure is outlined below:

- 1) JVX in-house software was used to spatially reference the time-domain data. Spectral *Tau*, *M-IP* and *c* were calculated - in addition to chargeability and apparent resistivity. The spectral parameters describe the shape of the IP decay curve, giving information about:
  - ♦ the grain size (indicated by the parameter *Tau*),
  - ♦ the magnitude of the chargeable source (indicated by *M-IP*),
  - ♦ the variability of grain size (indicated by *c*).

The spectral parameters were calculated internally in the IPR-12 and with JVX in-house software. This software works on IPR-11 format data and it also varies the spectral value *c*, whereas the IPR-12 circuitry uses a fixed value for  $c=0.25$ . JVX's extensive experience with master-curve-matching provides more reliable interpretative results. In-house software was used to convert the time slices from IPR-12 windows to IPR-11 windows. The M0 slice was extrapolated based on the approximate straight-line character of the Log-Lin decay curve. This estimation proved satisfactory for our purposes, based on sensitivity analyses done on a test data sample.

- 2) The **GEOSOFT IP Package** was used to generate colour and black and white pseudosections of chargeability and resistivity data.
- 3) Plan maps of both chargeability and resistivity data were produced using **JVX** in-house software and the **GEOSOFT Mapping Package**. Additional drafting on the compilation map was done through **AutoCAD**.

Steps 1 through 3 were carried out in the Richmond Hill office.

## 5.2 MAGNETICS

Diurnally corrected magnetics data were plotted in colour plan map format.

## 6. INTERPRETATION METHODOLOGY

JVX uses its many years of experience in geophysical interpretation to extract the most accurate information from the data. The procedures involved are simplified for the sake of clarity.

### 6.1 IP AND RESISTIVITY

The IP and resistivity data are interpreted using the following procedure:

- 1) Chargeability anomalies are picked on the pseudosections and classified using the following scheme *as a guide*:

———— *Very Strong* ( $> 30$  mV/V) and well defined

———— *Strong* (20 to 30 mV/V) and well defined

— — — *Moderate* (10 to 20 mV/V) and well defined

- - - *Weak* (5 to 10 mV/V) and well defined

..... *Very Weak* (3 to 5 mV/V) and poorly defined

x x x x *Extremely Weak* ( $< 3$  mV/V) and very poorly defined

The peak of the anomaly provides a qualitative indication of the depth to the top of the anomalous source and the location of the centre of the body. Where possible, the location and dipole number of the peak are written beside the anomaly bar.

NOTE: Relatively deep pole-dipole anomalies ( $\sim$  greater than  $n=3$ ) should be inverted (JVX inversion software) to provide a better estimate of source characteristics, etc



- 2) The spectral characteristics of the anomalies are examined. The peak value of *M-IP* is noted, and *Tau* is classified according to the following scheme:

***IPR-12/JVX Scheme:***

- L**     *Long* (> 1 s)
- M**     *Medium* (0.1 s to 1 s)
- S**     *Short* (< 0.1 s)

- 3) Resistivity anomalies are picked on the pseudosections and classified using the following scheme *as a guide*:

- no symbol*     **VH(n)** *Very High* (> 25 000 ohm m) — highly silicified
- no symbol*     **H(n)** *High* (> 10 000 ohm m) — probably silicified
- no symbol*     **WH(n)** *Weak High* (< 10 000 ohm m) — relative increase compared to surrounding material
- **SL(n)** *Strong Low* — strong decrease in resistivity
- **ML(n)** *Medium Low* — medium decrease in resistivity
- .....         **WL(n)** *Weak Low* — weak resistivity decrease relative to surrounding material, where *n* is the dipole number at which the anomaly peak is located.

- 4) The anomalies from steps 1 to 3 are marked on the Compilation Map.
- 5) Zones of high chargeability are interpreted based on resistivity and geometric information.
- 6) The anomalies are rated according to JVX' past experience.

7) Interpretation of inversion models (not presented in this report) is done with basic shapes. As we gain practical experience carrying out and interpreting inversion models, the confidence level of interpreted source boundaries will naturally increase. The boundaries of the shapes are drawn with dotted lines to thick solid lines, representing the following:

- High confidence in source-core location
- Good confidence in source-core location
- — — Fair confidence in source-core location
- ..... Source-core location uncertain (main source in general vicinity)

Note that the entire model depth-section is plotted, including regions where the inversion results are divergent. This is done because the cut off depth for divergence is non-uniform across the profile. The above interpreted source location serves to distinguish between interpreted true anomalies and these divergences.

## 6.2 MAGNETICS

Zones of magnetic anomalies are identified from the plan map presentation. These are compared to IP and resistivity results. Recognizable patterns that emerge from these results can be used to infer geologic structure. The results can also be used to further prioritize exploration targets that were initially located using the IP results. For example, if gold mineralization typically occurs along fracture surfaces, than breaks in the magnetics could represent fault zones. If these zones contain chargeable anomalies, then they may be ranked higher priority exploration targets than if no magnetic signature existed.

## 7. DISCUSSION OF RESULTS

The geophysical anomalies have been transferred to the Compilation Map (Plate 1) and anomalous zones have been identified. A brief discussion of the results follows:

### IP-1 (along baseline)

This long continuous n=1 chargeability zone appears related to the contact between a gabbro unit located south of the baseline, and sediments in the north. Chargeability values are strong with spectral MIP and Tau greater than 400 mV/V and long respectively. A magnetic high zone, possibly associated with magnetite and/or pyrrhotite, coincides with the zone. The chargeability anomaly also appears to coincide with resistivity low values. *IP-1* is the result of relatively large amounts of coarse-grained or linked sulphides.

### Exploration Targets:

L300E/stn.100S, very **high priority** (very high MIP, long Tau, mag. high)  
 L300W/stn.BL, high priority (high MIP, long Tau, mag. high)  
 L2100W/stn.25N, high priority (high MIP, long Tau, mag. high)

### IP-1N, IP-4 (parallel & north of IP-1)

*IP-1N* and *IP-4* are located immediately north of *IP-1* and the magnetic trend (see Compilation Map, Plate 1). They both consist of strong MIP and long Tau, but *IP-1N* is primarily at n=3 (deeper than *IP-1*). *IP-4* is located within the broad apparent resistivity high zone in the north, whereas *IP-1N* is located along its southern edge, possibly coinciding with a geologic contact or horizon.

### Exploration Targets:

L300W/stn.~175N, high priority (high MIP, medium and long Tau, low res)  
 L300W/stn.325N, medium priority (moderate MIP, medium Tau, high res)

## IP-3 (along north edge of res. High zone)

*IP-3* is located within the interpreted gabbro unit. The apparent resistivity high zone located south of this chargeability zone indicates that *IP-3* may be located along a geologic contact.

Chargeability values on L1500W and L900W are weak to moderately strong, and MIP and Tau values are ~300 mV/V and short respectively, indicating relatively large amounts of fine-grained sulphides. On L300W, there are two weak chargeability anomalies with long spectral Tau indicating coarse or linked sulphides.

## Exploration Targets:

L1500W/stn.425S, medium priority (moderate MIP, short Tau, high res)

## Single-line Anomalies:

Due to the relatively wide line spacing, a number of anomalies were detected on end-lines that could not be formed into zones. These include zones *IP-2*, *IP-6*, *IP-7*, *IP-8*, *IP-5* and *IP-5S*.

*IP-2* (L700E) and *IP-6* (L1500W) are the result of minor fine-grained sulphides (MIP<250 mV/V, Tau=short) and possibly associated with silicification (high resistivity). *IP-7*, located on L2900W, consists of a weak chargeability anomaly located adjacent to a very high and narrow apparent resistivity anomaly which could represent a quartz vein. Spectral Tau is short indicating fine-grained sulphides.

*IP-8* is located at the north end of L700E. It is moderately strong and coincides with a very high apparent resistivity anomaly. *IP-8* is typical for moderate amounts of fine-grained sulphides, possibly associated with silicification. *IP-5* is similar in character to *IP-1N* discussed earlier, and located further northeast. Therefore, it could be part of the same mineralized zone. *IP-5S* is located at the end of a moderate magnetic high zone that could be associated with the same magnetic high zone located further northeast along *IP-1*. However, unlike *IP-1*, the IP anomaly is weak and has short spectral Tau indicating minor fine-grained sulphides. *IP-1* is also likely associated with silicification due to the high apparent resistivity.

## Overburden "Masking"

Much of the southwest corner of the survey area appears to be "masked" by thick conductive overburden. This can be seen in the apparent resistivity pseudosections for L2900W and L2100W. In these areas it is unlikely that the IP data represent bedrock information.

## 8. RECOMMENDATIONS

Chargeability zones should be further investigated if favourable results are seen at the recommended targets. Fill-in IP coverage is recommended to define the trends and character of "single-line" anomalies. These anomalies should also be investigated. Additional prioritization of anomalies should be done with available geologic and geochemical data.

Please contact JVX to discuss optimal drill collar locations and their associated geophysical targets.


If there are questions with regard to the survey or its interpretation please call the undersigned.

Respectfully submitted,

JVX Ltd.



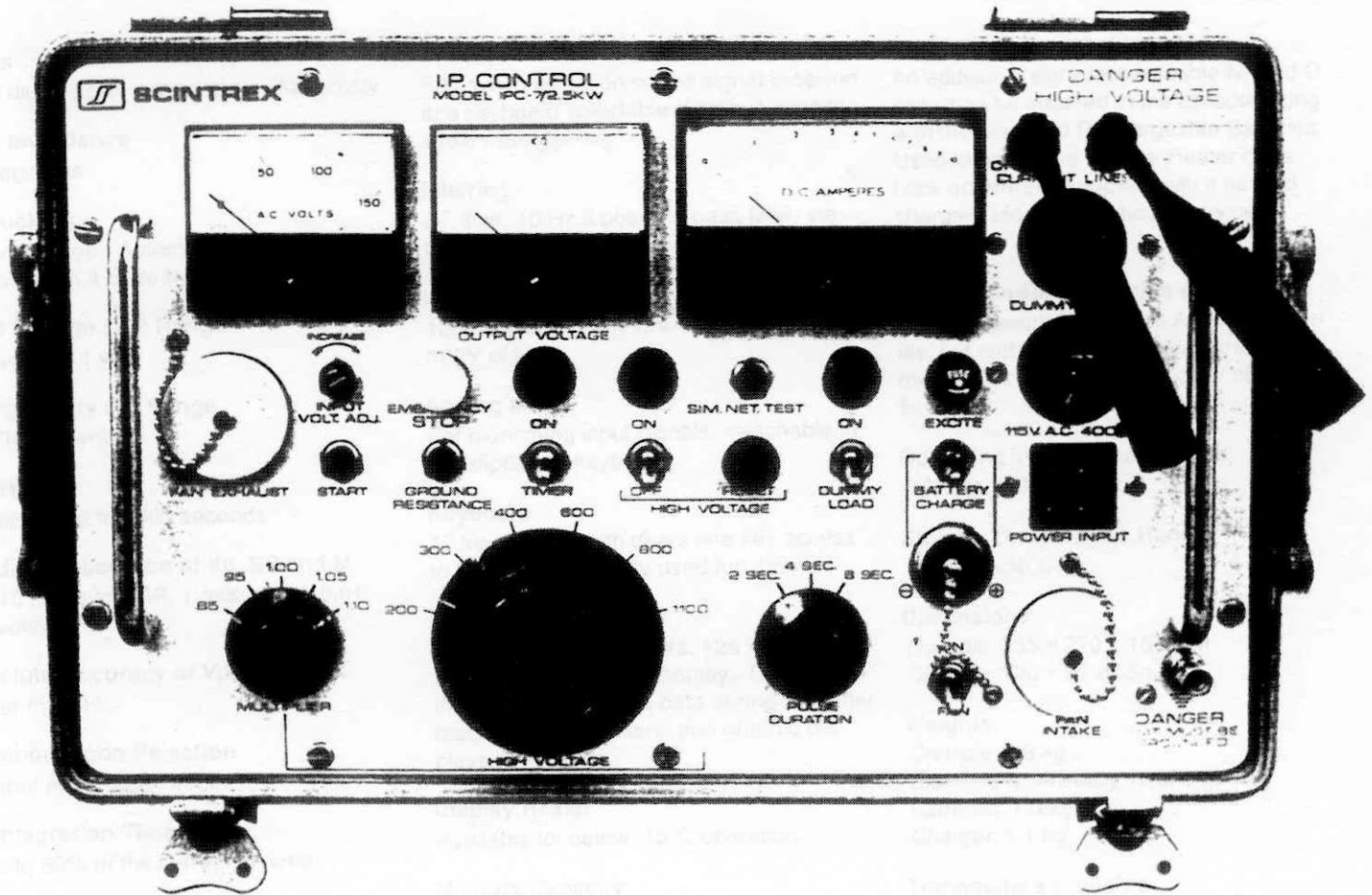
Joe Mihelcic  
Geophysicist



Blaine Webster  
President

**APPENDIX A**

# SCINTREX IPC-7/2.5kW Induced Polarization and Commutated DC Resistivity Transmitter System



## Function

The IPC-7/2.5 kW is a medium power transmitter system designed for time domain induced polarization or commutated DC resistivity work. It is the standard power transmitting system used on most surveys under a wide variety of geophysical, topographical and climatic conditions.

The system consists of three modules. A Transmitter Console containing a transformer and electronics, a Motor Generator and a Dummy Load mounted in the Transmitter Console cover. The purpose of the Dummy Load is to accept the Motor Generator output during those parts of the cycle when current is not transmitted into the ground, in order to improve power output and prolong engine life.

The favourable power-weight ratio and compact design of this system make it portable and highly versatile for use with a wide variety of electrode arrays.

## Features

Maximum motor generator output, 2.5 kW. maximum power output, 1.85 kW. maximum current output, 10 amperes. maximum voltage output, 1210 volts DC.

Removable circuit boards for ease in servicing.

Automatic on-off and polarity cycling with selectable cycling rates so that the optimum pulse time (frequency) can be selected for each survey.

The overload protection circuit protects the instrument from damage in case of an overload or short in the current dipole circuit.

The open loop circuit protects workers by automatically cutting off the high voltage in case of a break in the current dipole circuit.

Both the primary and secondary of the transformer are switch selectable for power matching to the ground load. This ensures maximum power efficiency.

The built-in ohmmeter is used for checking the external circuit resistance to ensure that the current dipole circuit is grounded properly before the high voltage is turned on. This is a safety feature and also allows the operator to select the proper output voltage required to give an adequate current for a proper signal at the receiver.

The programmer is crystal controlled for the very high stability required for broadband (spectral) induced polarization measurements using the Scintrex IPR-11 Broadband Time Domain Receiver.

# SCINTREX

## IPR-12 Time Domain Induced Polarization/Resistivity Receiver

### Specifications

#### Inputs

1 to 8 dipoles are measured simultaneously.

#### Input Impedance

16 Megohms

#### SP Bucking

±10 volt range. Automatic linear correction operating on a cycle by cycle basis.

#### Input Voltage (Vp) Range

50  $\mu$ volt to 14 volt

#### Chargeability (M) Range

0 to 300millivolt

#### Tau Range

1 millisecond to 1000 seconds

#### Reading Resolution of Vp, SP and M

10 microvolt; SP, 1 millivolt; M, 0.01  
ivolt/volt

#### Absolute Accuracy of Vp, SP and M

Better than 1%

#### Common Mode Rejection

At input more than 100db

#### Vp Integration Time

10% to 80% of the current on time.

#### IP Transient Program

Total measuring time keyboard selectable at 1, 2, 4, 8, 16 or 32 seconds. Normally 14 windows except that the first four are not measured on the 1 second timing, the first three are not measured on the 2 second timing and the first is not measured on the 4 second timing. (See diagram on page 2.) An additional transient slice of minimum 10 ms width, and 10ms steps, with delay of at least 40 ms is keyboard selectable

#### Transmitter Timing

Equal on and off times with polarity change each half cycle. On/off times of 1, 2, 4, 8, 16 or 32 seconds. Timing accuracy of 100 ppm or better is required.

#### External Circuit Test

All dipoles are measured individually in sequence, using a 10 Hz square wave. The range is 0 to 2 Mohm with 0.1kohm resolution. Circuit resistances are displayed and recorded.

#### Synchronization

Self synchronization on the signal received at a keyboard selectable dipole. Limited to avoid mistriggering.

#### Filtering

RF filter, 10 Hz 6 pole low pass filter, statistical noise spike removal.

#### Internal Test Generator

1200 mV of SP; 807 mV of Vp and 30.28 mV/V of M.

#### Analog Meter

For monitoring input signals; switchable to any dipole via keyboard.

#### Keyboard

17 key keypad with direct one key access to the most frequently used functions.

#### Display

16 lines by 42 characters, 128 x 256 dots, Backlit Liquid Crystal Display. Displays instrument status and data during and after reading. Alphanumeric and graphic displays.

#### Display Heater

Available for below -15°C operation.

#### Memory Capacity

Stores approximately 400 dipoles of information when 8 dipoles are measured simultaneously.

#### Real Time Clock

Data is recorded with year, month, day, hour, minute and second.

#### Digital Data Output

Formatted serial data output for printer and PC etc. Data output in 7 or 8 bit ASCII, one start, one stop bit, no parity format. Baud rate is keyboard selectable for standard rates between 300 baud and 51.6 kBaud. Selectable carriage return delay to accommodate slow peripherals. Handshaking is done by X-on/X-off.

#### Standard Rechargeable Batteries

Eight rechargeable Ni-Cad D cells. Supplied with a charger, suitable for 110/230V, 50 to 60 Hz, 10W. More than 20 hours service at +25°C, more than 8 hours at -30°C.

