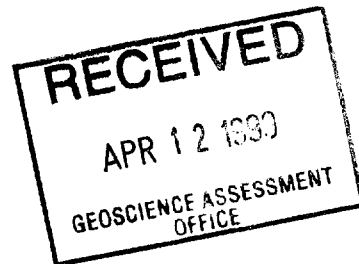


42A07NE2012 2.19379 SHERATON

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GEOPHYSICAL REPORT  
FOR  
CROSS LAKE MINERALS  
ON THE  
SHERATON MASSIVE SULPHIDE DISCOVERY  
SHERATON TOWNSHIP  
PORCUPINE MINING DIVISION  
DISTRICT OF COCHRANE  
NORTHEASTERN, ONTARIO

**2.19379**



Prepared by:: J.C.Grant, CET, FGAC  
Timmins, Ontario,  
March, 1998

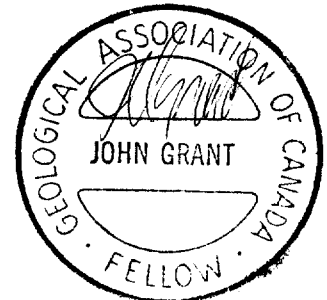




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**SUMMARY:**

A surface and down hole Mise-a-la-masse, IP, survey was carried out in Sheraton Township on Cross Lake Minerals Ltd. massive sulphide deposit during the months of January through to April, 1998. The Mise-a-la-masse method works in this environment because this orebody contains electrically conductive chalcopyrite and pyrite veins sandwiched between non conductive massive sphalerite lenses and electrically resistive volcanic host rocks. A single current and voltage electrodes were employed with the other ends of each dipole at a separate, effective infinite distance. A 3.0 KHZ current of between 1.5 and 2 amps was sent through an electrode into sulphides intersected in drill holes. Voltage measurements were made in drill holes and on the surface over an area large enough to show the influence of the current-injected sulphides.

Current preferentially flows through sulphides connected to the current source, so that measured voltages can map the pattern of these sulphides. The exploration phase employed holes drilled from surface. The Mise-a-la-masse measurements have made significant contributions to the development of the Sheraton deposit and it is helping to provide a definition of the body in advance of the drilling.

**INTRODUCTION TO THE MISE A LA MASSE METHOD:**

The following is an excerpt from a report by Laurie E. Reed on the "Definition of Ore at Les Mines Selbaie Using Mise a la Masse", presented at the 4th International MGLS/KEGS Symposium on Borehole Geophysics for Minerals, Geotechnical and Groundwater Applications; Toronto, Canada, August 18 to 22, 1991.

"Mise a la masse is a method in which an electric current is introduced into an electrically conductive body and resultant voltages are measured in the surrounding volume. It is used in mineral exploration to map the distribution of conductive mineral bodies in the ground, where such bodies have been intersected by drill holes or found in surfaces exposures. The electric current introduced into the conductive body creates a voltage pattern characteristic of the shape of the conductive body. Voltages may be measured on the surface and in drill holes to establish the three dimensional, (3D), shape and extent of the body."



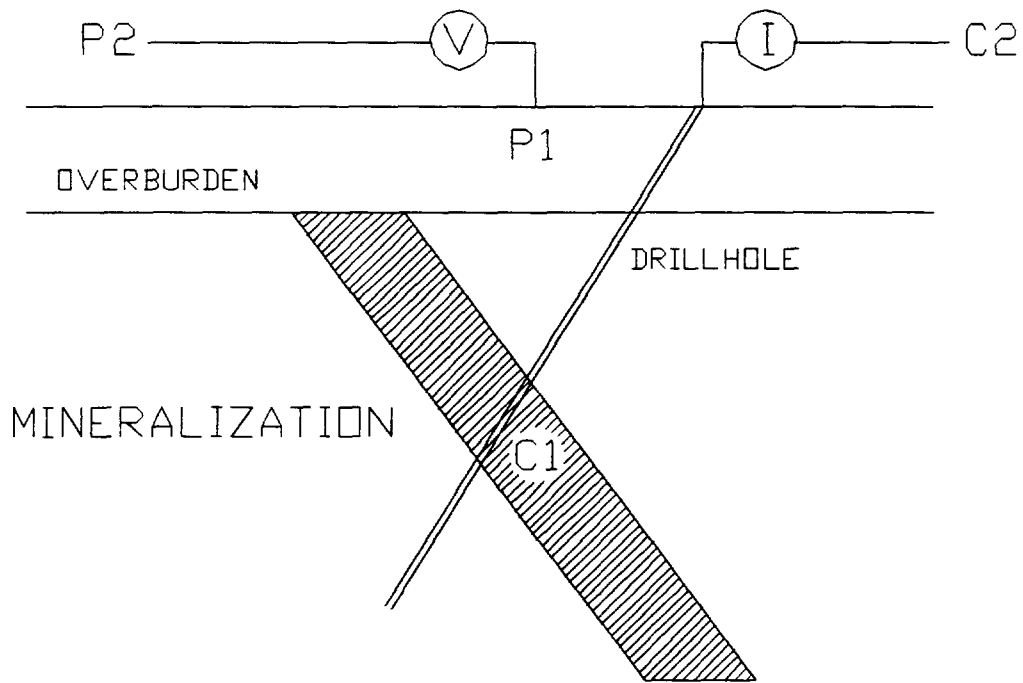
"Conductive orebodies are composed typically of sulphides of copper, nickel and lead; that is, chalcopyrite, pentlandite and galena. Associated iron sulphides, pyrite and pyrrhotite contribute to the conduction in metallic ores. Chalcopyrite is the primary mineral; the secondary element, pyrite was also mapped in the surveys from Les Mines Selbaie. The other Selbaie ore mineral, sphalerite, (Zinc Sulphide), is not electrically conductive; it plays a role in making resistive barriers that could cause misinterpretation of ore outlines."

The Sheraton Massive sulphide deposit is somewhat similar to the Selbaie deposit. The orebody is composed of sulphides of copper, and scattered lead, that is chalcopyrite and galena as well as associated iron sulphides of pyrites and minor pyrrhotite which contribute to conduction in metallic ores. The orebody is also composed of silver and minor gold. Chalcopyrite is the primary mineral with pyrite being the secondary mineral being mapped in the Mise a la masse surveys. The other Sheraton ore mineral is sphalerite, (Zinc Sulphide), which is not electrically conductive but it plays a part in making resistive barriers which can cause misinterpretation of ore outlines.


#### GROUND SURVEY METHOD:

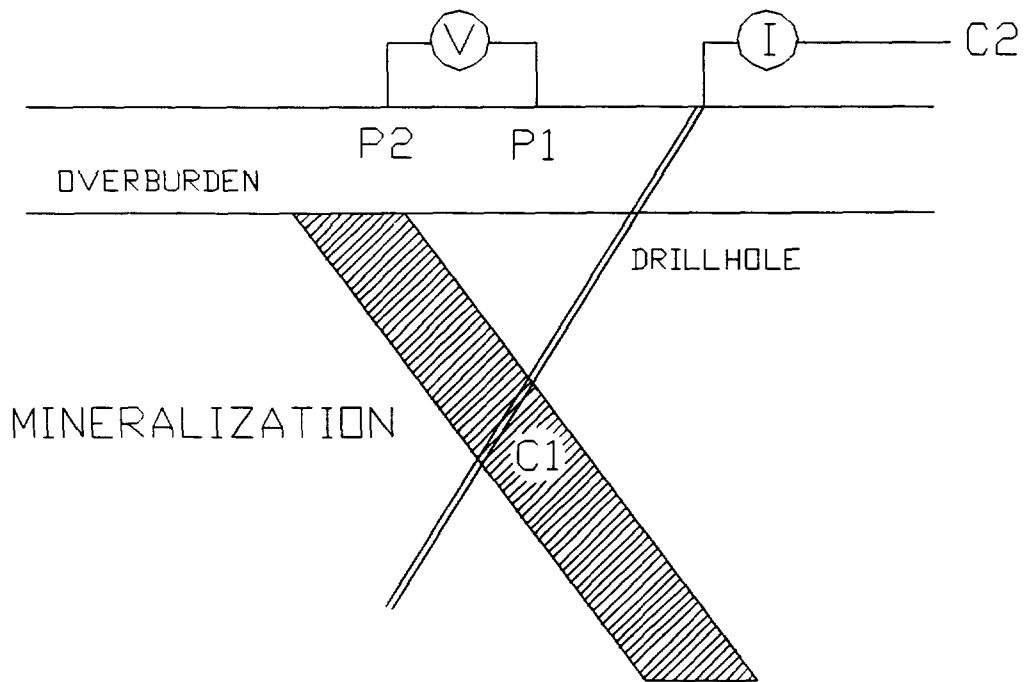
There are two electrode configurations commonly used in Mise a la masse surveys: the Potential, (normal), and the potential gradient array. With the Potential normal array, one of the potential electrodes is fixed effectively at infinity while the other potential electrode is moved from one measuring station to another either on the surface or in the drill holes, Figure 1. With the potential gradient array, the potential difference is measured between two electrodes. This electrode pair is moved from one measuring station to the other either on the surface or in the drill holes, Figure 2. In both these arrays, the energizing system remains the same.

The Sheraton Property employed the Potential, (normal), array which is the more widely used. As stated above this method employs a single current electrode placed in the conductor, (sulphides), with the other end of the current dipole placed at infinity, Figure 3. The reading point was a single moving measuring voltage electrode and is used with the other end of the potential dipole placed at another effective infinity; that is, far from the measuring point and from the two current electrodes. Effective infinity at the Sheraton deposit was generally greater than 800 meters. This is a standard pole-pole or two-array configuration.



CI=CURRENT INJECTION POINT  
 C2=CURRENT ELECTRODE AT EFFECTIVE  
 P1=FIXED POTENTIAL ELECTRODE  
 P2=MOVING POTENTIAL ELECTRODE  
 V=VOLTAGE POTENTIAL ( $V_p$ )  
 I=CURRENT

		
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PROPERTY: SHERATON TWP. PROPERTY		
TITLE:		
<b>POTENTIAL (NORMAL) ARRAY</b> Fig. 1		
Date: April 1998	Scale:	NTS:
Drawn: P Gauthier	Interp: J.C. Grant	Job No.: E-313



C1=CURRENT INJECTION POINT  
 C2=CURRENT ELECTRODE AT EFFECTIVE  
 P1-P2=MEASURING POTENTIAL ELECTRODE  
 V=VOLTAGE POTENTIAL (V<sub>p</sub>)  
 I=CURRENT



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POTENTIAL GRADIENT ARRAY

Fig. 2

Date: April 1998

Scale:

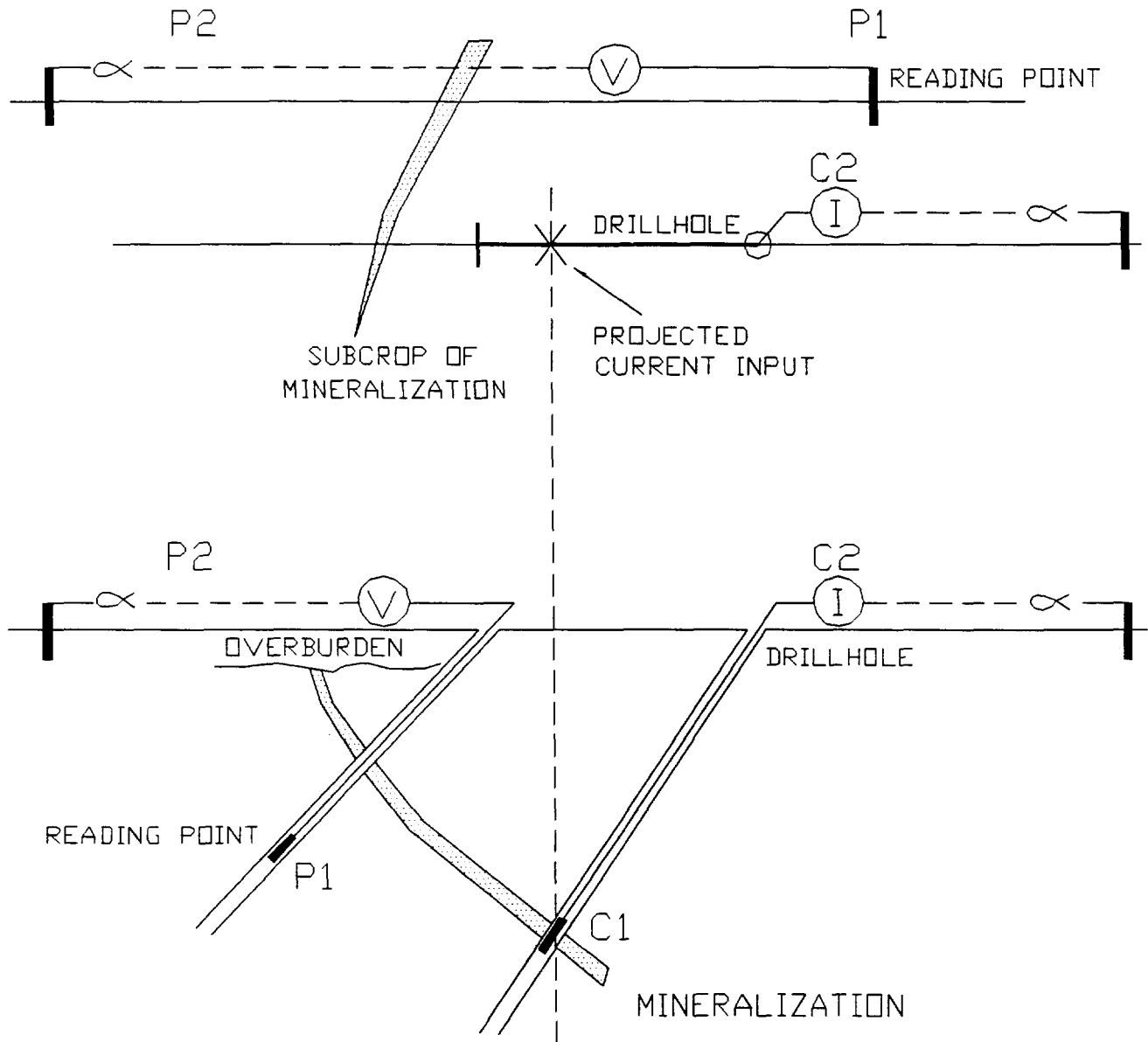
NTS:

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(3a) MISE-A-LA-MASSE SURVEY  
SURFACE CONFIGURATION



(3b) MISE-A-LA-MASSE SURVEY  
DRILL HOLE TO DRILL HOLE CONFIGURATION



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TITLE:

SHERATON SURVEY METHOD

Fig. 3

Date: April 1998

Scale:

NTS:

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Job No: E-313

The current generator was an induced-polarization transmitter which provided stable currents of 1.5 to 2.0 amps. This was the IRIS VIP 3000 3.0 kilowatt Transmitter. The receiver was either the IRIS ELREC 4 or the ELREC 6. Both provided stable voltage readings from 1 to several thousand millivolts. The induced-polarization equipment was used as it is easily available and provided stable current and good resolution of voltages. Refer to Appendix A for the specifications of these units. Only the primary voltages, ( $V_p$ ), were read and recorded.

The currents at the Sheraton Property were introduced into the sulphide zones through drill holes from surface. Voltages were measured on the surface at intervals of 25 meters along the grid lines read and in drill holes from surface at 20, 10 and 5 meter intervals. As the target area was approached, the interval was reduced to 1 to 2 meters to better define the best contact point, (injection point),.

The current and voltage electrodes used on the surface were stainless steel bars about 120 centimeters long and the bars in the holes were about 50 centimeters long. The bars were generally lowered into the drill holes under their own weight and suspended by insulated conducting wire. Care was essential in making sure the insulated wire was not cracked or frayed as this would result in current leakage up the hole away from the main current source. This can cause spurious voltage readings and other noise.

The location of the current rods in the sulphide zones were determined from geological logs of the holes and as the rod was lowered to that point, the current and voltage outputs were monitored at the transmitter. The number of holes read from one current point as well as the number of lines read from one current source was determined by the continuity and size of the conductor, as seen by the behaviour of the voltages.

#### GENERAL THEORY OF THE MISE A LA MASSE METHOD:

The mise a la masse method used on the Sheraton property is a simple application of Ohm's Law. Current and voltages are measured with no attempt to calculate resistivities. Resistivities would be difficult to establish since the true distance from the current source to the measured voltage is not known. Generally, current tends to flow uniformly from the conductive body in the surrounding host rock; that is, under an ideal situation, there would be a uniform potential over the surface of the body. In reality, this is modified by the shape of the body and by the resistivity contrast between the body and its host. The higher the contrast, the more uniform the voltage over the surface. As this resistivity contrast is reduced, voltage drops regularly away from the current injection point.

In high resistivity contrast situations the voltages measured around and near the conductive body would map the shape of the body. As this contrast diminishes, the voltage mapping of the shape of the body is less precise and as the resistivity of the body and the host rock approach each other, the mapping becomes the point source electrode, that is a circular distribution of voltages because current flows uniformly in all directions from the source. This is also known as the ripple effect, that is, a similar pattern a stone creates when dropped in water.

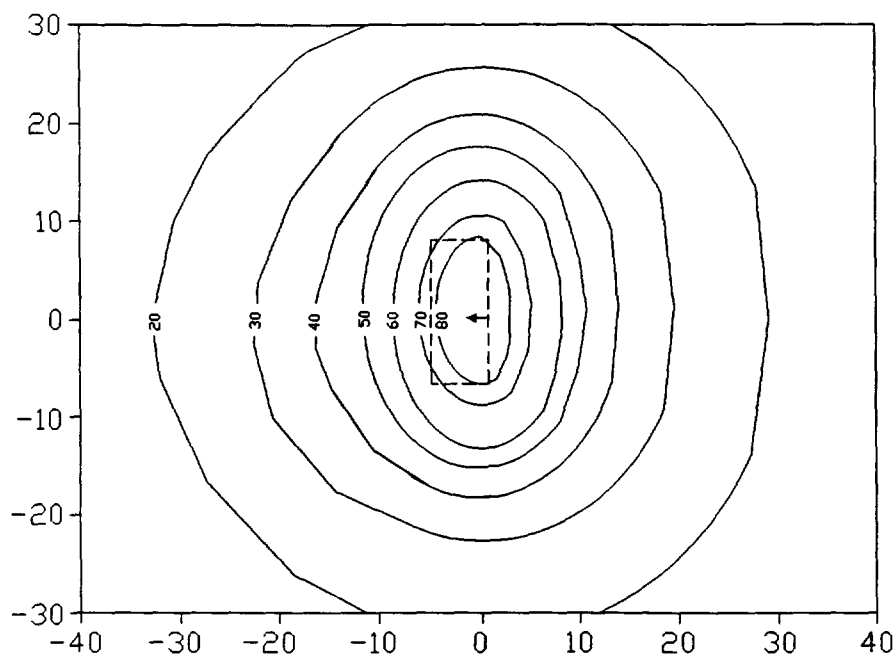
If two bodies lie in close proximity to one another there may be an effect called **current leakage**. That is where current flows from the source body to the adjacent body in such a way as to elevate the voltages in that adjacent body. However, current peaks in the adjacent body will be lower than the source body by an amount dependant on the amount of electrical connection between the two bodies. Care must be taken when interpreting for current leakage as it may at first appear to be indicating a dip direction and or a strike direction and not a parallel source. Good drill log information and geological information of the area is a deciding factor in this type of interpretation.

However, experience has shown that a dipping and or strike direction results in an elongation or stretch in the voltage contours whereas tight or narrow contours would tend to suggest adjacent bodies. Figures 4a, 4b.

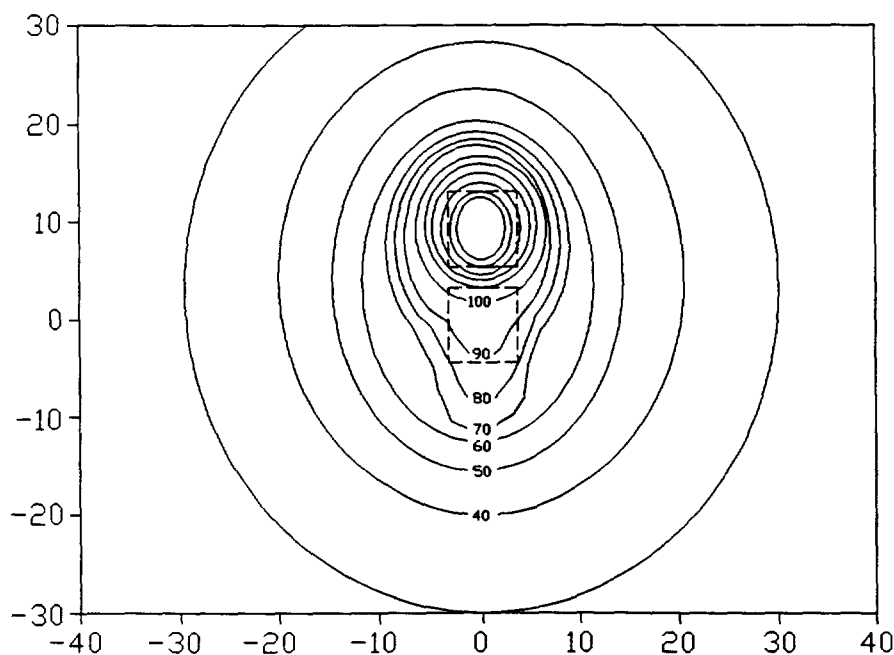
As *mise a la masse* is a form of pole-pole resistivity mapping, conductive bodies sufficiently removed either spatially or electrically, that is, behind a resistivity barrier, from the current source body will be current sinks and appears as a voltage low. High resistivity events such as intrusions by crosscutting dikes may act as a dam to current flow and cause sharp gradients in voltage patterns.


Dip direction of current source bodies away from a measuring surface and usually at surface may be estimated. This would be seen as the highest voltages near the upper edge and a stretching or elongation in the contours on the down dip side. This is just a decreasing in the voltages as the distance to the source increases much similar to a contoured magnetic survey.

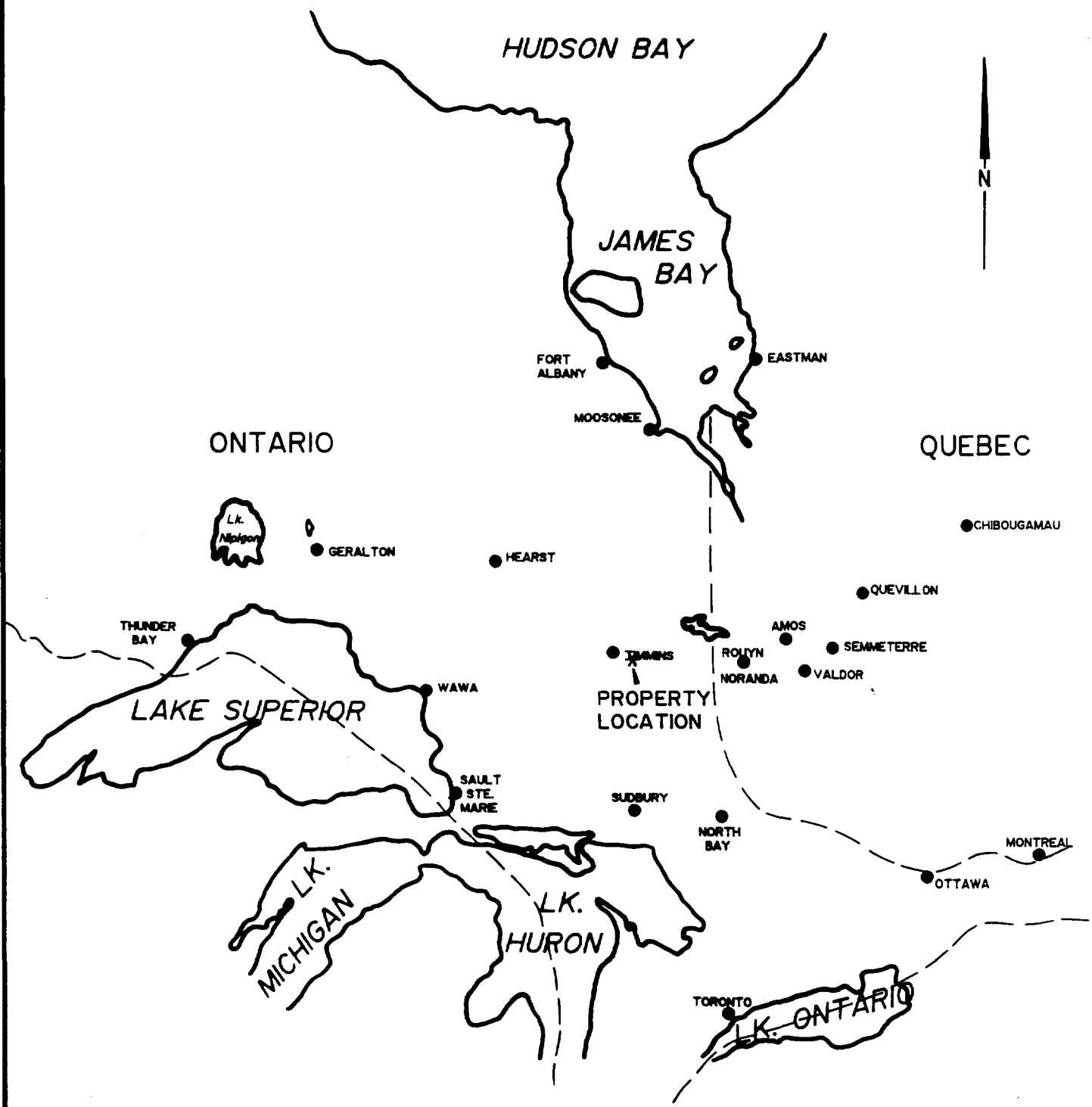
(4a) MODEL OF DIPPING SHEET TO THE LEFT AT 45°



(4b) MODEL OF TWO ADJACENT FLAT-LYING SHEET WITH CURRENT INJECTED INTO THE UPPER BODY



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<b>PROPERTY: SHERATON TWP. PROPERTY</b>		
<b>TITLE: SURFACE EXAMPLE OF</b> -DIPPING ZONE-4A -PARALLEL ZONES-4B		Fig. 4
Date: April 1998	Scale:	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313




		
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PROPERTY: SHERATON TWP. PROPERTY		
TITLE: <b>LOCATION MAP</b>		
Date: Feb. 1998	Scale: 1"=125miles	MNDM Plan#:
Drawn: P. Gauthier	Interp: J.C. Grant	Job No E-292

Fig. 5



MISE A LA MASSE AT THE SHERATON, VMS, DISCOVERY:

INTRODUCTION:

The services of Exsics Exploration Limited were retained by Mr. R. S. Middleton on the behalf of Cross Lake Minerals Inc. to complete mise a la masse surveys on selected lines and down selected drill holes on their recently discovered volcanogenic massive sulphide, (VMS), deposit located east of the City of Timmins in the District of Cochrane, Northeastern, Ontario, Figures 5 and 6. Electrically conductive sulphides were identified at the site initially by airborne to the immediate north of the actual discovery and by follow-up induced polarization surveys and ground magnetic surveys. This initial ground program resulted in several drill holes being done to test the conductive zones which verified the existence of electrically conductive sulphides. As discovery and definition drilling of the deposit proceeded, it was recognized that mise a la masse surveys might complement the magnetic and induced polarization surveys performed at the site.

The mise a la masse surveys began during the first week of January, 1998 and are ongoing at the time of this report. This report will deal with the initial results of the mise a la masse work and will be amended as the program continues.

PROPERTY LOCATION AND ACCESS:

The Cross Lake Minerals, VMS deposit, is located in the northwest quadrant of Sheraton Township approximately 43 kilometers east of the City of Timmins, District of Cochrane in Northeastern, Ontario. More specifically it is located south-southeast of Sheraton Lake, west of the Driftwood River and east of the Whitefish River that flows into the southeast end of Night Hawk Lake. The immediate area of interest covers all of lots 7, 8, 9 and 10, Concession IV and V of Sheraton Township. Figures 5 and 6.

Access to the grid is ideal. A good gravel road, locally called the Gibson Lake Road travels south-southeast off of Highway 101 which services the City of Timmins and Matheson. Matheson is approximately 65 kilometers east of Timmins and is at the east junction of Highway 101 and Highway 11 North, Figure 6.

Gibson Lake Road runs through Macklem Township and continues on into Sheraton Township where it passes to the immediate west of Gibson Lake as well as to the west and south of Heart Lake. The road then continues into Timmins Township to the south of Sheraton. A series of ingress roads created by recent drilling and refurbishing of old bush roads runs east and northeast off of the Gibson Lake Road and provides good access to all parts of the grid as well as to a majority of the drill holes. Ongoing drilling during the mise a la masse surveys resulted in the drill roads being plowed during the winter months which allowed for good skidoo access.

The travelling time from Timmins to the site is approximately one hour.

**CLAIM NUMBERS:**

The Cross Lake Minerals Ltd. holdings in the area of Timmins and Sheraton Townships are quite extensive. The claims listed below are the numbers that were covered by the ongoing mise a la masse surveys and are the numbers that will be dealt with in this report.

<u>Claim Number</u>	<u># of Units</u>
P-1193737	16 units
P-1177240	16 units
P-1193711	4 units
P-1213220	8 units
P-1223890	2 units
P-1223895	2 units
P-1223894	2 units

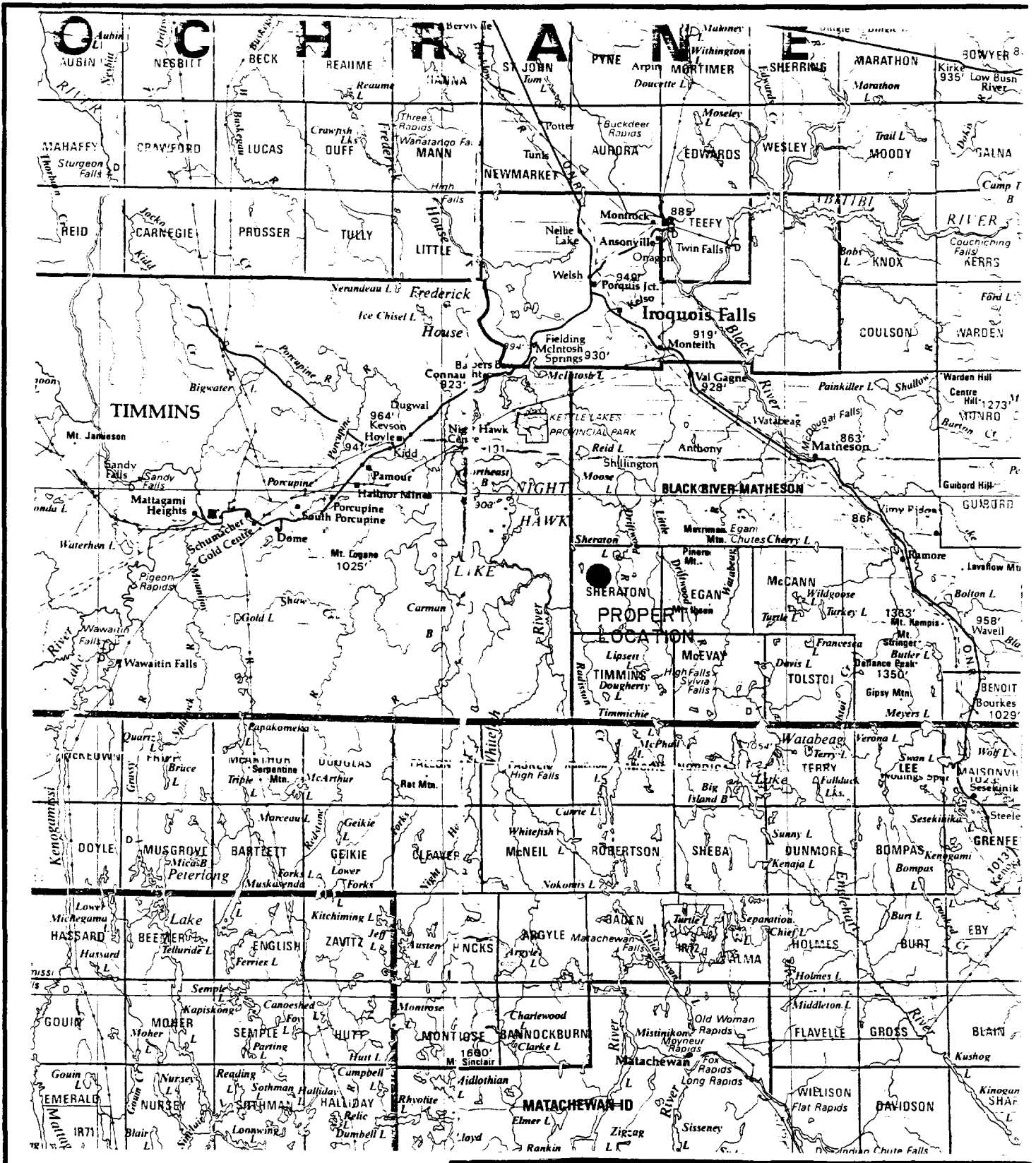
Refer to Figure 3 copied from MNDM Plan Map G-3971 of Sheraton Township for the positioning of the claims within the Township.

**PERSONNEL:**

The field crew directly responsible for the collection of all of the raw data were as follows.