#### Ancillary Rechargeable Batteries

An additional eight rechargeable Ni-Cad D cells may be installed in the console along with the Standard Rechargeable Batteries Used to power the Display Heater or as back up power. Supplied with a second charger. More than 6 hours service at -30°C.

#### Use of Non-Rechargeable Batteries

Can be powered by D size Alkaline batteries, but rechargeable batteries are recommended for longer life and lower cost over time.

#### Operating Temperature Range

-30°C to +50°C

#### Storage Temperature Range

-30°C to +50°C

#### Dimensions

Console: 355 x 270 x 165 mm  
Charger: 120 x 95 x 55mm

#### Weights

Console: 5.8 kg  
Standard or Ancillary Rechargeable Batteries: 1.3 kg  
Charger: 1.1 kg

#### Transmitters available

IPC-9	200 W
TSQ-2E	750 W
TSQ-3	3 kW
TSQ-4	10 kW

# SCINTREX

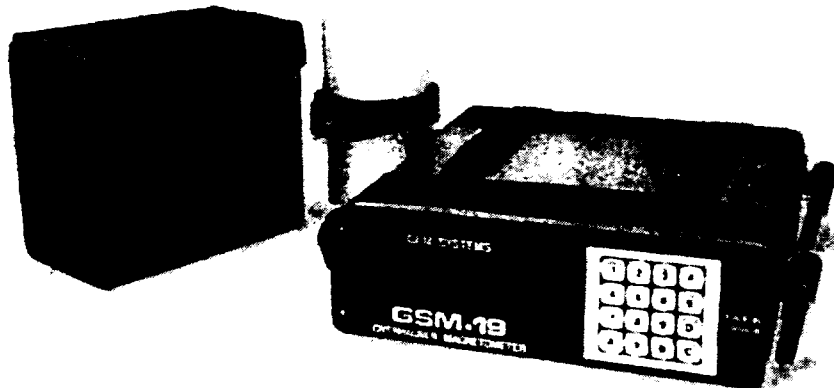
#### In Canada

222 Snidercroft Rd. Tel: (905) 669-2280  
Concord, Ontario Fax: (905) 669-6403  
Canada, L4K 1B5 Telex: (905) 06-964570

#### In the U.S.A.

35 River Rock Drive Tel: (716) 298-1219  
Unit # 202 Fax: (716) 298-1317  
Buffalo, N.Y.  
U.S.A. 14207





## **GSM-19 PROTON MAGNETOMETER/VLF**

*Proton Magnetometer/VLF System*

### **Features:**

- Omnidirectional Magnetometer with VLF.
- Remote control for observatory and airborne base station applications.
- Streamlined grid coordinate system with "end of line" quick change capability.
- 128kb basic memory, expandable to 2MB.
- Programmable RS-232 high-speed data transfer to 19.2kb.
- 50 and 60Hz filter, user selectable.
- Automatic tuning and base station synchronization.

### **General**

The GSM-19 is a state-of-the-art magnetometer/VLF system that delivers quality data and the extensive capabilities required to perform a broad spectrum of applications. Whether the application calls for detailed ground surveys, or remotely controlled magnetic observatory measurements, you can count on the GSM-19 system to meet your goals.

The proton magnetometer can be equipped with gradiometer or VLF options, and is upgradable to an Overhauser Magnetometer.

### **Simultaneous Gradiometer**

Many mining, environmental, and archaeological applications call for high-sensitivity gradiometer surveys. The GSM-19 meets these needs in several ways. For example, simultaneous measurement of the magnetic field at both sensors eliminates diurnal magnetic effects.

### **"Walking" Magnetometer/Gradiometer**

The "Walking" option enables acquisition of nearly continuous data on survey lines. Data is recorded at discrete time intervals (up to 2 readings-per-second) as the instrument travels along the line.

### **Omnidirectional VLF**

With the omnidirectional VLF option, up to three stations of VLF data can be acquired without orienting. Moreover, the operator can record both magnetic and VLF data with a single stroke on the keypad.

### **Remote Control Operation**

When used during observatory, marine, and airborne base station applications, this option allows users to set parameters and initiate measurements from a computer terminal using standard RS-232 commands. A real-time transmission capability is provided to allow data quality monitoring while marine or vehicle borne surveys are in progress.

### **Automatic Tuning**

Tuning is automatic in all modes of operation with initial preset. An override option is also provided for manual and remote modes. Tuning steps are 1,000 gammas wide.

### **Adaptability to High Gradients**

In standard instruments, a gradient in the magnetic field across the sensor volume can shorten the decay time of the proton precession signal. However, the GSM-19 monitors the signal decay, and calculates the optimal time interval for measurement. Warning messages appear on the display when the measuring interval becomes too short.

# **GSM-19**

*Proton Magnetometer/VLF System*

## **Specifications**

### **Performance**

- Resolution: 0.01nT
- Relative Sensitivity: 0.2nT
- Absolute Accuracy: 1nT
- Range: 20,000 to 120,000nT
- Gradient Tolerance: Over 7,000nT/m
- Operating Temperature: -40°C to +60°C

### **Operating Modes**

**Manual:** Coordinates, time, date and reading stored automatically at min. 3 second interval.

**Base Station:** Time, date and reading stored at 3 to 60 second intervals.

**Mobile:** Time, date and reading stored at coordinates of fiducial.

**Remote Control:** Optional remote control using RS-232 interface.

**Input/Output:** RS-232 or analog (optional) output using 6-pin weatherproof connector.

### **Storage Capacity**

**Manual Operation:** 8,000 readings standard. 131,000 optional.

**Base Station:** 43,000 readings standard. 700,000 optional.

**Gradiometer:** 6,800 readings standard. 110,000 optional.

### **Dimensions and Weights**

**Dimensions:** Console: 223 x 69 x 240mm.  
**Sensor:** 170 x 71mm diameter cylinder.

**Weight:** Console: 2.1kg. Sensor and Staff Assembly: 2.2kg

## **Standard Components**

GSM-19 console, batteries, harness, charger, case, sensor with cable, connector, staff, and instruction manual.

## **Ordering Information**

Description	Order Number
GSM-19 Proton Mag	350-170-0039
Gradiometer Option	350-170-0042
VLF Option	350-170-0069
Memory Upgrade, 128kb	350-170-0063
Analog Output	350-170-0040
Remote Option	350-170-0043

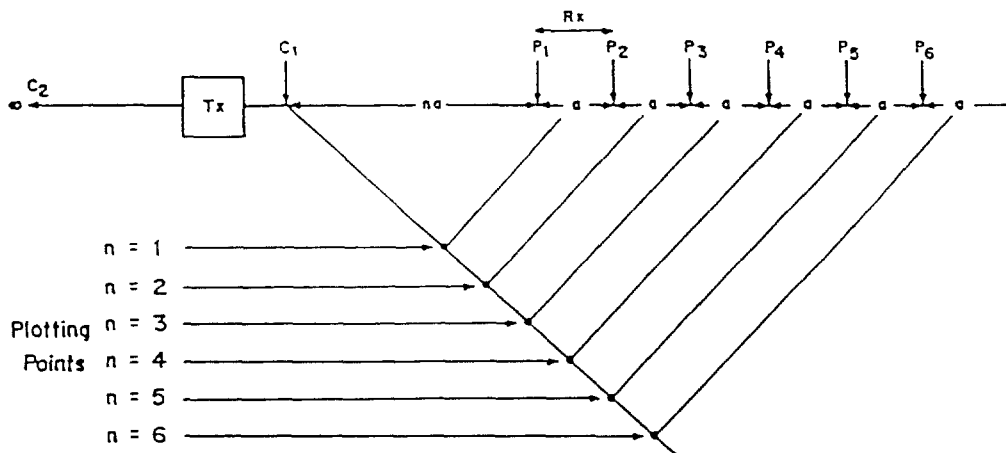
Scintrex has used low power consumption microprocessors and high density memory chips to create the IGS Integrated Portable Geophysical System; instrumentation which will change the way you do ground geophysics.

Here are the main benefits which you will derive from the IGS family of instrumentation:

1. Depending on your choice of optional sensors you can make one, two or all of: magnetic, VLF and electromagnetic measurements. Thus, you may optimize the IGS system for different geophysical conditions and production requirements.
2. You will save time and money in the acquisition, processing and presentation of ground geophysical survey data.
3. You will achieve an improvement in the quality of data through enhanced reading resolution, an increase in the number of different parameters measured and/or a higher density of observations. Further, errors which occur in manual transcription and calculation will be eliminated.
4. Your operator will appreciate the simplicity of operation achieved through automation.
5. Since add-on sensors are relatively less expensive, your investment in a range of IGS instrumentation may be much less than it would be with a number of different instruments, each dedicated to a different measurement.



The Scintrex IGS-2/MP-4/VLF-4/EM-4 permits one operator to efficiently measure magnetic, VLF and EM fields and to record data in computer compatible solid-state memory.



ARRAY GEOMETRY

Apparent Resistivity:

$$\rho_a = 2\pi na(n+1) V_p/I$$

where

- $\rho_a$  = apparent resistivity (ohm.m)
- n = dipole number (dimensionless)
- a = dipole spacing (m)
- $V_p$  = primary voltage (mV)
- I = primary current (mA)

Pole-Dipole Array  
 Array Geometry and Formula for Apparent Resistivity

**APPENDIX B**



Date: 2002-JUN-10

GEOSCIENCE ASSESSMENT OFFICE  
933 RAMSEY LAKE ROAD, 6th FLOOR  
SUDBURY, ONTARIO  
P3E 6B5

URSA MAJOR MINERALS INCORPORATED  
100 ADELAIDE STREET WEST  
SUITE 405  
TORONTO, ONTARIO  
M5H 1S3 CANADA

Tel: (888) 415-9845  
Fax: (877) 670-1555

**Submission Number:** 2 23306  
**Transaction Number(s):** W0270 00572

Dear Sir or Madam:

**Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact STEVEN BENETEAU by email at [steve.beneteau@ndm.gov.on.ca](mailto:steve.beneteau@ndm.gov.on.ca) or by phone at (705) 670-5855.

Yours Sincerely,



Ron Gashinski  
Senior Manager, Mining Lands Section

Cc: Resident Geologist

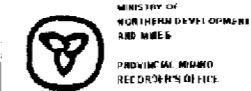
Falconbridge Limited  
C.A.M. Holder)

Ursa Major Minerals Incorporated  
C.A.M. Holder)

Assessment File Library

Michael James Perkins  
(Agent)

Ursa Major Minerals Incorporated  
(Assessment Office)



MINING LAND TENURE MAP

Date / Time of Issue Jan 17, 2002 10:29h Eastern

TOWNSHIP / AREA SHAKESPEARE PLAN G-3001

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division Sudbury
Land Titles/Registry Division SUDBURY
Ministry of Natural Resources District SUDBURY

TOPOGRAPHIC

- Legend for topographic features including roads, rivers, and boundaries.

LAND TENURE

- Legend for land tenure types including surface and mining rights, licenses of occupation, and land tenure withdrawals.

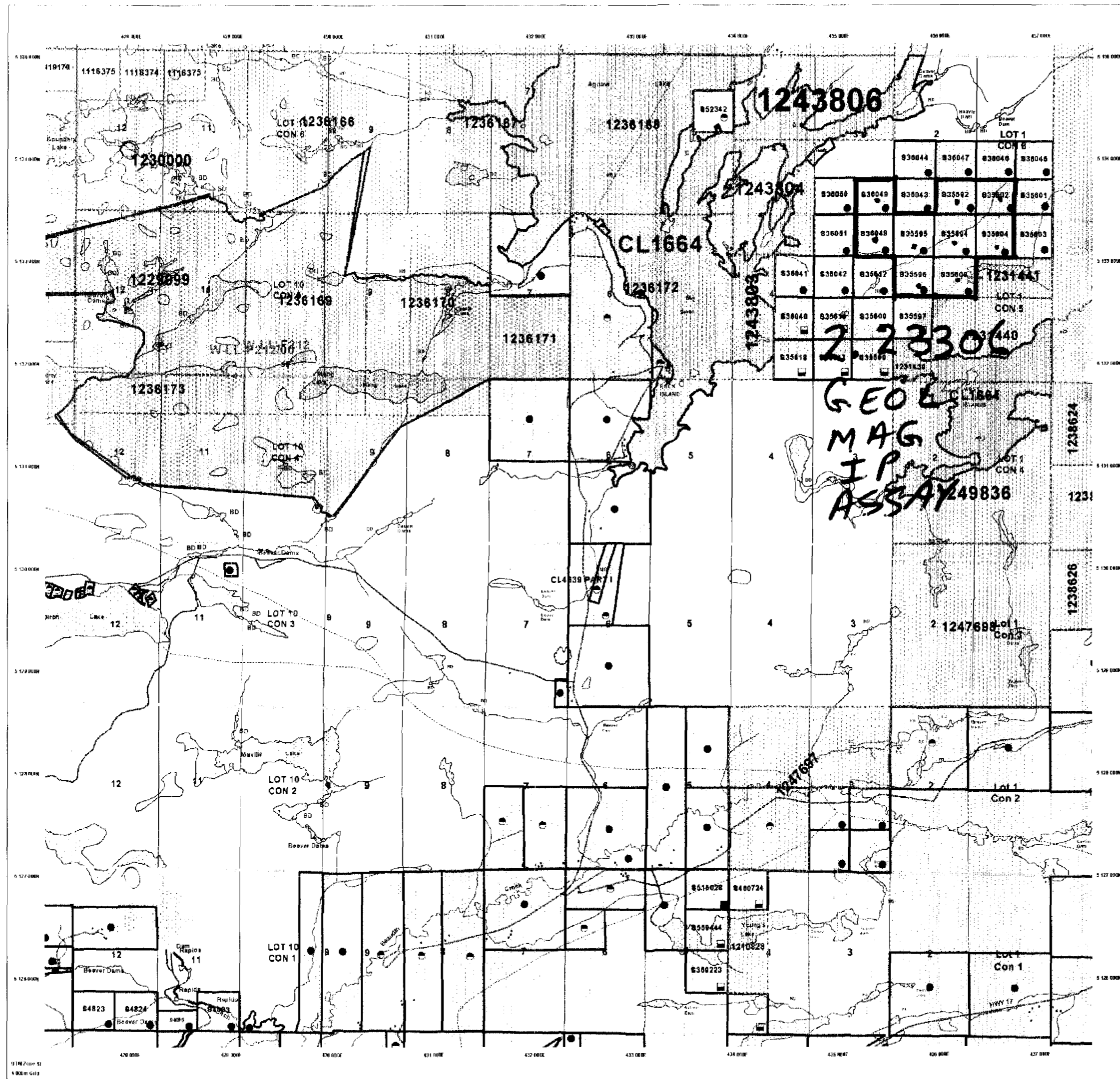
IMPORTANT NOTICES

LAND TENURE WITHDRAWAL DESCRIPTIONS

Table with columns: Number, Type, Date, Description. Lists mining act withdrawal permits and surface rights withdrawals.

IMPORTANT NOTICES

Areas under which a section of regulations, conditions or restrictions apply that affect normal prospecting.



41055M2009 2.23306 SHAKESPEARE 200

General Information and Limitations

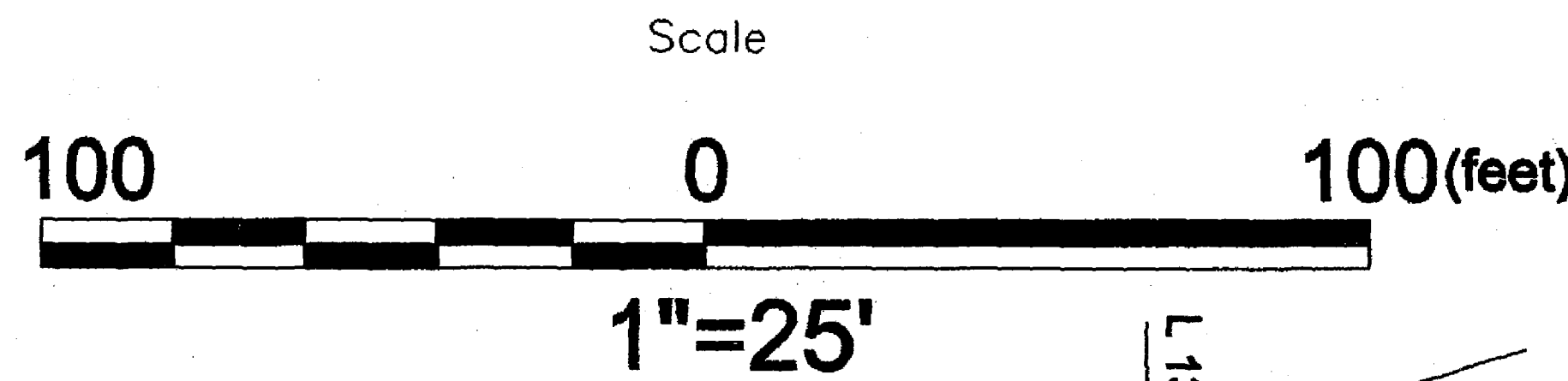
Contact information for the Provincial Record Office, including address, phone, and website.

Map details including scale, projection, and data source information.

Disclaimer text regarding the accuracy and use of the map data.

Disclaimer text regarding the accuracy and use of the map data.





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URSA MAJOR MINERALS INC.

Geology By: G.T. Shore  
A.C. Campbell

Scale: 1:1600

Drawn By: KR, MJP

Description: Channel Sampling

Property: Falconbridge Option

Township: Shakespeare

Sampling Legend

Au - Pt - Pd - Cu - Ni  
ppb ppb ppb % % Cut Channel # Interval

218,304,379,0.38,0.28,0.015  
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GEOLOGICAL LEGEND	
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3	Channel bank/bedrock/golden -10% or less
4	Channel bank/bedrock/golden -10% or less
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5m Cliff

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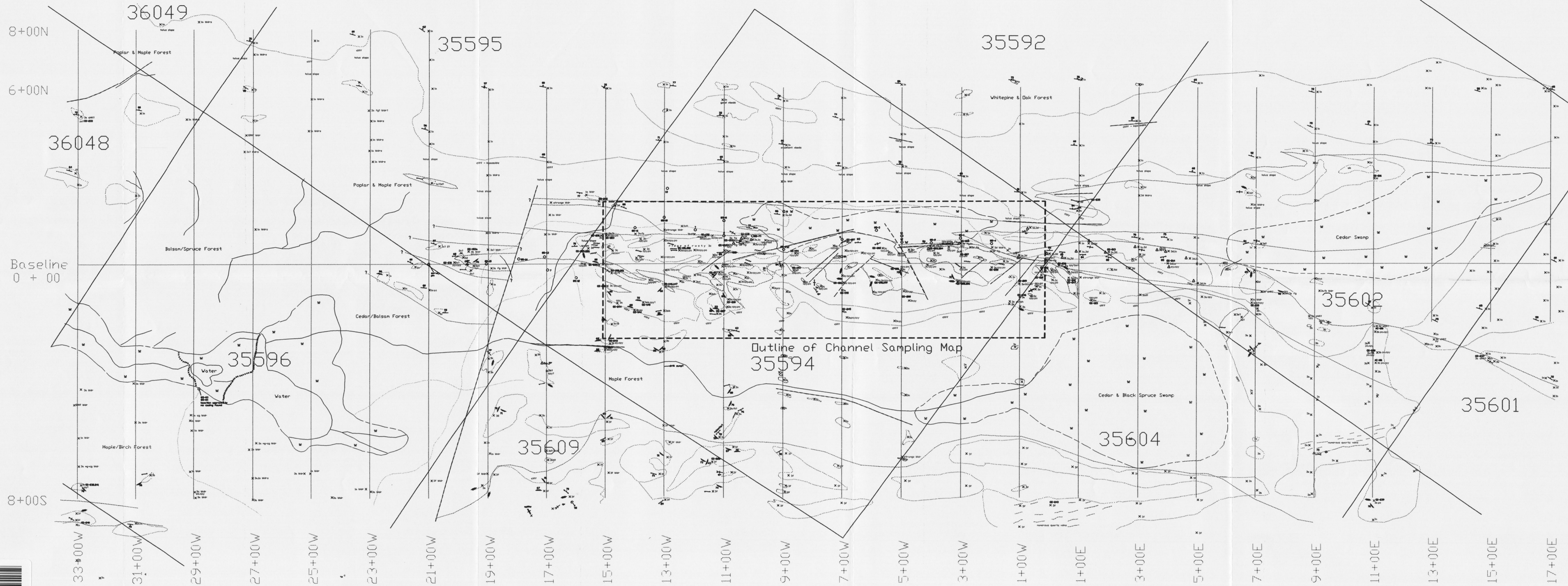
5m Cliff

5m Cliff



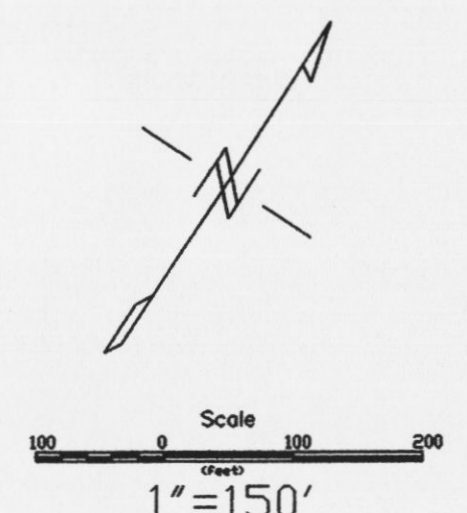






410582009 2.23306 SHAKESPEARE 230

SYMBOLS		SYMBOLS		GEOLOGICAL LEGEND	
Symbol	Symbol	Symbol	Symbol	Symbol	Description
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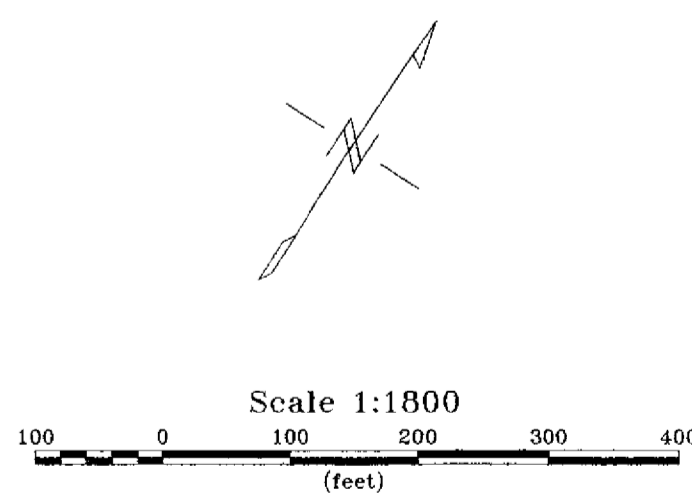
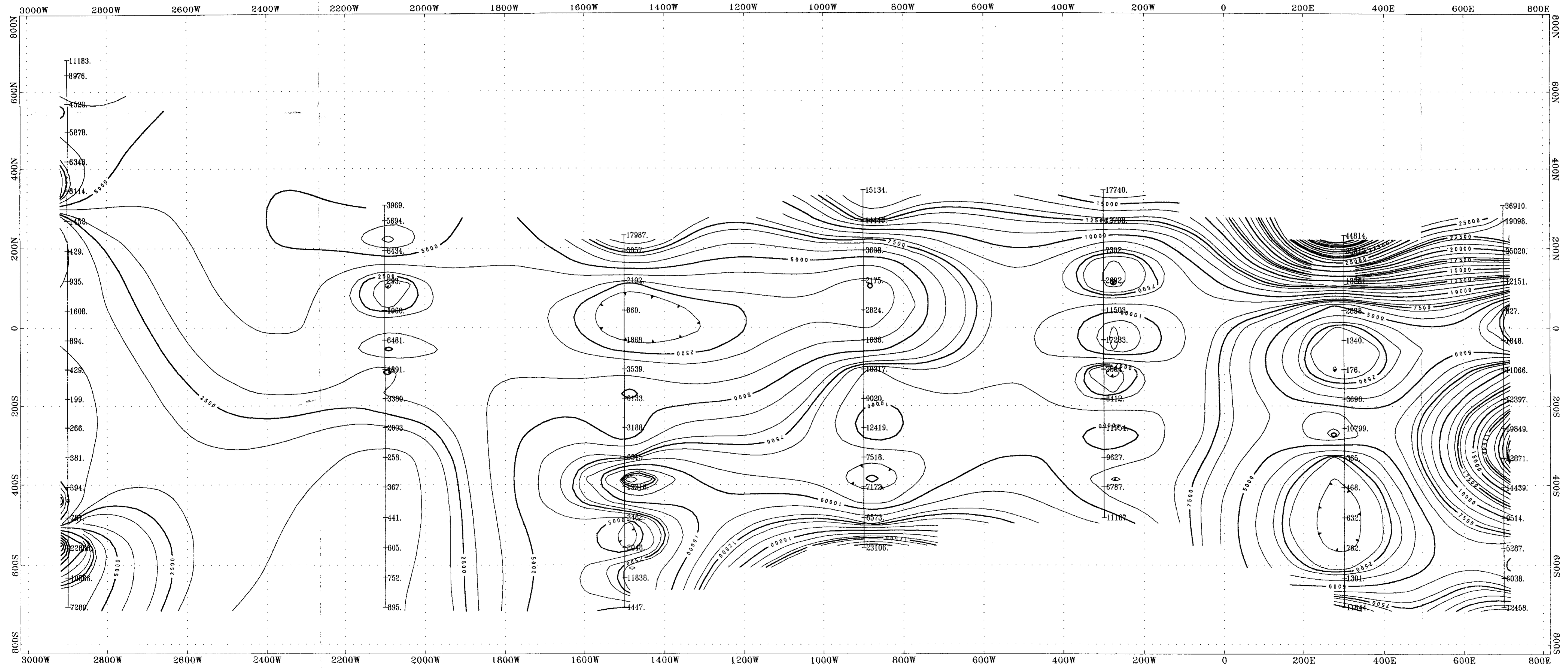


2.23306

MAP 1.

URSA MAJOR MINERALS INC.	Description	Surface Geology
	Property	Falconbridge Option
	Township	Shakespeare
	Geology By	G.T. Shore A.C. Campbell
Scale	1: 1800	
Drawn By	GTS, MJP	



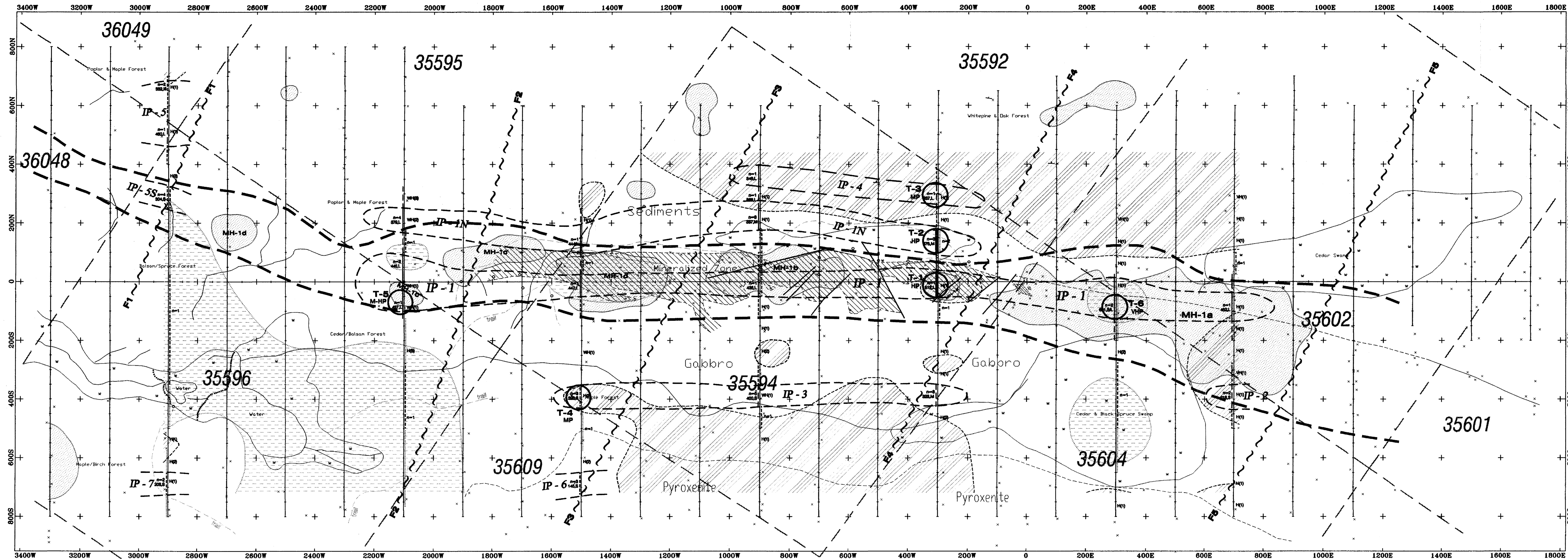


411055W2009 2.23306 SHAKESPEARE 240

PLATE 3  
 APPARENT RESISTIVITY (n=2, 75 ft.)  
 URSA MAJOR MINERALS INC.  
 Spectral IP Survey  
 Falconbridge Option  
 Agnew Lake Area, Shakespeare Twp., Ontario  
 NTS 41 1/5  
 Contours: 1000 & 2500 ohm-m  
 Scintrex IPR12 & Huntex M-4  
 JVX Ltd. ref.0-49, OCT 2000







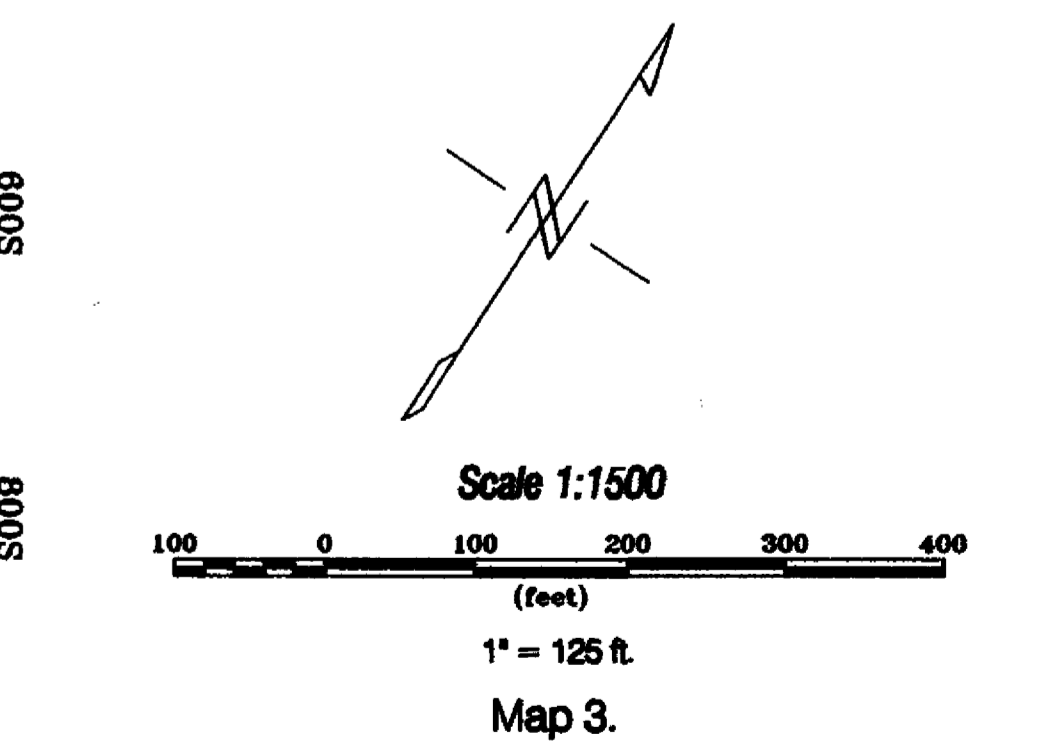
**LEGEND**

Very Strong | Very Strong  
 Strong | Strong  
 Medium | Medium  
 Dipole Moment | Dipole Moment  
 The Contour Length, Median or Peak = 100 | The Contour Length, Median or Peak = 100  
 MP (n=1) | MP (n=1)  
 Weak | Weak  
 Very Weak | Very Weak  
 Chargeability Anomaly | Resistivity Anomaly

H2 - High Resistivity, n=2  
 VH(1) - Very High Resistivity, n=1  
 WH(1) - Weak High Resistivity, n=1

IP-1 | IP Chargeability zones  
 Reliability High, n=2 (>10,000 ohm-m)  
 Reliability Low, n=2 (<200 ohm-m)  
 MH-1a | Magnetic High (> 57,000 nT)  
 Magnetic Trend  
 Lineament  
 Geological Fault  
 Geophysical Fault

T-1 | Exploration Target  
 VHP | Very High Priority  
 HP | High Priority  
 MP | Moderate Priority

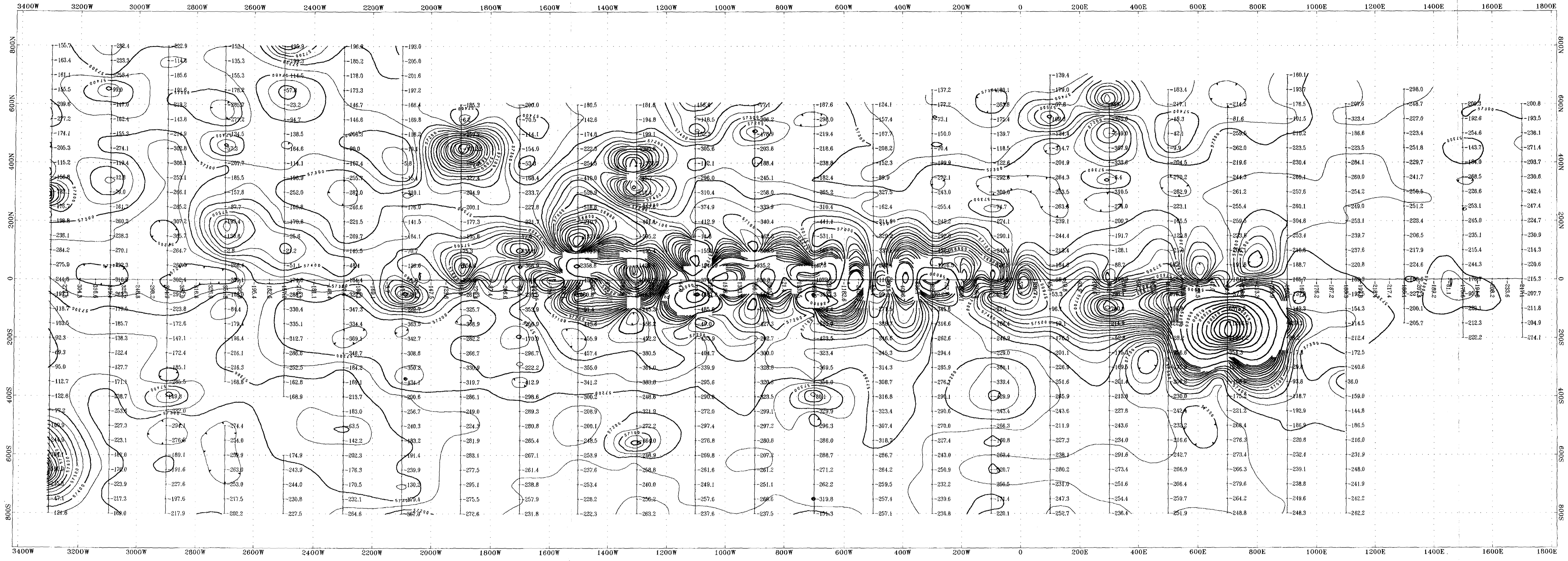


**Map 3.**

**COMPILATION MAP**  
 URSA MAJOR MINERALS INC.  
 Falconbridge Option  
 Agnew Lake Area, Shakespeare Twp., Ontario  
 NTS 41 1/5  
 JvX Ltd. ref.0-49,OCT 2000