- A. Chaumont.....Timmins, Ontario
- P. Cavanaugh.....Timmins, Ontario
- P. Otis.....Timmins, Ontario
- E. Jaakkola.....Timmins, Ontario

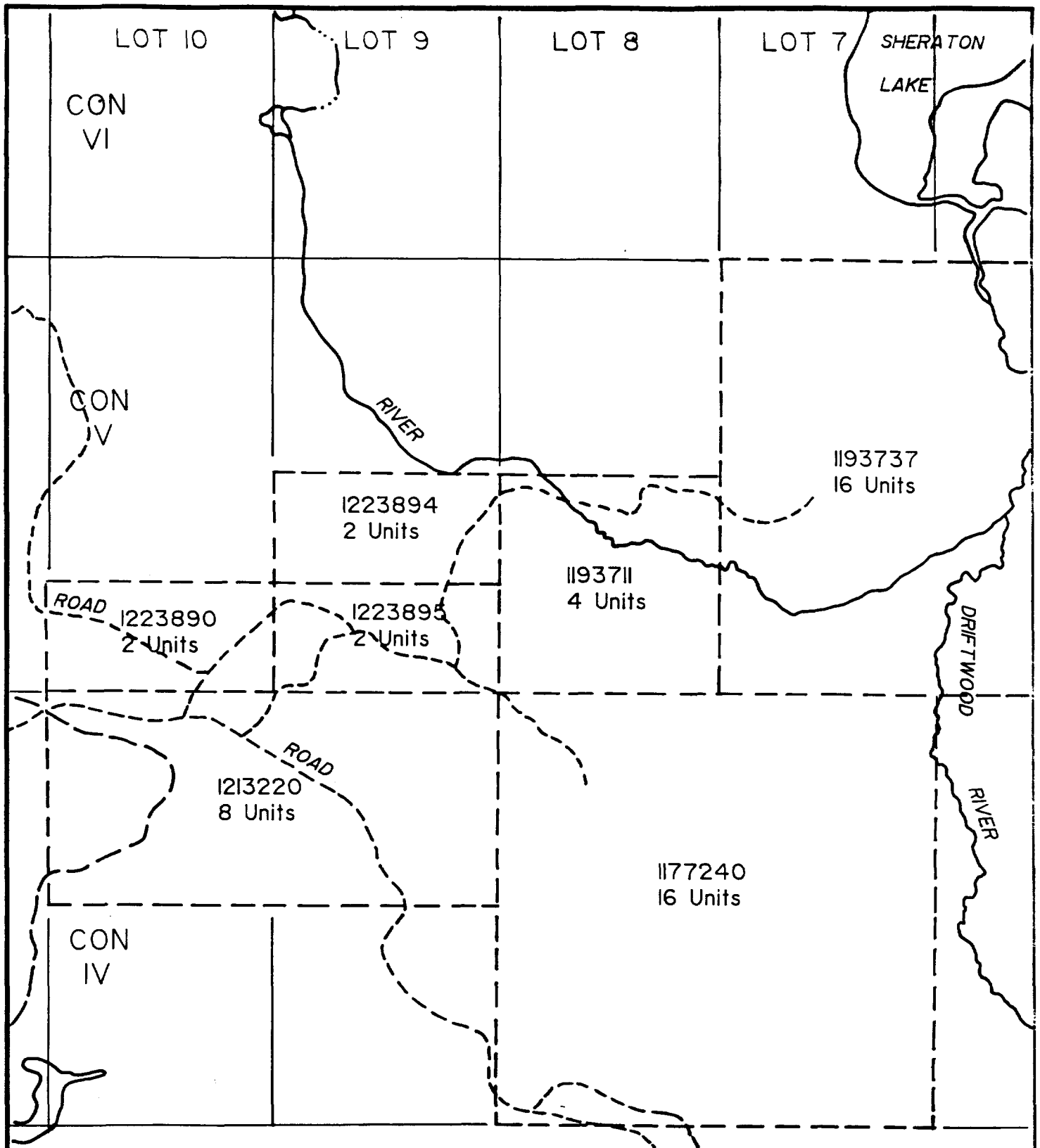
The program was completed under the direct supervision of J.C.Grant and all of the plotting and computer compilation was completed by P. Gauthier of Exsics.




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CLIENT: CROSS LAKE MINERALS LTD.		
PROPERTY: SHERATON TWP. PROPERTY		
TITLE: PROPERTY LOCATION		
Date: Feb. 1998	Scale: 1:600,000	MNDM Plan#: 22-6
Drawn:	Interp: J.C. Grant	Job No. E-292

Fig. 6



		
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PROPERTY: SHERATON TWP. PROPERTY		
TITLE:  CLAIM SKETCH		
Fig. 7		
Date: Feb. 1998	Scale: 1:20,000	MNDM Plan#: G-3971
Drawn: P. Gauthier	Interp: J.C. Grant	Job No. E-292

GROUND PROGRAM:

The ground program on the Cross Lake Minerals Ltd., VMS deposit, consisted of surface and down hole Mise a la masse surveys. The initial program was to set a current electrode in drill hole CLS97-29 at 350 meters down and 265 meters down. The objective then was to read a series of surrounding hole to test for electrical continuity in selected sulphide horizons within the holes. Unfortunately, only drill hole CLS97-17 was read from the injection points noted above because CLS97-29 collapsed at 250 meters down due to faulting. The electrode and several 100 feet of wire was lost in the hole below the fault zones.

There did appear to be electrical continuity from hole CLS97-29 to CLS97-17 suggesting the sulphide intersections did continue between the two holes. Refer to Section A of this report for the locations of the holes and the plotted survey results.

The current electrode was then placed into CLS97-17 at two chalcopyrite intersections, one at 255 meters down and the second at 355 meters down. These locations were based on the drill logs and assay results.

With the current electrode at 355 meters down, drill holes CLS97-23, 25, 31 and 32 were read for continuity. All of the read holes were successful in denoting Vp increases which suggested that there was electrical continuity in the sulphide zones. Drill hole CLS97-23 returned at least four, (4), Vp highs with the main increase situated between 344 meters and 420 meters of a peak value of 847 Vp. Drill hole CLS97-25 showed a good Vp peak situated between 272 meters and 330 meters with a peak Vp of 1050. Drill holes CLS97-31 and 32 were also successful in returning good Vp increases between 280 meters and 420 meters in CLS97-31 and 315 meters and 405 meters in CLS97-32.

This would suggest that the sulphide zone energized in CLS97-17 at 355 meters down continues as far as hole CLS97-32 and the multiple peaks in each of the holes surveyed may, in part, relate to current leakage between different sulphide horizons within those holes.

The drill logs for the four holes read from injection point CLS97-17 at 355 meters down should be able to explain each of the Vp peaks outlined. Refer to Section B of this report for the location of the holes and their plotted surveyed results.

The current electrode was then moved up CLS97-17 to the 255 meter location, (the main zone), and the following drill holes were surveyed; CLS97-1,16,18 21,22,23,25,27,28,31 and 32. There was a good intersection of chalcopyrite rich mineralization at the 255 meter interval in CLS97-17 and reading the above holes was to test the zone for continuity in surrounding holes. Several additional holes, CLS97-33,34,35,36,37,38 and 39 are also to be surveyed as soon as conditions permit.

The following is a hole by hole interpretation of the results.

CLS97-1:

This hole was blocked at 160 meters down but appears to be building up to a Vp high which is thought to represent the upper edge of the copper mineralization.

CLS97-16:

This hole was very successful with a text book example of a good Vp high response between 240 meters and 340 meters. The peak is situated 270 to 280 meters.

CLS97-18:

This hole returned a quite broad Vp high between 280 meters and 400 meters.

CLS97-21:

This hole was read to test the up plunge extension of the main copper rich zone located in CLS97-17 at 255 meters. Hole CLS97-21 returned excellent results between 160 meters and 270 meters again being a text book example. The peak Vp readings are between 160 meters noted by a very sharp edge build up, and 200 meters followed by a slow fall off in the Vp readings. This would suggest that the upper edge is well defined but the lower edge may be the result of current leakage into adjoining conductive zones or a more disseminated unit further down the hole which resulted in a slow Vp drop down the hole.

CLS97-22:

This hole again returned a similar response as that of hole CLS97-18, that being a good broad Vp build up from 260 meters to 520 meters.

CLS97-23:

This hole was surveyed to test the down dip plunge of the main zone located in CLS97-17. The hole returned excellent results between 310 meters to 360 meters with the Vp peak between 320 and 340 meters. The broad response is probably due to disseminated sulphides on either side of a more massive zone between 320 and 340 meters.

CLS97-25:

This hole was successful with a Vp high situated between 225 and 300 meters which is thought to represent the upper edge of the copper mineralization intersected in CLS97-1.

CLS97-27:

This hole is situated about 600 meters southwest of CLS97-17. Even for this distance, the mise a la masse survey results show a modest increase as you progress down the hole. This would suggest a continuation of the main mineralization that is being energized in CLS97-17. Otherwise there would be no build up in the Vp readings.

CLS97-28:

This hole is also situated 600 meters southwest of CLS97-17 and drilled below and behind CLS97-27. The drilling did not return any significant copper mineralization but the downhole surveys show a broad Vp increase as you progress down the hole especially between 540 meters and 670 meters. This would suggest that there is a sulphide horizon near the hole that the mise a la masse is reacting to.

CLS97-31:

This hole showed a good build up in the Vp readings especially in the area between 280 and 400 meters. There appears to be a peak at 310 to 320 meters and a second build up at 350 to 400 meters. The zone may also be surrounded by disseminated sulphides which would account for the gradual build up and decrease in the Vp readings up hole and down hole from the peak Vp reading points.

CLS97-32:

This hole showed a good Vp build up between 300 meters and 420 meters at which point it drops quickly. This quick drop may suggest the zone was cut off down the hole by either a dike or fault system. The peak or best sulphide intersect would be between 360 and 390 meters.

SURVEY RESULTS, CLS97-17 INJECTION POINTS 255 & 355 METERS

The mise a la masse down hole survey was successful in showing that the main copper zone in CLS97-17 at 255 meters continues as far as CLS97-32. It was also successful in showing that the second copper zone situated in CLS97-17 at 355 meter also continues as far as CLS97-32. The similarity in the profiles especially in CLS97-31 and 32 suggest that the zones closely parallel one another and may be contained within the same geological horizon.

The response of CLS97-28 would suggest that the hole just missed the main copper zone. The Vp readings are building as they progressed down the hole. CLS97-27 also show, albeit somewhat weaker, the same response as CLS97-28 again proving that the main zone in CLS97-17 at 255 meters continues as far as CLS97-27.

In fact, the results of this portion of the mise a la masse survey suggest that the main copper zone extends from CLS97-21 to the northeast to CLS97-32 to the southwest. The zone also appears to continue to the southwest plunging below CLS97-27 and near CLS97-28.

Refer to Section B of this report for the location of CLS97-17 and the location of the holes that were read from the two injection points. This section will also contain the plotted survey results of the mise a la masse.

GROUND PROGRAM CONTINUED, CLS97-27, CURRENT INJECTION 382 METERS:

The current electrode was then moved to drill hole CLS97-27 and placed at 382 meters down. A series of drill holes were then read from this current injection point to test for the down plunge extension of the main copper zone as well as to prove up the continuity of the main zone in the southwesterly drill holes. The following holes were completed from this current set up; CLS97-06, 08, 28 and 32. Joint venture holes SK97-9, 10, 16 and 20 were also read.

The following is a hole by hole interpretation of the mise a la masse survey results.

CLS97-06:

This hole was one of the few holes surveyed that did not show any significant results from the current injection point in CLS97-27. This would suggest that the main copper zone was not intersected in this hole. This type of response is typical of no electrical continuity from point of injection.



CLS97-08

This hole was also not entirely successful in showing any definite continuity between the injection point and this surveyed hole. The slight Vp increase between 205 meters and 280 meters may suggest that the main zone may be in close proximity to the hole but was not intersected by the hole. This response is somewhat similar, albeit considerably weaker, than the response in CLS97-28 from this current injection point. CLS97-28 that was read from CLS97-27 showed that hole 28 just missed the main copper zone and this is evident by the large increase in Vp readings from 430 meters down to the bottom of the drill hole.

The weak Vp increase in CLS97-08 may suggest the zone is somewhat further removed from the hole than it is from CLS97-28.

CLS97-28:

This hole was successful in suggesting that the main copper zone lies just to the side or just below the hole. The good increase in Vp readings which are situated between 440 meters and 700 meters suggest that the zone is relatively close to the hole. The decrease in Vp readings between the 600 and 630 meter section may suggest two zones of mineralization or a higher concentration of sulphides within a more disseminated horizon.

CLS97-32:

This hole was not as successful from the injection point in CLS97-27 as it was from CLS97-17. The Vp readings generated from CLS97-17 are considerably higher than those generated from CLS97-27. This would suggest that there may be some sort of electrical blocking being caused by a geological cross structure between CLS97-27 and CLS97-32 which was not present between CLS97-17 and CLS97-32. Even so, there is still a slight increase in the area between 180 meters and 320 meters suggesting some current is passing from CLS97-27 to CLS97-32. This may suggest that the main copper zone continues as far as CLS97-27. The holes previously surveyed from CLS97-17 proved that the main copper zone extends definitely from CLS97-21 to CLS97-32.

SK97-09:

This hole showed a moderate Vp build up between 140 meters and 240 meters which could suggest either a continuity in the sulphide zone from CLS97-27 to this hole or the fact that SK97-09 is above the main copper zone. At this time it appears that this hole may have missed the main copper zone which could be below the hole.

SK97-10:

This hole was drilled from the northwest to the southeast which generally aimed it back at CLS97-27. However, CLS97-27 veered off to the northeast whereas SK97-10 generally ran southeast and ended up about 100 meters to the west of CLS97-27. Whether this hole is above 27 is not clear, however, the Vp readings build up significantly between 250 meters and 420 meters with two definite peaks at 380 meters and 410 meters. This would suggest continuity between CLS97-27 and SK97-10. It could also suggest that SK97-10 just missed the main copper zone which could be just below the hole.

SK97-16:

This hole was also drilled from the northwest to the southeast much the same as SK97-10 but higher up. The hole showed an increase in Vp readings from 180 meters to 300 meters, peaking at 290 meters. This again may relate to continuity in the main zone or the fact that SK97-16 again just missed the copper zone which is below the hole.

SK97-20:

This hole showed a text book example of mise a la masse results from one hole to the next. SK97-20 is situated above the bottom of CLS97-27 which may suggest that the response is indicative of a hole that just missed the main zone. Care must also be used in the event that the response is due to the hole coming closer than expected to the actual location of the current injection point in CLS97-27. This may also be the case for SK97-10 and 16.

#### SURVEY RESULTS, CLS97-27, INJECTION POINT 382 METERS:

The mise a la masse surveys for this injection point were successful in indicating that the main copper zone extends as far as CLS97-27 but that it is plunging to the southwest. It is also safe to say that the mise a la masse method is good for detecting sulphides off of the drill holes if the sulphides are with a reasonable distance from the hole. This is evident in CLS97-28 and possibly CLS97-08. Both of these holes showed a weak Vp build up, (hole 08), and a strong Vp build up, (hole 28), which is indicative of either the distance the main zone is to the holes or the amount of sulphides present next to each hole.

Another thing that is evident from the surveys from this hole is the results of the SK97 holes, 09,10,16 and 20. It is not clear if the increase in the Vp readings is due to the holes coming close to the location of the injection point, or the fact that the holes all missed the main zone which appears to be below the holes. If the latter is the case, then geologically there must be some major cross structures at play in the area that may have faulted or folded the main zone and has either pushed it down or pushed it up. This is all happening in the area between lines 3900MW and 4100MW. This is based on all of these SK holes returning similar Vp results, relatively speaking yet the drill logs do not return significant copper mineralization. All of the holes returned good sphalerite mineralization with minor copper blebs and or minor stringer type zones. It is possible that these copper blebs and stringer were enough sulphides to allow for electrical continuity between the holes. At this time either assumption could be possible. Further drilling in this area is required to better define these assumptions.

Refer to Section C of this report for the location of the drill holes that were surveyed from CLS97-27 and the injection point of 382 meters in that hole.

SURFACE SURVEY, CLS97-27, INJECTION POINT 382 METERS:

The next phase of the ground program was to leave the current electrode in CLS97-27 at the 382 meter point and to read a select group of lines on surface. This was done to map the surface expression of the main zones. Eight grid lines were read from this injection point; these are lines 4300MW to and including 3600MW.

The survey was successful in mapping out two elongated bullseyes. The stronger of the two is situated generally over line 4000MW with the parallel weaker one situated over line 3800MW. The zones appear to be dipping slightly to the southeast but it is not evident if the two zones represent the same source. What is apparent is that there may be evidence of two cross structures in the vicinity of the zones.

The first cross structure is represented by a typical "current sink" or voltage low which cuts across the northwest edge of both bullseyes and appears to swing to the southwest of the stronger bullseye between lines 4200MW and 4100MW. This may represent a somewhat resistive barrier but it is not a consistent barrier as there appears to be current leakage across it in the vicinity of 4050MW and 3750MW. The Vp readings to the north of the bullseyes increase significantly which have not been explain as of yet.

The second suspected cross structure may be two parallel units following line 3900MW and 4200MW which generally strike northwest. These units are well defined in the contoured results of the surface mise a la masse and become more evident in the colour contours of the higher Vp readings over the northern section of the grid lines.

The stronger of the two bullseyes may relate to a shallower source or a heavier concentration of sulphides than that of the weaker bullseye. There may also be a minor cross structure cutting into the down dip side of the stronger zone in the vicinity of line 4000MW at 1550MS.

Drill hole CLS97-27 has tested the weaker of the bullseyes and confirmed the presence of copper mineralization in the hole. Drill hole SK97-24 was completed to test the stronger bullseye and it is the understanding of the Author that the hole was a technical success, that being that sulphides were encountered to explain the mise a la masse results but the assays for the hole are not public as of this writing.

A black and white copy of the surface mise a la masse from CLS97-27, at a scale of 1:2500, is included in the back pocket of this report and an 8 x 11 and 1/2 inch colour print of the mise a la masse is included in the report in Section C.

#### SURVEY RESULTS, CLS97-32, INJECTION POINT 377.3 METERS:

The current electrode was then moved from CLS97-27 and placed into CLS97-32 at an injection point of 377.3 meters. Three drill holes to the southwest of CLS97-32 were then read. These holes were CLS97-28 and 39 as well as SK97-24 which was the drill hole done to test the stronger of the surface mise a la masse bullseyes.

The following is a hole by hole interpretation of the drill hole survey results.

##### CLS97-28:

This hole showed a general moderate build up as the survey progressed down the hole again suggesting that the hole just missed the main copper zone. The minor peaks encountered in the hole may just represent stringer type zones within the main zone that is assumed to be in close proximity to the hole.

##### CLS98-39:

This hole showed a good elevated series of Vp readings between 380 meters and 450 meters which may relate to continuity in the copper zone between hole 32 and 39. The overall moderate build up in the Vp readings from 360 meters to the end of the hole would suggest the hole encountered or is near the main mineralized zone.

SK97-24:

This hole was drilled to test the strong surface mise a la masse bullseye. The down hole results show a moderate build up in the Vp readings from 240 meters to 460 meters. There are a number of peaks within this overall build up which may relate to concentrations of copper mineralization within the zone. The Vp readings are lower which may, in part, relate to a suspected dike which was encountered in the bottom of CLS97-32. This dike may be blocking some of the current emanating from the injection point in CLS97-32.

SURFACE SURVEY, CLS97-32, INJECTION POINT 377.3 METERS:

The current electrode was left in CLS97-32 at the injection point of 377.3 meters and two sets of surface lines were read. Grid A represents lines 4000MW to and including 3500MW and Grid B represents lines 100SE to and including 400SE.

Both of the surface grids returned similar patterns, that being a cigar shaped trend elongating to the southeast. When the two grids were merged and replotted, (plan map Grid A, B combined), the results showed a general southeast elongation with the possibility of a northeast strike, evident in the contours bulging to the northeast off of line 400SE and weakly bulging southwest off of 100SE.

Also evident is a typical "current sink" or voltage low which would suggest a possible dike like structure cutting across the north end of the trend as well as the northwest side of the trend. This dike like structure strikes approximately north-south. Pinching in the shape of this dike like structure may relate to minor cross faulting and or shearing.

The tight contouring between 400SE and 3500MW is due to the location of the current wire leading to one of the infinity electrodes to the north of line 3500MW.

This mise a la masse trend should be followed up further to the northeast from the same injection point in drill hole CLS97-32 to better define the direction of this zone.

Refer to Section D of this report for the location of the holes read from drill hole CLS97-32 as well as for the 8 1/2 x 11 inch colour surface mise a la masse results for Grids A, B and Grids A, B combined. A copy of the contoured black and white mise a la masse results for Grids A and B as well as the combined results of A and B, on a base map at a scale of 1:2500, are included in the back pocket of this report.

SUMMARY OF THE MISE A LA MASSE RESULTS, SURFACE AND DOWN HOLE:

The mise a la masse proved to be a viable geophysical tool in an attempt to trace one of the main copper zones of Cross Lakes Sheraton VMS deposit. The down hole surveys have proven that the main copper zone is connected from drill hole CLS97-21 to drill hole CLS97-27 and possibly as far as SK97-24. This would suggest a main zone striking in a northeast to southwest direction that appears to be plunging to the southwest. The zone is also open to the southwest. The survey also suggest that the deposit is coming closer to surface as the zone strikes northeast.

The surface expression of the zone suggest that the dip is to the southeast but may be undulating back and forth from vertical to southeast. This can be seen from the elongation in the surface contours especially in the combined Grids A and B and in the colour contours of the same combined Grids.

The second copper zone energized in the bottom of CLS97-17 at 355 meters also suggested that this zone extends as far as CLS97-32. This may prove that there are a number of copper rich lenses with good electrical continuity striking across the grid. These copper lenses appear to be separated by the non conductive sphalerite mineralization as proven by a number of the drill hole results.

Also evident is the occurrence of a cross structure that has caused a typical "current sink" or voltage low which has acted as a partial barrier for the current flow. This cross structure most probably relates to a dike which has been intersected in drill hole CLS97-32. There may also be evidence of two northwest striking features that appear as slumping in the overall contours of the surface mise a la masse results and these are quite evident in the colour contoured results.

The fact that drill holes SK97-09,10,16 and 20 all seemed to return similar results, more or less, and that CLS97-28 and 08 appear to show an off hole response it appears that the main copper zone is beginning to plunge steeper to the southwest or that there is a major geological event happening in the southwest corner of the property. This is based on the assumption that the above mentioned SK holes missed the main zone but appear to be reacting to some electrical source in close proximity to them.

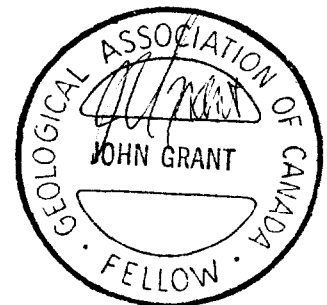
Difficulties in interpretation of the mise a la masse results exist on this property as they do on all properties. It is apparent that electrical connections can occur even when they have not been intersected or seen in adjoining drill cores. This may be due to highly disseminated sulphide particles mixed in with the non conductive sphalerite ores or to the fact that the side seeking ability of the mise a la masse method is more effective than first expected. Advanced and more sensitive IP equipment may be a contributing factor to the sideseeking abilities of the surveys.

**RECOMMENDATIONS:**

The mise a la masse surveys continue to provide good quality information which will be useful to the planning of additional drilling on the Cross Lake VMS deposit in Sheraton Township. Continual surface surveys will aid with the shape of the deposit as well as mapping parallel vein systems and outlining cross structures.

The continuance in down hole mise a la masse surveys will help generate a three dimensional picture of the deposit in so far as its plunge, dip and strike extent. Continuing the surveys on the next generation of drill holes, those being the CLS holes concentrated in the vicinity of lines 3400MW to 2900MW will aid in the determination of how close the deposit comes to surface to the northeast and the continuity of the copper rich phase of the deposit.

It may require further drilling to the southwest of holes SK97-24 and CLS97-28 to better define the plunge of the deposit as it strikes to the southwest.



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Polarization Method.u













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CERTIFICATE

I, John C. Grant, hereby certify that:

1) I am a graduate technologist, (1975) of the three year program in Geological Technology at Cambrian College of Applied Arts and Technology, Sudbury Campus. I have worked subsequently as an Exploration Geophysicist for Teck Exploration Limited, (5 years), North Bay office and currently as Exploration Manager and Geophysicist for Exsics Exploration Limited since 1980.

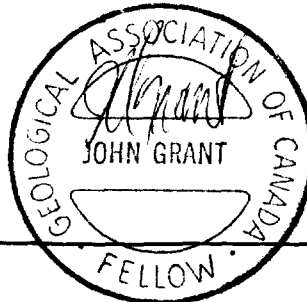
2) I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984

3) I am a Fellow of the Geological Association of Canada, (FGAC), since 1986.

4) I have been actively engaged in my profession since May of 1975, including all aspects of exploration studies, surveys and interpretation.

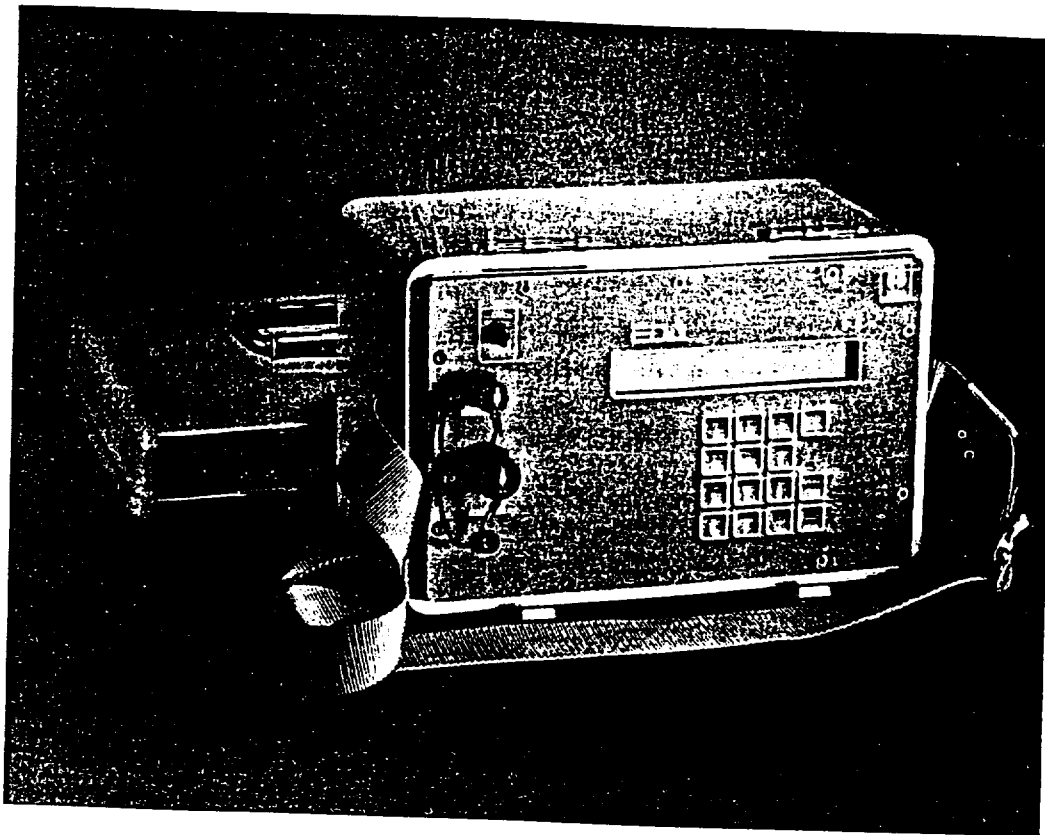
5) I have no specific or special interest in the described property. I have been retained as a Consulting Geophysicist by the Property holders.

John Charles Grant, CET, FGAC.



# IP-4 Four Dipole Time Domain IP Receiver

EDA



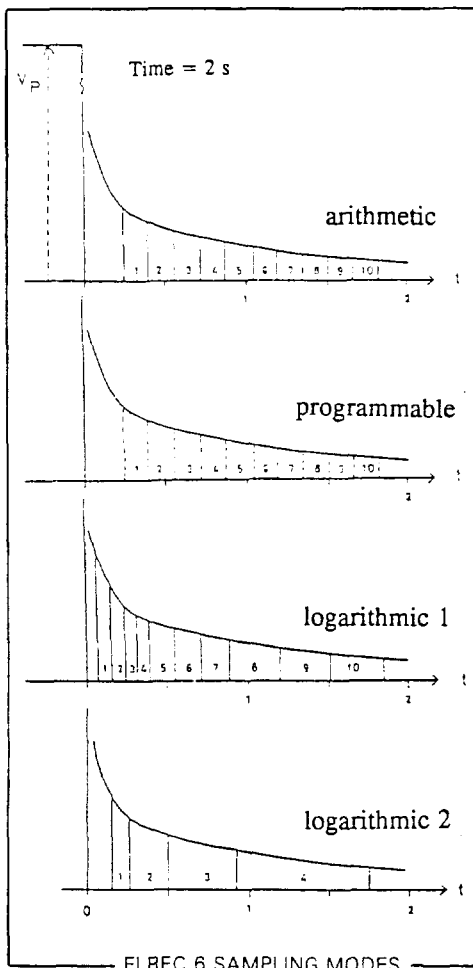
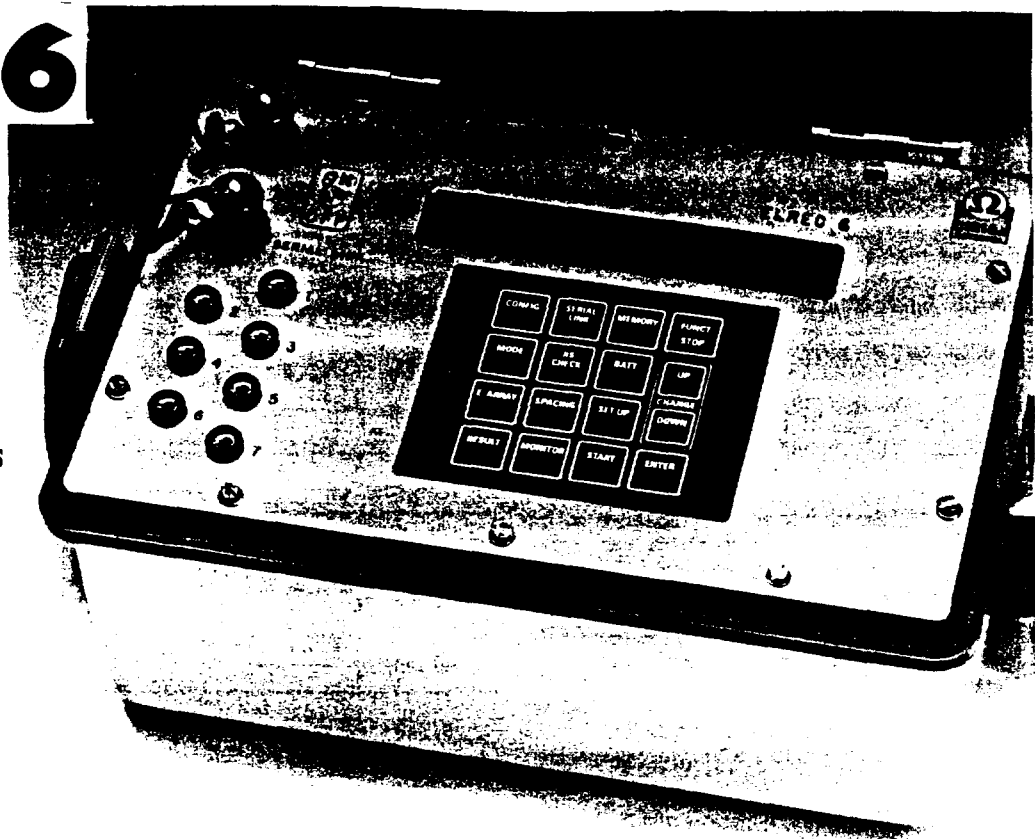
## Major Benefits

- 4 Dipoles Simultaneously Measured
- Ten Windows Available
- Choice of Arithmetic or Logarithmic Window Width
- Programmable Arithmetic Window Width
- High Input Voltage
- Weighs Only 8.5 kg.
- User Friendly

# ELREC 6

## MULTI CHANNEL IP RECEIVER FOR MINERAL EXPLORATION

- Six simultaneous dipoles
- Ten programmable chargeability windows
- High accuracy and sensitivity



ELREC 6 is a six dipole Time Domain Induced Polarization receiver designed for high productivity surveys in mineral exploration.

ELREC 6 has been designed for being both a user friendly and very sensitive IP receiver.

### ELREC 6 OUTSTANDING FEATURES

- **Six dipole :**  
The six channels of the receiver permit to measure six dipoles simultaneously, which provides a high efficiency in the field.
- **Ten programmable windows :**  
Beside the classical preset logarithmic and arithmetic modes, ELREC 6 also offers ten fully independant programmable windows which the operator can define by himself according to the way he wants to sample the IP decay curve.
- **Automatic measuring process :**  
A microprocessor fully controls the synchronization, the gain ranging, the stacking, and the display of the results including the apparent resistivity.



### Monitoring display :

During the acquisition, the chargeabilities of the six dipoles can be displayed simultaneously on the LCD display for a global visualization of the readings ; the standard deviations of these chargeabilities can also be displayed simultaneously for a real time monitoring of the quality of the on going readings.

### Internal memory :

The memory can store up to 2500 readings, each reading including the full set of parameters characterizing the measurements ; the date and time of the reading, given by the Real Time Clock of the instrument, are also stored. A serial link permits to transfer the data to a printer or a micro computer.

### Remote control :

ELREC 6 can be fully driven by a micro computer through the serial link for remote operation applications.

### Frequency mode :

The frequency effect and the phase shift between the fundamental and the third harmonics may be measured for a Frequency Domain waveform (ON+, ON-), or for a Time Domain waveform (ON+, OFF, ON-, OFF).

Time Domain waveform (ON+, OFF, ON-, OFF).

### Field proof instrument :

ELREC 6 operates in a wide temperature range and features a fiber-glass case for resisting to field shocks and vibrations.

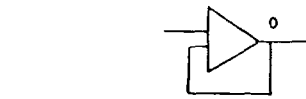


## ELREC 6 MEASURING PROCESS

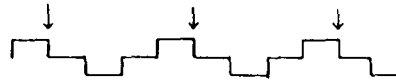
ELREC 6 measuring process has been optimized to provide the best possible accuracy in real field conditions.