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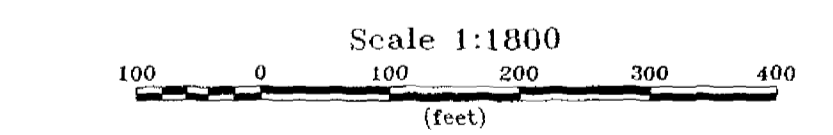
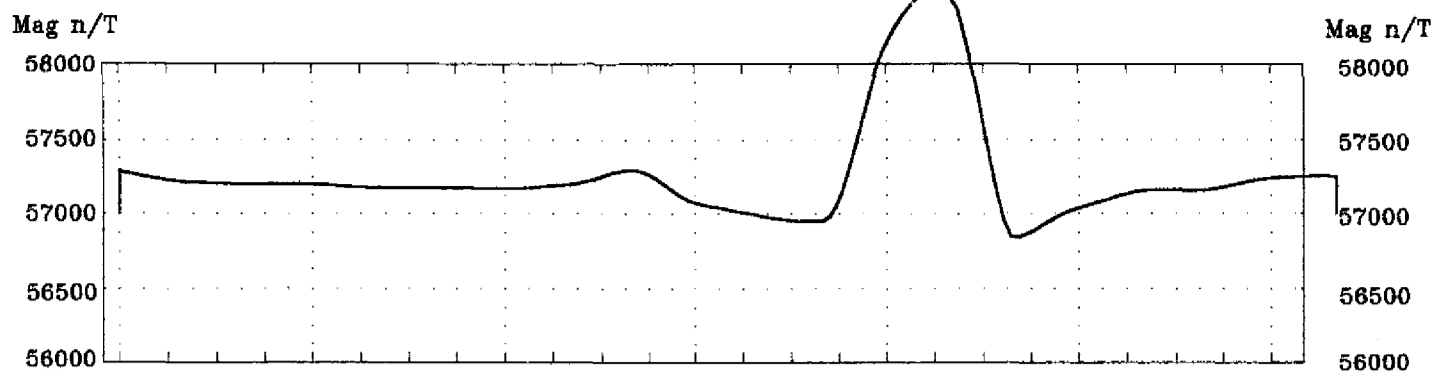


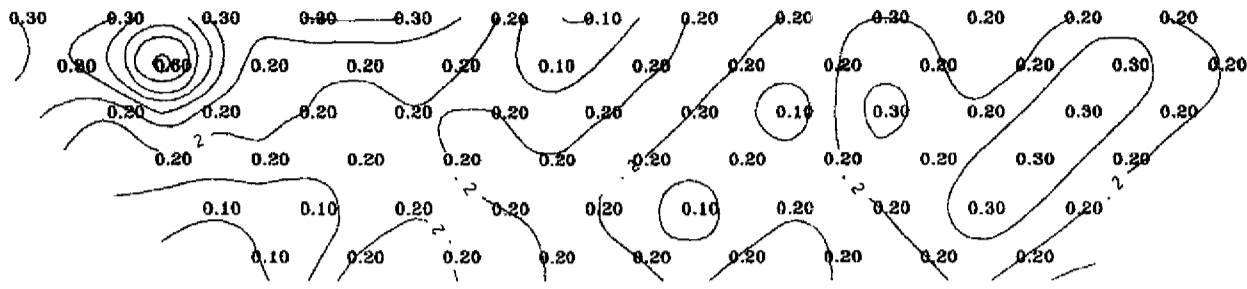
PLATE 4  
**TOTAL FIELD MAGNETIC CONTOURS**  
 URSA MAJOR MINERALS INC.  
 Total Field Magnetometer Survey  
 Falconbridge Option  
 Agnew Lake Area, Shakespeare Twp., Ontario  
 NTS 41 1/5  
 Contours: 50, 100, & 1000 nT, Posted Base=57,500 nT  
 Inst: Scintrex Envimag  
 Surveyed by JVX Ltd. ref.0-49, OCT 2000



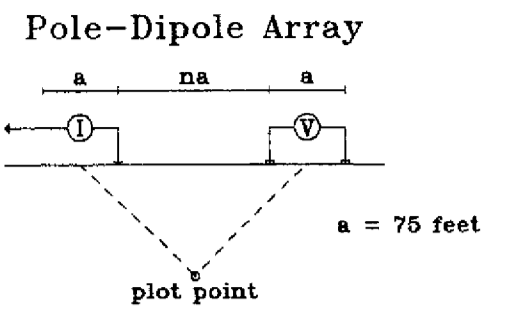
PYROXENITE | G A B B R O | METASEDIMENTS  
 5+75 S | 4+25 S | 2+75 S | 1+25 S | 0+25 N | 1+75 N | 3+25 N

JVX Spectral 'c' (dimensionless)

JVX Spectral 'c' (dimensionless)



**Line 900 W**

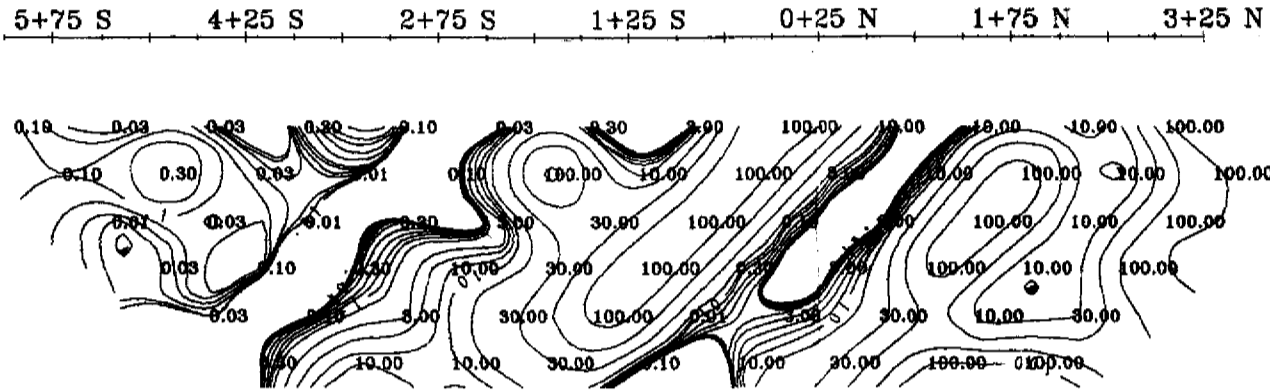


**Resistivity and Chargeability Anomalies**

- Very strong
- Strong
- Medium
- Weak
- ..... Very weak
- xxxx xxxx Extremely weak

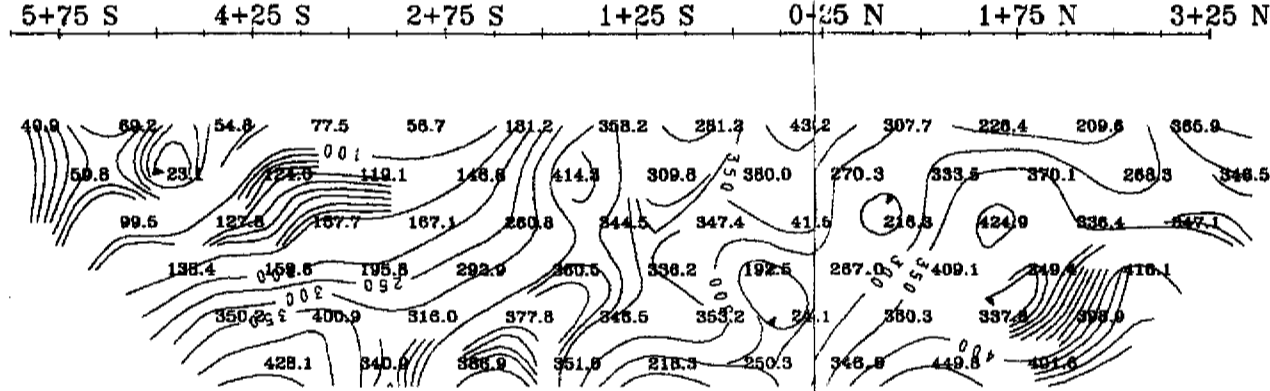
JVX Spectral Tau (s)

JVX Spectral Tau (s)



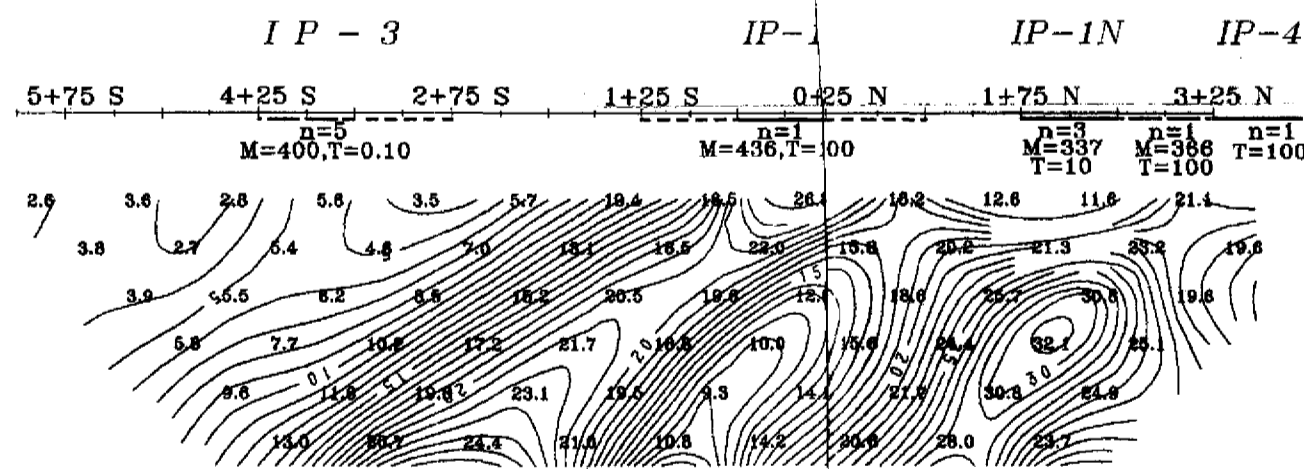
JVX Spectral MIP (mV/V)

JVX Spectral MIP (mV/V)



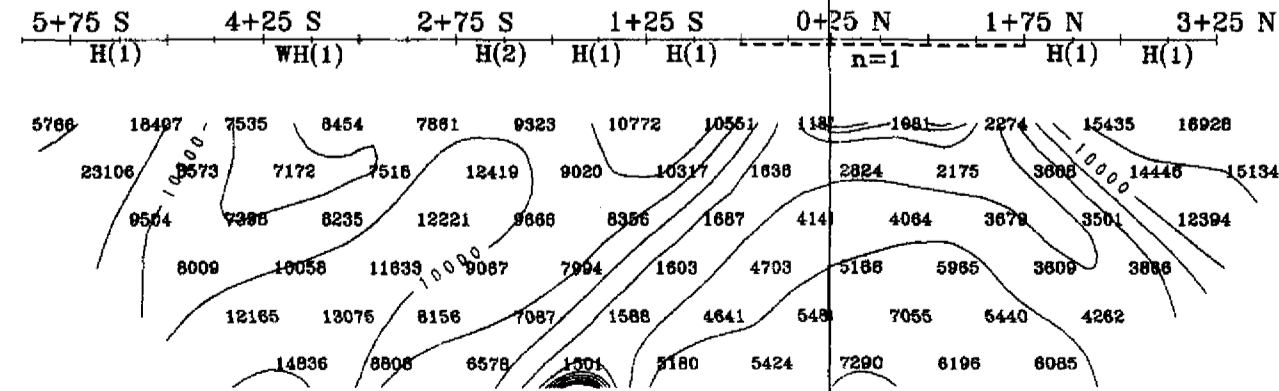
Mx Chargeability (mV/V, 690ms-1050ms)

Mx Chargeability (mV/V, 690ms-1050ms)



Apparent Resistivity (ohm-m)

Apparent Resistivity (ohm-m)



Scale 1"=150ft

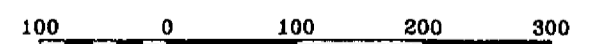


Plate 8

**URSA MAJOR MINERALS INC.**

**JVX SPECTRAL IP/RES SURVEY  
AGNEW LAKE SHAKESPEARE TWP.  
NORTHEASTERN ONTARIO; NTS 41 I/5**

**900 W**

00/10/23

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Huntec M-4

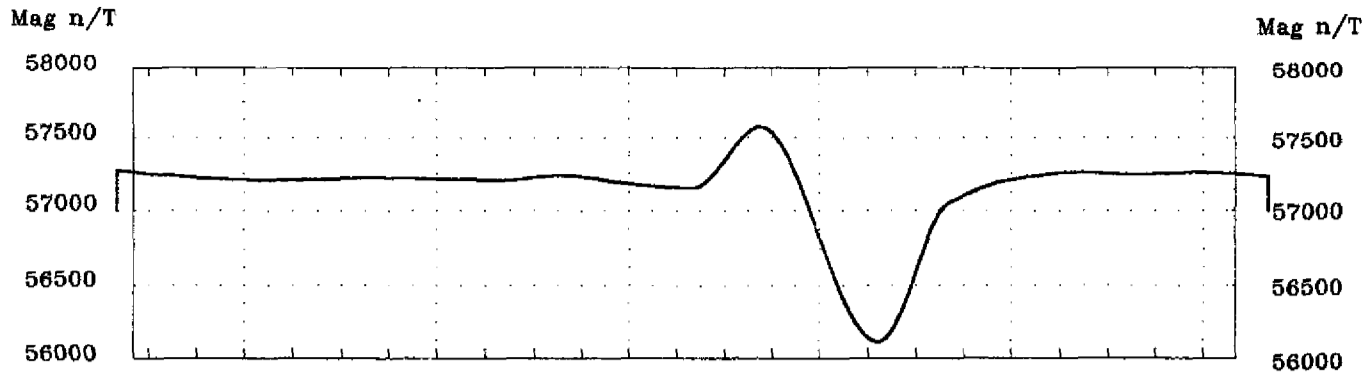
**JVX Ltd. ref. no. 0-49**



41105SW2009 2.23306

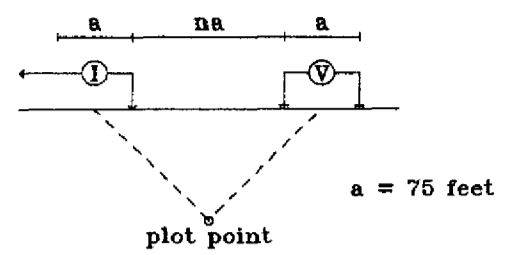
SHAKESPEARE

280



**Line 300 W**

Pole-Dipole Array

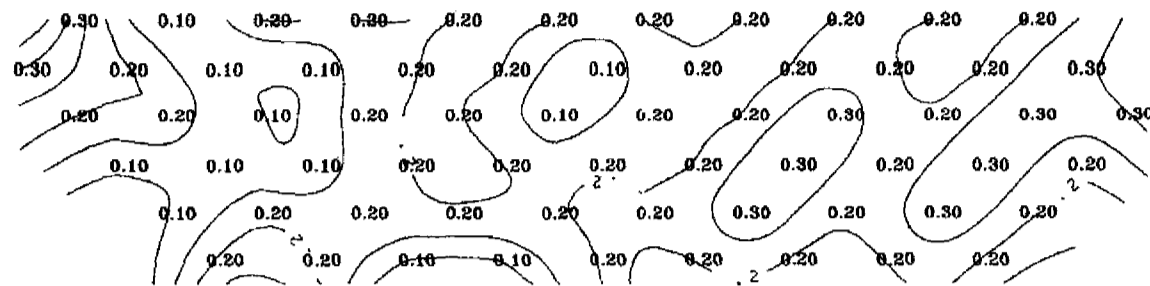


PYROXENITE | GABBRO | MINERALIZED ZONE | METASEDIMENTS

4+25 S    2+75 S    1+25 S    0+25 N    1+75 N    3+25 N

JVX Spectral 'c'  
(dimensionless)

JVX Spectral 'c'  
(dimensionless)