### ELREC 6 features :

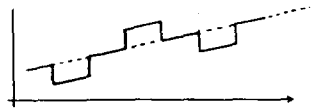
- **A noise monitoring system :**  
A monitor function enables the operator to check the level of noise observed on each dipole before the measurement : the digital voltmeter function displays on the LCD the raw instantaneous value of potential. In particular, it is possible to numerically observe the presence of a pulse square waveform corresponding to a primary voltage signal and showing the operation of a transmitter. This function is also available during the acquisition of a reading.
- **A line check/ground resistance measurement** which permits to check that all seven electrodes are properly connected to the receiver.
- **A low-pass analog filter** which reduces the effect of higher frequency natural and cultural noises (50-60 Hz).
- **Automatic SP compensation**, including linear drift correction (up to 1 mV/s) through a digital filter.
- **Automatic gain ranging**, within a voltage range of  $\pm 10V$ .
- **Automatic synchronization process :** ELREC 6 automatically synchronizes with the signal through a waveform recognition process ; besides it automatically re-synchronizes at each new pulse to avoid errors due to a possible shift in the period of the transmitted signal.
- **Automatic digital stacking** to enhance the signal-to-noise ratio for as long as the operator wants, with a maximum of 250 stacks. During the stacking, the operator can monitor either the instantaneous value (to observe the level of noise), or the cumulative value (to observe the convergence of the average value).
- **A continuous quality test procedure**, which stops the averaging process when the noise level becomes too high, but keeps the previously stacked data. The averaging procedure starts again when noise decreases. This procedure optimizes the time of data acquisition in very noisy areas.
- **A resolution after stacking of  $1 \mu V$**  for primary voltage, and of  $0.01 \text{ mV/V}$  for chargeability, for pointing out low amplitude anomalies. The standard deviations of the chargeability of the six dipoles are displayed during and after the acquisition to give an indication on the noise level.
- **A Normalized chargeability option :** The Normalized chargeability option refers the chargeability to a standard IP decay curve, and permits to point out any EM coupling effect on the measured signal.



Automatic calibration



Automatic synchronization



SP compensation



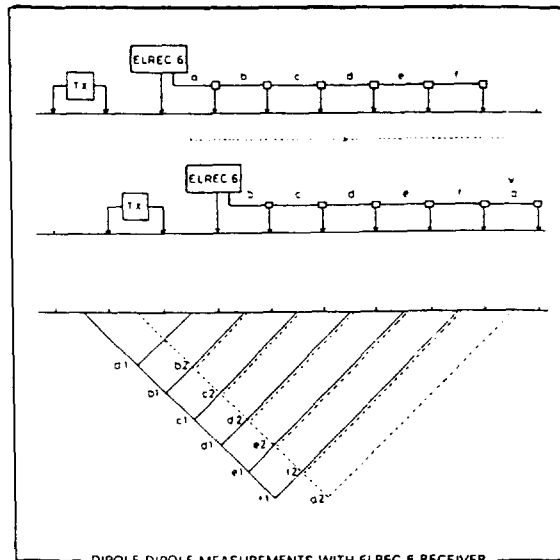
Digital ranging

$$\frac{\text{SIGNAL}}{\text{NOISE}} \sim \sqrt{N}$$

Digital stacking

$$\left( \sum (\bar{m} - m_i)^2 / N \right)^{1/2}$$

Standard deviation



DIPOLE DIPOLE MEASUREMENTS WITH ELREC 6 RECEIVER

## SPECIFICATIONS

- \* Six input channels
- \* Signal waveform :  
Time Domain (ON+, OFF, ON-, OFF)  
with pulse duration of 0.5, 1, 2, 4, seconds;
- \* Up to ten arithmetic, logarithmic, or full programmable IP chargeability windows.
- \* Computation of apparent resistivity, average chargeability and standard deviation.
- \* Input impedance 10 Mohm
- \* Input overvoltage protection up to 1000 volt
- \* Input voltage range :  
each dipole : 10V max  
sum of voltage of dipoles 2 to 6 : 15V max
- \* Automatic SP bucking  $\pm 10V$  with linear drift correction up to 1 mV/s
- \* 50 to 60 Hz power line rejection
- \* Sampling rate : 10 mS
- \* Common mode rejection :  
100 dB (for RS = 0)
- \* Grounding resistance measurement from 0.1 to 467 Kohm
- \* Battery test : manual and automatic before each measurement
- \* Primary voltage :  
resolution :  $1 \mu V$  after stacking  
accuracy : typ. 0.3%
- \* Chargeability :  
resolution :  $0.01 \text{ mV/V}$   
accuracy : typ. 0.6%
- \* Memory capacity : 2500 readings
- \* RS 232 link for data transfer to micro computers and printers (300 to 19200 bauds rate)
- \* Remote control through the serial link

### FREQUENCY MODE

- \* Signal waveform :  
(ON+, ON-) or (ON+, OFF, ON-, OFF)
- \* Pulse duration : 1s or 2s
- \* Frequency effect and relative phase of fundamental and third harmonics
- \* Resolution : about 0.01 degree after stacking

### GENERAL FEATURES :

- \* Dimensions : 31x21x21 cm
- \* Weight : 6 kg with dry cells  
8 kg with internal battery
- \* Operating temperature :  
-20°C to +70°C  
(-40°C to +70°C optional)
- \* Power supply :  
12V internal battery,  
or six 1.5V D size dry cells.  
In both cases, a 12V external battery can also be used.

IRIS INSTRUMENTS  
1, avenue Buffon  
BP 6007 - 45060 Orléans cedex 2, France  
Phone : (33) 38.63.81.00  
Fax : (33) 38.63.81.82



# VIP 3000

## RESISTIVITY AND IP ADVANCED TRANSMITTER

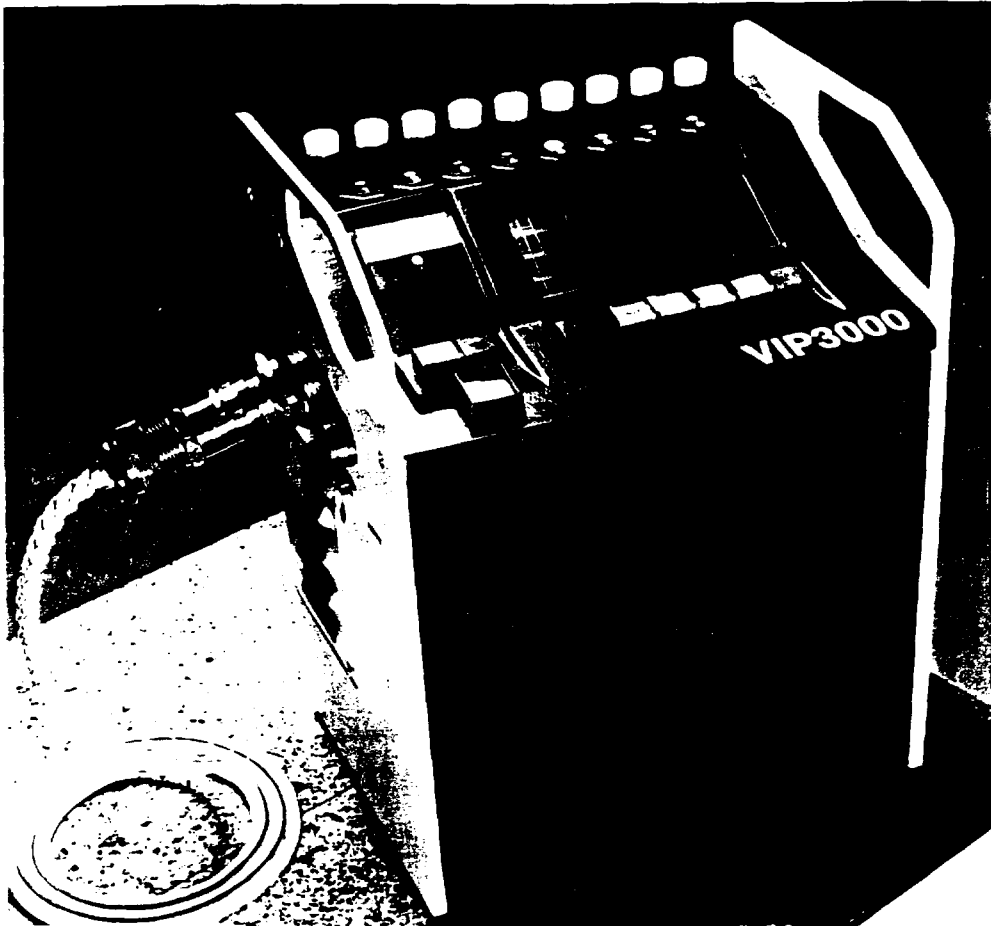
- 3000V output voltage
- Full microprocessor control
- Ease-of-use
- Standard motor generator

VIP 3000 is a three kilowatt power current regulated Time Domain and Frequency Domain electrical transmitter.

### VIP 3000 MAJOR BENEFITS

- Light in weight and provided with a high voltage (3000V) output, the VIP 3000 is particularly convenient for IP surveys in high resistivity rugged areas and for deep resistivity soundings.
- Microprocessor controlled for ease of operation and protection against misuse. All injection parameters (current, voltages, ...) are controlled. The VIP 3000 can also be operated through its remote control port (RS232).
- The VIP 3000 eight output dipoles provide for higher productivity in the field. Powered from a standard 220V single phase motor generator, the VIP 3000 eliminates the maintenance and supply problems associated with custom power sources.

- HIGH VOLTAGE ON +  
U = 2900V I = 1.00A  
R = 2.9K $\Omega$  P = 2900W  
I setpoint = 1.00A



### VIP 3000 MAIN FEATURES

#### HIGH OUTPUTS

- The VIP 3000 will generate up to 3000 volts for work in high resistivity areas and up to 5 amperes at 600 volts for low resistivity regions.
- With its weight of only 16kg, the VIP 3000 is the lightest 3000W unit on the market.

#### HEAVY DUTY CONSTRUCTION

- Very high quality connectors, and heavy duty industrial components are used throughout. The VIP 3000 is shock resistant and weatherproof, for a higher reliability.



#### FULLY AUTOMATED

- The VIP 3000 is designed for ease of operation. It has a much simplified front panel: current, dipole and frequency (in the frequency domain) settings are the only parameters to be selected by the operator. All the other functions, like voltage range setting, are fully automated.

#### PROGRAMMABLE

Programming functions are also available, either through the front panel, with a suitable key, or from an external computer terminal. These functions are used to select the parameters and options that are not normally changed during a survey: operating mode, time or frequency domain, cycle time, frequencies, etc.

- This approach reduces front panel cluttering and drastically reduces the possibility of operator mistake. Instrument reliability is also increased. For example, it is not possible to switch dipoles when transmitting. This eliminates the possibility of burning out the selector switch or the output circuitry.

## COMPLETE DISPLAY

A backlighted liquid crystal alphanumeric display is provided for the simultaneous indication of **all output parameters**. Output current, output voltage, contact resistance and output power are continuously displayed.

## ERROR MESSAGES

Intelligent messages and warnings are displayed in case of problem or malfunction. Besides, the permanent storage of all the parameters relating to the operation of the unit make easier the remote identification of a trouble by the manufacturer for quicker instrument servicing.

## INTELLIGENT REGULATION

The VIP 3000 internal microprocessor is capable of **excellent current regulation** in almost any load.

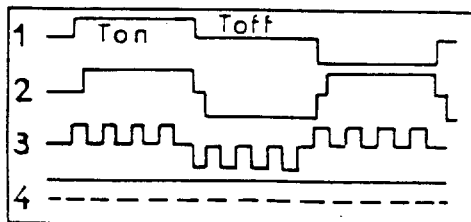
Current is operator selectable in preprogrammed steps from 50mA to 5 amperes. Intelligent current adjustment algorithms are always in operation. For example, the contact resistance will occasionally be too high for the VIP 3000 to provide the requested current setting. In such cases, the VIP 3000 will display a warning message and will set the current to the maximum value allowable under that combination of current setting and contact resistance. Some reserve current capacity will always be kept to insure that the current stays constant during the measurements, whatever the contact resistance fluctuations.

## REMOTE CONTROL

The VIP 3000 is provided with a **remote control port**. By using radio modems, it can be operated from a remote location.

The VIP 3000 can also be linked to an intelligent receiver, or to a computer, for the automatic recording of current settings.

Finally, **synchronization** with a receiver or system is also possible in both directions (i.e. Rx to Tx or Tx to Rx).

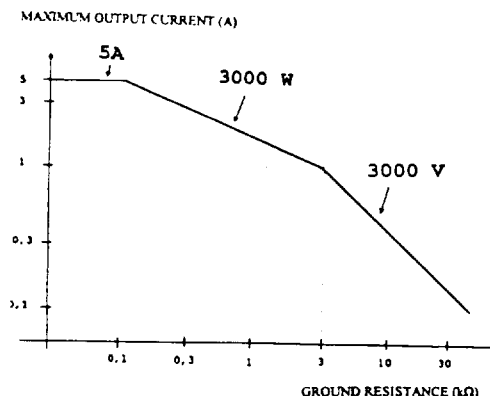


VIP 3000 CURRENT WAVEFORMS

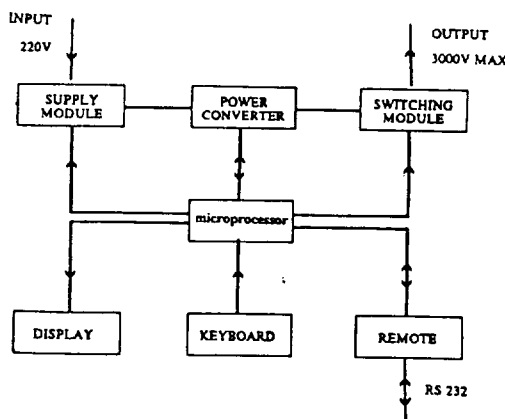
## WORKS WITH ALMOST ANY POWER GENERATOR

The VIP 3000 IP transmitter can be powered by almost **any motor generator** providing a nominal 230V, 45-450 Hz output, single phase, at a suitable KVA rating.

Low cost commercial generator sets, available at local hardware or equipment rental stores are perfectly suitable.



VIP 3000 LOAD LIMITS



VIP 3000 BLOCK DIAGRAM

## SPECIFICATIONS

- **Output Power:** 3000 VA maximum
- **Output Voltage:** 3000 V maximum  
Automatic voltage range selection
- **Output Current:** 5 amperes maximum, current regulated
- **Current accuracy:** better than 1%
- **Current stability:** 0.1%
- **Dipoles:** 8, selected by push button
- **Output Connectors:** Uniclip™ connectors accepts bare wire or plug of up to 4 mm. diameter.
- **Time Domain Waveforms:**  
On+, off, on-, off, (on = off) preprogrammed cycle.  
Automatic circuit opening in off time.  
Preprogrammed on times from 0.5 to 8 seconds by factor of two.  
Other cycles programmable by user.

- **Frequency Domain Waveforms:**  
Square wave,  
Preprogrammed frequencies from 0.0625 Hz to 4 Hz by factors of 2.  
Alternate or simultaneous transmission of any two frequencies.  
Other frequencies programmable by user.

- **Time and Frequency Stability:**  
0.01%, 1 PPB optional

- **Display:**  
Alphanumeric liquid crystal display.  
Simultaneous display of output current, output voltage, contact resistance, and output horse-power

- **Protection:**  
Short circuit at 20 ohms,  
Open loop at 60000 ohms,  
Thermal  
Input overvoltage and undervoltage.

- **Remote Control:**  
Full duplex RS-232A, 300-19200 bauds.  
Direct wire sync for on-time and polarity.

## GENERAL FEATURES

- **Dimensions (h w d):** 41 x 32 x 24 cm.
- **Weight:** 16 kg
- **Power Source:**  
175 to 270 VAC, 45-450 Hz, single phase.
- **Operating Temperature:** -40 to +50 degrees Celsius.
- **Supplied Accessories:**  
Programming key  
Operation manual.



IRIS INSTRUMENTS

1, avenue Buffon

BP 6007 - 45060 Orléans cedex 2, France

Phone : (33) 38.63.81.00

Fax : (33) 38.63.81.82

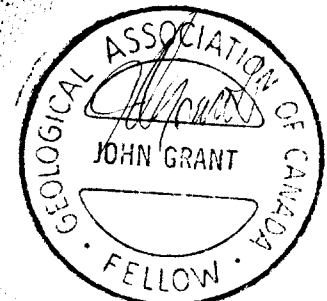
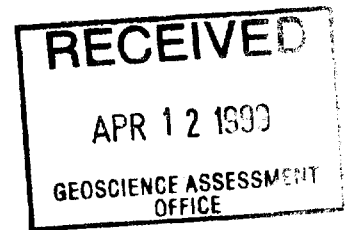


42A07NE2012 2.19379 SHERATON

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SUMMARY REPORT OF THE MISE A LA MASSE PROGRAM  
SUMMER, 1998  
FOR GOLDEN KNIGHT RESOURCES INC.  
ON THE  
SHERATON VMS JOINT VENTURE PROPERTY  
SHERATON TOWNSHIP  
PORCUPINE MINING DIVISION  
NORTHEASTERN, ONTARIO

2.19379



Prepared by: J.C. Grant, CET, FGAC  
July, 1998.



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	CONTOURED BLACK AND WHITE SURFACE RESULTS

**SUMMARY:**

Exsics Exploration Limited carried out a detailed mise a la masse, downhole and surface program across selected grid lines and diamond drill holes of the joint venture program which has been ongoing on the recent VMS discovery located by Cross Lake Minerals Inc. on their Sheraton Township property. The summer program commenced on the 29th of April, 1998 and was completed on the 28th of July, 1998. During that period, a number of drill holes were read as well several groupings of grid lines on both Golden Knight's claims and Cross Lake claims.

The intent of the mise a la masse survey was to energize specific sulphide horizons that had been encountered in various locations in a number of drill holes. Once the zones were energized adjacent drill holes as well as a number of grid lines were read to outline the shape and strength of the energized horizon.

This report will deal with the results of an injection point in hole SK-24 and two different injection points from hole CLS-54.

**INTRODUCTION:**

The mise a la masse survey that was completed on the above two mentioned holes is a continuation of surveys that commenced in early January of 1998 on a portion of the Cross Lake Property. The initial survey results from that earlier program were proving to be quite successful at not only outlining the sulphide horizon being energized but at identifying near off hole sulphide zones not intersected in the drill hole. The mise a la masse survey was also proving to be a good tool for extending the drilled horizon along strike and, at times, up to 500 meters from the injection point.

The mise a la masse results were also correlating well with other geophysical surveys that were being done on the property and, at times, the mise a la masse survey was able to enhance those results.

**Mise a la Masse Concept:**

Mise a la masse is a method in which an electric current is introduced into an electrically conductive body and resultant voltages are measured in the surrounding volume. This electric current introduced into the conductive body creates a voltage pattern characteristic of the shape of the conductive body. These voltages may be measured on the surface and in drill holes to establish the three dimensional shape and extent of the body.

**GROUND SURVEY METHOD:**

The mise a la masse electrode configuration used for this present survey was the Potential, (normal), array which is the more widely used method. This method employs a single current electrode placed in the conductive horizon, (C1), which has been intersected in a drill hole. The second current electrode, (C2), is placed at effective infinity, generally 800 to 1000 meters from the hole being energized. The reading point was a single moving measuring voltage electrode, (P2), and it is used with the other end of the potential dipole, (P1), that is a fixed electrode, far from the measuring electrode and far from the two current electrodes. This is a standard pole-pole or two-array configuration.

**EQUIPMENT:**

The current generator was the VIP 3000, 3.0 kilowatt Transmitter which provided stable current of 1.5 to 2.0 amps. The Receiver was the IRIS, ELREC 4 which provided stable voltage readings from 1 to several thousand millivolts. The Induced Polarize equipment was used as it is easily available and provides stable current and good resolution of voltages.

The current and voltage electrodes were stainless steel bars approximately 1.25 centimeters in diameter. The surface electrodes were about 120 centimeters long and the downhole electrodes were about 50 centimeters long.

Refer to Appendix A of this report for the specifications of the above mentioned equipment.

**SURVEY PROCEDURE:**

The current was introduced into the sulphide horizons through drill hole SK-24 and CLS-54 from surface. The best point for current injection in each of the drill holes was first obtained from reviewing the drill logs for an estimated target area and then by monitoring the current and voltage output at the transmitter as the electrode was lowered into the hole.

The reading interval to locate the current injection point was 20 meter intervals at the top of the hole which was then reduced to 10 and 5 meter intervals as the electrode descended. As the target area was approached, the reading interval was dropped to 1 meter to better define the best possible injection point in each of the two holes.

Once the injection point was located, the C1 electrode was then essentially locked off at the top of the casing to keep the position in the hole secured. The C2 electrode was placed between 800 and 1000 meters away from the drill hole collar and perpendicular to the expected strike of the sulphide horizon.

The voltages were measured on the surface at 25 meter intervals along the grid lines read and in the drill holes from surface at 20 meter 10 meter and 5 meter intervals to the bottom of the hole. The electrodes were generally lowered into the drill holes under their own weight and suspended by insulated conducting wire. Care was essential in making sure the insulated wire was not frayed or cracked as this would result in current leakage up the hole and away from the main current source which would result in spurious and otherwise noisy readings.

A metric counter was initially placed over the hole before the commencement of the down hole work which was used to accurately position the current electrode and allow for the operator to record the readings at the correct station interval. In some deep holes, there may be a minor amount of stretching in the insulated cable but this stretching was never enough to offset the survey results.

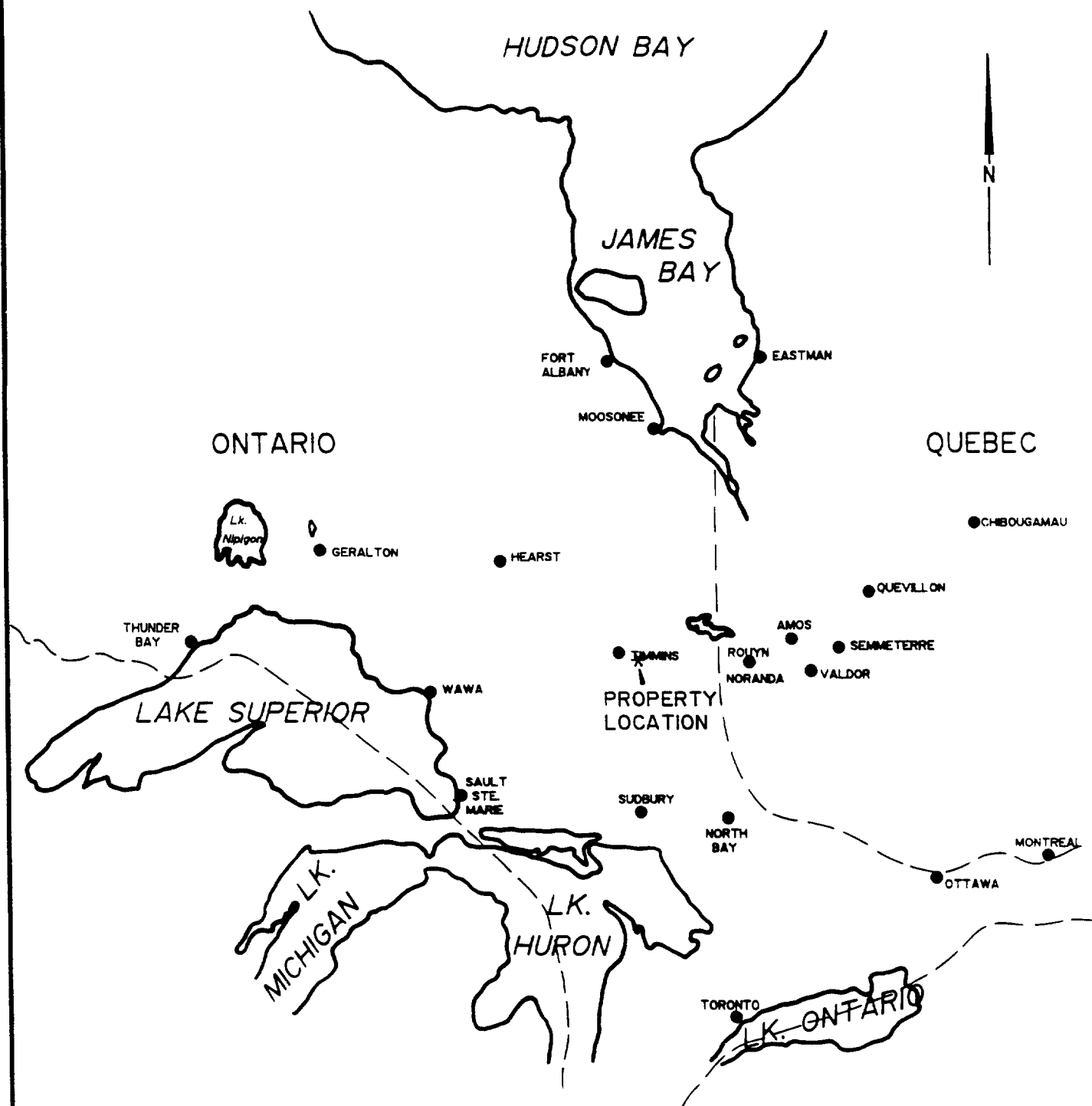
#### PROPERTY LOCATION AND ACCESS:


The Cross Lake Property is situated in the northwest section of Sheraton Township approximately 43 kilometres east of the City of Timmins. The Township is situated in the Porcupine Mining Division of the District of Cochrane.

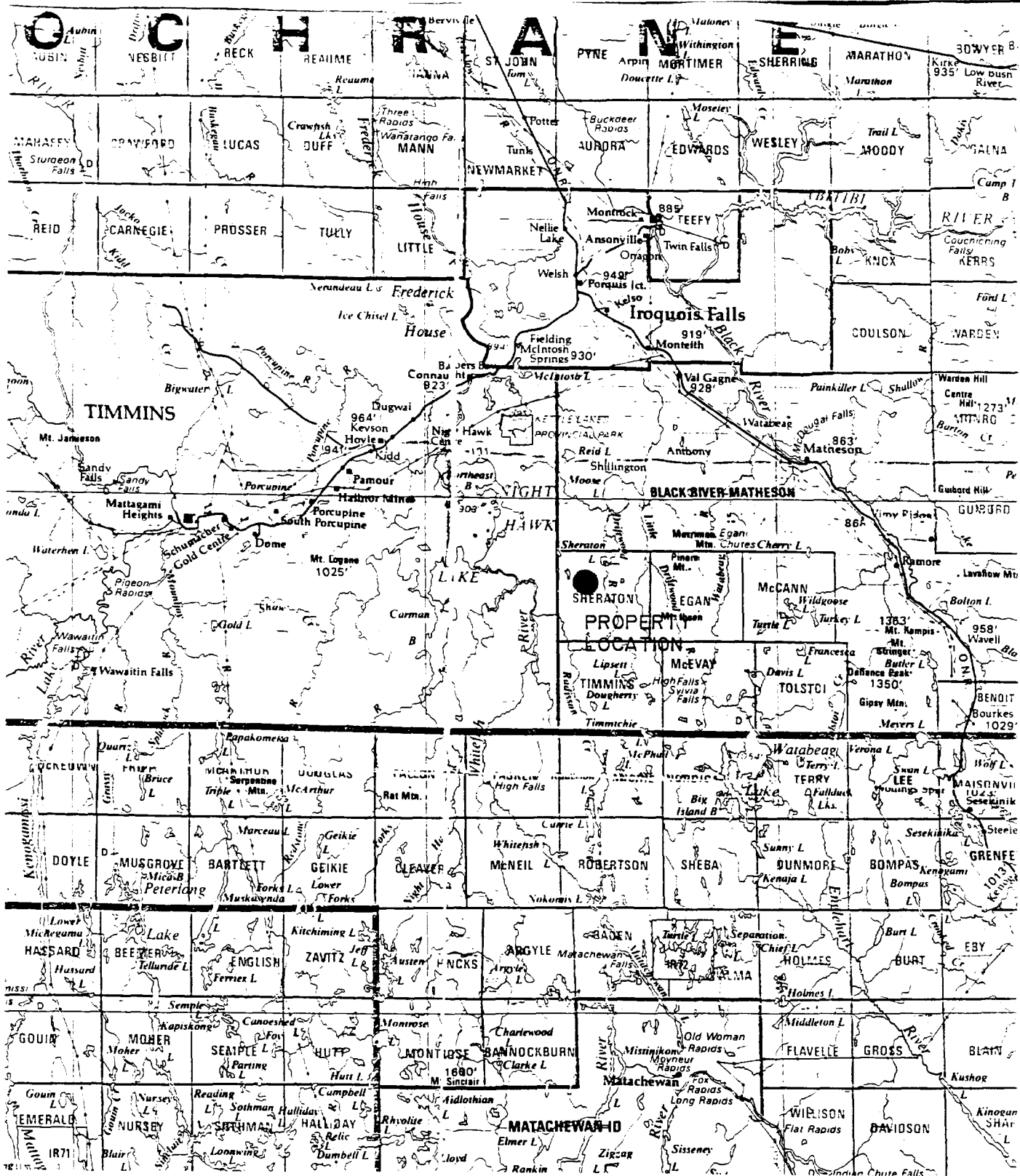
More specifically, the drill collar of hole SK-24 is located on line 4000MW which is in the northwest corner of Lot 8, Concession IV and is covered by claim P-1177240. The drill collar for hole CLS-54 is located on line 0+00, west of a small lake and it is located in the northwest corner of Lot 10, Concession III of the Township. This hole is covered by claim P-1213218. Refer to Figures 1 and 2 for the location of the Township and Figure 3 for the location of the drill hole collars.

Access to the two drill holes was ideal. A good gravel road locally called the Gibson Lake road travels south-southeast from Highway 101 and provides two wheel drive access to Sheraton Township. The ongoing drill program of Cross Lake has provided a number of drill roads to the different drill sites and these roads allowed the survey crew ATV access to the two holes to be surveyed. Travelling time from Timmins to the holes takes about 1.5 hours.





		
<b>EXSICS EXPLORATION LTD.</b> P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT: GOLDEN KNIGHT RESOURCES INC.		
PROPERTY: SHERATON TWP. PROPERTY		
TITLE: PHASE III LOCATION MAP		
Fig. 1		
Date: July 1998	Scale: 1"=125miles	MNDM Plan#:
Drawn: P. Gauthier	Interp: J.C. Grant	Job No. E-323



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

**CLIENT: GOLDEN KNIGHT RESOURCES INC.**

**PROPERTY: SHERATON TWP. PROPERTY**

**TITLE: PHASE III  
 PROPERTY LOCATION**

Fig. 2

**Date: July 1998**

**Scale: 1:600,000**

**MNDM Plan#: 22-6**

**Drawn:**

**Interp: J.C. Grant**

**Job No. E-323**

CLAIM NUMBERS:

The claim numbers that were covered by the surveys that were completed from the two drill holes are as follows.

CLS-54 Drill hole: P-1213218.....16 units  
P-1218056..... 8 units  
P-1218055..... 8 units  
P-1213219..... 6 units

SK-24 Drill Hole: P-1177240.....16 units  
P-1213220..... 8 units  
P-1223895..... 2 units  
P-1193711..... 4 units

Refer to Figure 3 of this report for the location of the drill collars and the positioning of the claims that were covered by the survey.

PERSONNEL:

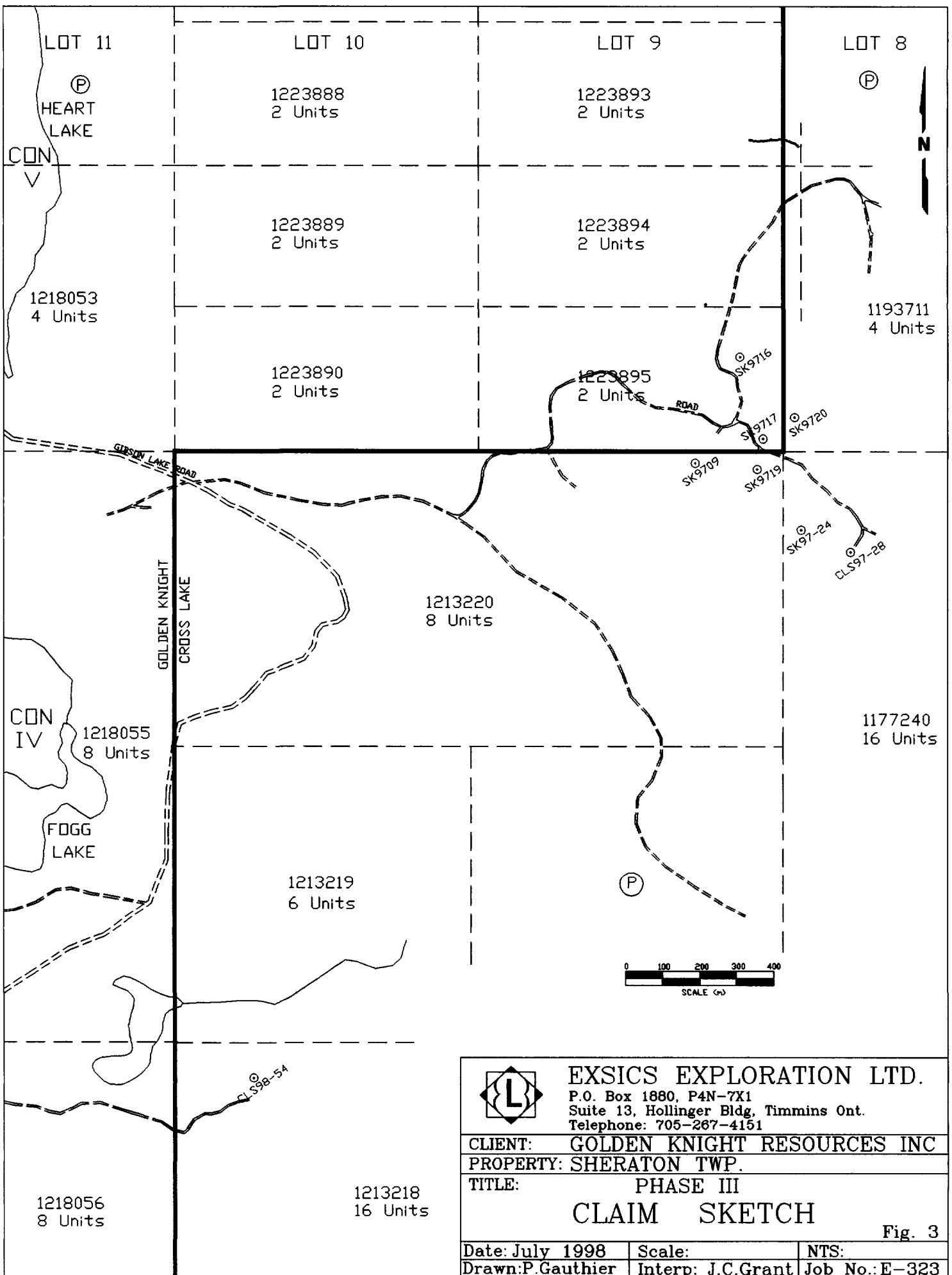
The field crew directly responsible for the collection of all raw data were as follows.


- A. Chaumont.....Timmins, Ontario
- C. Turcott.....Timmins, Ontario
- E. Jaakkola.....Timmins, Ontario

The program was completed under the direction of J.C.Grant and all of the plotting and computer compilation was completed by P. Gauthier of Exsics.

SURVEY RESULTS:

The survey results for the hole to hole program completed from SK-24 and the surface program completed from CLS-54 will be done separately and in detail. Each of the survey methods was highly successful and their results will be compiled in separate sections in this report.



 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
<b>PROPERTY: SHERATON TWP.</b>		
<b>TITLE: PHASE III</b>		
<b>CLAIM SKETCH</b>		
<b>Fig. 3</b>		
<b>Date: July 1998</b>	<b>Scale:</b>	<b>NTS:</b>
<b>Drawn: P. Gauthier</b>	<b>Interp: J.C. Grant</b>	<b>Job No.: E-323</b>

SURVEY RESULTS , SK-24:

Drill hole SK97-24 was drilled to test the mise a la masse survey results that were done from an injection point in hole CLS97-27 which was at 382 meters down the hole. The surface results from CLS97-27 indicated two anomalies, one to the east of the hole and one to the west of the hole. The surface response to the west of the hole was the strongest and this was the reason hole SK97-24 was collared on line 4000W and was drilled to the northwest to intersect this stronger zone.

An injection point 355 meters down drill hole SK97-24 was then used to read down hole IP surveys in six, (6), surrounding hole for mapping the continuity of the intersected conductive horizon. The results of the down hole mise a la masse surveys is as follows.

SK97-28:

The survey results from this hole shows some minor build up in the voltage potentials, (vp), between 300 meters and 360 meters down the hole. There appears to be a strong conductive zone situated between 440 meters and 480 meters with the sharpest vp reading at the 455 meter point. A second increase in the vp values lies between 500 and 550 meters down the hole with the peak vp value situated at 520 meters down, A final conductive zone, albeit somewhat narrow lies between 570 590 meters down with the peak situated at 580 meters.

SK97-09:

The results from this hole suggest a minor build up in the vp readings between 110 and 140 meters down with the peak at 130 meters. A second broader build up is evident between 150 and 260 meters down again with the vp readings peaking at 180 meters. These zones appear to be moderate to weak.

SK97-16:

The survey results showed a long build up to a peak vp value at 230 meters down the hole which drops off quickly. A minor vp increase followed by a strong vp build up is evident between 240 and 300 meters down the hole, which peaks at 280 meters down. This would suggest a good but narrow conductive zone.

SK97-17:

This hole returned a good set of vp values escalating as you progress down the hole. There appears to be three distinctive conductive zones situated at the 160, 182 and 222 meter points in the hole. The stronger zone is at the 182 meter mark. The entire conductive horizon appears to lie between 100 meters and 250 meters points.

SK97-19:

This hole is quite similar to the results outlined in SK97-17 but the vp values are stronger which would suggest the zone is more conductive. The limits of the zone seem to lie between the 160 meter and 320 meter marks with the peaks centred at 210, 230 and 250 meter points.

SK97-20:

This hole again is somewhat similar as hole SK97-17 and SK97-19. The zone seems to be centred between the 135 meter and 260 meter mark with narrower peaks at 150m 170, 199 and 240 meter points. This zone is not as conductive as the horizon in SK97-19 but it probably relates to the same zone.

Generally the mise a la masse survey suggested that the conductive horizon in hole SK97-24 represents a broad conductive horizon that has a number of narrower to moderate higher conductive zones contained within it. These more conductive zones are represented by the peak vp readings that show up in all of the holes.

Refer to Section A of this report for the location of the drill holes and for the profiled results of the down hole mise a la masse surveys.

The survey then was shifted to drill hole CLS98-54 which was on the southwest side of the Cross Lake property, nearing the boundary of the Cross Lake and Golden Knight ground.

Hole CLS98-54 was read to find the best injection point which turned out to be at the 466 meter mark down the hole. An electrode was lowered to this point, locked off and then a constant current of 2.0 amps was applied to the electrode. A series of east-west lines and northwest-southeast lines were read from this injection point to outline the shape of the zone intersected by drill hole CLS98-54.

The lines read were from 6100MW to 6500MW as well as lines 200MS to 100MN.

The results of the surface survey suggested a number of conductive zones may be present around the hole. The first and possibly the strongest zone appeared to lie between lines 100MS and 100MN, between 1500MW at 1300MW. This would suggest that there is a conductive zone that was missed by drill hole CLS98-54 and that it could lie below the upper part of the hole.

The survey also suggest that there may be a second strong conductive horizon to the south of the hole that is being indicated by the vp build up at the south ends of lines 6400MW, 6300MW and 6200MW.

The survey also suggested that there may be evidence of a third zone situated on line 100MS, west of the main Gibson Lake Road. This is indicated by a modest build up in the vp readings along line 100MS. This zone is a particular interest as this point is almost 600 meters west of the injection point and yet the survey was able to outline the zone.

Refer to Section B1 for the results of the surface survey from the 466 meter injection point.

The IP crew had to with draw from the hole so a Crone bore hole crew could survey down CLS98-54. Upon completion of the bore hole survey, the IP crew returned to the hole but due to cave in they were only able to reach 450 meters down the hole and not to the original 466 meter mark. Thus, a complete set of surface lines were read from the new injection point as well as the line that had been read from the 466 meter injection point.

The new lines that were read were a combination of east-west lines as well as northwest-southeast lines. These line numbers were 500MS to 600MN excluding lines 200MN and 300MN due to excessive flooding; as well as lines 6100MW to 6700MW and 11200MW. Refer to Section B2 for the location of the grid lines.

The results of this mise a la masse survey was a well defined conductive zone which lies between lines 200MN and 200MS from 1450MW to 2000MW. It appears that drill hole CLS98-54 just clipped the northeast portion of the zone and that the horizon extends at least another 350 to 400 meters to the southwest.

The increase in vp readings on the east ends of lines 500MS to 400MN may in part be due to the current electrode set out on line 0+00 at 550MW.

Again, refer to Section B2 for the colour contour of the surface mise a la masse readings.

**CONCLUSIONS AND RECOMMENDATIONS:**

The hole to hole survey done from SK97-24 was successful in mapping the continuity of the conductive zone that had been intersected in the drill hole at or around the injection point of 382 meters down the hole. Additional drilling in the area, and along strike should be based on the results of the down hole mise a la masse results.

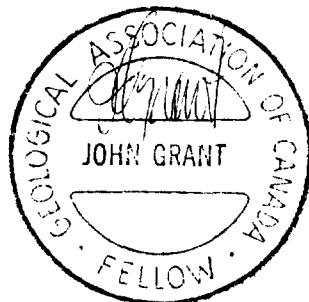
The surface survey from CLS98-54 at the 466 meter injection point was successful in outlining at least three separate conductive zones. The first and most important zone appears to lie below the upper part of the hole and should be drill tested. A second drill hole should be done to test the weak conductive zone noted on line 100MS west of the Gibson Lake Road. This hole might be collared on line 200MS and drilled northwest to cross the suspected target.

The surface survey from drill hole CLS98-54 was quite successful in mapping out a good conductive horizon that extends for at least 500 meters in a northeast-southwest direction. Drill hole CLS98-54 appears only to have tested the northeast edge of the zone. Further drilling to the southwest of hole CLS98-54 should be considered .

Additional down hole and surface mise a la masse surveys should be considered if the drill holes encounter conductive horizons. The mise a la masse method continues to be a good geophysical and geological tool for mapping the shape of the conductors that are being traced by drilling on the Cross Lake/Golden Knight VMS deposit in Sheraton Township.

Respectfully submitted

J.C. Grant, CET, FGAC.  
July, 1998.



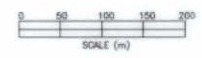
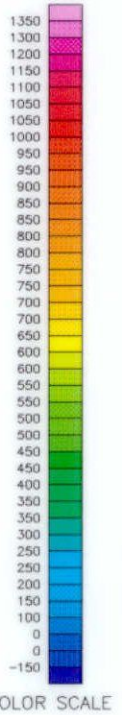
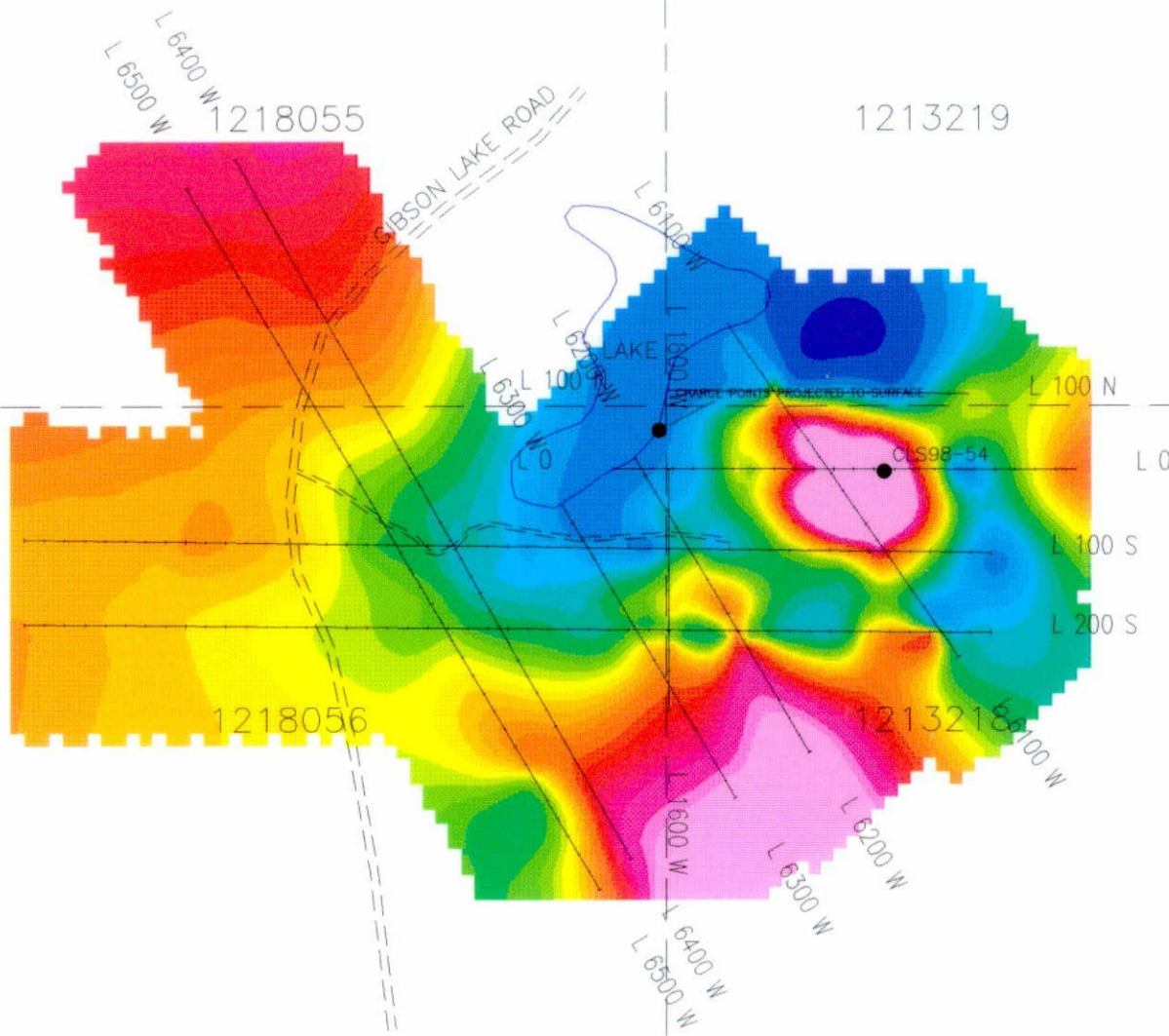




LOT 11

LOT 10

CON IV



**LEGEND**  
 Receiver: IRIS ELREC-4  
 Transmitter: IRIS VIP 3000 3Kw generator  
 Current injection: L0/1330mW (466m in hole)  
 Conductor Zone:  
 Contour Interval: 0, 50, 100, 150, 200, 250, .....

	<b>EXSICS EXPLORATION LTD.</b>		
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151, 267-2424		
CLIENT: GOLDEN KNIGHT RESOURCES INC			
PROPERTY: SHERATON TWP JOINT VENTURE			
TITLE: <b>MISE-A-LA-MASSE</b> CHARGE IN HOLE CLS98-54 AT 466m			
Date: June 1998	Scale: 1:5000	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-323	







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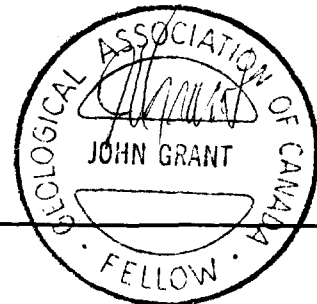
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CERTIFICATE

I, John C. Grant, hereby certify that:

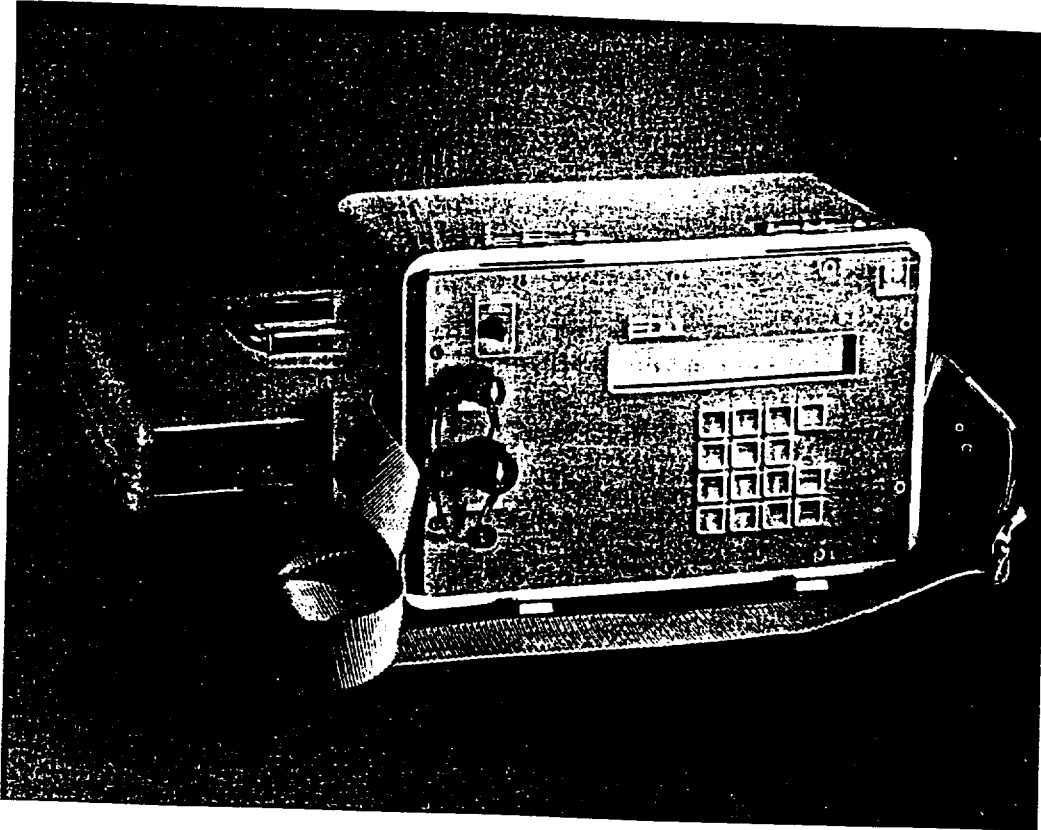
- 1) I am a graduate technologist, (1975) of the three year program in Geological Technology at Cambrian College of Applied Arts and Technology, Sudbury Campus. I have worked subsequently as an Exploration Geophysicist for Teck Exploration Limited, (5 years), North Bay office and currently as Exploration Manager and Geophysicist for Exsics Exploration Limited since 1980.
- 2) I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984
- 3) I am a Fellow of the Geological Association of Canada, (FGAC), since 1986.
- 4) I have been actively engaged in my profession since May of 1975, including all aspects of exploration studies, surveys and interpretation.
- 5) I have no specific or special interest in the described property. I have been retained as a Consulting Geophysicist by the Property holders.

John Charles Grant, CET, FGAC.





# IP-4 Four Dipole Time Domain IP Receiver



## Major Benefits

- 4 Dipoles Simultaneously Measured
- Ten Windows Available
- Choice of Arithmetic or Logarithmic Window Width
- Programmable Arithmetic Window Width
- High Input Voltage
- Weighs Only 8.5 kg.
- User Friendly

## Specifications

Dipoles	4 simultaneous input dipoles.
Input Voltage (Vp) Range	Standard: — 8 volt maximum for each dipole — maximum sum of 12 volts from the second to the sixth dipole. Additional Setting: — attenuation of up to 40 volts on the first dipole.
Input Voltage Protection	Up to 1000 volts.
Vp Resolution	1 microvolt.
Vp Accuracy	0.3% typical; maximum 1% over temperature range.
Chargeability Resolution	1 millivolt/volt for Vp greater than 10 millivolts. 0.1 millivolt/volt for Vp greater than 100 millivolts.
Chargeability Accuracy	0.6% typical; maximum 2% for Vp greater than 10 millivolts over temperature range.
Automatic SP Compensation	± 1 volt with linear drift correction up to 1 millivolt/second.
Input Impedance	10 megohm.
Sample Rate	10 milliseconds.
Automatic Stacking	1 to 999 cycles.
Synchronization	Minimum primary voltage level of 40 microvolts.
Rejection Filters	50 and 60 Hz power line rejection greater than 100 dB.
Grounding Resistance Check	0.1 to 128 kilo-ohms.
Compatible Transmitters	Any time domain waveform transmitter with a pulse duration of 1, 2, 4 or 8 seconds and a crystal timing stability of 100 ppm.
Programmable Parameters	Geometric parameters, time parameter, intensity of current, type of array, line and station number, dipole length, window width and delay time (mode 2).
Display	Two-line, 40-character alphanumeric liquid crystal display protected by an internal heater for low temperature conditions.
Memory Capacity	1800 sets of readings.
RS-232C Serial I/O Interface	300 to 19,200 baud rate; 7 or 8 data bits; 1 or 2 stop bits; odd, even, no parity.
Console Power Supply	Six - 1.5V "D" cell alkaline batteries with auto power save feature; 20 hours of operation at 20°C.
Operating Environmental Range	-40°C to +60°C; 0 to 100% relative humidity; weatherproof.
Weight and Dimensions	8.5 kg. (with batteries), 300 x 200 x 240 mm.
Standard System Complement	Instrument console with carrying strap, batteries, data transfer cable and operations manual.
Displayed Parameters	Primary voltage, partial and total decimalized chargeabilities, running and cumulative average of total chargeabilities (in fixed modes), standard deviation of primary voltage and total chargeability, self potential, number of cycles, dipole being measured and contact resistance.
Available Options	Stainless steel transmitting electrodes, copper sulphate receiving electrodes, alligator clips, bridge leads, multi dipole wire cable, wire spools and software programs.

EDA Instruments Inc.  
4 Thorncliffe Park Drive  
Toronto, Ontario  
Canada M4H 1H1  
Telex: 06 23222 EDA TOR  
Cable: EDAINSTRMITS TORONTO  
Telephone: (416) 425 7800  
Fax: (416) 425 8135

In USA  
EDA Instruments Inc.  
9200 E. Mineral Avenue  
Suite 370  
Englewood, Colorado, USA 80112  
Telephone: (303) 790 2541  
Fax: (303) 790 2902



# VIP 3000

## RESISTIVITY AND IP ADVANCED TRANSMITTER

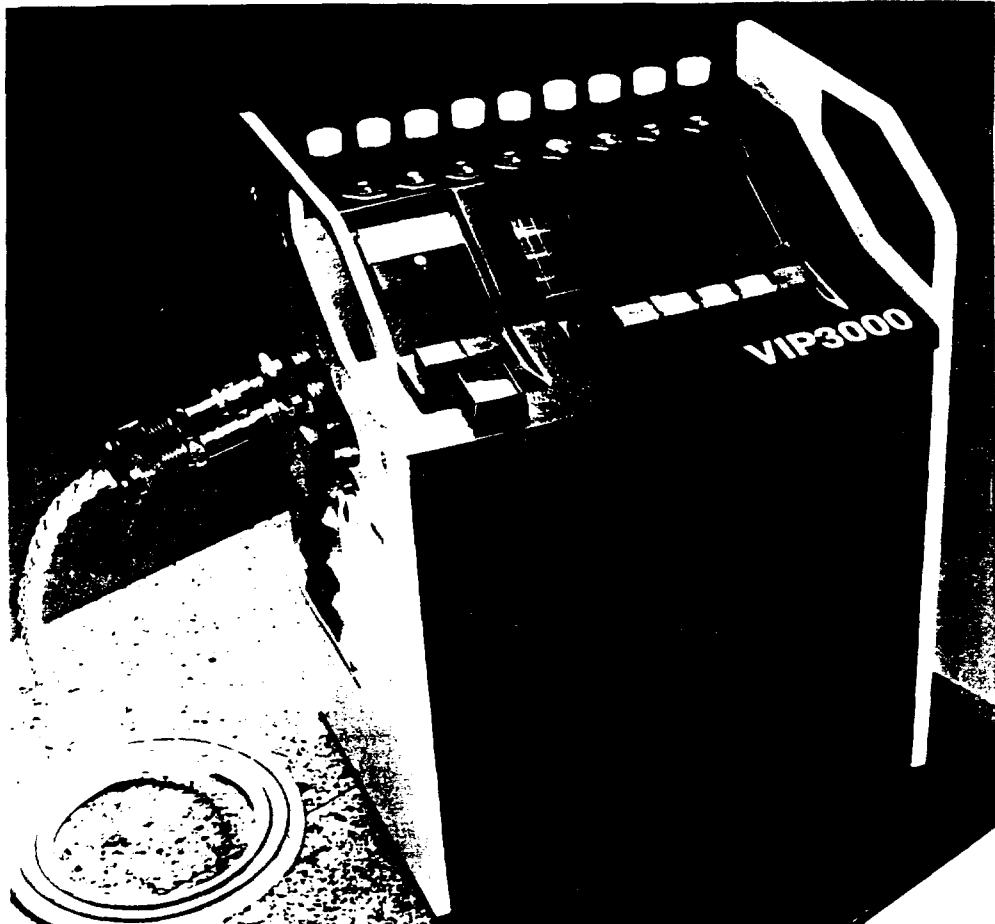
- 3000V output voltage
- Full microprocessor control
- Ease-of-use
- Standard motor generator

VIP 3000 is a three kilowatt power current regulated Time Domain and Frequency Domain electrical transmitter.

### VIP 3000 MAJOR BENEFITS

- Light in weight and provided with a high voltage (3000V) output, the VIP 3000 is particularly convenient for IP surveys in high resistivity rugged areas and for deep resistivity soundings.
- Microprocessor controlled for ease of operation and protection against misuse. All injection parameters (current, voltages, ...) are controlled. The VIP 3000 can also be operated through its remote control port (RS232).
- The VIP 3000 eight output dipoles provide for higher productivity in the field. Powered from a standard 220V single phase motor generator, the VIP 3000 eliminates the maintenance and supply problems associated with custom power sources.

- HIGH VOLTAGE ON +  
U = 2900V I = 1.00A  
R = 2.9K $\Omega$  P = 2900W  
I setpoint = 1.00A



### VIP 3000 MAIN FEATURES

#### HIGH OUTPUTS

- The VIP 3000 will generate up to 3000 volts for work in high resistivity areas and up to 5 amperes at 600 volts for low resistivity regions.
- With its weight of only 16kg, the VIP 3000 is the lightest 3000W unit on the market.

#### HEAVY DUTY CONSTRUCTION

- Very high quality connectors, and heavy duty industrial components are used throughout. The VIP 3000 is shock resistant and weatherproof, for a higher reliability.



### FULLY AUTOMATED

- The VIP 3000 is designed for ease of operation. It has a much simplified front panel: current, dipole and frequency (in the frequency domain) settings are the only parameters to be selected by the operator. All the other functions, like voltage range setting, are fully automated.

### PROGRAMMABLE

Programming functions are also available, either through the front panel, with a suitable key, or from an external computer terminal. These functions are used to select the parameters and options that are not normally changed during a survey: operating mode, time or frequency domain, cycle time, frequencies, etc.

- This approach reduces front panel cluttering and drastically reduces the possibility of operator mistake. Instrument reliability is also increased. For example, it is not possible to switch dipoles when transmitting. This eliminates the possibility of burning out the selector switch or the output circuitry.

## COMPLETE DISPLAY

A backlighted liquid crystal alphanumeric display is provided for the simultaneous indication of **all output parameters**. Output current, output voltage, contact resistance and output power are continuously displayed.

## ERROR MESSAGES

Intelligent messages and warnings are displayed in case of problem or malfunction. Besides, the permanent storage of all the parameters relating to the operation of the unit make easier the remote identification of a trouble by the manufacturer for quicker instrument servicing.

## INTELLIGENT REGULATION

The VIP 3000 internal microprocessor is capable of **excellent current regulation** in almost any load.

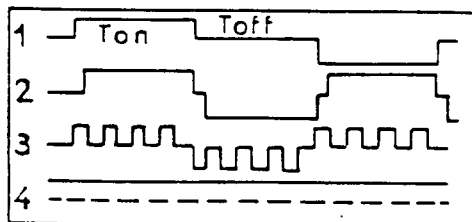
Current is operator selectable in preprogrammed steps from 50mA to 5 amperes. Intelligent current adjustment algorithms are always in operation. For example, the contact resistance will occasionally be too high for the VIP 3000 to provide the requested current setting. In such cases, the VIP 3000 will display a warning message and will set the current to the maximum value allowable under that combination of current setting and contact resistance. Some reserve current capacity will always be kept to insure that the current stays constant during the measurements, whatever the contact resistance fluctuations.

## REMOTE CONTROL

The VIP 3000 is provided with a **remote control port**. By using radio modems, it can be operated from a remote location.

The VIP 3000 can also be linked to an intelligent receiver, or to a computer, for the automatic recording of current settings.

Finally, **synchronization** with a receiver or system is also possible in both directions (i.e. Rx to Tx or Tx to Rx).

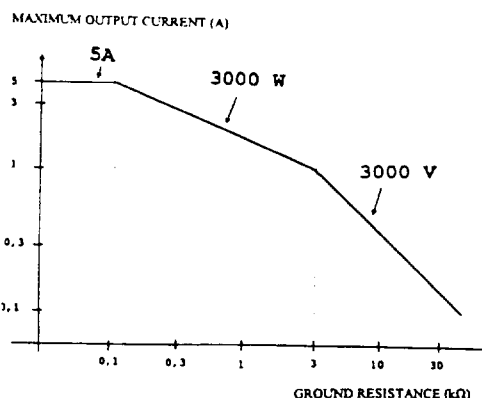


VIP 3000 CURRENT WAVEFORMS

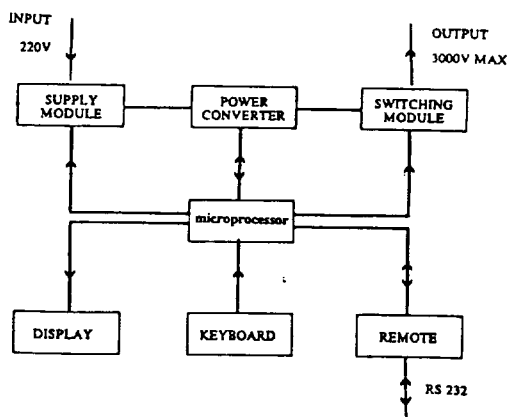
## WORKS WITH ALMOST ANY POWER GENERATOR

The VIP 3000 IP transmitter can be powered by almost **any motor generator** providing a nominal 230V, 45-450 Hz output, single phase, at a suitable KVA rating.

Low cost commercial generator sets, available at local hardware or equipment rental stores are perfectly suitable.



VIP 3000 LOAD LIMITS



VIP 3000 BLOCK DIAGRAM

## SPECIFICATIONS

- **Output Power:** 3000 VA maximum
- **Output Voltage:** 3000 V maximum  
Automatic voltage range selection
- **Output Current:** 5 amperes maximum, current regulated
- **Current accuracy:** better than 1%
- **Current stability:** 0.1%
- **Dipoles:** 8, selected by push button
- **Output Connectors:** Uniclip™ connectors accepts bare wire or plug of up to 4 mm. diameter.
- **Time Domain Waveforms:** On+, off, on-, off, (on = off) preprogrammed cycle.  
Automatic circuit opening in off time. Preprogrammed on times from 0.5 to 8 seconds by factor of two. Other cycles programmable by user.

- **Frequency Domain Waveforms:** Square wave, Preprogrammed frequencies from 0.0625 Hz to 4 Hz by factors of 2. Alternate or simultaneous transmission of any two frequencies. Other frequencies programmable by user.

- **Time and Frequency Stability:** 0.01%, 1 PPB optional

- **Display:** Alphanumeric liquid crystal display. Simultaneous display of output current, output voltage, contact resistance, and output horse-power

- **Protection:** Short circuit at 20 ohms, Open loop at 60000 ohms, Thermal  
Input overvoltage and undervoltage.
- **Remote Control:** Full duplex RS-232A, 300-19200 bauds. Direct wire sync for on-time and polarity.

## GENERAL FEATURES

- **Dimensions (h w d):** 41 x 32 x 24 cm.
- **Weight:** 16 kg
- **Power Source:** 175 to 270 VAC, 45-450 Hz, single phase.
- **Operating Temperature:** -40 to +50 degrees Celsius.
- **Supplied Accessories:** Programming key  
Operation manual.



IRIS INSTRUMENTS

1, avenue Buffon

BP 6007 - 45060 Orléans cedex 2, France

Phone : (33) 38.63.81.00

Fax : (33) 38.63.81.82

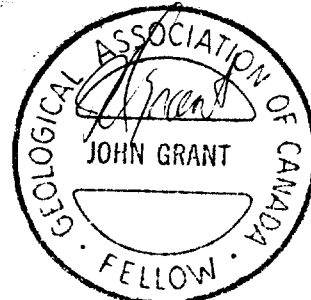
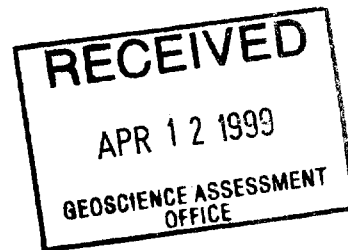


42A07NE2012 2.19379 SHERATON

030

GEOPHYSICAL REPORT  
FOR  
GOLDEN KNIGHT RESOURCES INC.  
ON THE  
SHERATON LAKE OPTION PROPERTY  
SHERATON TOWNSHIP  
PORCUPINE MINING DIVISION  
NORTHEASTERN, ONTARIO

2.19379



Prepared by: J.C. Grant, CET, FGAC  
June, 1998.



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COLOUR INSERTS:	COLOUR CONTOUR OF SKG97-02, 82.0 METERS DEEP COLOUR CONTOUR OF SKG97-14, 72.4 METERS DEEP COLOUR CONTOUR OF SKG97-14, 88.9 METERS DEEP

**INTRODUCTION:**

The services of Exsics Exploration Limited were retained on behalf of the Company, Golden Knight Resources Inc., to complete a surface mise a la masse survey over their Sheraton Lake Option Property located in the northwest section of Sheraton Township of the Porcupine Mining Division, Timmins, Ontario.

The purpose of this program was to test for continuity in several sulphide intersections which had been intersected in a series of drill holes to the west-southwest of Sheraton Lake. Figures 1 and 2.

The Mise a la masse survey method begins by introducing a controlled electrical current into an electrode that has been placed into a sulphide horizon that has been encountered in a drill hole. The location of the electrode is called the current injection point. This applied current should "light up" the sulphide horizon in the hole which allows for the shape of the zone to be mapped by reading a series of surface lines or adjacent drill holes around the current injection hole can also be read to test the zone for continuity between holes.

This method of down hole IP surveys is effective for locating and outlining highly disseminated sulphide zones and multiple lenses that have been intersected in a number of drill holes.

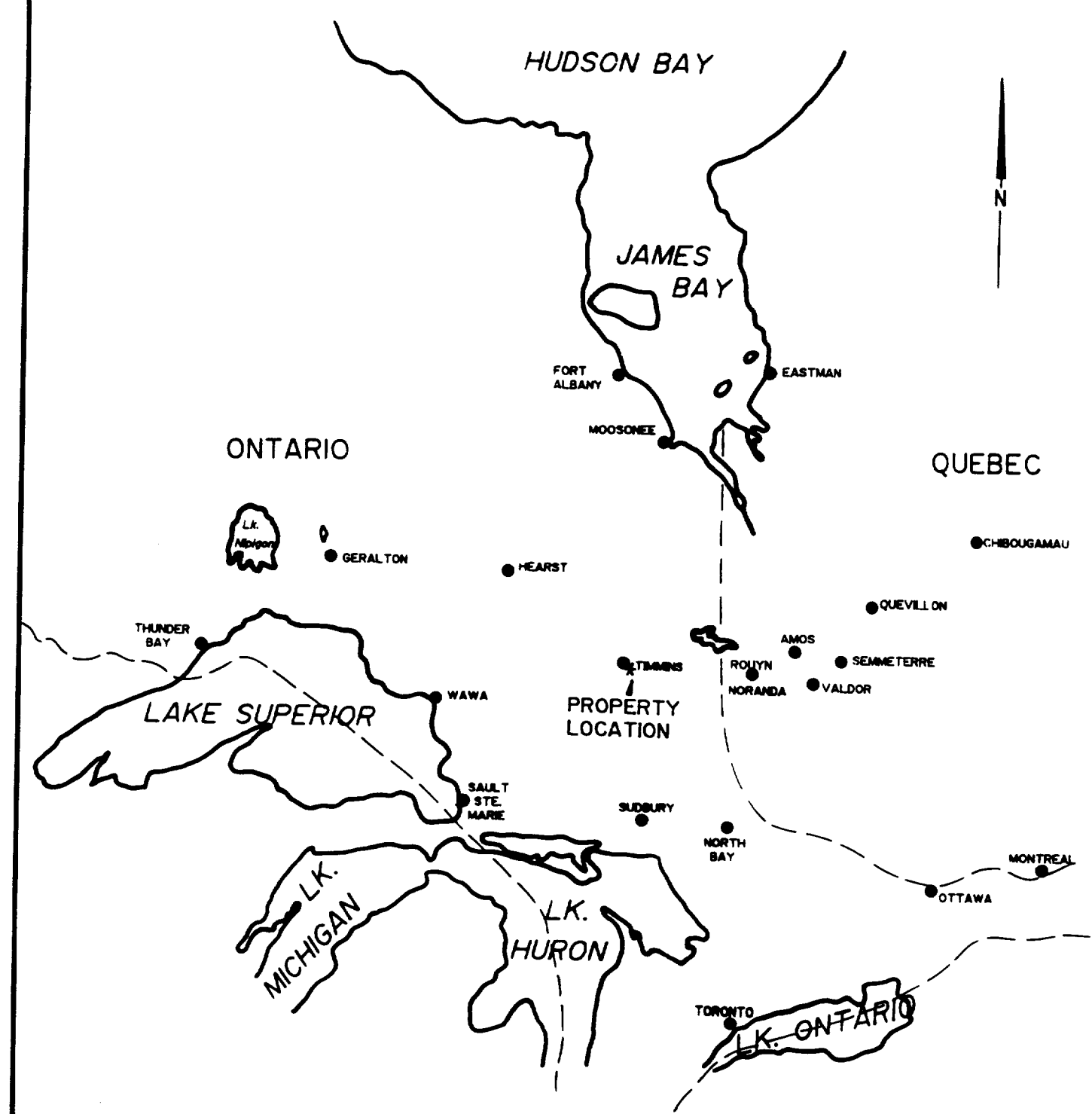
The mise a la masse surveys for the Sheraton Lake Option Property commenced on the 28th of May and were completed on the 9th of June, 1998, with two days lost to weather, May 31st and June 7th.