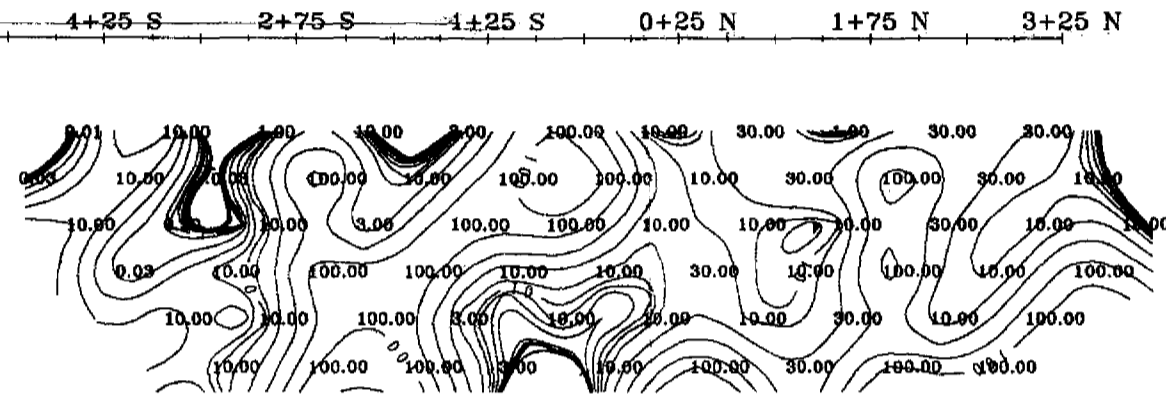


**Resistivity and Chargeability Anomalies**

- Very strong
- Strong
- Medium
- Weak
- ..... Very weak
- xxxx xxxx Extremely weak

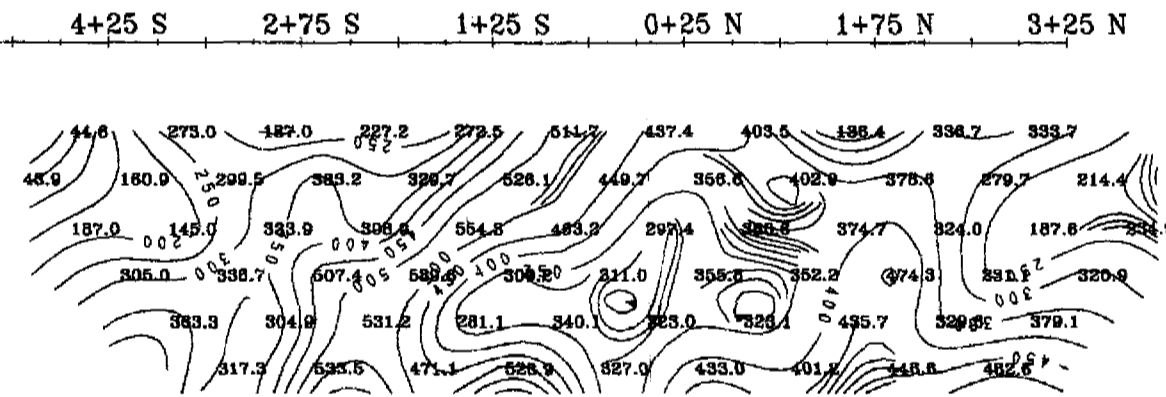
JVX Spectral Tau  
(s)

JVX Spectral Tau  
(s)



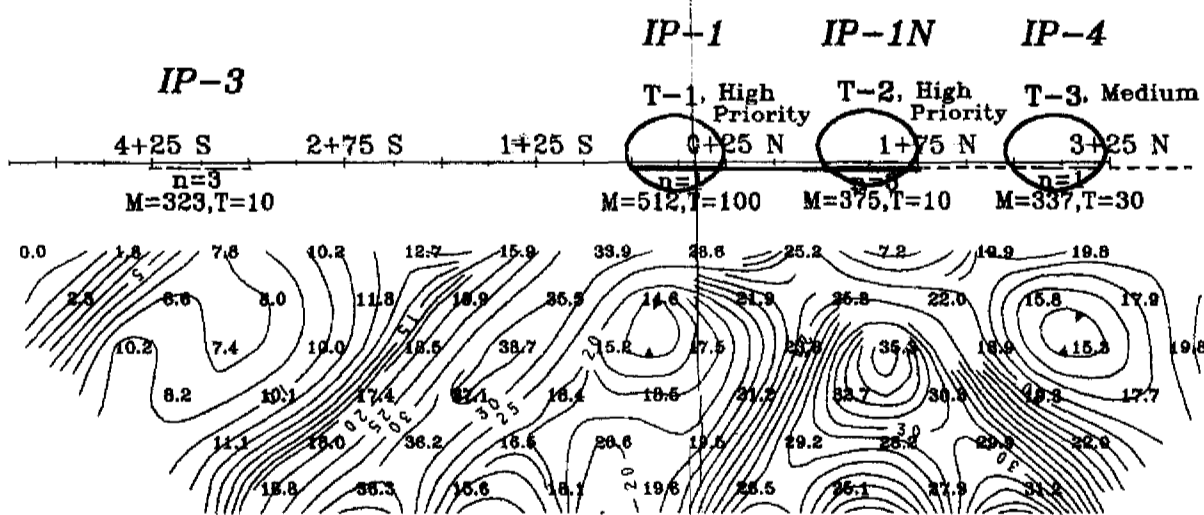
JVX Spectral MIP  
(mV/V)

JVX Spectral MIP  
(mV/V)



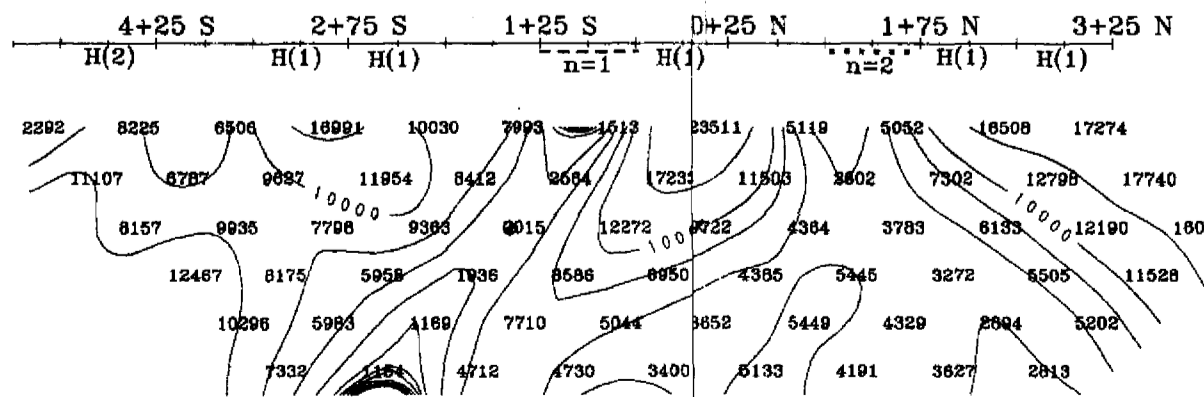
Mx Chargeability  
(mV/V, 690ms-1050ms)

Mx Chargeability  
(mV/V, 690ms-1050ms)



Apparent Resistivity  
(ohm-m)

Apparent Resistivity  
(ohm-m)



Scale 1"=150ft



Plate 9

**URSA MAJOR MINERALS INC.**  
JVX SPECTRAL IP/RES SURVEY  
AGNEW LAKE SHAKESPEARE TWP.  
NORTHEASTERN ONTARIO; NTS 41 I/5

300 W  
00/10/23  
Rx (2 sec): Scintrex IPR12, Tx (2 sec): Huntec M-4  
**JVX Ltd. ref. no. 0-49**

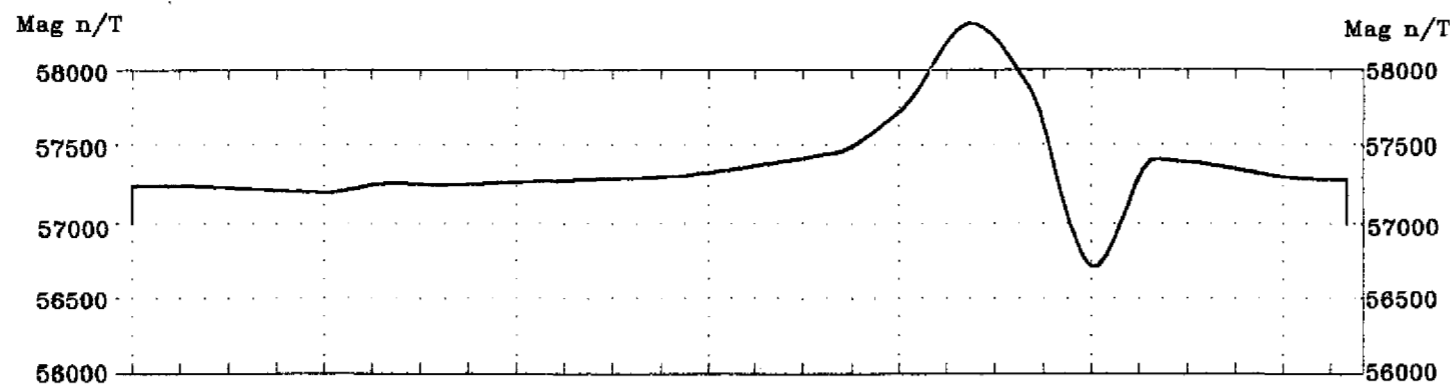


411055W2009 2.23306

SHAKESPEARE

290

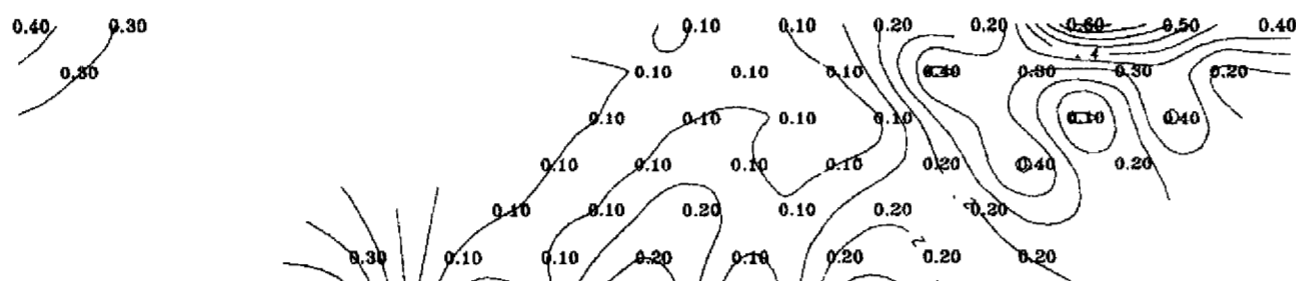




QTZ GABBRO/  
TONALITE

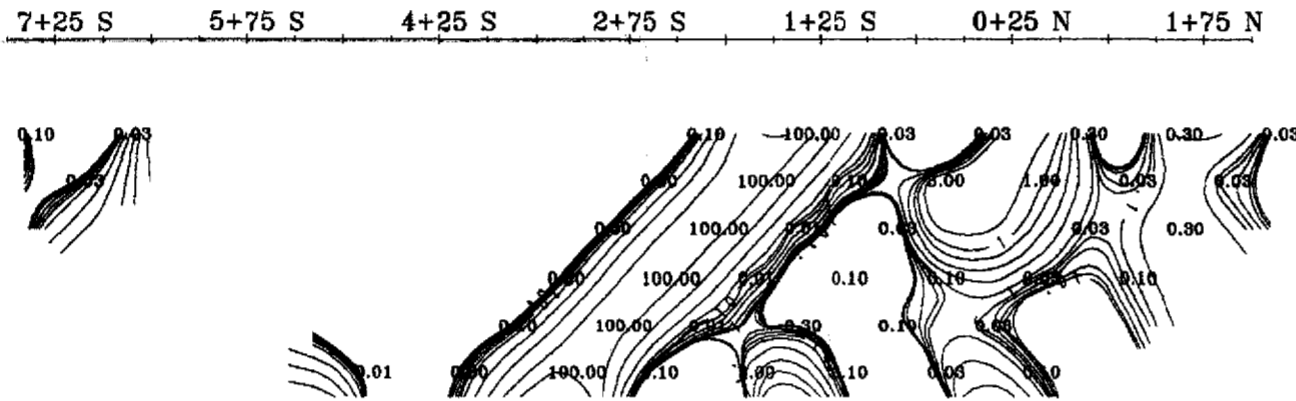
PYROXENITE GABBRO METASEDIMENTS

JVX Spectral 'c'  
(dimensionless)



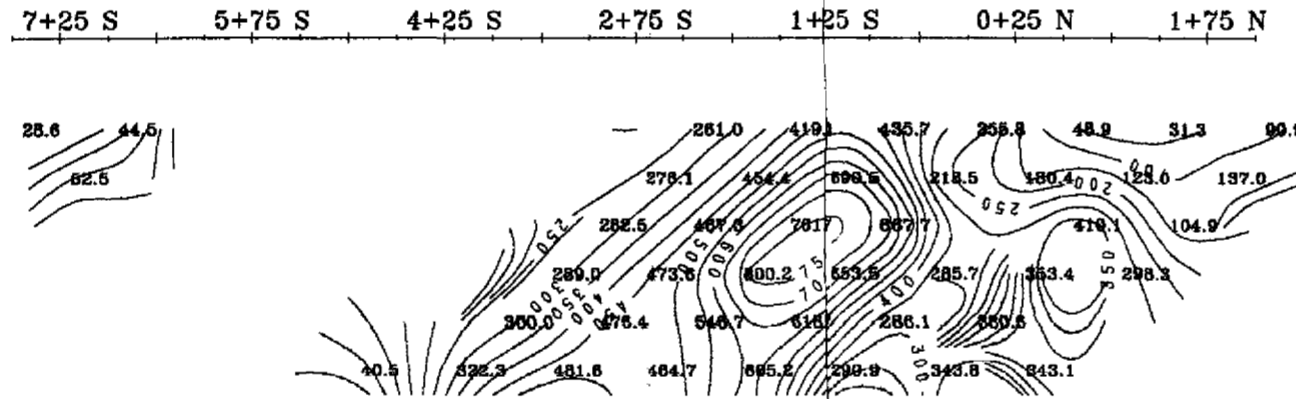
JVX Spectral 'c'  
(dimensionless)

JVX Spectral Tau  
(s)



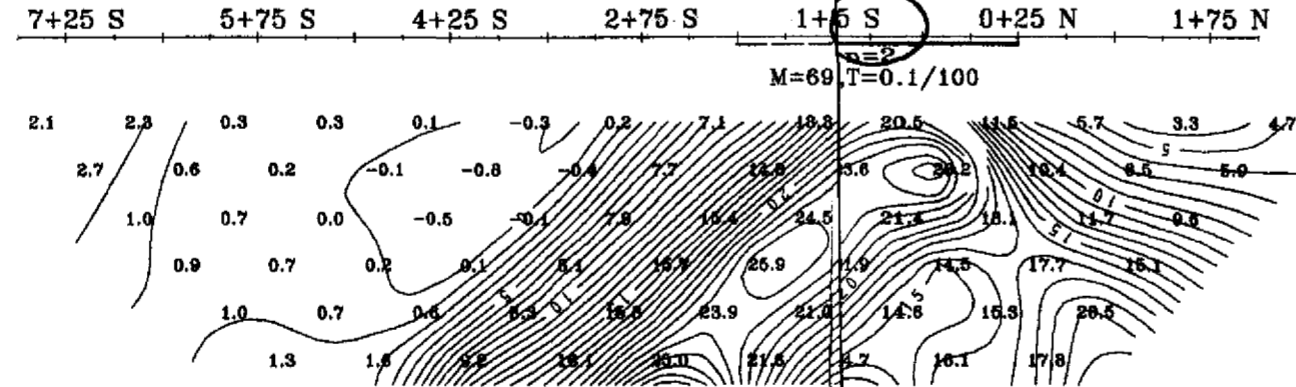
JVX Spectral Tau  
(s)

JVX Spectral MIP  
(mV/V)



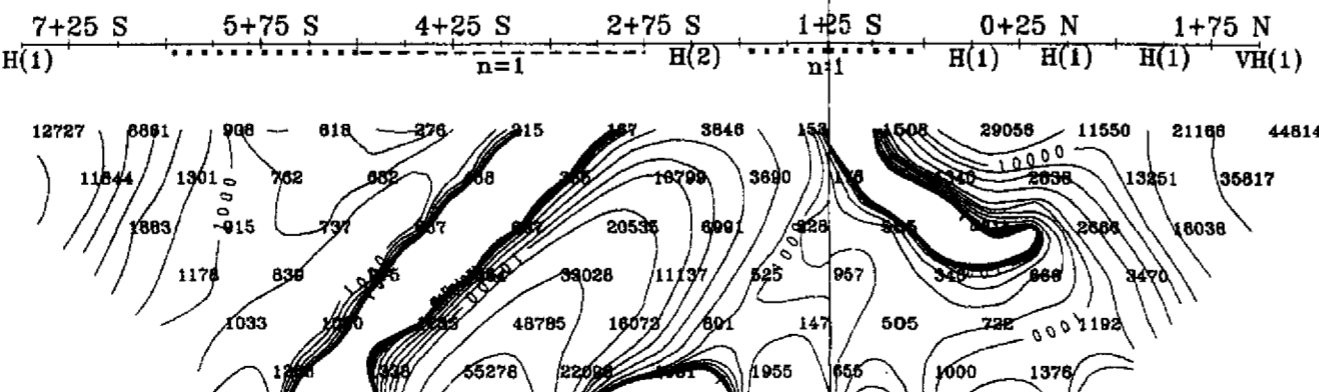
JVX Spectral MIP  
(mV/V)

Mx Chargeability  
(mV/V, 690ms-1050ms)



Mx Chargeability  
(mV/V, 690ms-1050ms)

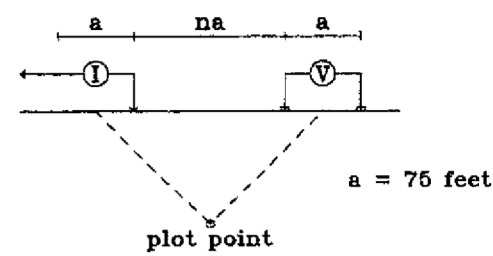
Apparent Resistivity  
(ohm-m)