**PROPERTY LOCATION AND ACCESS:**

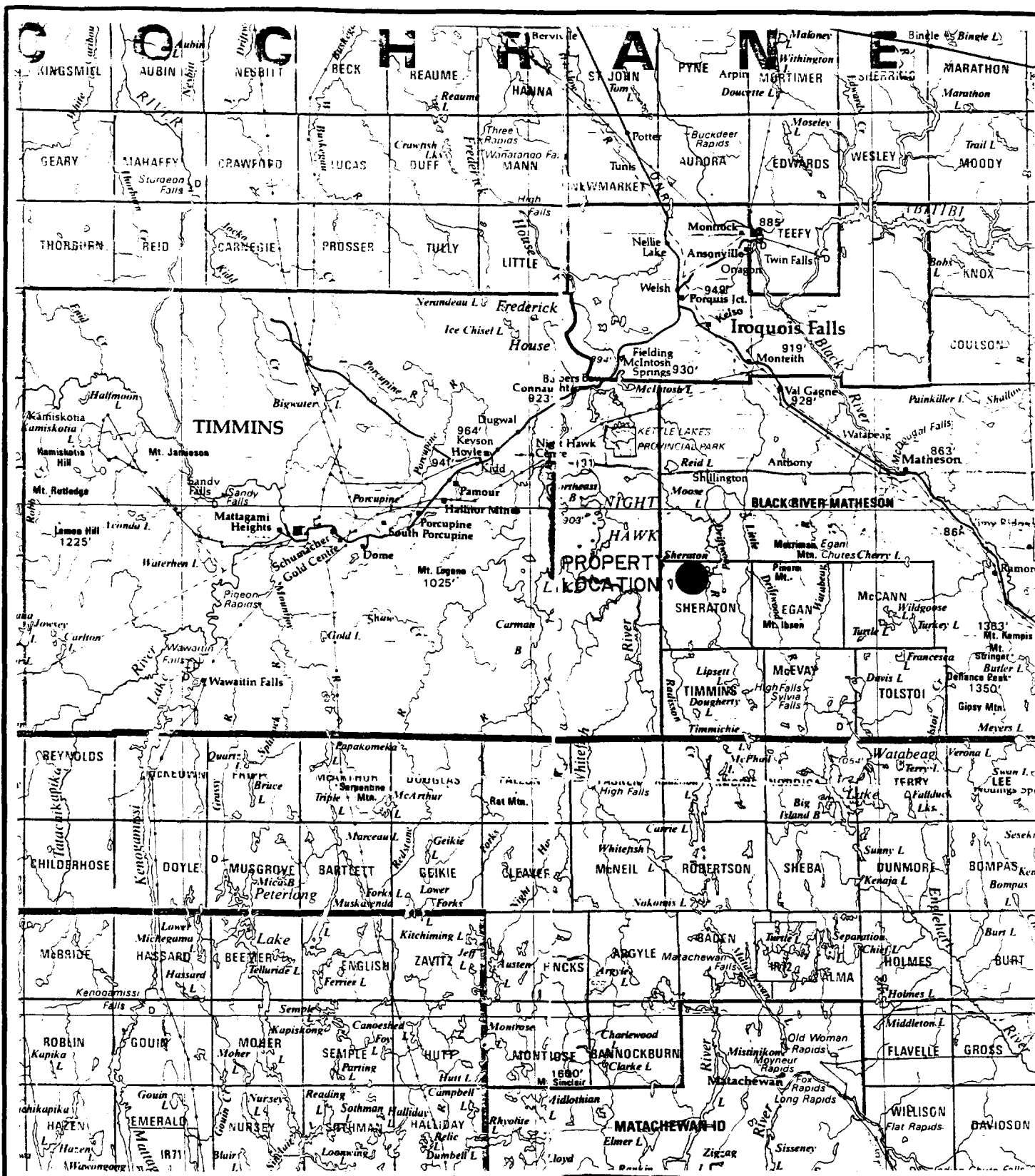
The Sheraton Lake Option Property is situated in the northwest quadrant of Sheraton Township which is situated in the Porcupine Mining Division of Northeastern, Ontario. More specifically the portion of the property covered by the mise a la masse surveys is situated to the immediate west of Sheraton Lake, approximately 800 meters south of the township line between Sheraton and Bond.

The entire property is located approximately 40 kilometres east of the City of Timmins. Figures 1 and 2.

The access to the grid was somewhat difficult. Highway 101 travels east of the City of Timmins and truncates at the Town of Matheson which is situated approximately 65 kilometres east of Timmins at the junction of Highways 101 and 11 North.



		
<b>EXSICS EXPLORATION LTD.</b> P.O. Box 1000, P4M-7X1 Suite 13, Mallinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT: GOLDEN KNIGHT RESOURCES INC.		
PROPERTY: SHERATON LAKE OPTION		
TITLE: <b>LOCATION MAP</b>		
Fig. 1		
Date: June 1998	Scale: 1"=25miles	MNDM Plan#:
Drawn: P. Gauthier	Interp: J.C. Grant	Job No. E-323



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1090, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: **GOLDEN KNIGHT RESOURCES INC.**  
 PROPERTY: **SHERATON LAKE OPTION**  
 TITLE: **PROPERTY LOCATION**

Fig. 2

Date: June 1998	Scale: 1:600,000	MNDM Plan#:
Drawn:	Interp: J.C. Grant	Job No. E-323

About 40 kilometres east of Timmins highway 101 crosses a good gravel road, locally called the Gibson Lake road, which travels south-southeast off of the Highway and provides two wheel drive access to the current drilling operations of Cross Lake Minerals which is located about 4 kilometres west-southwest of the Option Property. An ATV vehicle was then used along a series of summer and winter drill roads to access the Sheraton Lake Property.

Travelling time from Timmins to the property is approximately 1.5 hours.

**CLAIM BLOCK:**

The two claim units that were covered by the mise a la masse surveys are as follows.

P-1207096.....4 units

P-1219601.....4 units

Refer to figure 3, copied from MNDM Plan map, G-3971, Sheraton Township, scale 1:20,000.

The Author is not aware of the status of the claims at the time of this writing.

**PERSONNEL:**

The field crew directly responsible for the collection of all of the raw data are as follows.

A. Chaumont.....Timmins, Ontario

C. Turcott.....Timmins, Ontario

The surveys were completed under the direct supervision of J.C.Grant and all of the plotting and compilation was completed by P.Gauthier of Exsics.

**GROUND PROGRAM FOR SKG97-02:**

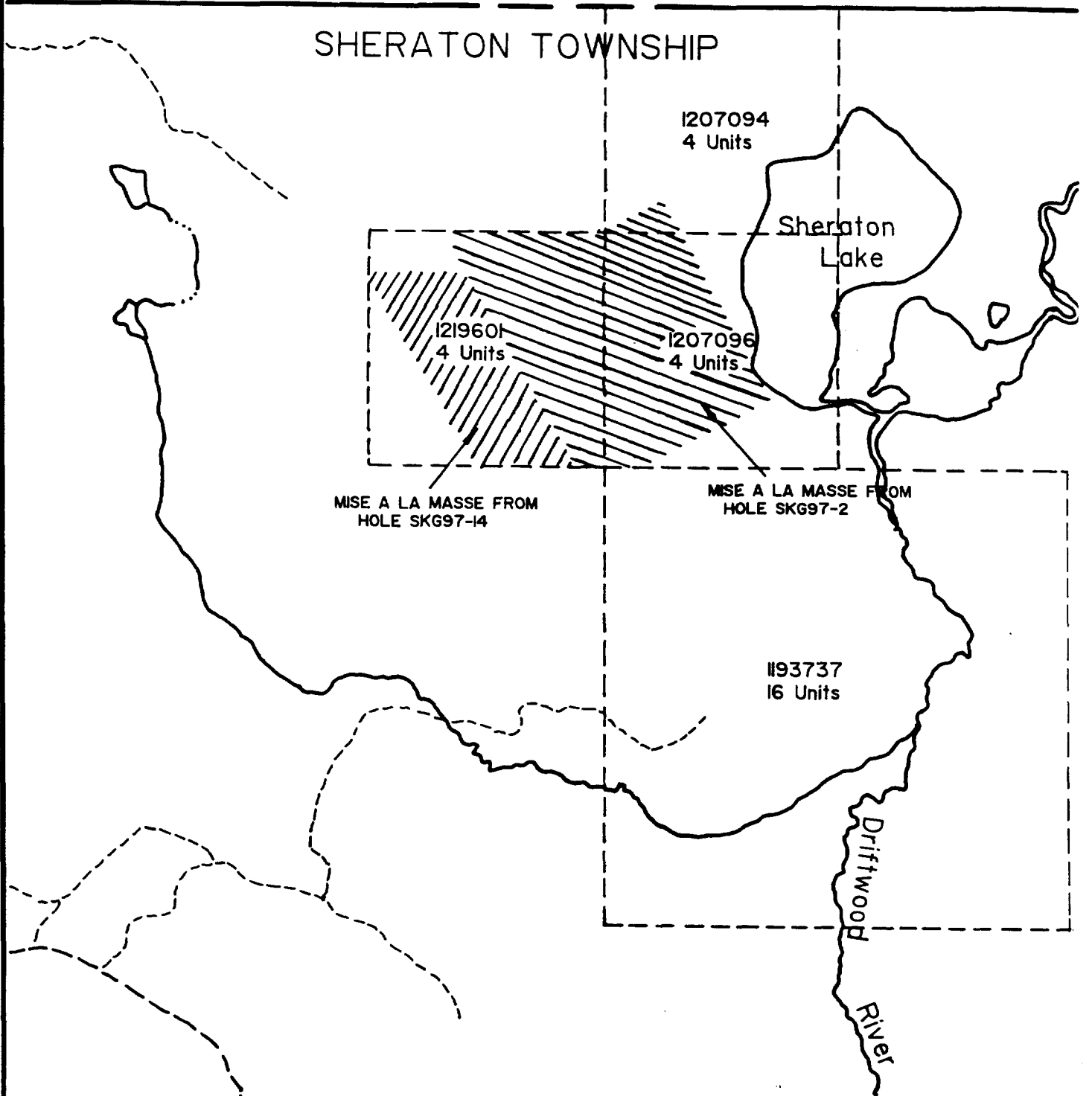
The ground program commenced with the reading of SKG97-02 which was located on line 2200W. Initially, the survey was to be a hole to hole survey from SKG97-02 with a current injection point at 82 meters down the hole. The drill holes to be read from this set up were SKG97-03,07 and 15. However, SKG97-03 was blocked at surface, SKG97-07 was blocked at 123 meters down the hole and SKG97-15 was blocked at 94 meters down the hole.

The same injection point was then used to read a series of surface lines to try and outline the shape of the suspected conductive zone. The lines that were covered by the surface survey are 1800W to 2600W from the north boundary to at least 500MS. All of the lines were read at 25 meter reading intervals.



BOND TOWNSHIP

SHERATON TOWNSHIP



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Suite 13, Hattinger Bldg, Timmins Ont.  
Telephone: 705-267-4151

**CLIENT: GOLDEN KNIGHT RESOURCES INC**

**PROPERTY: SHERATON LAKE OPTION**

**TITLE:**

**CLAIM SKETCH**

Fig. 3

Date: June 1998

Scale: 1:20,000

MNDM Plan#:

Drawn: P. Gauthier

Interp: J.C. Grant

Job No. E-323

Lines 18W, 19W, 20W, 21W and 22W had to be recut and chained due to the amount of dead fall and regrowth which made surveying difficult. The lines were cut from the north boundary of the claim block to 600MS.

The following parameters were kept constant throughout this survey.

Receiver.....BRGM, IP-2/IRIS,ELREC 4  
Transmitter.....Scintrex, IPC-7 2.5Kw/IRISVIP-3000,3.0kw  
Misc a la Masse array.....Potential normal array  
Peak current output.....1.70 to 2.00 amps  
Values recorded.....Millivolts,(mv)

The equipment used for the survey was the IRIS, ELREC 4 receiver and the IRIS VIP 3000, 3.0 kilowatt transmitter. Specifications for these units can be found as Appendix A of this report.

#### SURVEY RESULTS OF SKG97-02:

The surface survey outlined a conductive zone that extends from line 2200W to and including 2100W at about 75 MS. This zone is represented by a voltage potential,(vp), high of 576 on line 2200W, which may be elevated by the location of the current electrode in the hole , but this high can be traced to line 800E which has a 400vp high and line 2100W which has a 121vp high.

The surface survey also outlined a cross structure paralleling line 2500W and a second cross structure paralleling line 2100W

The Vp high building up at the south ends of the lines may relate to a second conductive horizon further to the south which has had some current leaked to it from the injection point in SKG97-02. The high Vp readings to the north of the hole could be due to the infinity, current electrode that is to the north along line 2200W or it may be indicative of a conductive horizon to the north.

#### GROUND PROGRAM FOR SKG97-14:

Upon the completion of the surveys from SKG97-02 the crew moved to SKG97-14 and read the hole for the best current injection point. The first indication of an injection location was 72.4 meters down the hole and the second indication was 88.9 meters down the hole. The maximum current that could be applied to each of the injection points was 1.0 amps which suggested that both zones apparently represented weak conductive targets.

The following lines were read from the first injection point of 72.4 meters. Lines 2800W, 2700W, 2600W and 2500W from about 250MN to 400MS. This survey was completed using the same equipment as that of SKG97-02.

Lines 2800W, 2700W and 2600W were read from 400MN to 400MS from the second injection point of 88.9 meters down the hole.

**SURVEY RESULTS FOR SKG97-14, 72.4 METERS DOWN:**

The survey did not appear to outline any continuity in the zone situated in the hole at 72.4 meters down. The increase in the Vp readings especially on the north extension of line 2800W may be indicative of a conductive zone in the vicinity. This Vp build up is also evident at the north end of line 2500W but not as strong.

**SURVEY RESULTS FOR SKG97-14, 88.9 METERS DOWN:**

This zone appears to be a little more conductive and may extend as far as line 2800W, 275MS with a Vp high of 150mv and possibly as far as line 2600W, 300MS with a Vp high of 57 mv.

The survey was also successful in locating and outlining a strong conductive horizon at 350MN on line 2700W. The zone has a strike length of 200 meters and appears to continue off of the grid in both directions. The strength of this zone would suggest that it could be closer to surface than the zone being energized to the south or that it has a higher sulphide content which would make it more conductive.

**CONCLUSIONS AND RECOMMENDATIONS:**

The mise a la masse surveys were successful in defining the targets that were energized. The conductive zone energized in hole SKG97-02 appears to be contained between lines 2200W and 2100W. A north-south cross structure paralleling line 2100W may have cut off the zone on its eastern extension. The increase in Vp values on the north ends of the lines may in part be due to the location of the C2 infinity wire or another conductive zone situated to the north of the grid lines.

The conductive zone energized in hole SKG97-14 at 72.4 meters down does not appear to have any continuity and appears to represent a weak questionable conductive horizon.

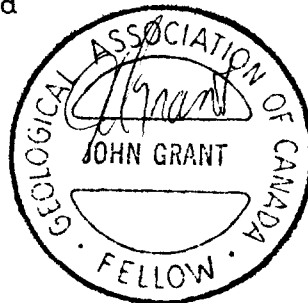
The second zone energized in hole KSG97-14 at 88.9 meters down appears to be a more conductive zone than the upper zone. This target also appears to be contained between lines 2600W and 2800W. The rapid drop off in Vp values on either side of the current injection point would suggest that the zone does not have good continuity along its strike.

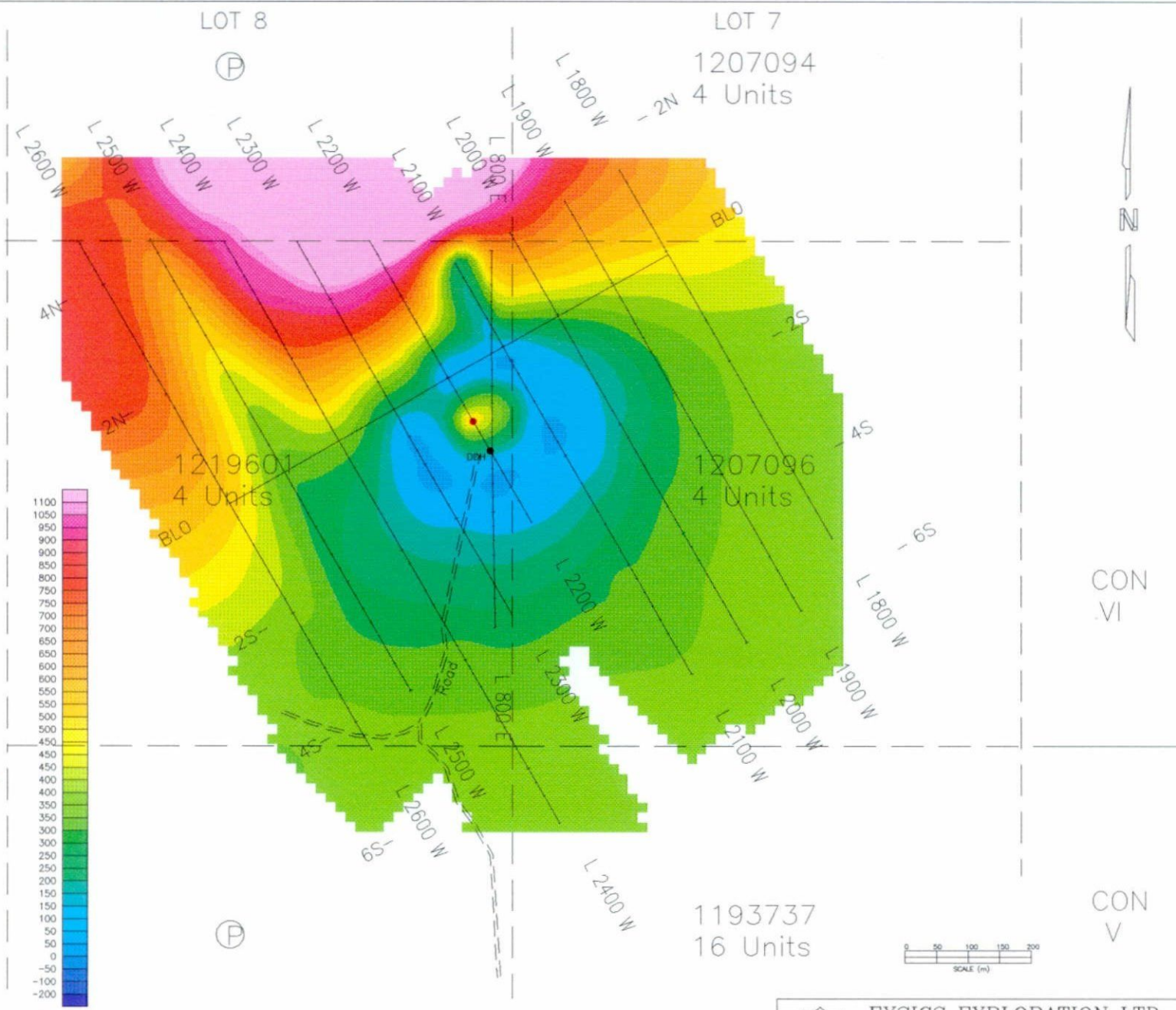
The second zone that was outlined by this portion of the survey is situated at the north ends of the lines and it appears to be quite conductive. The zone can be followed to the east and west of the peak which is situated on line 2700W at 325Mn and it seems to continue off of the grid in both directions. This zone may indicate a shallower source is present in the vicinity and that there has been current leakage from the injection point into this zone. Further work in and around the area of this target is required to better define this zone and to prove its validity.

All previous surface IP data covering this portion of the grid should be re-examined for correlation with the conductive zones, especially the northern target outlined by the injection point in SKG97-14 at 88.9 meters down the hole.

Respectfully submitted

J.C. Grant, CET, FGAC  
June, 1998.





color scale

**LEGEND**  
 Receiver: BRGM IP-2  
 Transmitter: Scintrex ipc-7 2.5Kw generator  
 Current Injection: SKG97-2, L22mW/133mS(82m in hole)  
 Conductor Zone:  
 Contour Interval: 0, 50, 100, 150, 200, 250, .....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 1.7 to 2 amp

- Appr. location of current projected to surface
- C1- Located on line 22W at 500N
- P1- Located on line 22W at 175S

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<b>CLIENT: GOLDEN KNIGHT RESOURCES INC</b>			
<b>PROPERTY: SHERATON LAKE OPTION</b>			
<b>TITLE: MISE-A-LA-MASSE</b>			
<b>HOLE SKG97-2</b>			
<b>Date: June 1998</b>	<b>Scale: 1:5000</b>	<b>NTS:</b>	
<b>Drawn: P.Gauthier</b>	<b>Interp: J.C.Grant</b>	<b>Job No.: E-323</b>	



121327  
6 Units

(P)

L 2600 W

L 2500 W

L 2700 W

- 2N

2N

BLO

1219601

4 Units

1223891  
2 Units

BLO

- 2S

DDH

- 4S

1223892  
2 Units

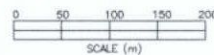
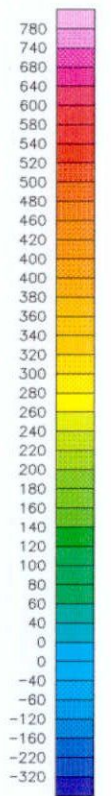
(P)

L 2800 W

L 2700 W

L 2600 W

L 2500 W



LEGEND

Receiver: BRGM IP-2  
Transmitter: Scintrex Ipc-7 2.5Kw generator  
Current Injection: L27mW/350mS (72.4m in hole)  
Conductor Zone:  
Contour Interval: 0, 20, 40, 60, 80, 100, .....

● Appr. location of current projected to surface

C1-Located on line 27W at 700N

P1-Located on line 27W at 400S



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Telephone: 705-267-4151, 267-2424

CLIENT: GOLDEN KNIGHT RESOURCES INC

PROPERTY: SHERATON LAKE OPTION

TITLE:

MISE-A-LA-MASSE

HOLE SKG97-14 Current at 72.4m down hole

Date: June 1998

Scale: 1:5000

NTS:

Drawn: P.Gauthier

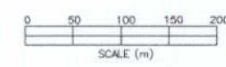
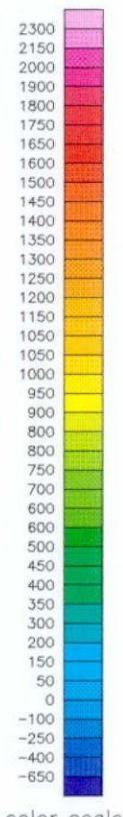
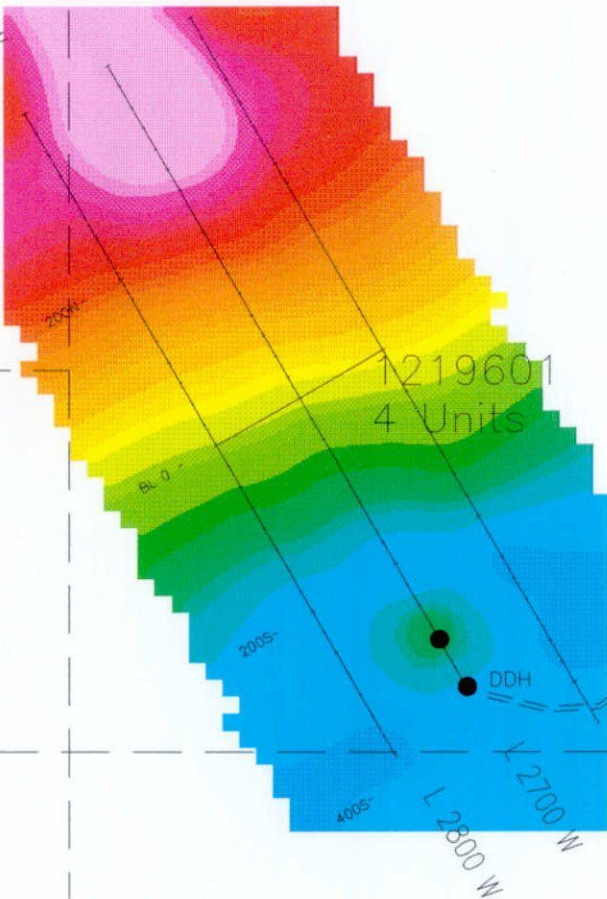
Interp: J.C.Grant

Job No.: E-323

1213270  
6 Units

1223891  
2 Units

1223892  
2 Units



**LEGEND**  
Receiver: BRGM IP-2  
Transmitter: Scintrex Ipc-7 2.5Kw generator  
Current Injection: L27mW/350mS (88.9m in hole)  
Conductor Zone:  
Contour Interval: 0, 50, 100, 150, 200, 250, .....  
Reading Interval: 25m  
Plotting Values: Potential (mv)  
Current: 1.0 amp

● Appr. location of current projected to surface  
C1-Located on line 27W at 700N  
P1-Located on line 27W at 400S

	<b>EXSICS EXPLORATION LTD.</b>		
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151, 267-2424		
	CLIENT: GOLDEN KNIGHT RESOURCES INC		
PROPERTY: SHERATON LAKE OPTION			
TITLE: <b>MISE-A-LA-MASSE</b>			
HOLE SKG97-14 Current at 88.9m down hole			
Date: June 1998	Scale: 1:5000	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-323	

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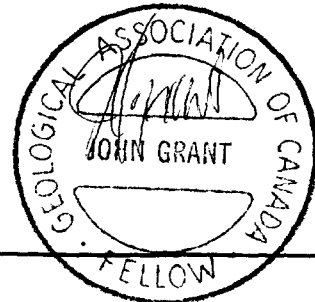
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CERTIFICATE

I, John C. Grant, hereby certify that:

- 1) I am a graduate technologist, (1975) of the three year program in Geological Technology at Cambrian College of Applied Arts and Technology, Sudbury Campus. I have worked subsequently as an Exploration Geophysicist for Teck Exploration Limited, (5 years), North Bay office and currently as Exploration Manager and Geophysicist for Exsics Exploration Limited since 1980.
- 2) I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984
- 3) I am a Fellow of the Geological Association of Canada, (FGAC), since 1986.
- 4) I have been actively engaged in my profession since May of 1975, including all aspects of exploration studies, surveys and interpretation.
- 5) I have no specific or special interest in the described property. I have been retained as a Consulting Geophysicist by the Property holders.

John Charles Grant, CET, FGAC.

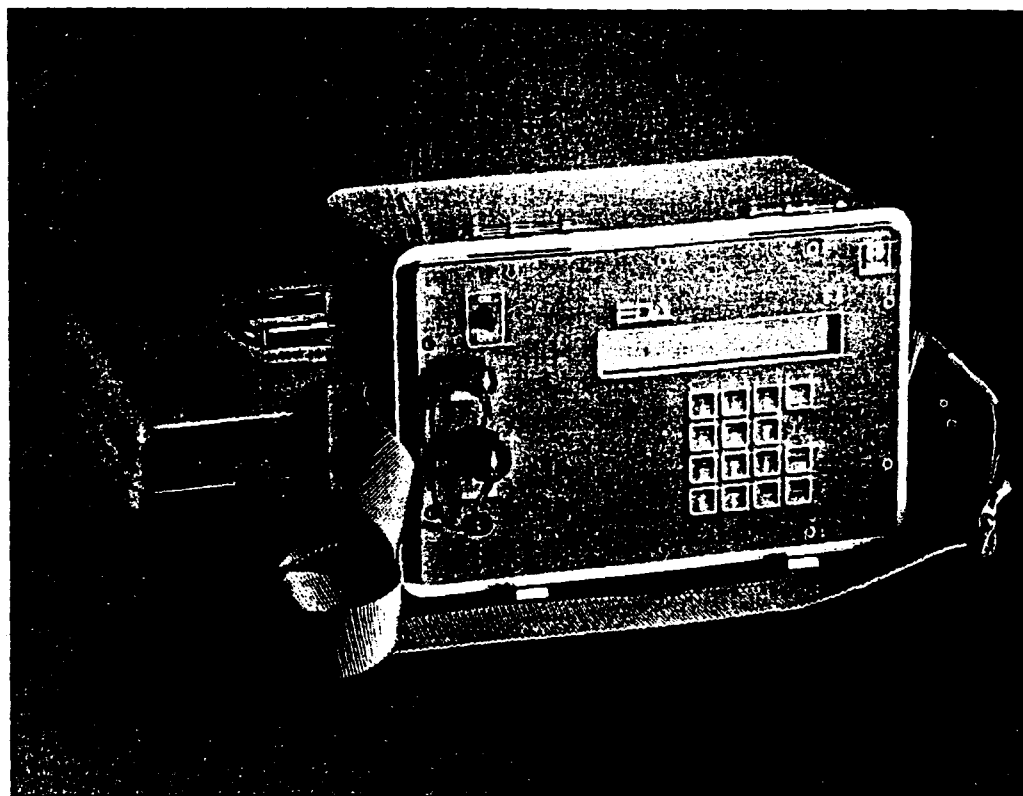




*APPENDIX A*

# IP-4 Four Dipole Time Domain IP Receiver

# EDA



## Major Benefits

- 4 Dipoles Simultaneously Measured
- Ten Windows Available
- Choice of Arithmetic or Logarithmic Window Width
- Programmable Arithmetic Window Width
- High Input Voltage
- Weighs Only 8.5 kg.
- User Friendly

## Specifications

Dipoles	4 simultaneous input dipoles.
Input Voltage (Vp) Range	Standard: — 8 volt maximum for each dipole — maximum sum of 12 volts from the second to the sixth dipole. Additional Setting: — attenuation of up to 40 volts on the first dipole.
Input Voltage Protection	Up to 1000 volts.
Vp Resolution	1 microvolt.
Vp Accuracy	0.3% typical; maximum 1% over temperature range.
Chargeability Resolution	1 millivolt/volt for Vp greater than 10 millivolts. 0.1 millivolt/volt for Vp greater than 100 millivolts.
Chargeability Accuracy	0.6% typical; maximum 2% for Vp greater than 10 millivolts over temperature range.
Automatic SP Compensation	± 1 volt with linear drift correction up to 1 millivolt/second.
Input Impedance	10 megohm.
Sample Rate	10 milliseconds.
Automatic Stacking	1 to 999 cycles.
Synchronization	Minimum primary voltage level of 40 microvolts.
Rejection Filters	50 and 60 Hz power line rejection greater than 100 dB.
Grounding Resistance Check	0.1 to 128 kilo-ohms.
Compatible Transmitters	Any time domain waveform transmitter with a pulse duration of 1, 2, 4 or 8 seconds and a crystal timing stability of 100 ppm.
Programmable Parameters	Geometric parameters, time parameter, intensity of current, type of array, line and station number, dipole length, window width and delay time (mode 2).
Display	Two-line, 40-character alphanumeric liquid crystal display protected by an internal heater for low temperature conditions.
Memory Capacity	1800 sets of readings.
RS-232C Serial I/O Interface	300 to 19,200 baud rate; 7 or 8 data bits; 1 or 2 stop bits; odd, even, no parity.
Console Power Supply	Six - 1.5V "D" cell alkaline batteries with auto power save feature; 20 hours of operation at 20°C.
Operating Environmental Range	-40°C to +60°C; 0 to 100% relative humidity; weatherproof.
Weight and Dimensions	8.5 kg. (with batteries), 300 x 200 x 240 mm.
Standard System Complement	Instrument console with carrying strap, batteries, data transfer cable and operations manual.
Displayed Parameters	Primary voltage, partial and total decimalized chargeabilities, running and cumulative average of total chargeabilities (in fixed modes), standard deviation of primary voltage and total chargeability, self potential, number of cycles, dipole being measured and contact resistance.
Available Options	Stainless steel transmitting electrodes, copper sulphate receiving electrodes, alligator clips, bridge leads, multi dipole wire cable, wire spools and software programs.