Apparent Resistivity  
(ohm-m)

Line 300 E

Pole-Dipole Array



Resistivity and Chargeability  
Anomalies

- Very strong
- Strong
- Medium
- Weak
- ..... Very weak
- xxxx xxxx Extremely weak

P - 1

T-6, High Priority

M=69, T=0.1/100

Scale 1"=150ft



Plate 10

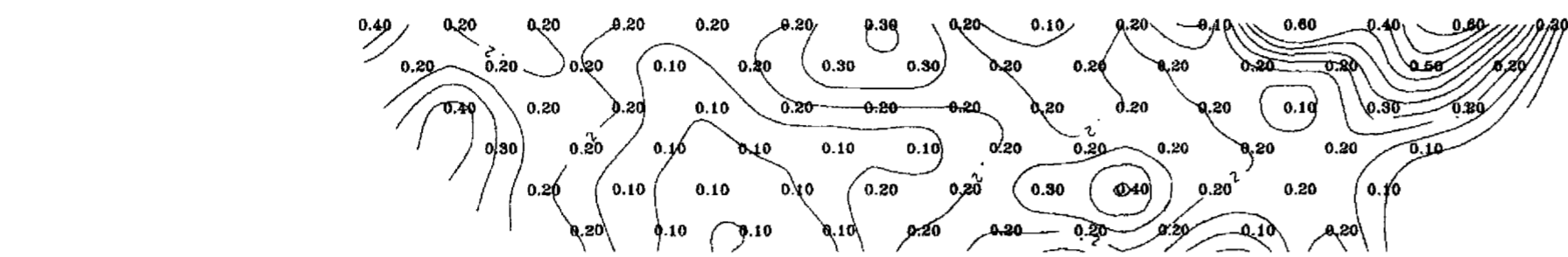
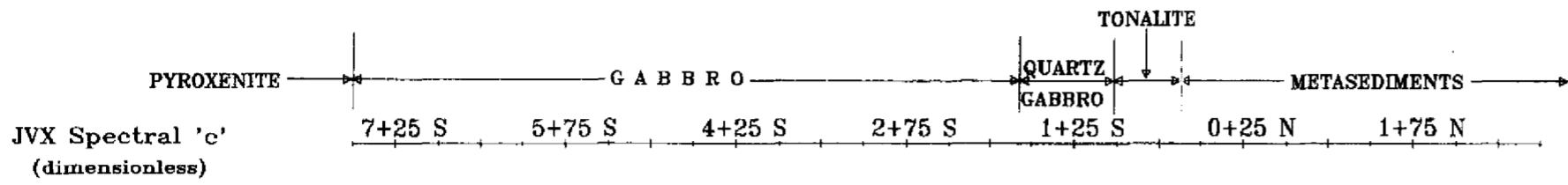
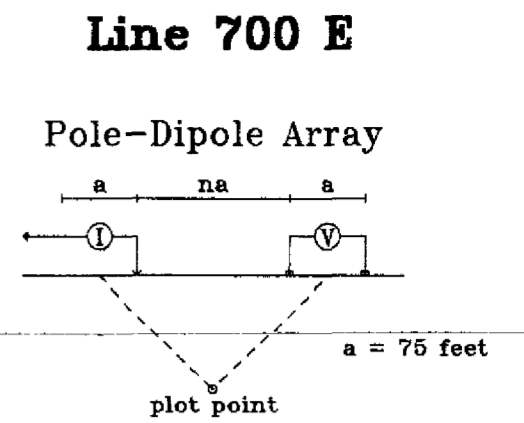
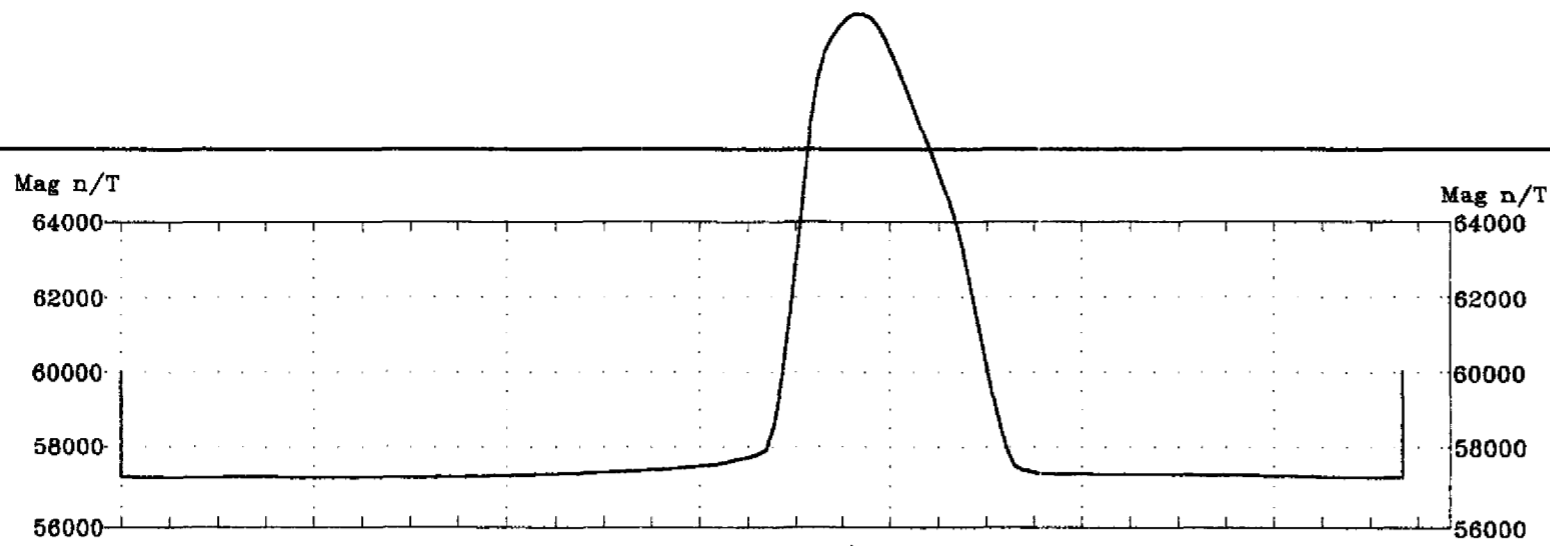
URSA MAJOR MINERALS INC.  
JVX SPECTRAL IP/RES SURVEY  
AGNEW LAKE SHAKESPEARE TWP.  
NORTHEASTERN ONTARIO; NTS 41 1/5

300 E  
00/10/23  
Rx (2 sec): Scintrex IPR12, Tx (2 sec): Huntex M-4

JVX Ltd. ref. no. 0-49



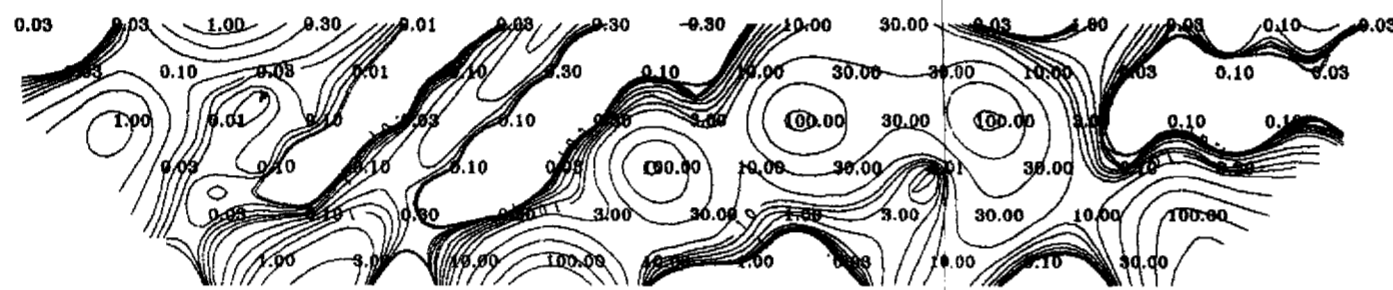
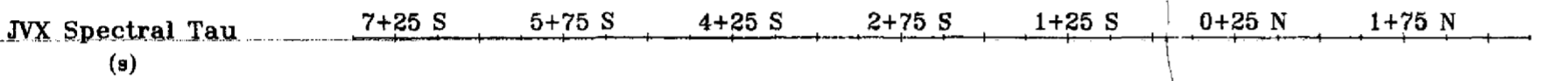
41I056W2009 2.23306 SHAKESPEARE



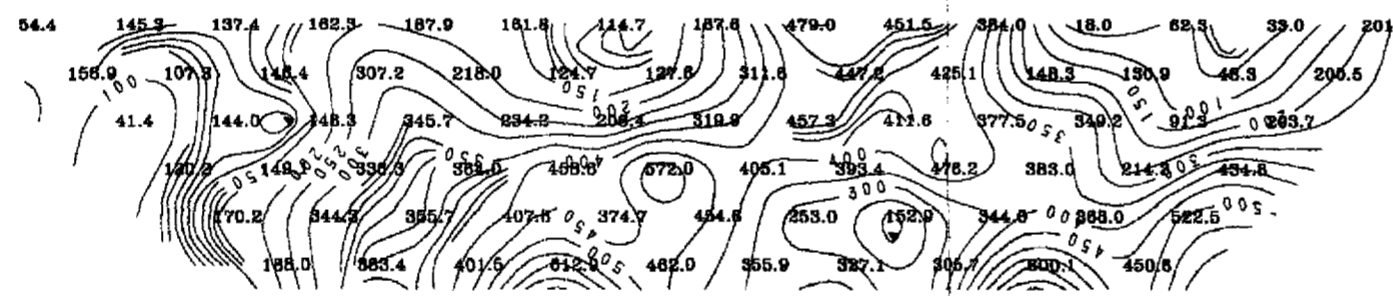
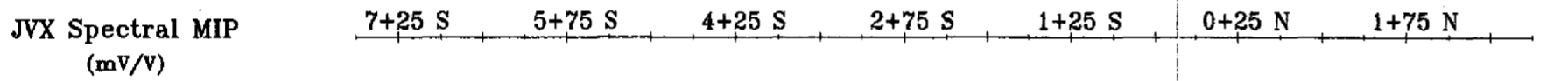
JVX Spectral 'c' (dimensionless)

**Resistivity and Chargeability Anomalies**

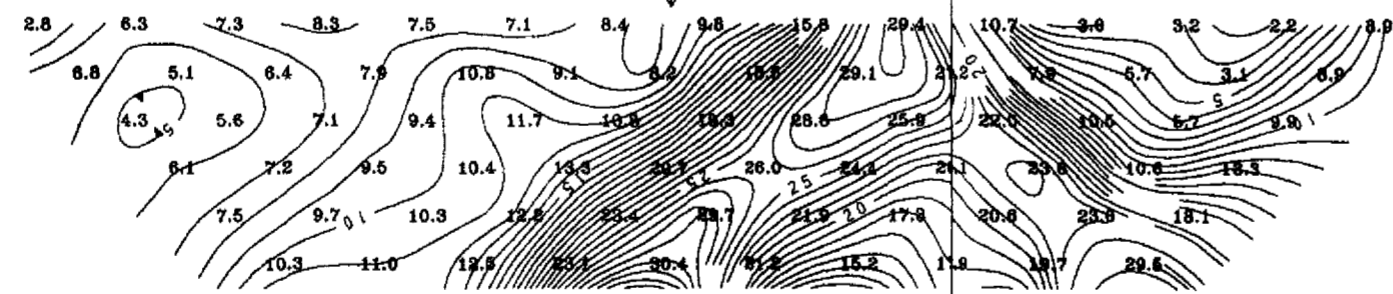
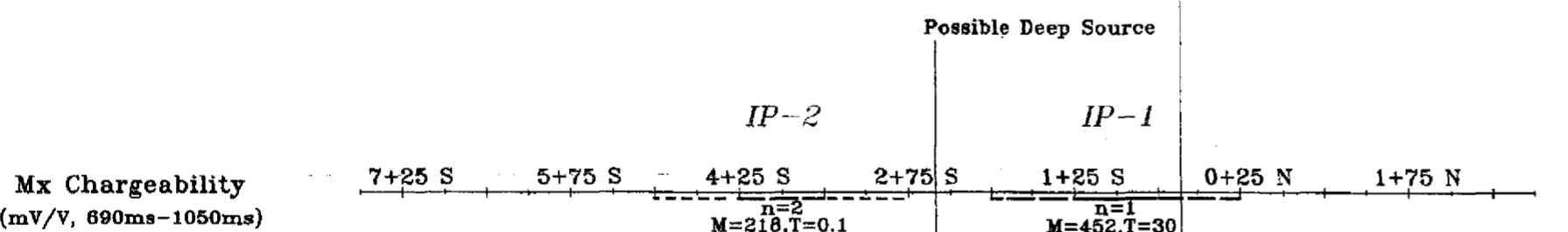
———— Very strong  
 - - - - - Strong  
 - - - - - Medium  
 - - - - - Weak  
 - - - - - Very weak  
 xxxx xxxx Extremely weak



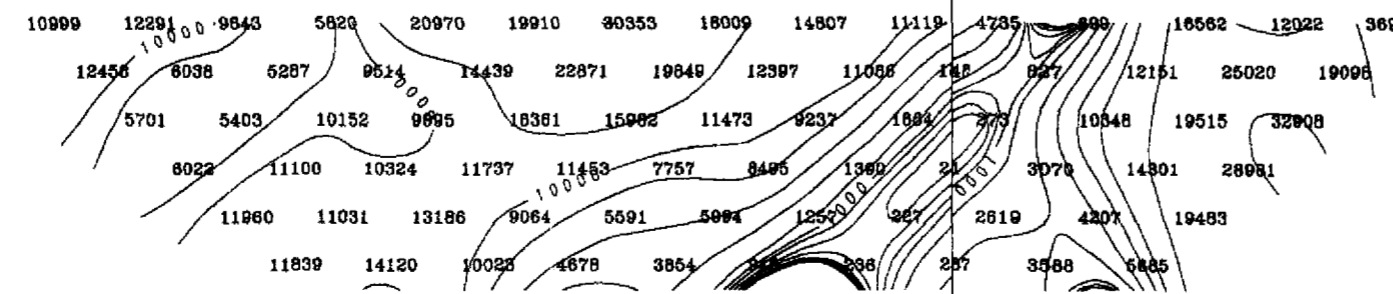
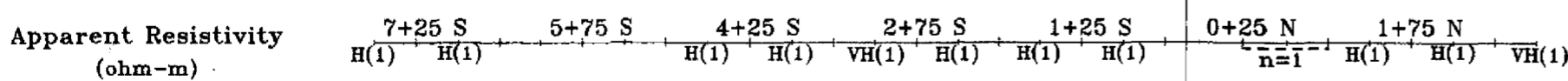
JVX Spectral Tau (s)



JVX Spectral MIP (mV/V)



Mx Chargeability (mV/V, 690ms-1050ms)



Apparent Resistivity (ohm-m)