EDA Instruments Inc.  
4 Thornccliffe Park Drive  
Toronto, Ontario  
Canada M4H 1H1  
Telex: 06 23222 EDA TOR  
Cable: EDAINSTRMITS TORONTO  
Telephone: (416) 425 7800  
Fax: (416) 425 8135

In USA  
EDA Instruments Inc.  
9200 E. Mineral Avenue  
Suite 370  
Englewood, Colorado, U.S.A. 80112  
Telephone: (303) 790 2541  
Fax: (303) 790 2902

# VIP 3000

## RESISTIVITY AND IP ADVANCED TRANSMITTER

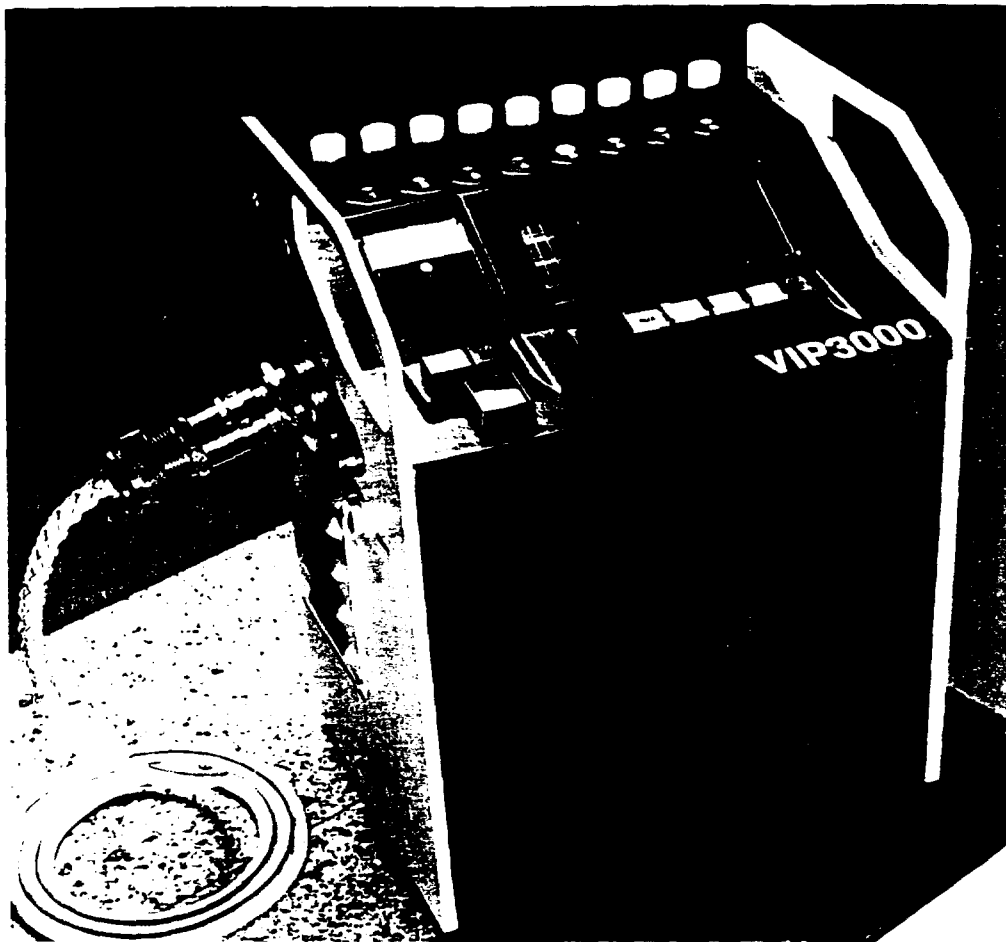
- 3000V output voltage
- Full microprocessor control
- Ease-of-use
- Standard motor generator

VIP 3000 is a three kilowatt power current regulated Time Domain and Frequency Domain electrical transmitter.

### VIP 3000 MAJOR BENEFITS

- Light in weight and provided with a high voltage (3000V) output, the VIP 3000 is particularly convenient for IP surveys in high resistivity rugged areas and for deep resistivity soundings.
- Microprocessor controlled for ease of operation and protection against misuse. All injection parameters (current, voltages, ...) are controlled. The VIP 3000 can also be operated through its remote control port (RS232).
- The VIP 3000 eight output dipoles provide for higher productivity in the field. Powered from a standard 220V single phase motor generator, the VIP 3000 eliminates the maintenance and supply problems associated with custom power sources.

- HIGH VOLTAGE ON +  
U = 2900V I = 1.00A  
R = 2.9K $\Omega$  P = 2900W  
I setpoint = 1.00A



### VIP 3000 MAIN FEATURES

#### HIGH OUTPUTS

- The VIP 3000 will generate up to 3000 volts for work in high resistivity areas and up to 5 amperes at 600 volts for low resistivity regions.
- With its weight of only 16kg, the VIP 3000 is the lightest 3000W unit on the market.

#### HEAVY DUTY CONSTRUCTION

- Very high quality connectors, and heavy duty industrial components are used throughout. The VIP 3000 is shock resistant and weatherproof, for a higher reliability.

#### FULLY AUTOMATED

- The VIP 3000 is designed for ease of operation. It has a much simplified front panel: current, dipole and frequency (in the frequency domain) settings are the only parameters to be selected by the operator. All the other functions, like voltage range setting, are fully automated.

#### PROGRAMMABLE

Programming functions are also available, either through the front panel, with a suitable key, or from an external computer terminal. These functions are used to select the parameters and options that are not normally changed during a survey: operating mode, time or frequency domain, cycle time, frequencies, etc.

- This approach reduces front panel cluttering and drastically reduces the possibility of operator mistake. Instrument reliability is also increased. For example, it is not possible to switch dipoles when transmitting. This eliminates the possibility of burning out the selector switch or the output circuitry.



## COMBINE DISPLAY

A backlighted liquid crystal alphanumeric display is provided for the simultaneous indication of **all output parameters**. Output current, output voltage, contact resistance and output power are continuously displayed.

## ERROR MESSAGES

Intelligent messages and warnings are displayed in case of problem or malfunction. Besides, the permanent storage of all the parameters relating to the operation of the unit make easier the remote identification of a trouble by the manufacturer for quicker instrument servicing.

## INTELLIGENT REGULATION

The VIP 3000 internal microprocessor is capable of **excellent current regulation** in almost any load.

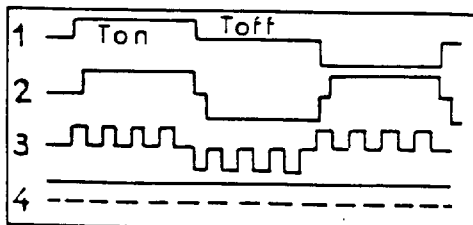
Current is operator selectable in preprogrammed steps from 50mA to 5 amperes. Intelligent current adjustment algorithms are always in operation. For example, the contact resistance will occasionally be too high for the VIP 3000 to provide the requested current setting. In such cases, the VIP 3000 will display a warning message and will set the current to the maximum value allowable under that combination of current setting and contact resistance. Some reserve current capacity will always be kept to insure that the current stays constant during the measurements, whatever the contact resistance fluctuations.

## REMOTE CONTROL

The VIP 3000 is provided with a **remote control port**. By using radio modems, it can be operated from a remote location.

The VIP 3000 can also be linked to an intelligent receiver, or to a computer, for the automatic recording of current settings.

Finally, **synchronization** with a receiver or system is also possible in both directions (i.e. Rx to Tx or Tx to Rx).

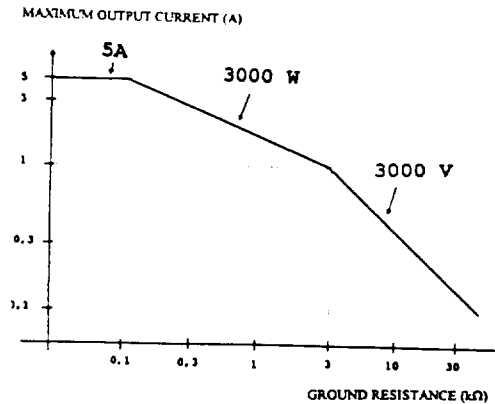


VIP 3000 CURRENT WAVEFORMS

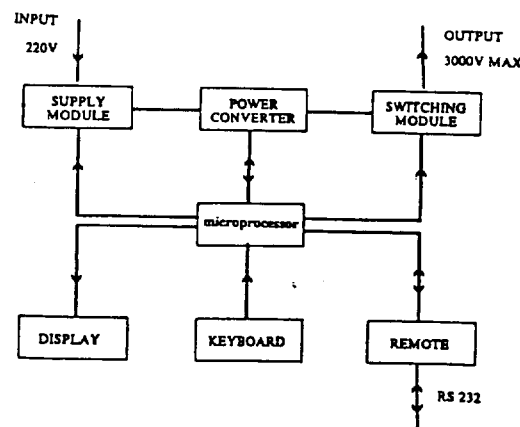
## WORKS WITH ALMOST ANY POWER GENERATOR

The VIP 3000 IP transmitter can be powered by almost **any motor generator** providing a nominal 230V, 45-450 Hz output, single phase, at a suitable KVA rating.

Low cost commercial generator sets, available at local hardware or equipment rental stores are perfectly suitable.



VIP 3000 LOAD LIMITS



VIP 3000 BLOCK DIAGRAM

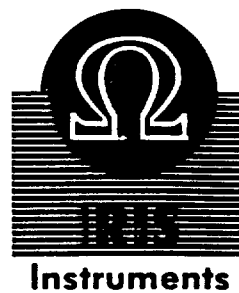
## SPECIFICATIONS

- **Output Power:** 3000 VA maximum
- **Output Voltage:** 3000 V maximum  
Automatic voltage range selection
- **Output Current:** 5 amperes maximum, current regulated
- **Current accuracy:** better than 1%
- **Current stability:** 0.1%
- **Dipoles:** 8, selected by push button
- **Output Connectors:** Uniclip™ connectors accepts bare wire or plug of up to 4 mm. diameter.
- **Time Domain Waveforms:**  
On+, off, on-, off, (on = off) preprogrammed cycle.  
Automatic circuit opening in off time.  
Preprogrammed on times from 0.5 to 8 seconds by factor of two.  
Other cycles programmable by user.
- **Frequency Domain Waveforms:**  
Square wave,  
Preprogrammed frequencies from 0.0625 Hz to 4 Hz by factors of 2.  
Alternate or simultaneous transmission of any two frequencies.  
Other frequencies programmable by user.
- **Time and Frequency Stability:**  
0.01%, 1 PPB optional
- **Display:**  
Alphanumeric liquid crystal display.  
Simultaneous display of output current, output voltage, contact resistance, and output horse-power
- **Protection:**  
Short circuit at 20 ohms,  
Open loop at 60000 ohms,  
Thermal  
Input overvoltage and undervoltage.

- **Remote Control:**  
Full duplex RS-232A, 300-19200 bauds.  
Direct wire sync for on-time and polarity.

## GENERAL FEATURES

- **Dimensions (h w d):** 41 x 32 x 24 cm.
- **Weight:** 16 kg
- **Power Source:**  
175 to 270 VAC, 45-450 Hz, single phase.
- **Operating Temperature:** -40 to +50 degrees Celsius.
- **Supplied Accessories:**  
Programming key



IRIS INSTRUMENTS  
1, avenue Buffon

BP 6007 - 45060 Orléans cedex 2, France  
Phone : (33) 38.63.81.00  
Fax : (33) 38.63.81.82

Declaration of Assessment Work Performed on Mining Land

5(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
W9960.00156
Assessment Files Research Imaging



42A07NE2012 2.19379 SHERATON

900

sections 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, assessment work and correspond with the mining land holder. Questions about this Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario,

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.  
- Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)

Name	Golden Knight Resources Inc.	Client Number	302803
Address	#1180 - 999 West Hastings Street	Telephone Number	(604) 689-3846
	Vancouver, B.C. V6C 2W2	Fax Number	(604) 689-3847
Name		Client Number	
Address		Telephone Number	
		Fax Number	

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

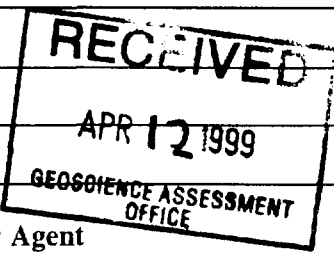
Geotechnical: prospecting, surveys, assays and work under section 18 (regs)       Physical: drilling, stripping, trenching and associated assays       Rehabilitation

Work Type	GEOPHYSICS; MISE a la masse	Office Use
Dates Work Performed	From: 01 01 98 To: 28 07 98 Day Month Year Day Month Year	Commodity
Global Positioning System Data (if available)	Township/Area SHERATON.	Total \$ Value of Work Claimed 58530
	M or G-Plan Number	NTS Reference
		Mining Division Timmins
		Resident Geologist District Timmins

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;  
- provide proper notice to surface rights holders before starting work;  
- complete and attach a Statement of Costs, form 0212;  
- provide a map showing contiguous mining lands that are linked for assigning work;  
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name	J.C. GRANT EXSICS Exploration Ltd.	Telephone Number	705 267 4151
Address	P.O. Box 1880 P4N-7X1 Suite 13, Hollinger Bldg, Timmins, Ont	Fax Number	
Name		Telephone Number	
Address		Fax Number	
Name		Telephone Number	
Address		Fax Number	



4. Certification by Recorded Holder or Agent

I, Linda J. Sue, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent	Assistant Secretary, Golden Knight Resources Inc.	Date	Mar. 30 / 99
Agent's Address	#1180 - 999 West Hastings Street Vancouver, B.C., V6C 2W2	Telephone Number	(604) 689-3846
		Fax Number	(604) 689-3847

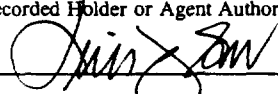
Deemed on July 11 / 99

5. **Work to be recorded and distributed.** Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W9960-00156

eg	Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg	TB 7827	16 ha	\$26,825	N/A	\$24,000	\$2,825
eg	1234567	12	0	\$24,000	0	0
eg	1234568	2	\$8,892	\$4,000	0	\$4,892
x 1	P1223895	2	21030			21030
✓ 2	P1219601	4	11132			11132
✓ 3	P1207096	4	3328			3328
4	P1218054	8	2702			2702
x 5	P1218055	8	7964			7964
x 6	P1218056	8	10489			10489
✓ 7	P1223894	2	1885			1885
8						
9						
10						
11						
12						
13						
14						
15						
<b>Column Totals</b>			<b>58530</b>			<b>58530</b>

I, Linda J. Sue, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.  
(Print Full Name)

Signature of Recorded Holder or Agent Authorized in Writing 	Date Mar. 30/99
Assistant Secretary, Golden Knight Resources Inc.	

**6. Instructions for cutting back credits that are not approved.**

Some of the credits claimed in this declaration may be cut back. Please check ( ✓ ) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

**For Office Use Only**

Received Stamp	<div style="border: 2px solid black; padding: 5px; width: fit-content; margin: auto;"> <p style="font-size: 1.2em; margin: 0;"><b>RECEIVED</b></p> <p style="font-size: 1.1em; margin: 0;">APR 12 1999</p> <p style="font-size: 0.8em; margin: 0;">GEOSCIENCE ASSESSMENT OFFICE</p> </div>	Deemed Approved Date	Date Notification Sent
		Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)			

2.1989





Geoscience Assessment Office  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (888) 415-9846  
Fax: (877) 670-1555

July 12, 1999

Linda J. Sue  
GOLDEN KNIGHT RESOURCES INC.  
1180-999 WEST HASTINGS STREET  
VANCOUVER, B.C.  
V6C-2W2

Visit our website at:  
[www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm](http://www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm)

Dear Sir or Madam:

**Submission Number:** 2.19379

**Status**

**Subject: Transaction Number(s):** W9960.00156 Approval

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We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at [steve.beneteau@ndm.gov.on.ca](mailto:steve.beneteau@ndm.gov.on.ca) or by telephone at (705) 670-5855.

Yours sincerely,



ORIGINAL SIGNED BY  
Blair Kite  
Supervisor, Geoscience Assessment Office  
Mining Lands Section

# Work Report Assessment Results

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**Submission Number:** 2.19379

**Date Correspondence Sent:** July 12, 1999

**Assessor:** Steve Beneteau

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<b>Transaction Number</b>	<b>First Claim Number</b>	<b>Township(s) / Area(s)</b>	<b>Status</b>	<b>Approval Date</b>
W9960.00156	1223895	SHERATON	Approval	July 09, 1999

**Section:**

14 Geophysical EM

Assessment work credit has been redistributed, as outlined on the attached Distribution of Assessment Work Credit sheet, to better reflect the location of the work.

**Correspondence to:**

Resident Geologist  
South Porcupine, ON

**Recorded Holder(s) and/or Agent(s):**

Linda J. Sue  
GOLDEN KNIGHT RESOURCES INC.  
VANCOUVER, B.C.

Assessment Files Library  
Sudbury, ON

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# Distribution of Assessment Work Credit

The following credit distribution reflects the value of assessment work performed on the mining land(s).

Date: July 12, 1999

Submission Number: 2.19379

---

Transaction Number: W9960.00156

<u>Claim Number</u>	<u>Value Of Work Performed</u>
1223895	22,000.00
1219601	11,646.00
1207096	3,482.00
1218055	8,332.00
1218056	10,973.00
1223894	2,097.00
	<hr/>
<b>Total: \$</b>	<b>58,530.00</b>

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AREAS WITHDRAWN FROM DISPOSITION

- M R O - MINING RIGHTS ONLY
- C P O - SURFACE RIGHTS ONLY
- M + S - MINING AND SURFACE RIGHTS

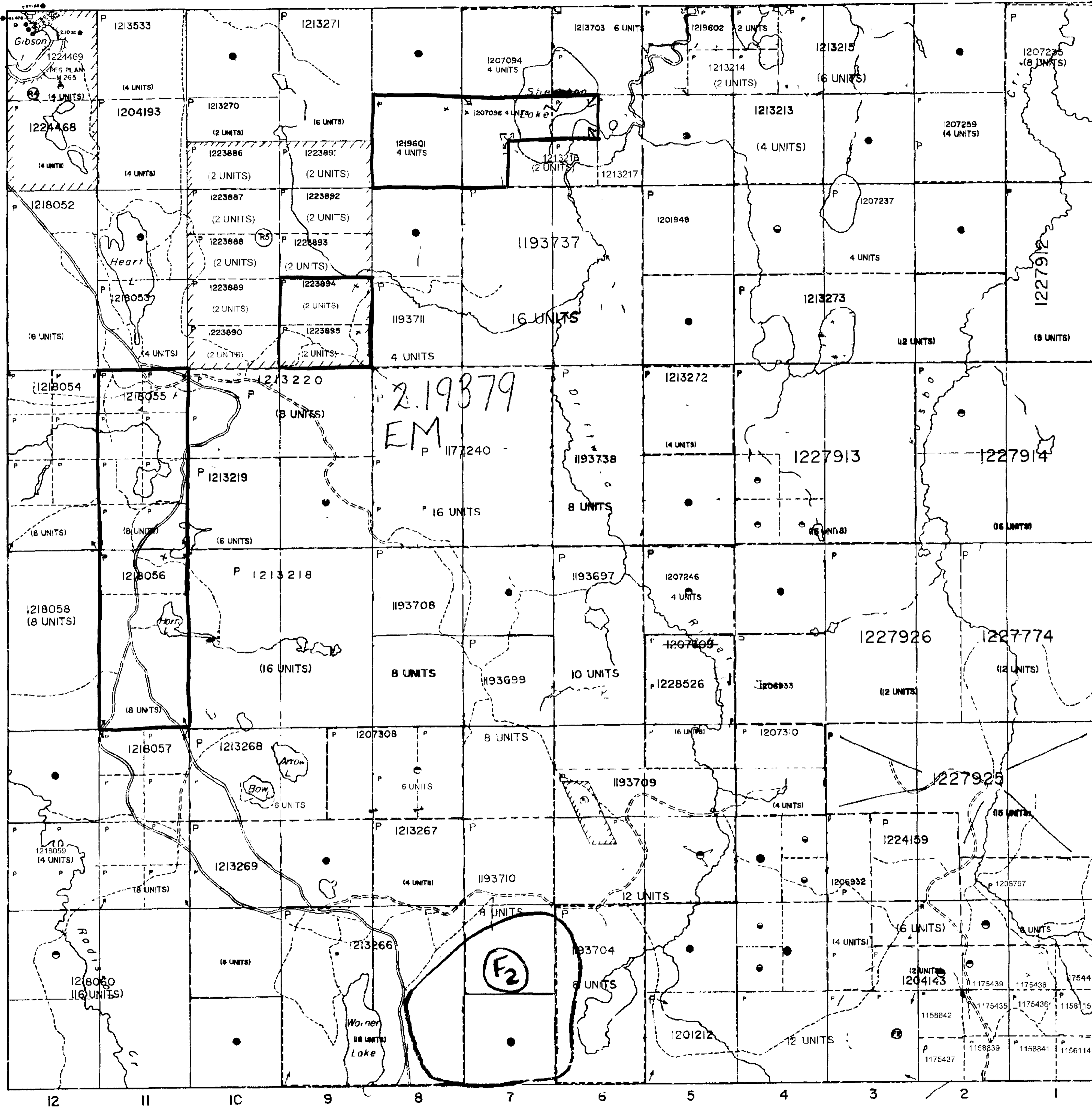
Description	Order No.	Date	Disposit	File
(R)	W 66/77	4/8/77	S.R.O.	177191
(R)	W 107/72	10/17/72	S.R.O.	
(R)	W 17/70	12/20/70	S.R.O.	

(R4) - MINING AND SURFACE RIGHTS RE-OPENED UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. O-P-13/97 NER DATED MAY 16/97, ORDER COMES INTO EFFECT AT 8AM STD TIME, JUNE 1, 1997

(R5) - MINING AND SURFACE RIGHTS RE-OPENED UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. O-P-15/97 NER DATED MAY 26/97, ORDER COMES INTO EFFECT AT 8AM STD TIME, JUNE 10, 1997

BOND TOWNSHIP

THOMAS TOWNSHIP



TIMMINS TOWNSHIP

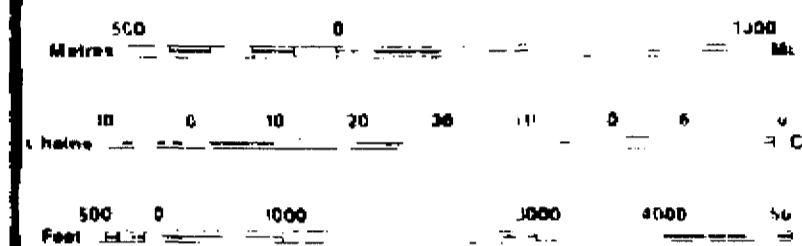
LEGEND

- HIGHWAY AND ROUTE NO
- OTHER ROADS
- TRAILS
- SURVEYED LINES
- TOWNSHIPS, BASELINES, ETC.
- LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
- LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS, ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
SURFACE RIGHTS ONLY	○
MINING RIGHTS ONLY	○
LEASE, SURFACE & MINING RIGHTS	□
SURFACE RIGHTS ONLY	□
MINING RIGHTS ONLY	□
LICENCE OF OCCUPATION	□
ORDER IN COUNCIL	OC
RESERVATION	○
CANCELLED	○
SAND & GRAVEL	○

NOTE: MINING RIGHTS IN PARCELS PATENTED UNDER THE 1913 MINE ACT OR ORIGINAL PATENT UNDER THE 1912 MINE ACT ARE NOT SUBJECT TO THE 1997 MINE ACT.



NOTES

(X) THIS TWP IS SUBJECT TO FOREST ACTIVITY IN 1994/95. FURTHER INFORMATION ON FILE.

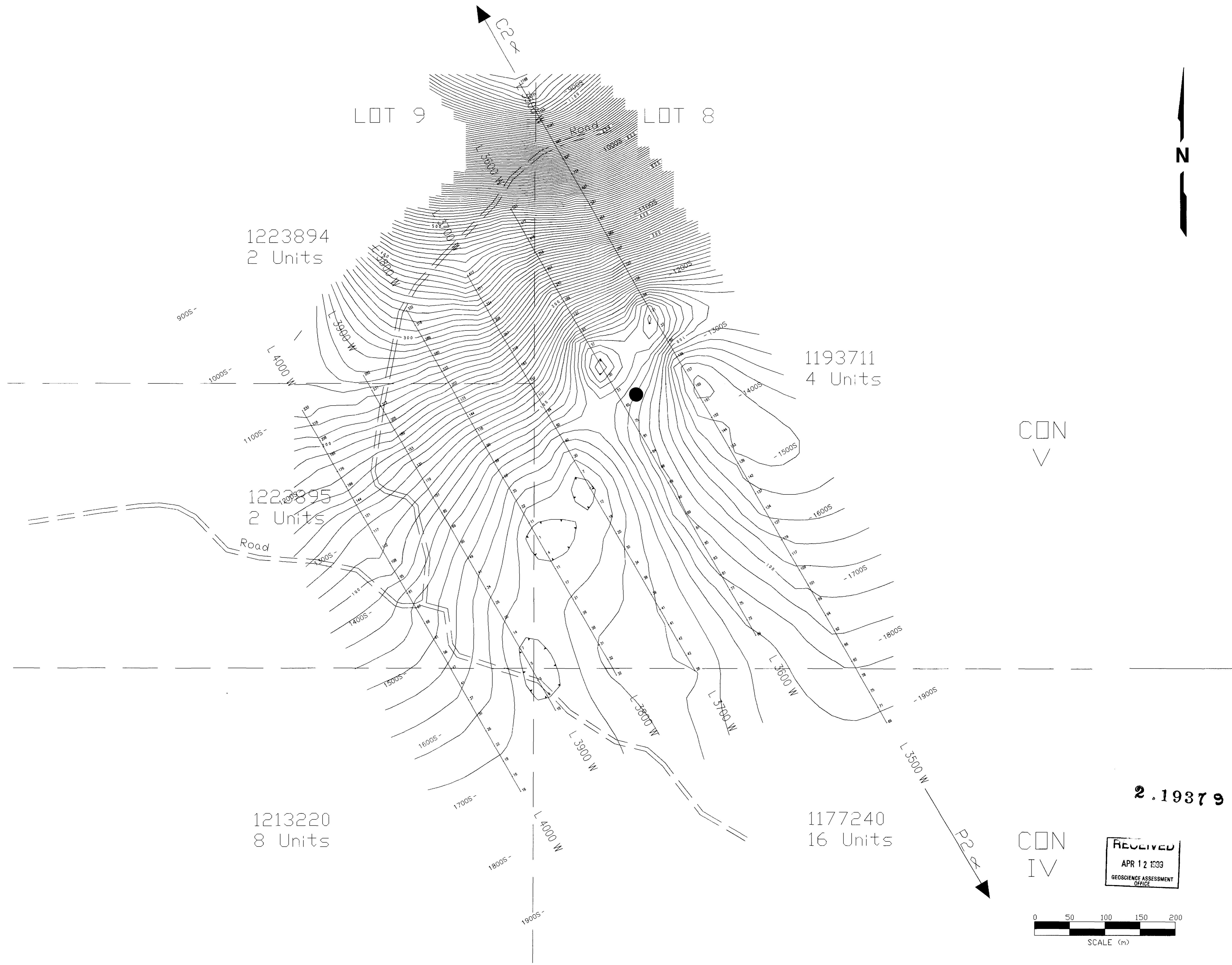
(O) THIS TWP IS SUBJECT TO FOREST ACTIVITY IN 1995/96. FURTHER INFORMATION AVAILABLE ON FILE.

TOWNSHIP  
**SHERATON**  
MNR ADMINISTRATIVE DISTRICT  
**TIMMINS**  
MINING DIVISION  
PORCUPINE  
LAND TITLES/REGISTRY DIVISION  
**COCHRANE**

Ministry of Natural Resources  
Ministry of Northern Development and Mines

By AC out 2/11/08  
88  
G-3971

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

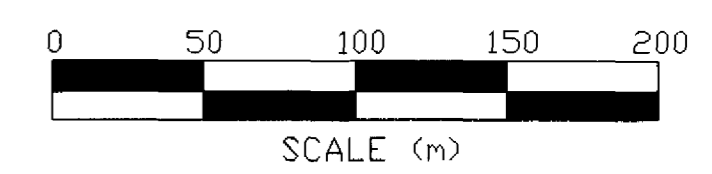


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**LEGEND**  
 Receiver: BRGM IP-4  
 Transmitter: Terraplus Inc. VIP-3000 3.5Kw gen.  
 Current Injection: L3490mW/1600mS (377.3m in hole)  
 Conductor Zone:  
 Contour Interval: 0,10,20,30,40,50,60,.....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 2 amp



● -Approx. Surface Expression  
of C1, DDH CLS97-32

	<b>EXSICS EXPLORATION LTD.</b>		
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT: CROSS LAKE MINERALS LTD.			
PROPERTY: SHERATON TWP.			
TITLE: GRID A <b>MISE-A-LA-MASSE SURFACE SURVEY</b>			
Date: Mar. 1998	Scale: 1:2500	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313	

LOT 9

LOT 8

1223894  
2 Units

1193711  
4 Units

1223895  
2 Units

1213220  
8 Units

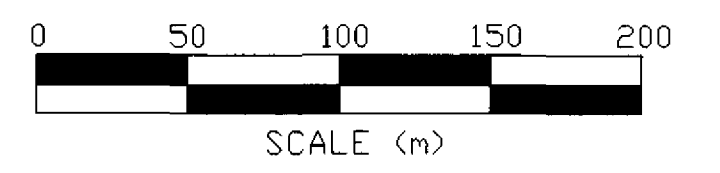
1177240  
16 Units

CON  
V

CON  
IV

2-19879

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GEOSCIENCE ASSESSMENT  
OFFICE



SCALE (m)

**LEGEND**  
Receiver: BRGM IP-4  
Transmitter: Terraplus Inc. VIP-3000 3.5kw gen.  
Current Injection: L3490mW/1600mS (377.3m in hole)  
Conductor Zone:  
Contour Interval: 0,10,20,30,40,50,60,.....  
Reading Interval: 25m  
Plotting Values: Potential (mv)  
Current: 2 amp



● -Approx. Surface Expression  
of C1, DDH CLS97-32

	EXSICS EXPLORATION LTD.	
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg. Timmins Ont. Telephone: 705-267-4151	
CLIENT:	CROSS LAKE MINERALS LTD.	
PROPERTY:	SHERATON TWP.	
TITLE:	GRID B MISE-A-LA-MASSE SURFACE SURVEY	
Date: Mar. 1998	Scale: 1:2500	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313



L 3500 W  
C2

LOT 9

LOT 8

1223894  
2 Units

1193711  
4 Units

1223895  
2 Units

Road

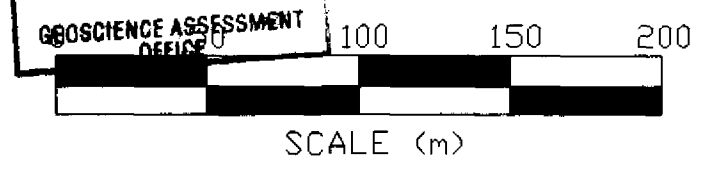
1213220  
8 Units

1177240  
16 Units

CON  
V

CON  
IV

RECEIVED  
APR 12 1998  
GEOSCIENCE ASSESSMENT  
DIVISION



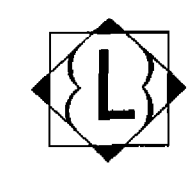
SCALE (m)

**LEGEND**  
 Receiver: BRGM IP-4  
 Transmitter: Terraplus Inc. VIP-3000 3.5Kw gen.  
 Current Injection: L3490mW/1600mS (377.3 in hole)  
 Conductor Zone:  
 Contour Interval: 0,10,20,30,40,50,60,.....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 2 amp



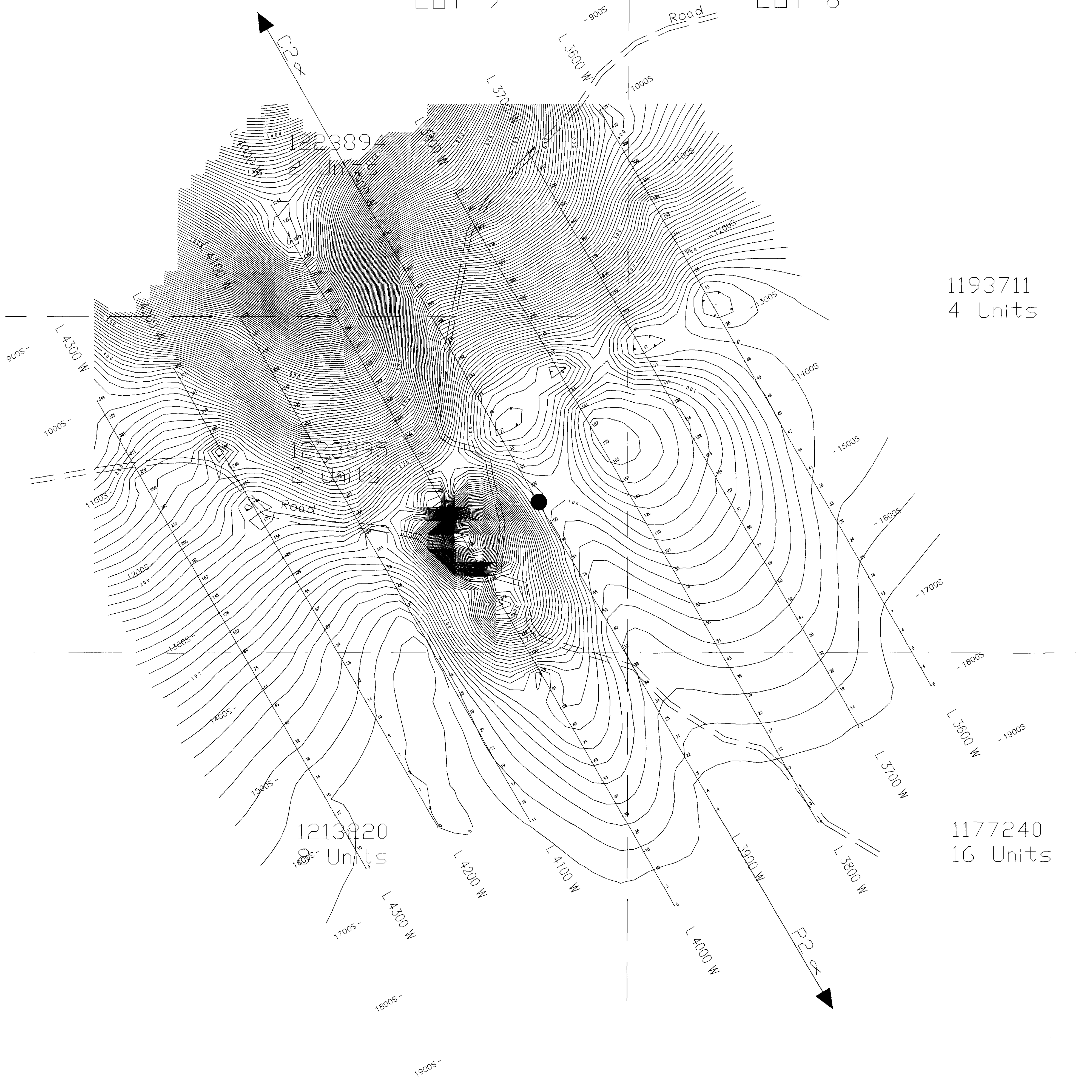
42A07NE2012 2-19379 SHERATON 230

● -Approx. Surface Expression  
of C1, DDH CLS97-32

		EXSICS EXPLORATION LTD. P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151	
CLIENT:		CROSS LAKE MINERALS LTD.	
PROPERTY:		SHERATON TWP.	
TITLE:		GRID A,B COMBINED MISE-A-LA-MASSE SURFACE SURVEY	
Date: Mar. 1998	Scale: 1:2500	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.:	E-313