Scale 1"=150ft



Plate 11

**URSA MAJOR MINERALS INC.**

**JVX SPECTRAL IP/RES SURVEY**

**AGNEW LAKE SHAKESPEARE TWP.**

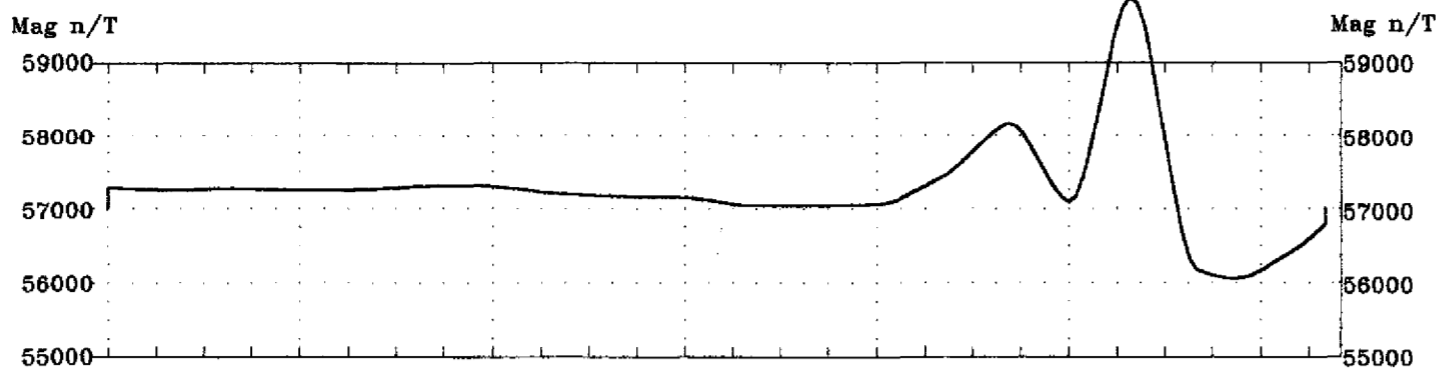
**NORTHEASTERN ONTARIO; NTS 41 1/5**

**700 E**

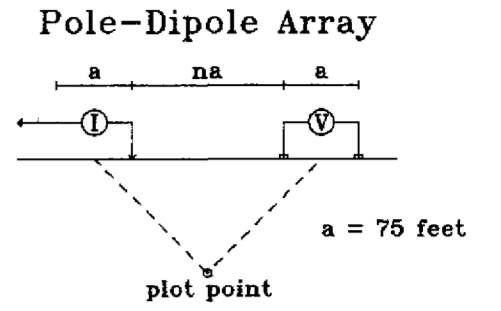
00/10/23

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Huntex M-4

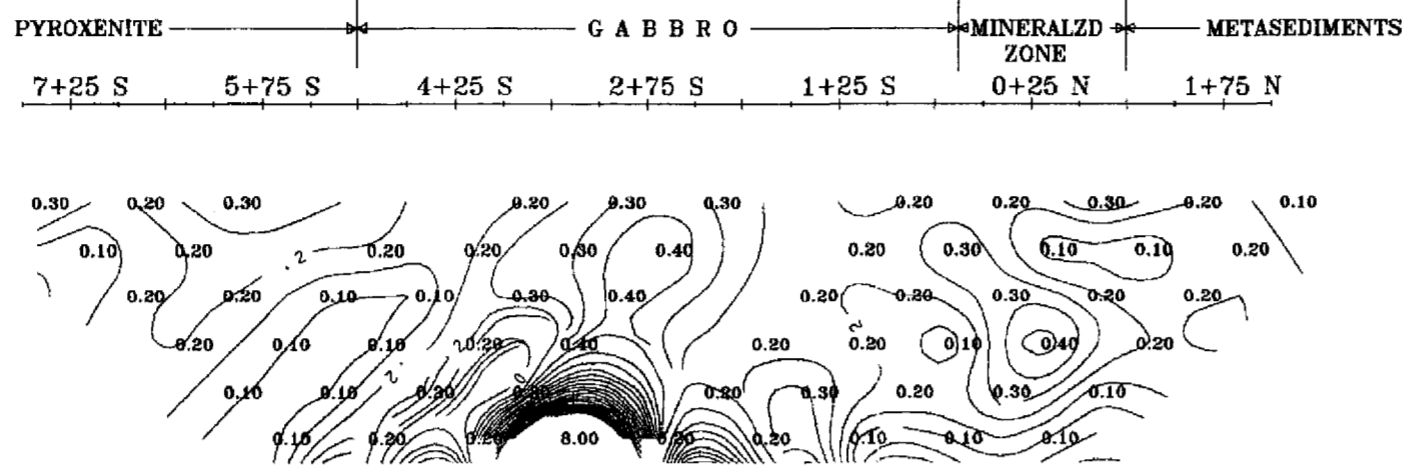
**JVX Ltd. ref. no. 0-49**



**Line 1500 W**



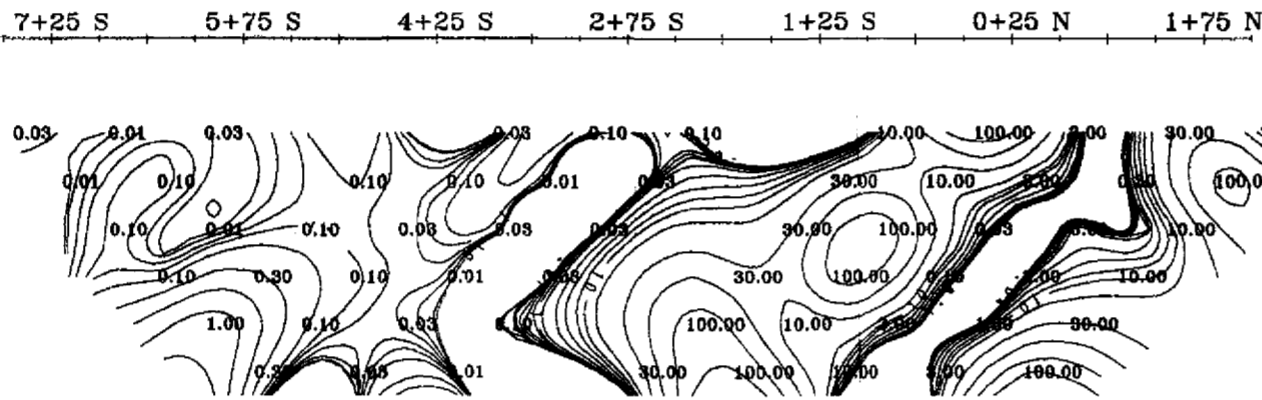
JVX Spectral 'c'  
(dimensionless)



JVX Spectral 'c'  
(dimensionless)

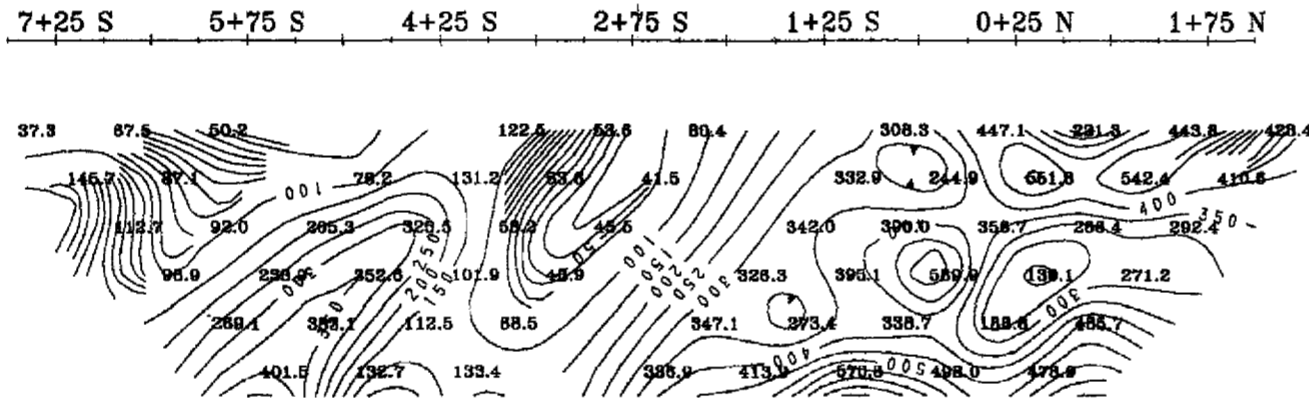
- Resistivity and Chargeability Anomalies**
- Very strong
  - Strong
  - Medium
  - Weak
  - ..... Very weak
  - xxxx xxxx Extremely weak

JVX Spectral Tau  
(s)



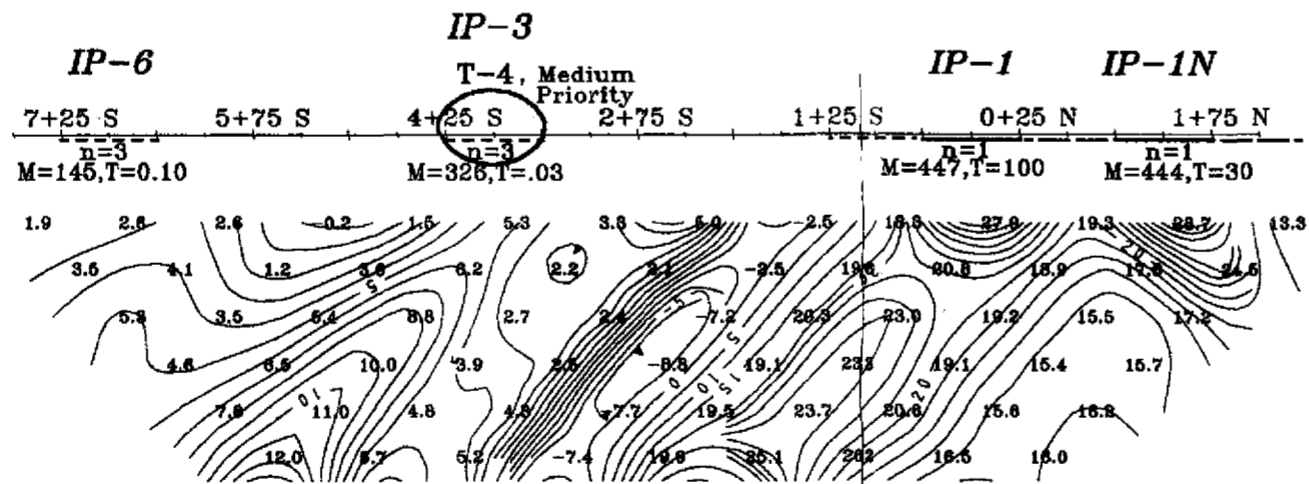
JVX Spectral Tau  
(s)

JVX Spectral MIP  
(mV/V)



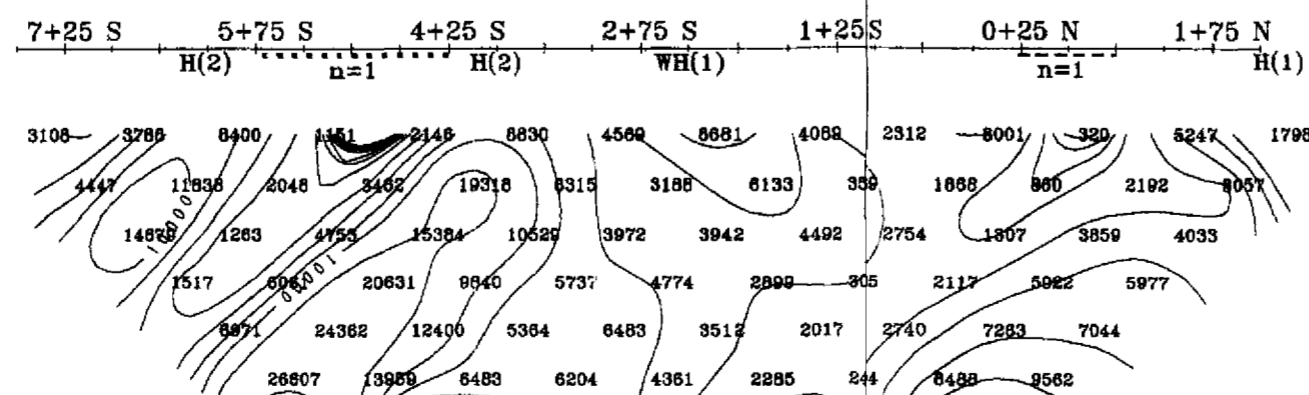
JVX Spectral MIP  
(mV/V)

Mx Chargeability  
(mV/V, 690ms-1050ms)

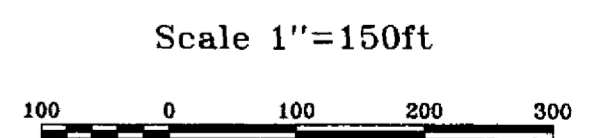


Mx Chargeability  
(mV/V, 690ms-1050ms)

Apparent Resistivity  
(ohm-m)

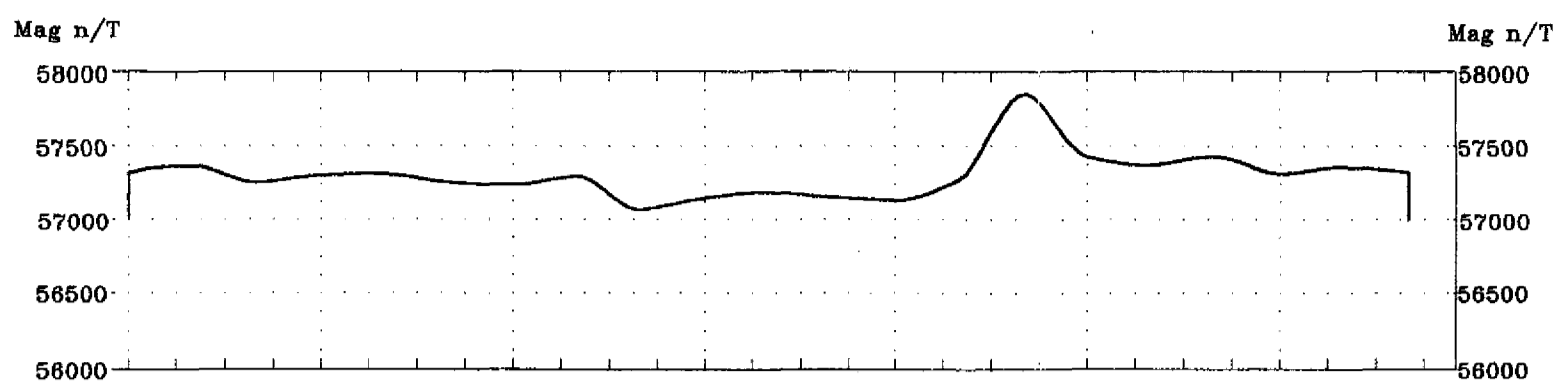


Apparent Resistivity  
(ohm-m)



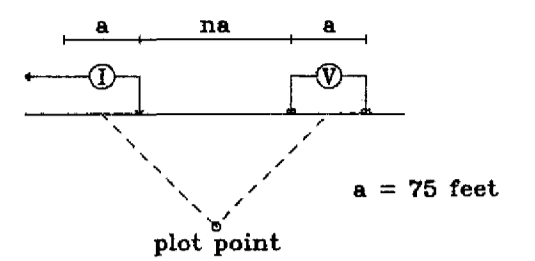
411055W2009 2.23306 SHAKESPEARE

320

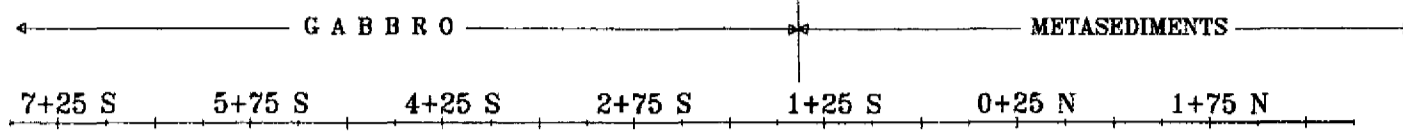


**Line 2100 W**

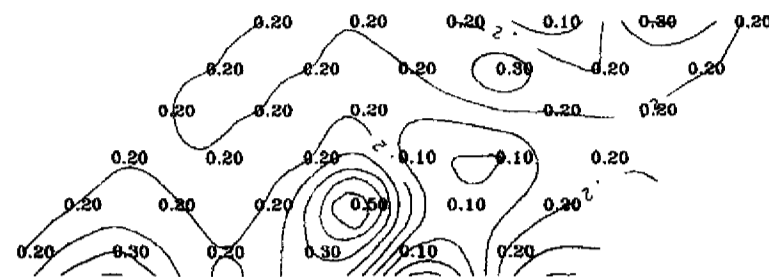
**Pole-Dipole Array**



JVX Spectral 'c'  
(dimensionless)



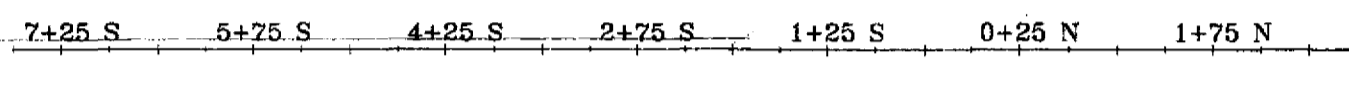
JVX Spectral 'c'  
(dimensionless)



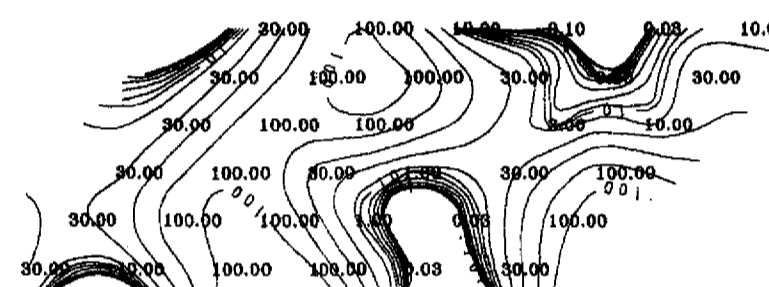
**Resistivity and Chargeability Anomalies**

- Very strong
- Strong
- Medium
- Weak
- ..... Very weak
- xxxx xxxx Extremely weak

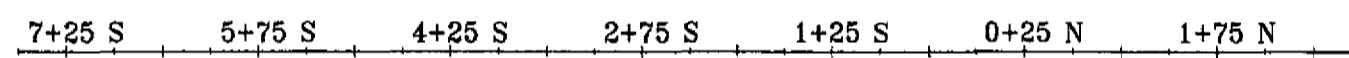
JVX Spectral Tau  
(s)



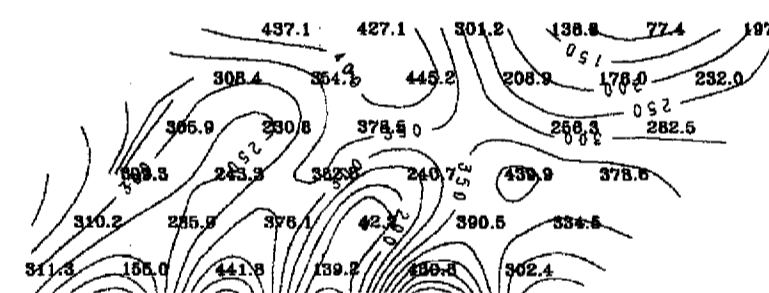
JVX Spectral Tau  
(s)



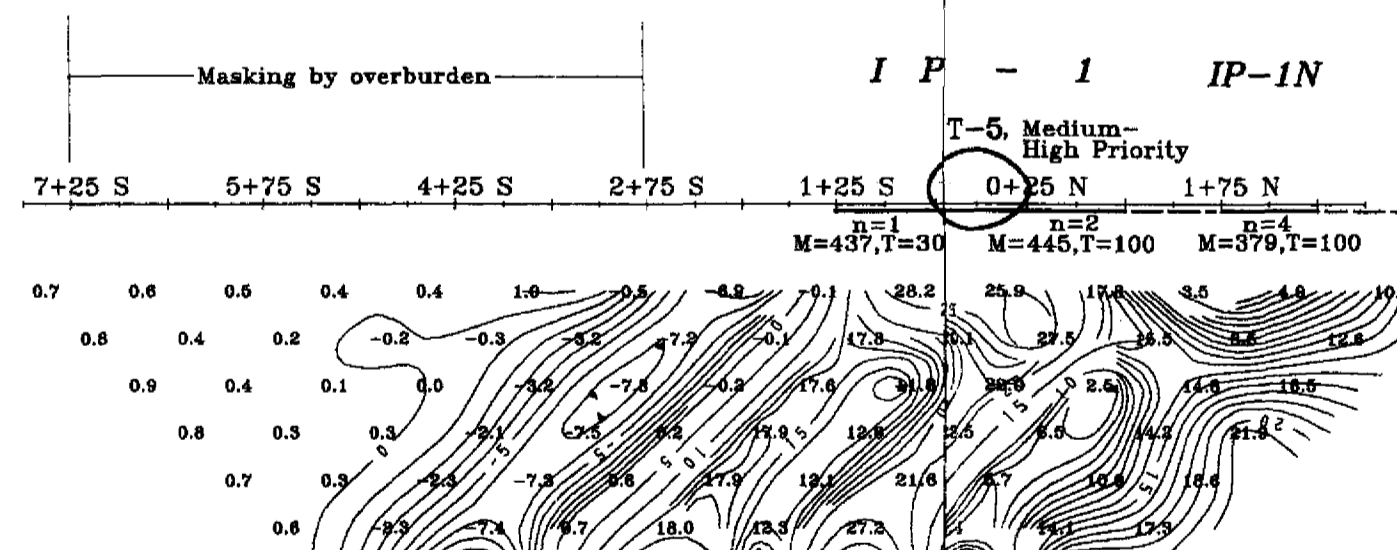
JVX Spectral MIP  
(mV/V)



JVX Spectral MIP  
(mV/V)

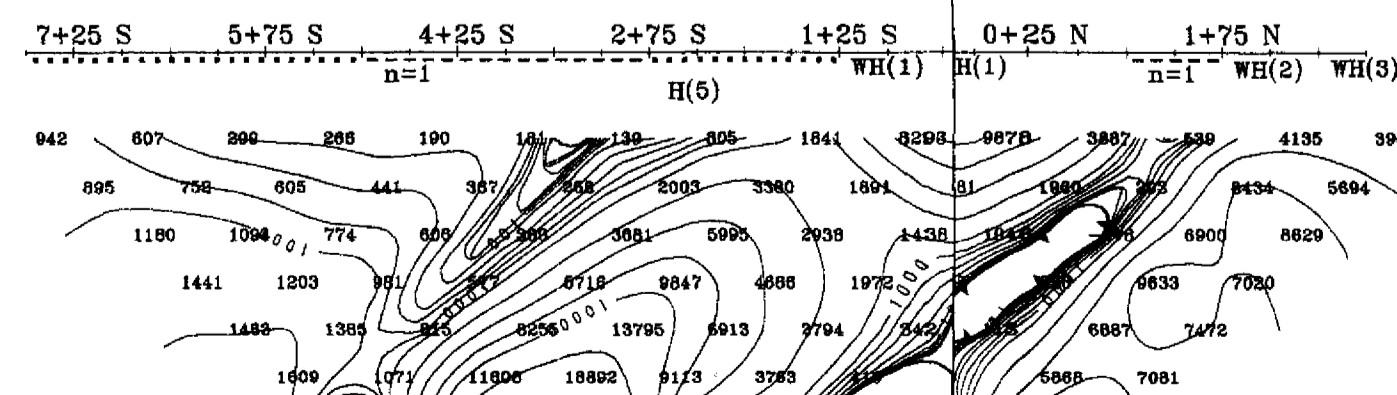


Mx Chargeability  
(mV/V, 690ms-1050ms)



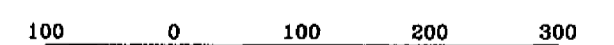
Mx Chargeability  
(mV/V, 690ms-1050ms)

Apparent Resistivity  
(ohm-m)



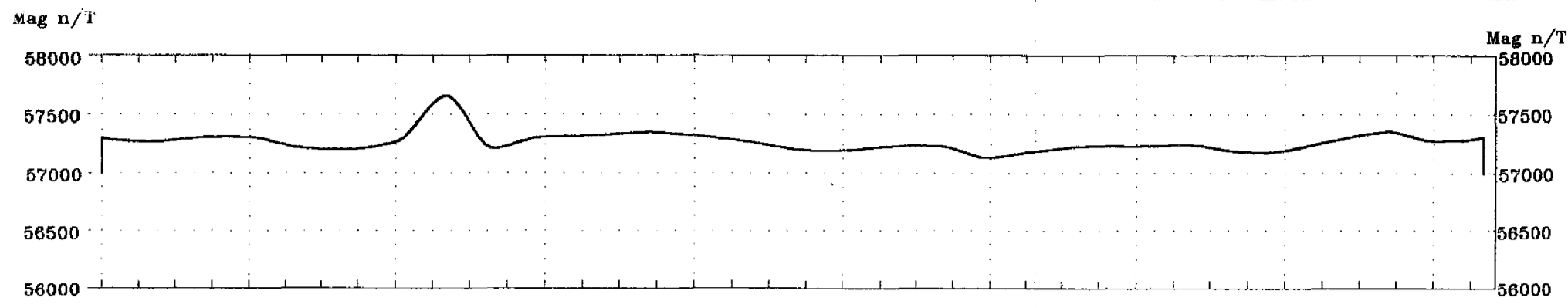
Apparent Resistivity  
(ohm-m)

Scale 1"=150ft

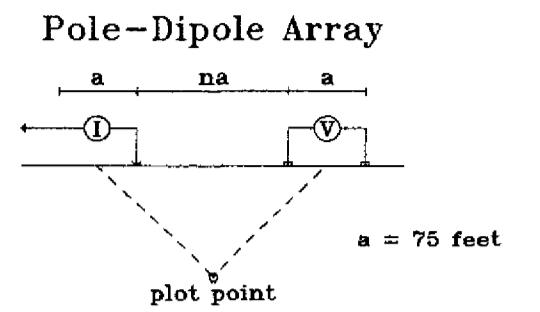


**URSA MAJOR MINERALS INC.**  
**JVX SPECTRAL IP/RES SURVEY**  
**AGNEW LAKE SHAKESPEARE TWP.**  
**NORTHEASTERN ONTARIO; NTS 41 1/5**  
**2100 W**  
 00/10/23  
 Rx (2 sec): Scintrex IPR12, Tx (2 sec): Hunttec M-4

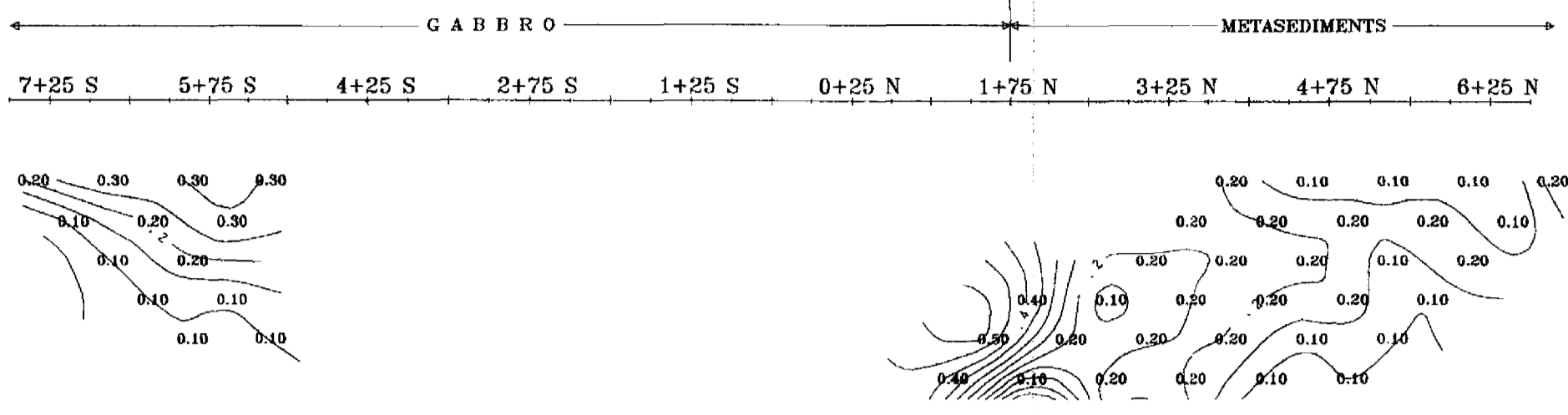




**Line 2900 W**

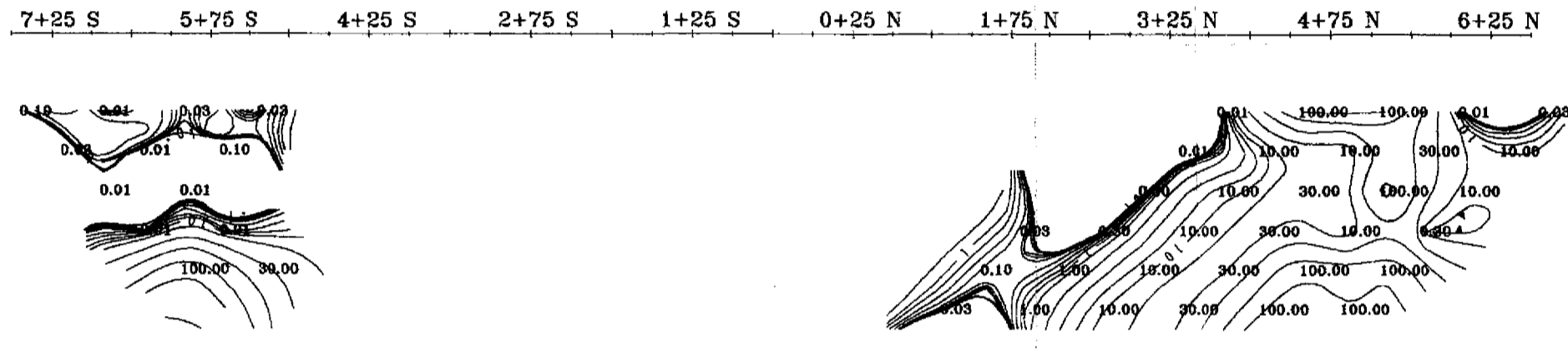


JVX Spectral 'c'  
(dimensionless)



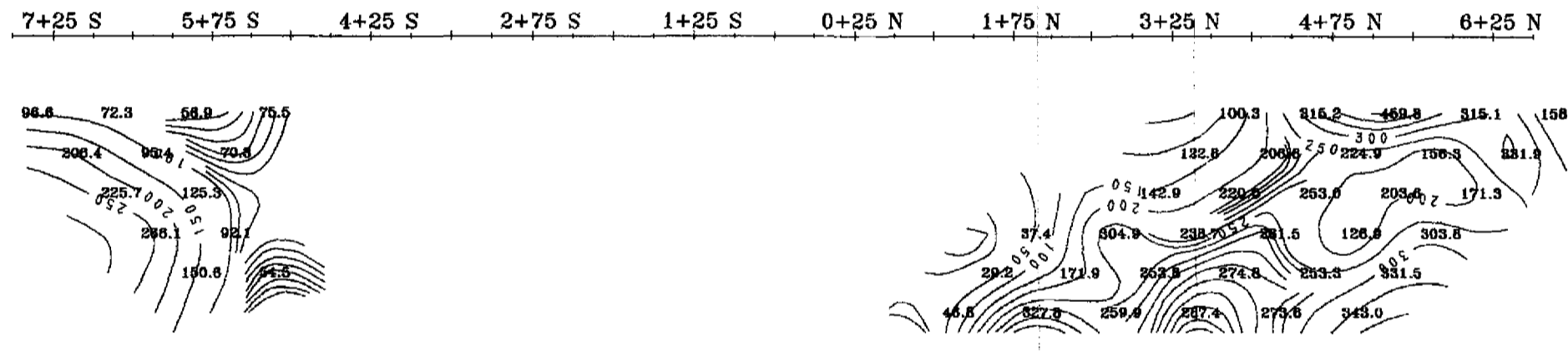
JVX Spectral 'c'  
(dimensionless)

JVX Spectral Tau  
(s)



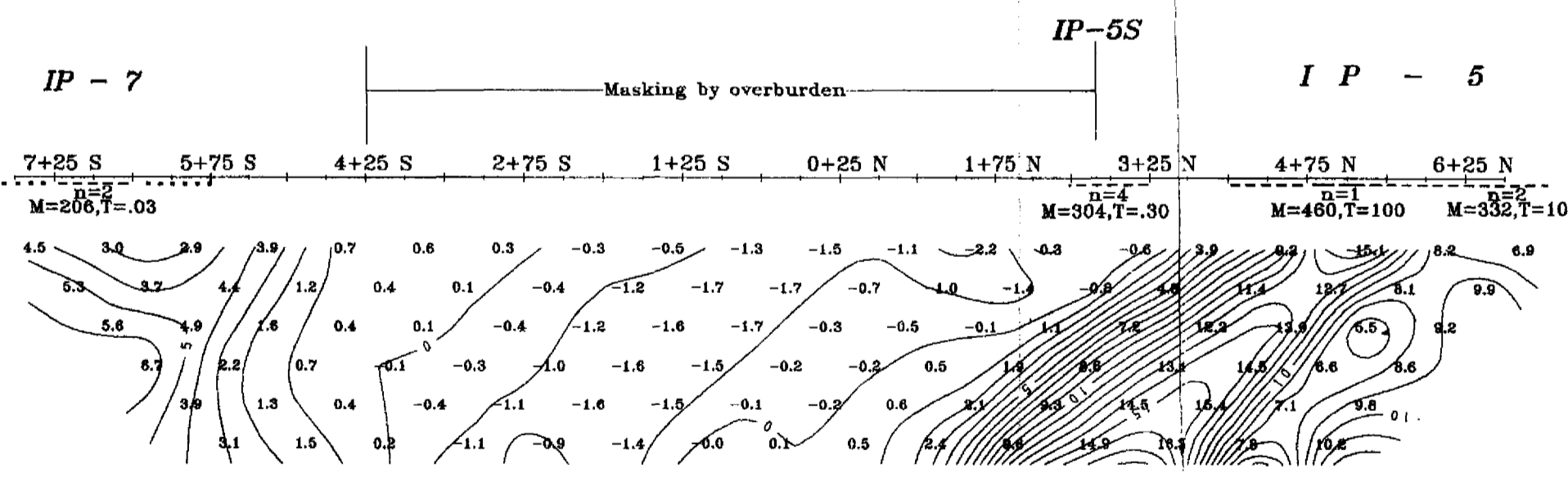
JVX Spectral Tau  
(s)

JVX Spectral MIP  
(mV/V)



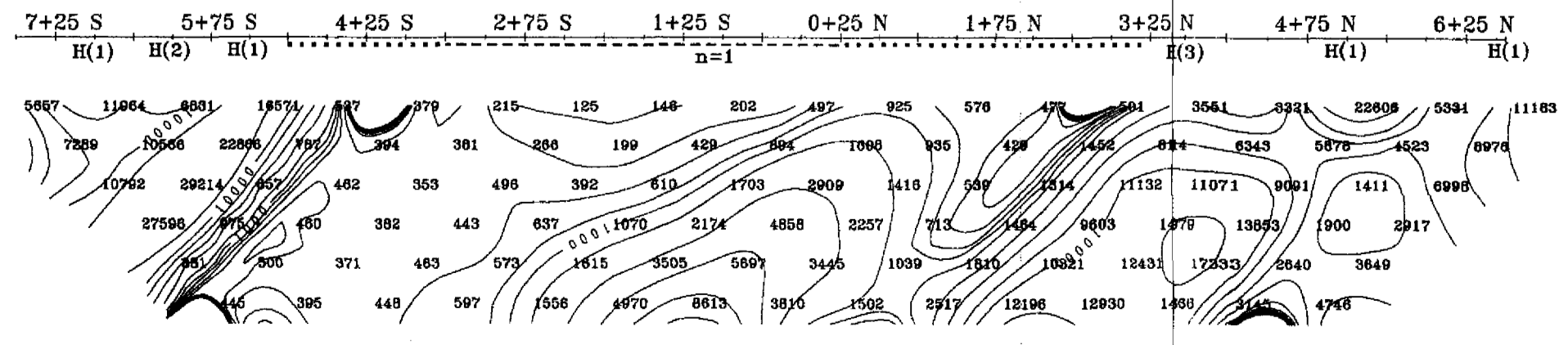
JVX Spectral MIP  
(mV/V)

Mx Chargeability  
(mV/V, 690ms-1050ms)



Mx Chargeability  
(mV/V, 690ms-1050ms)

Apparent Resistivity  
(ohm-m)



Apparent Resistivity  
(ohm-m)

- Resistivity and Chargeability Anomalies**
- Very strong
  - Strong
  - Medium
  - Weak
  - ..... Very weak
  - xxxx xxxx..... Extremely weak

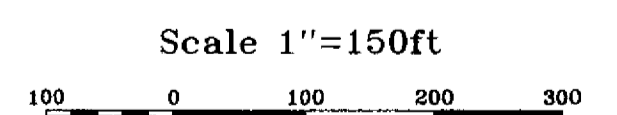


Plate 5

**URSA MAJOR MINERALS INC.**  
**JVX SPECTRAL IP/RES SURVEY**  
**AGNEW LAKE SHAKESPEARE TWP.**  
**NORTHEASTERN ONTARIO; NTS 41 I/5**  
**2900 W**  
 00/10/23  
 Rx (2 sec): Scintrex IPR12, Tx (2 sec): Huntce M-4  
**JVX Ltd. ref. no. 0-49**



411055W2009 2.23306 SHAKESPEARE 340