LOT 9

LOT 8



1193711  
4 Units

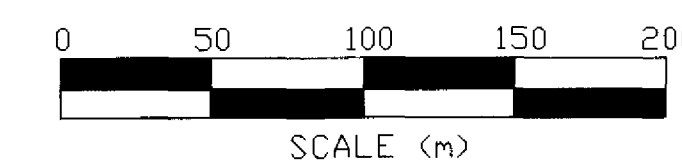
CON  
V

1213220  
8 Units

1177240  
16 Units

CON  
IV

RECEIVED  
APR 12 1998  
GEOSCIENCE ASSESSMENT  
OFFICE



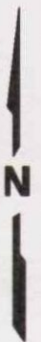
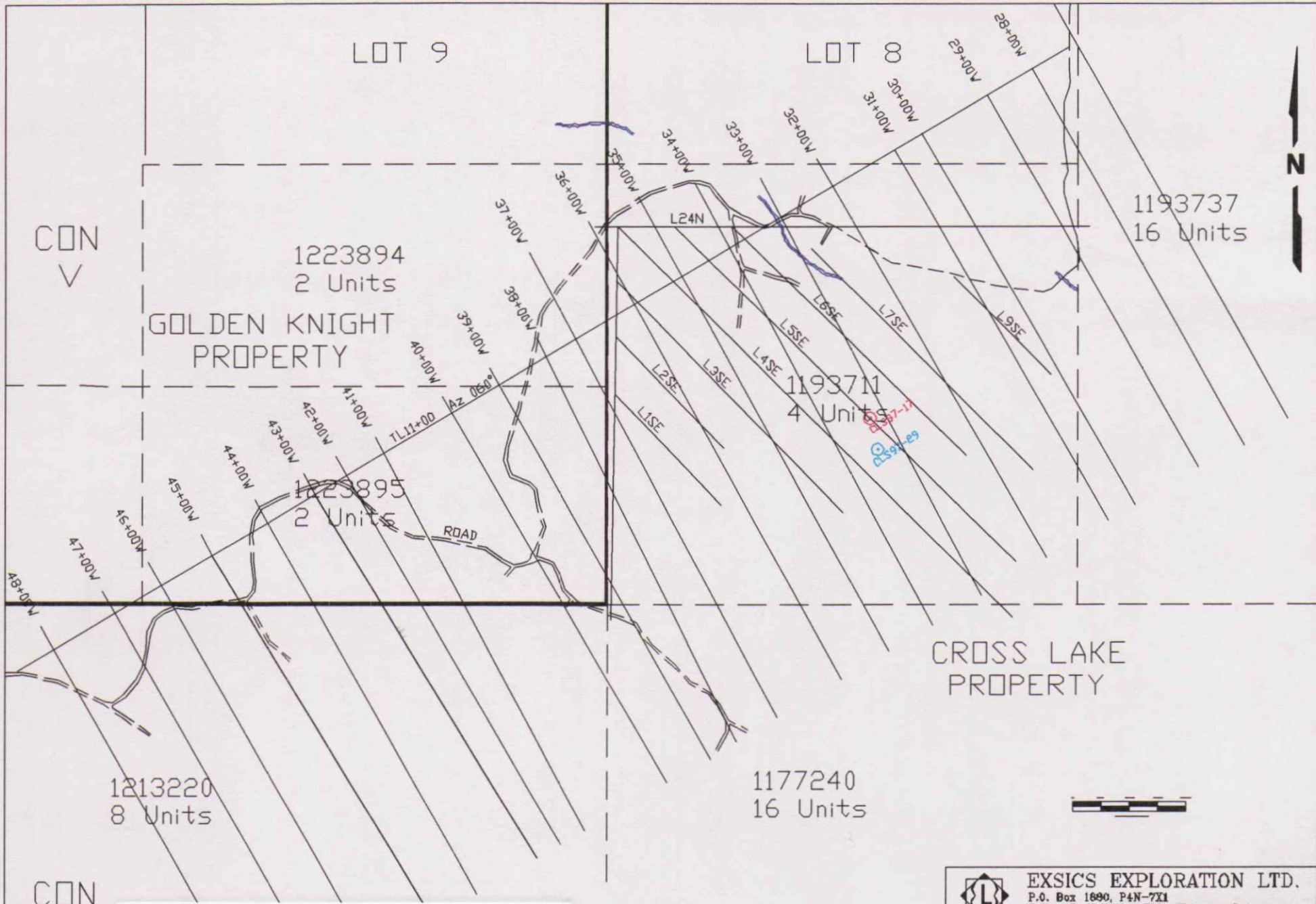
**LEGEND**  
 Receiver: BRGM IP-4  
 Transmitter: TerraPlus Inc. VIP-3000 3.5Kw gen.  
 Current Injection: L3900mW/1650mS (382m in hole)  
 Conductor Zone:  
 Contour Interval: 0,10,20,30,40,50,60,.....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 1.5 amp



● -Surface Expression  
of C1, DDH CLS97-27



	EXSICS EXPLORATION LTD.		
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT:	CROSS LAKE MINERALS LTD.		
PROPERTY:	SHERATON TWP.		
TITLE:	MISE-A-LA-MASSE SURFACE SURVEY		
Date: Jan. 1998	Scale: 1:2500	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-292	






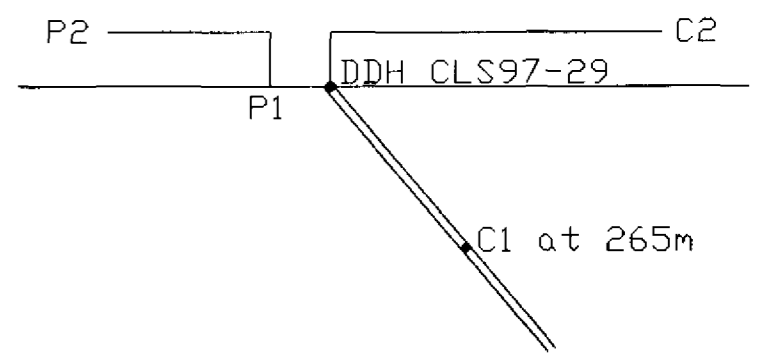
42A07NE2012 2.19379 SHERATON 250

LEGEND

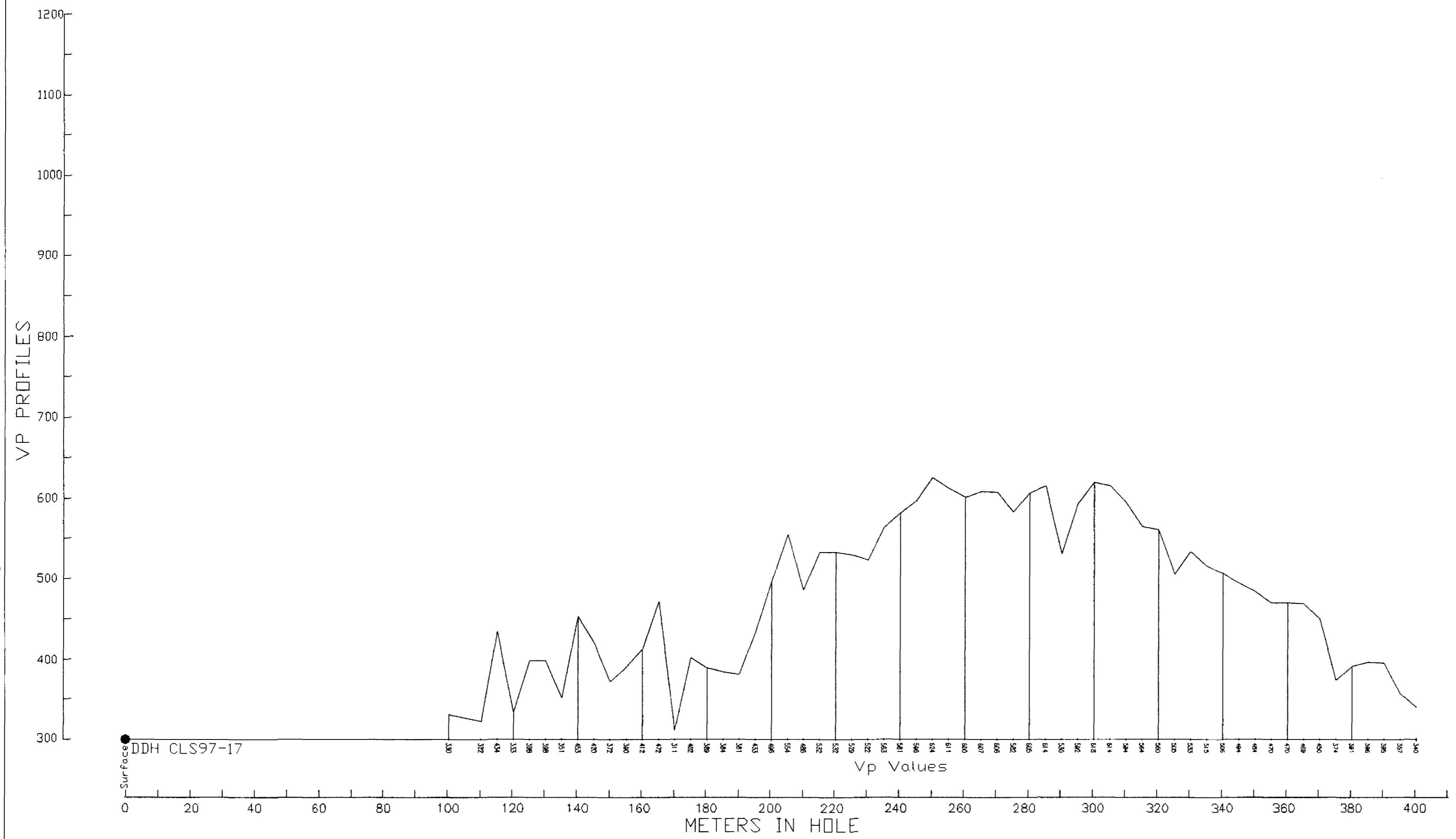
-  CLS97-29 CURRENT INJECTION HOLES
-  CLS97-17 HOLES COMPLETED

 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1690, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 706-287-4151		
CLIENT: CROSS LAKE MINERALS LTD.		
PROPERTY: SHERATON TWP.		
TITLE: DRILL COLLAR LOCATION		
FOR MISE-A-LA-MASSE 1998 SURVEY		
HOLES READ WITH CURRENT IN HOLE CLS97-29		
Date: April 1998	Scale:	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313

# HOLE CLS97-17



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: **CROSS LAKE MINERALS LTD.**

PROPERTY: **SHERATON TWP.**

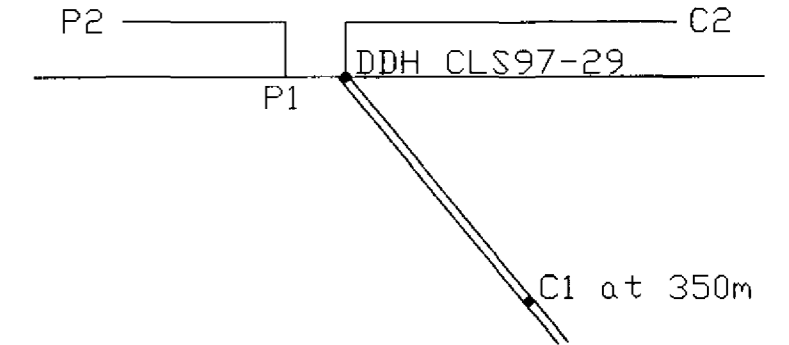
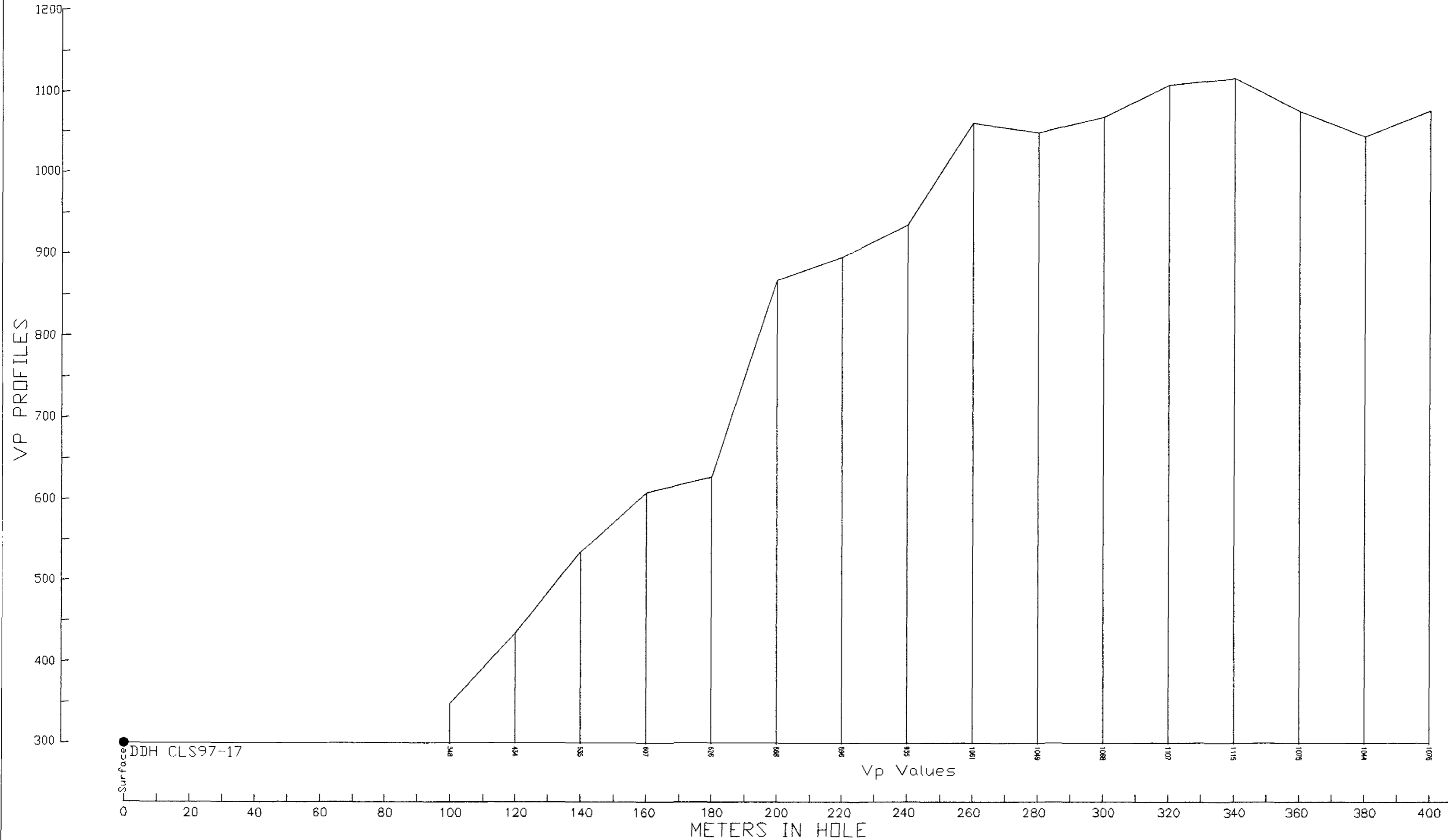
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

**CHARGE IN HOLE CLS97-29 AT 265m**

Profile Scale: 1cm=40%	Profile Base: 300 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292

42A07NE2012 2.19379 SHERATON 260

# HOLE CLS97-17



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-29 AT 350m

Profile Scale: 1cm=40% | Profile Base: 300 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P. Gauthier | Interp: J.C. Grant | Job No.: E-292

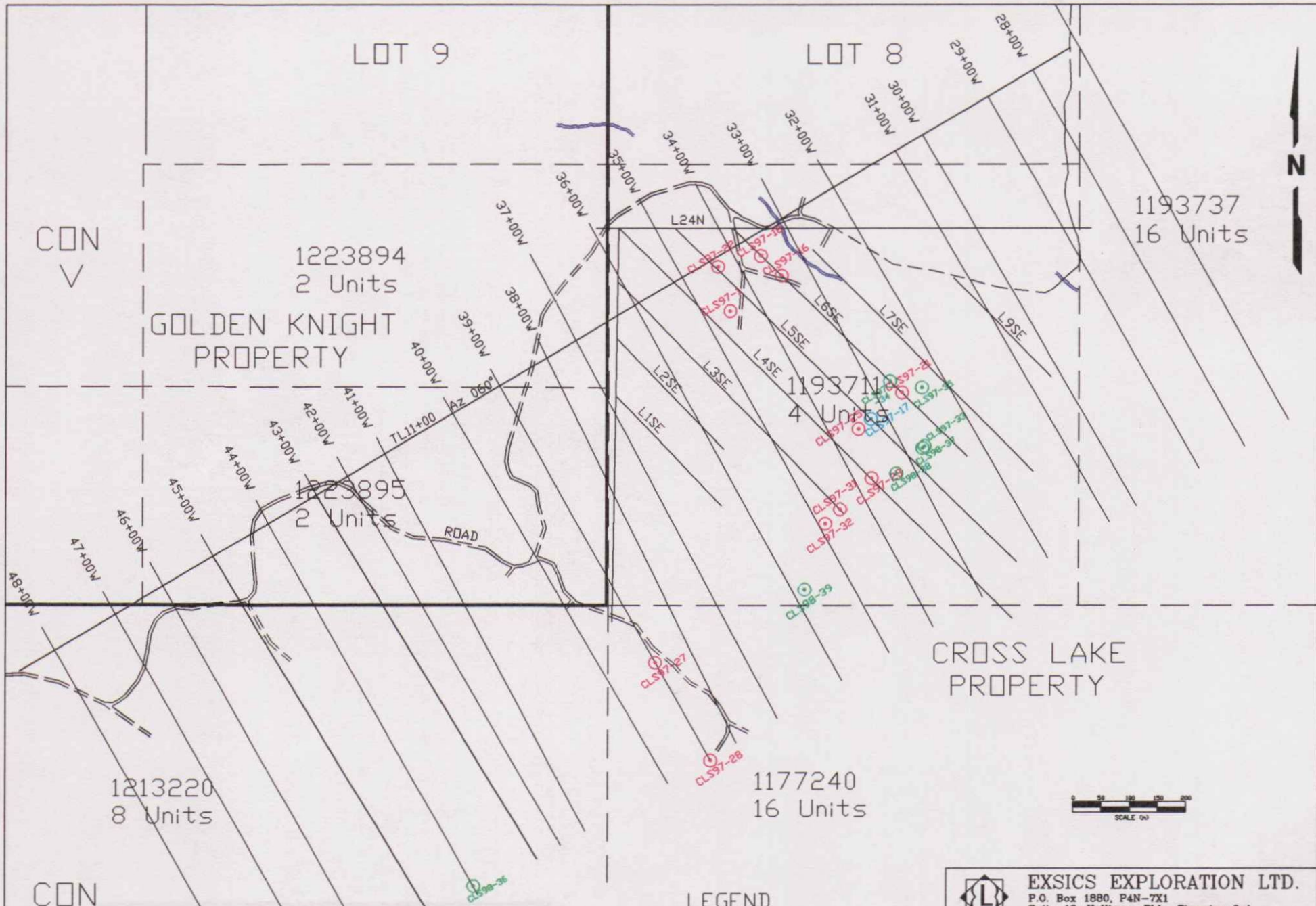
270

SHERATON

2.19379

42A07NE2012





**LEGEND**

- ⊙ CLS97-17 CURRENT INJECTION HOLES
- ⊙ CLS97-28 HOLES COMPLETED
- ⊙ CLS98-36 HOLES IN PROGRESS

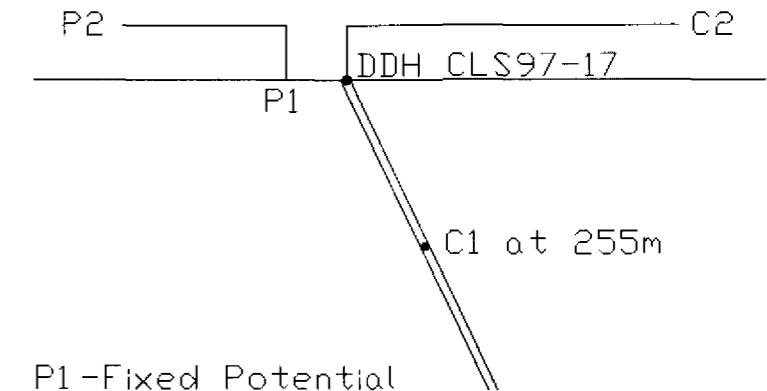
	<b>EXSICS EXPLORATION LTD.</b>	
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151	
CLIENT: CROSS LAKE MINERALS LTD.		
PROPERTY: SHERATON TWP.		
TITLE: DRILL COLAR LOCATION FOR MISE-A-LA-MASSE 1998 SURVEY		
HOLES READ AND TO BE READ WITH CURRENT IN HOLE CLS97-17		
Date: April 1998	Scale:	NTS:
Drawn: P. Gauthier	Interp: J.C. Grant	Job No.: E-313



CON  
V

CON  
IV

# HOLE CLS97-1



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

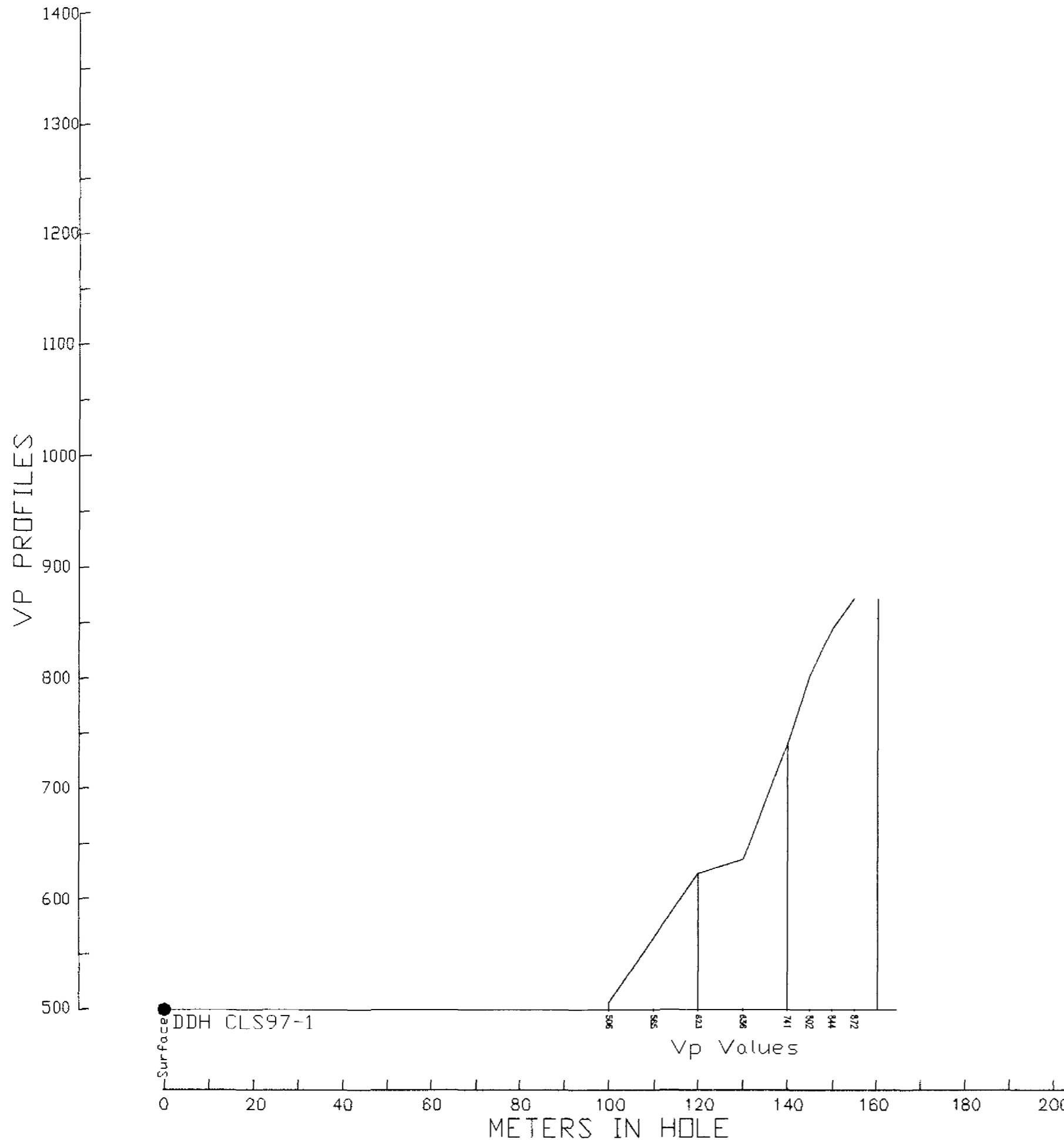
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

**CHARGE IN HOLE CLS97-17 AT 255m**

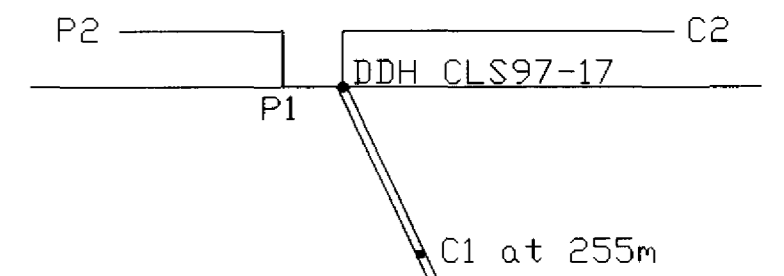
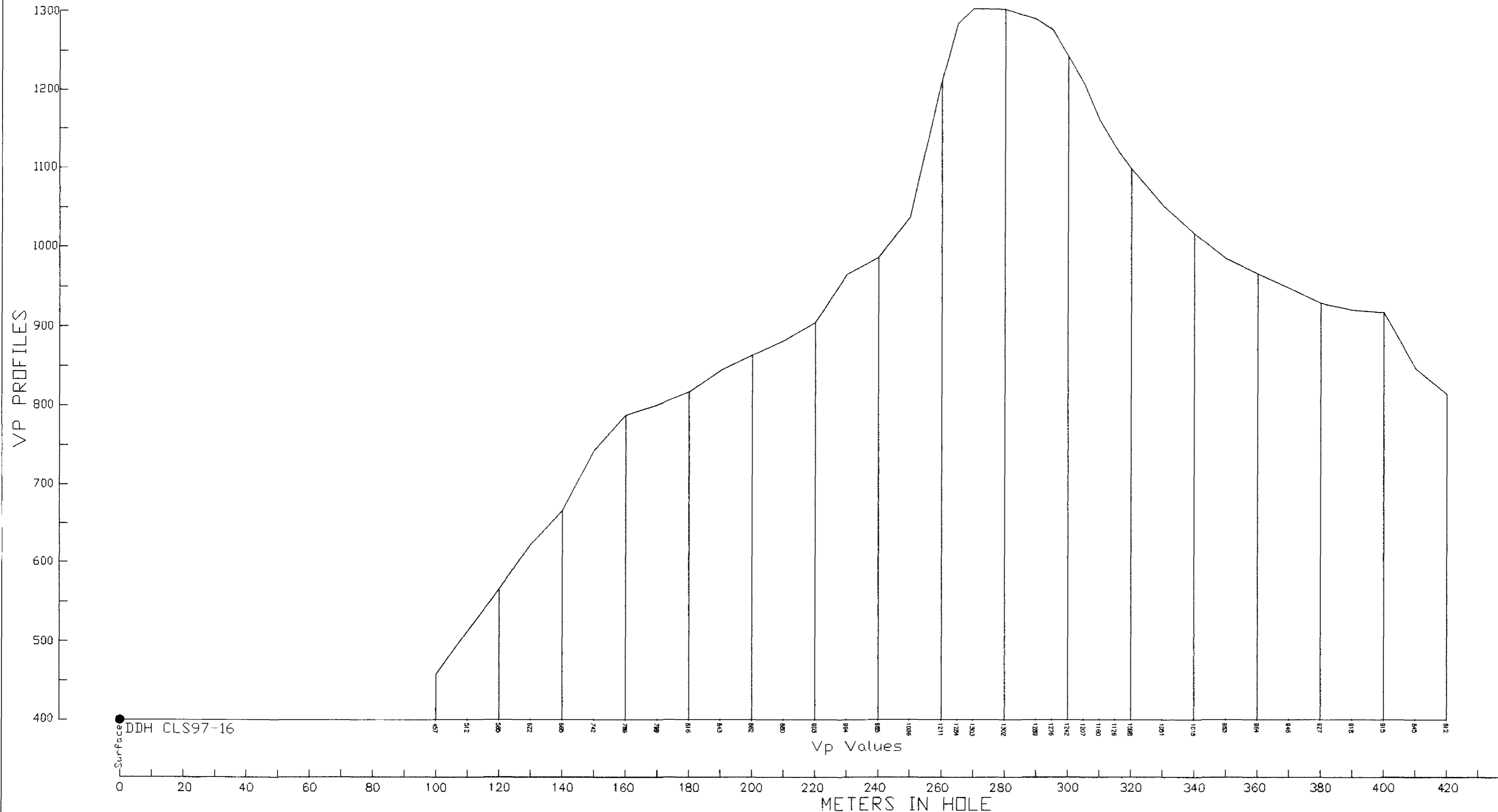
Profile Scale: 1cm=40% | Profile Base: 500 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P. Gauthier | Interp: J.C. Grant | Job No.: E-292



# HOLE CLS97-16



P1-Fixed Potential  
P2-Moving Potential  
C1-Charge Electrode  
C2-Infinity Electrode

42A07NE2012 2.19379 SHERATON 300

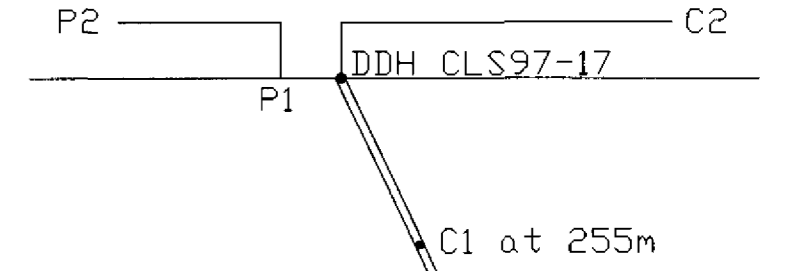
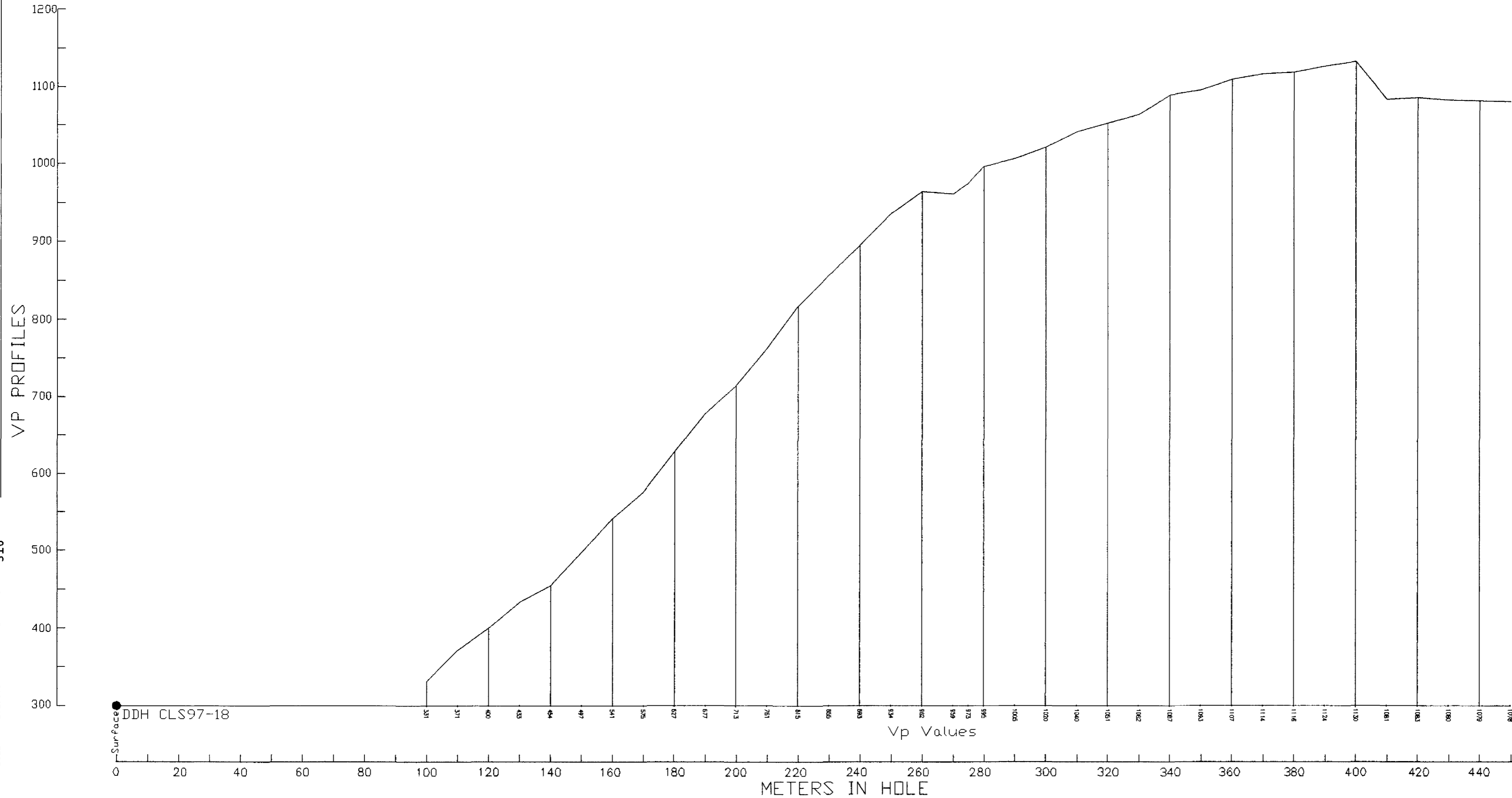
**EXSICS EXPLORATION LTD.**  
P.O. Box 1880, P4N-7X1  
Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.  
PROPERTY: SHERATON TWP.

TITLE:  
**DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m  
Profile Scale: 1cm=40% Profile Base: 400 V.P.  
Date: Jan. 1998 Scale: 1:1000 NTS:  
Drawn: P.Gauthier Interp: J.C.Grant Job No.: E-292

# HOLE CLS97-18



P1-Fixed Potential  
P2-Moving Potential  
C1-Charge Electrode  
C2-Infinity Electrode



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Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

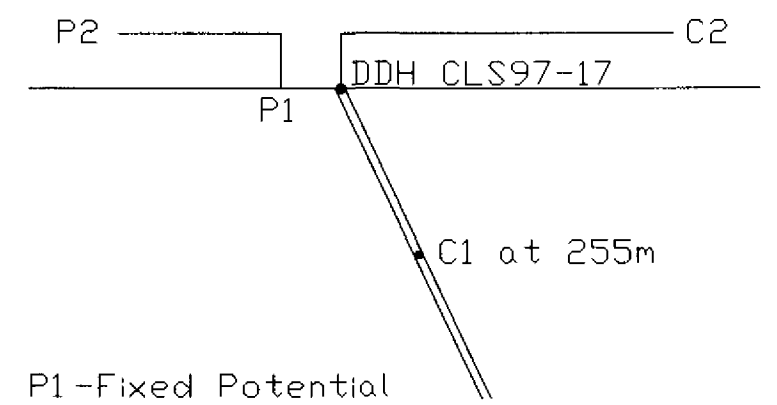
TITLE:  
**DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

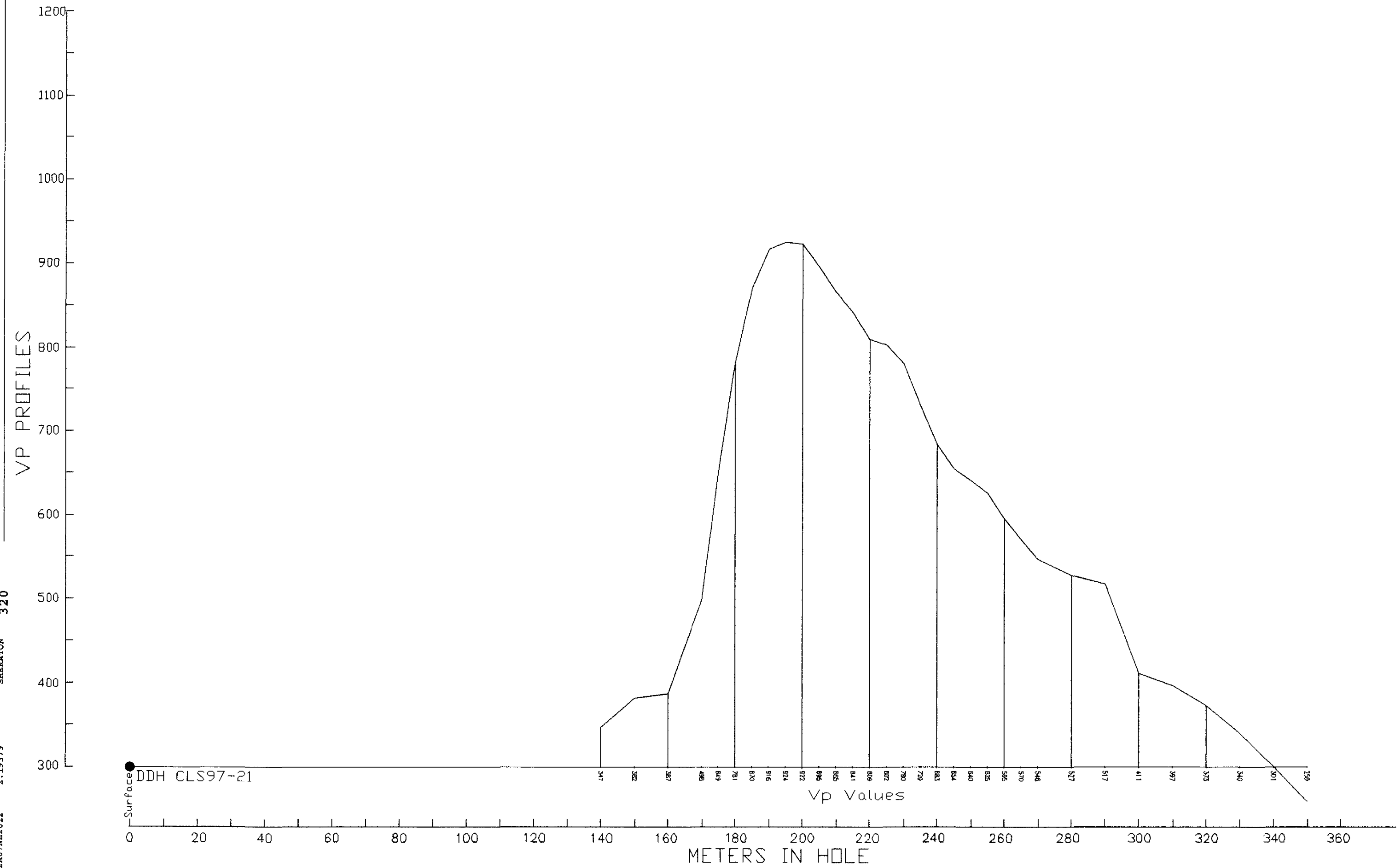
Profile Scale: 1cm=40%	Profile Base: 300 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P. Gauthier	Interp: J.C. Grant
	Job No.: E-292

42A07NE2012 2.119379 SHERATON 310


# HOLE CLS97-21



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



42A07NE2012 2.19379 SHERATON 320

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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

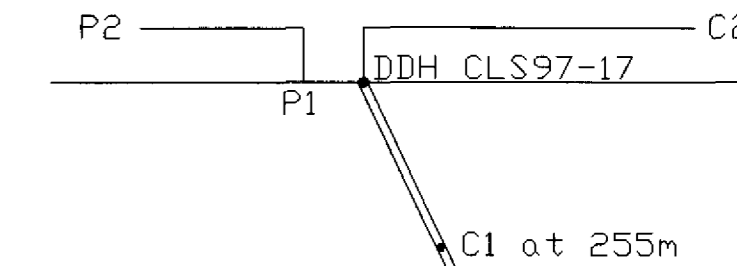
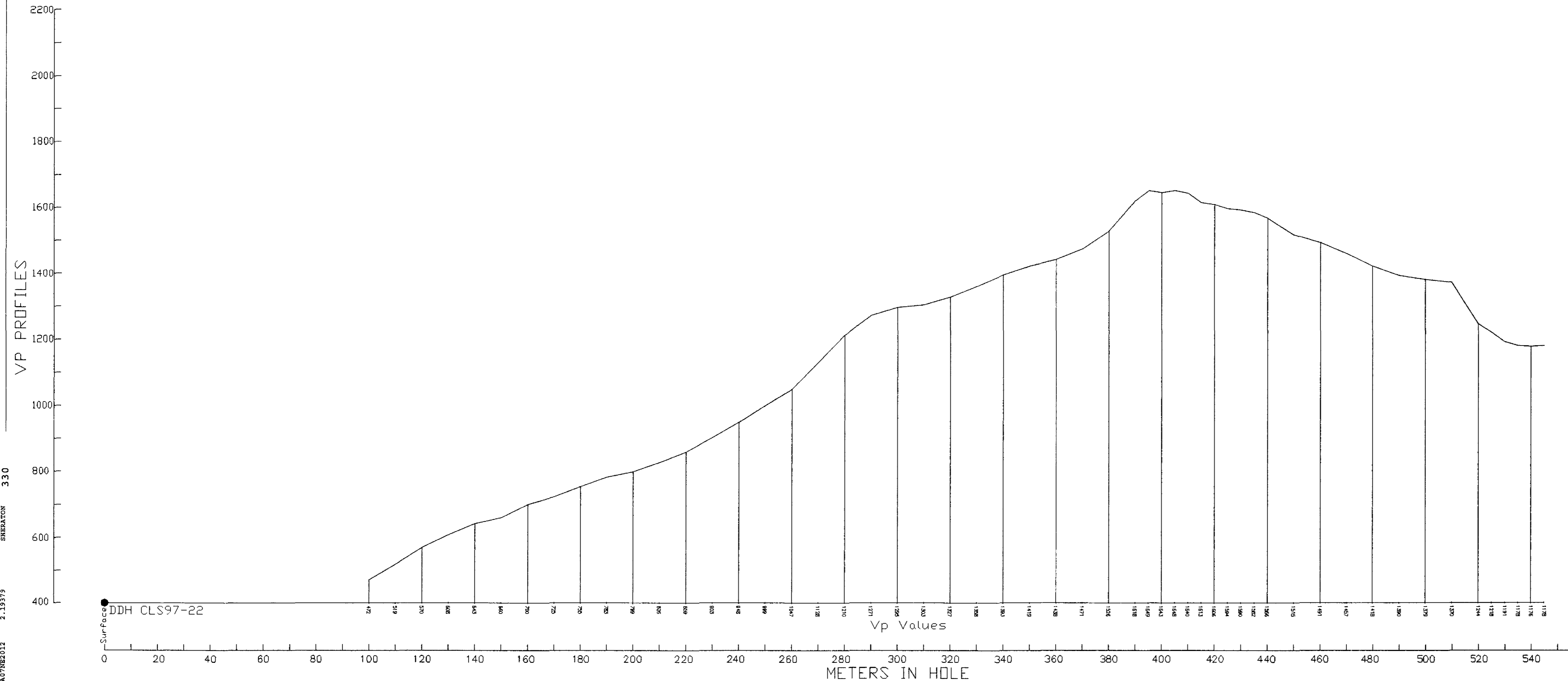
Profile Scale: 1cm=40% | Profile Base: 300 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P. Gauthier | Interp: J.C. Grant | Job No.: E-292



# HOLE CLS97-22



**EXSICS EXPLORATION LTD.**  
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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.  
 PROPERTY: SHERATON TWP.

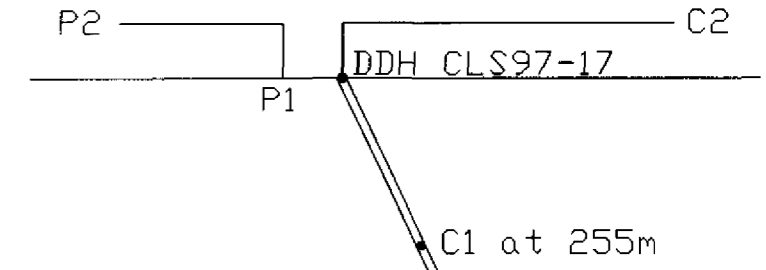
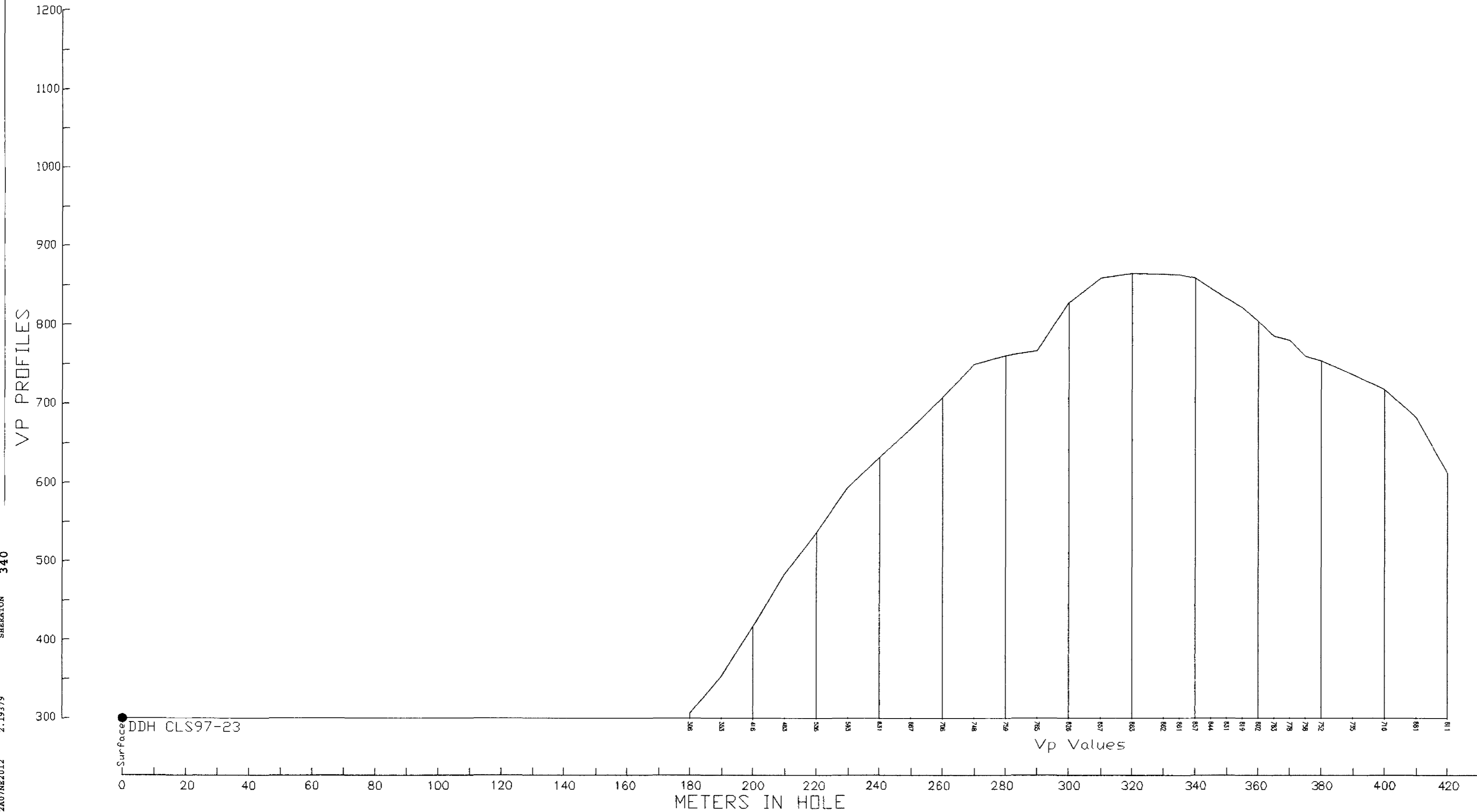
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

Profile Scale: 1cm=80%	Profile Base: 400 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292

42A07NE2012 2.19379 SHERATON 330

# HOLE CLS97-23



P1 - Fixed Potential  
 P2 - Moving Potential  
 C1 - Charge Electrode  
 C2 - Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

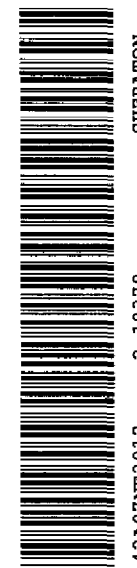
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

Profile Scale: 1cm=40% | Profile Base: 300 V.P.

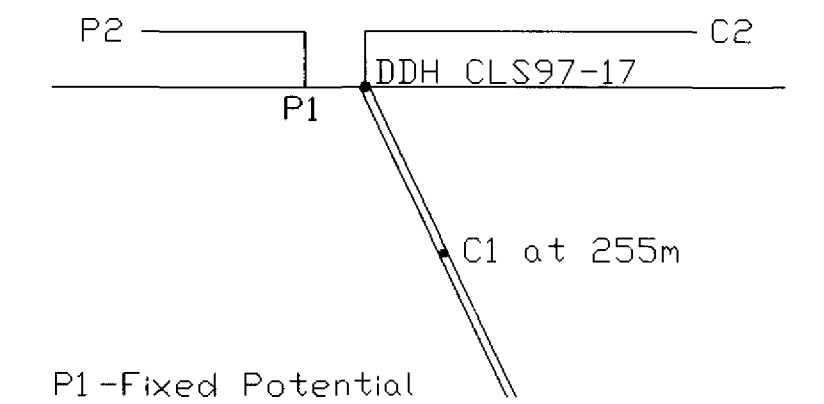
Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P. Gauthier | Interp: J.C. Grant | Job No.: E-292





# HOLE CLS97-27



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

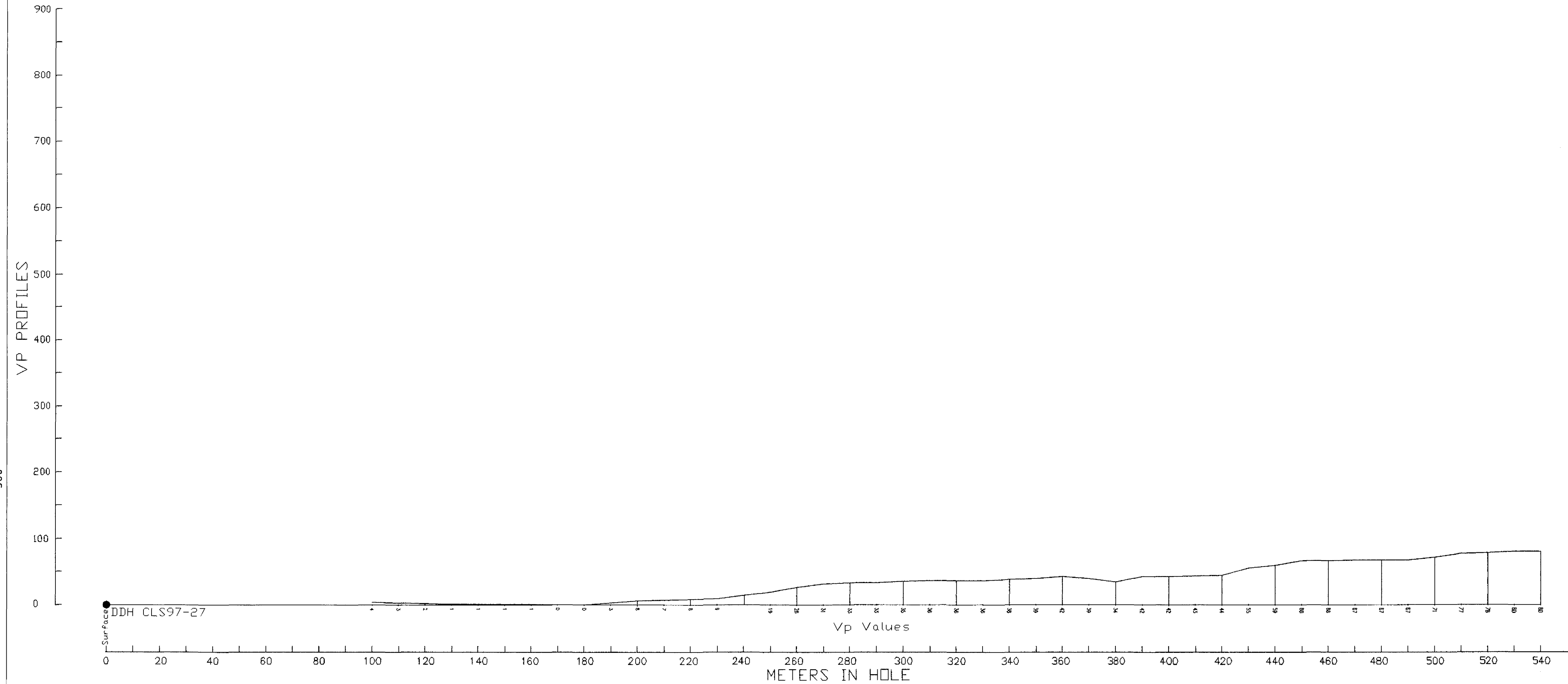
CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

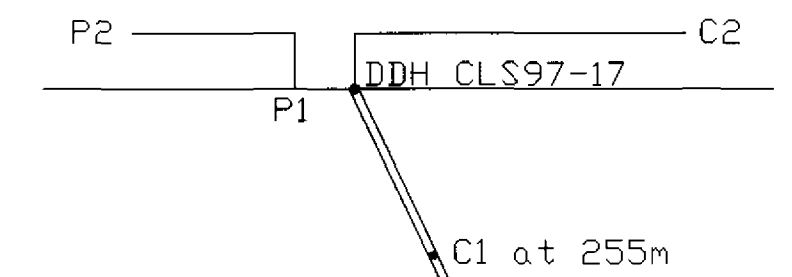
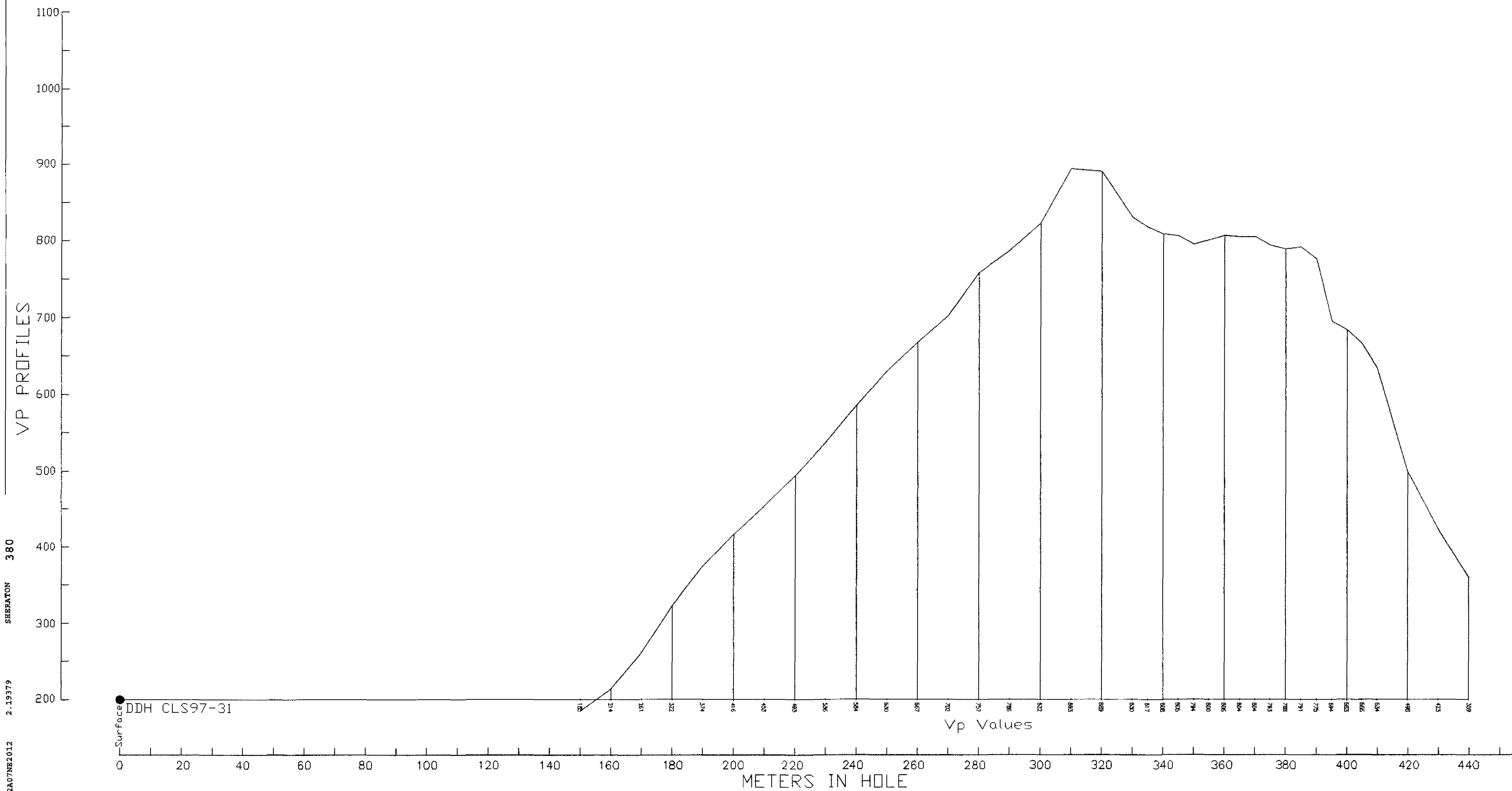
Profile Scale: 1cm=40%	Profile Base: 0 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292



42A07NE2012 2.19379 SHERATON 360



# HOLE CLS97-31



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode

42307NE2012 2.19379 SHERATON 380



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

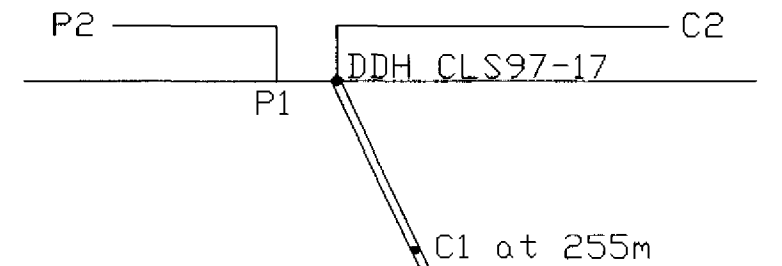
CLIENT: **CROSS LAKE MINERALS LTD.**  
 PROPERTY: **SHERATON TWP.**

TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

Profile Scale: 1cm=40%	Profile Base: 200 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292

# HOLE CLS97-32



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**

P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 255m

Profile Scale: 1cm=40% | Profile Base: 100 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-292

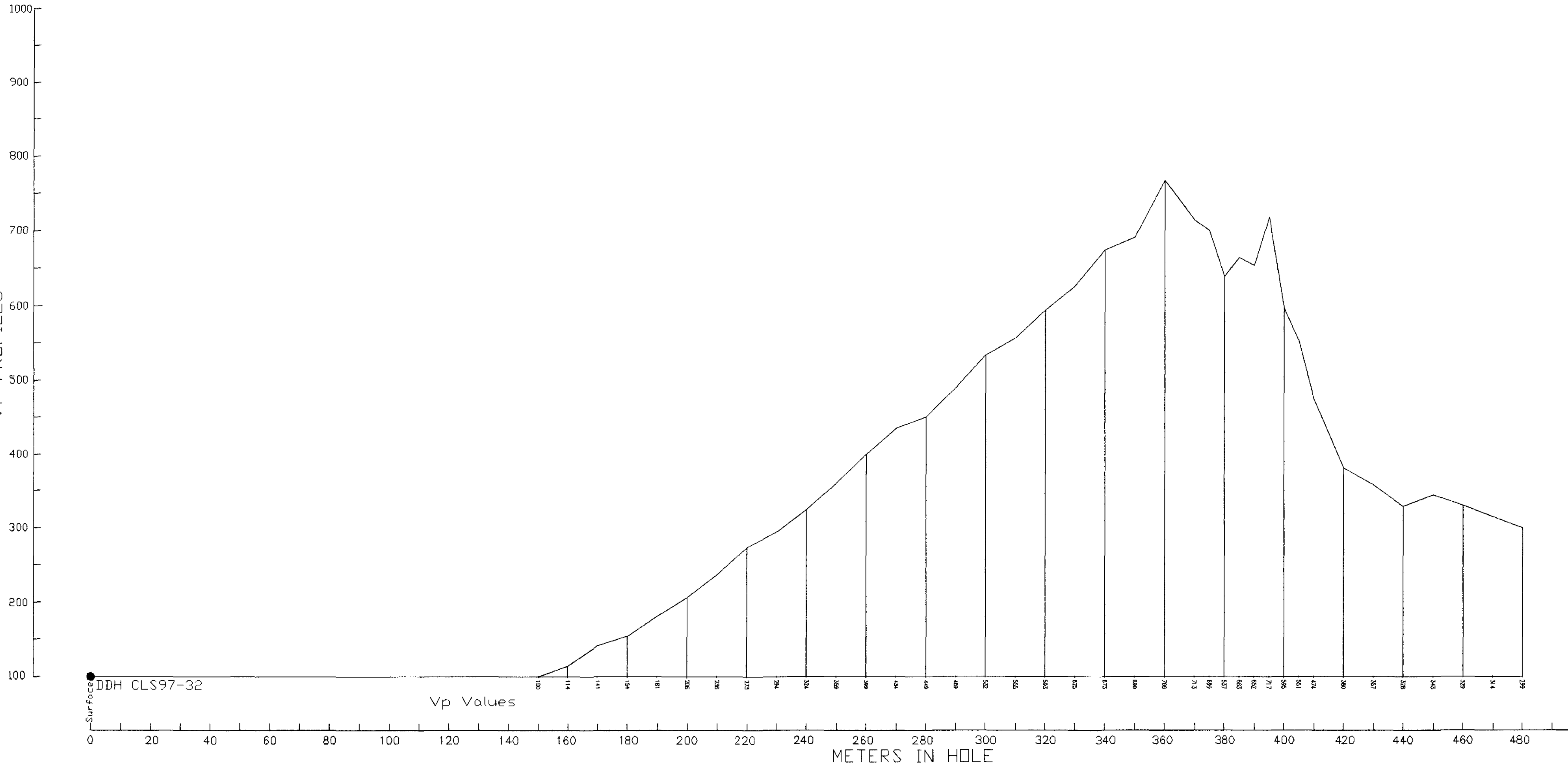
VP PROFILES

390

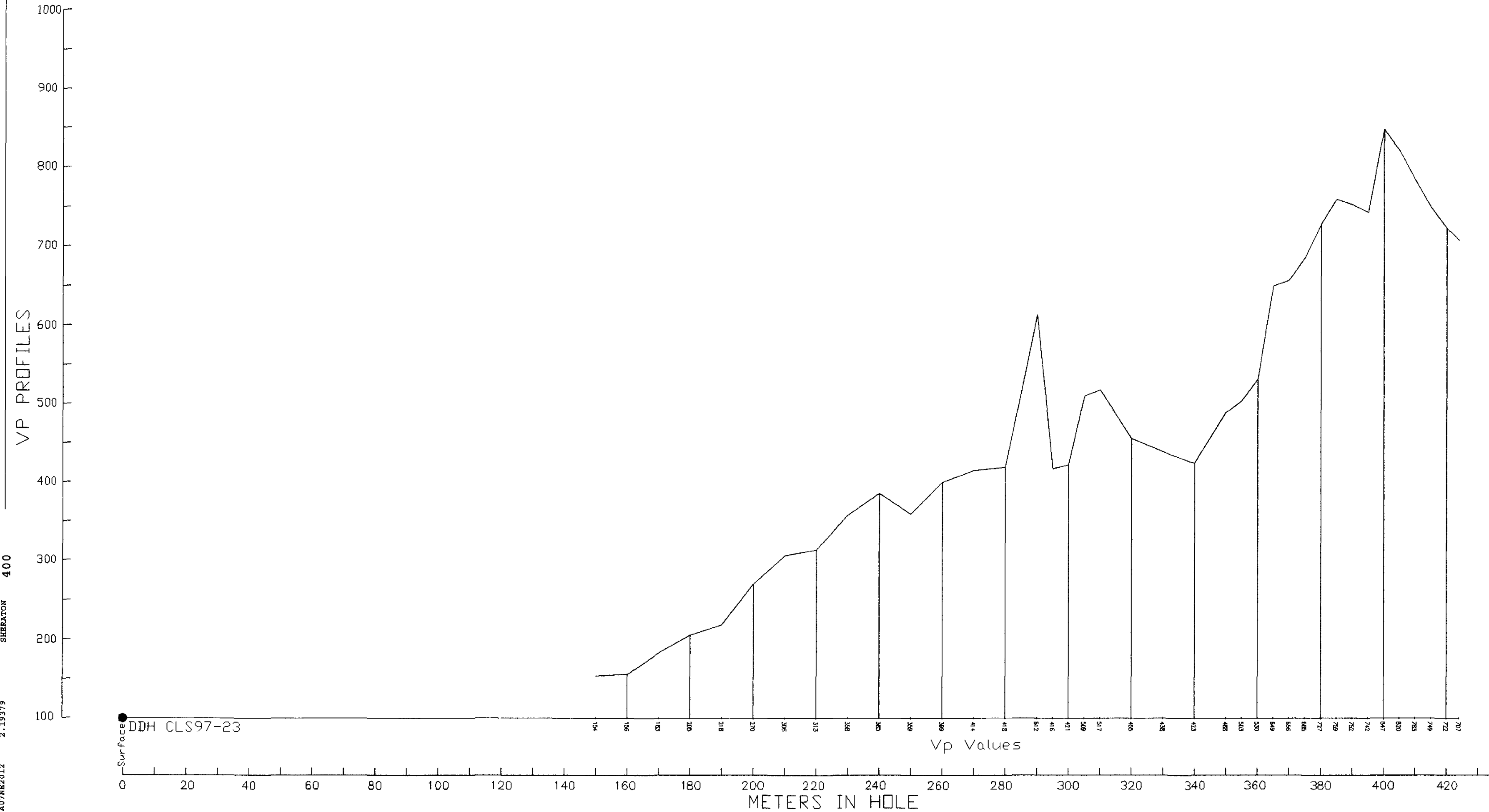
2.19379

42A07N82012

SHERATON



# HOLE CLS97-23



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 355m

Profile Scale: 1cm=40%	Profile Base: 100 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292



SHERATON 400

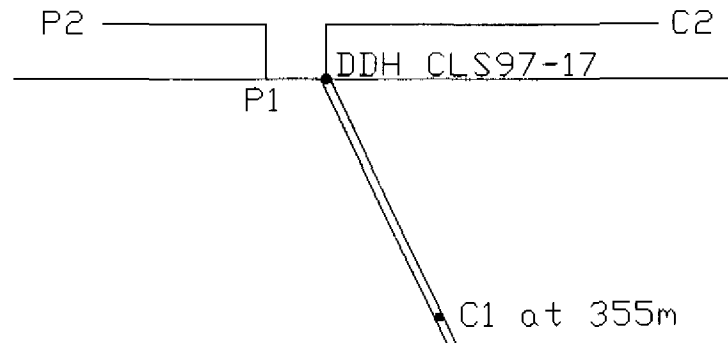
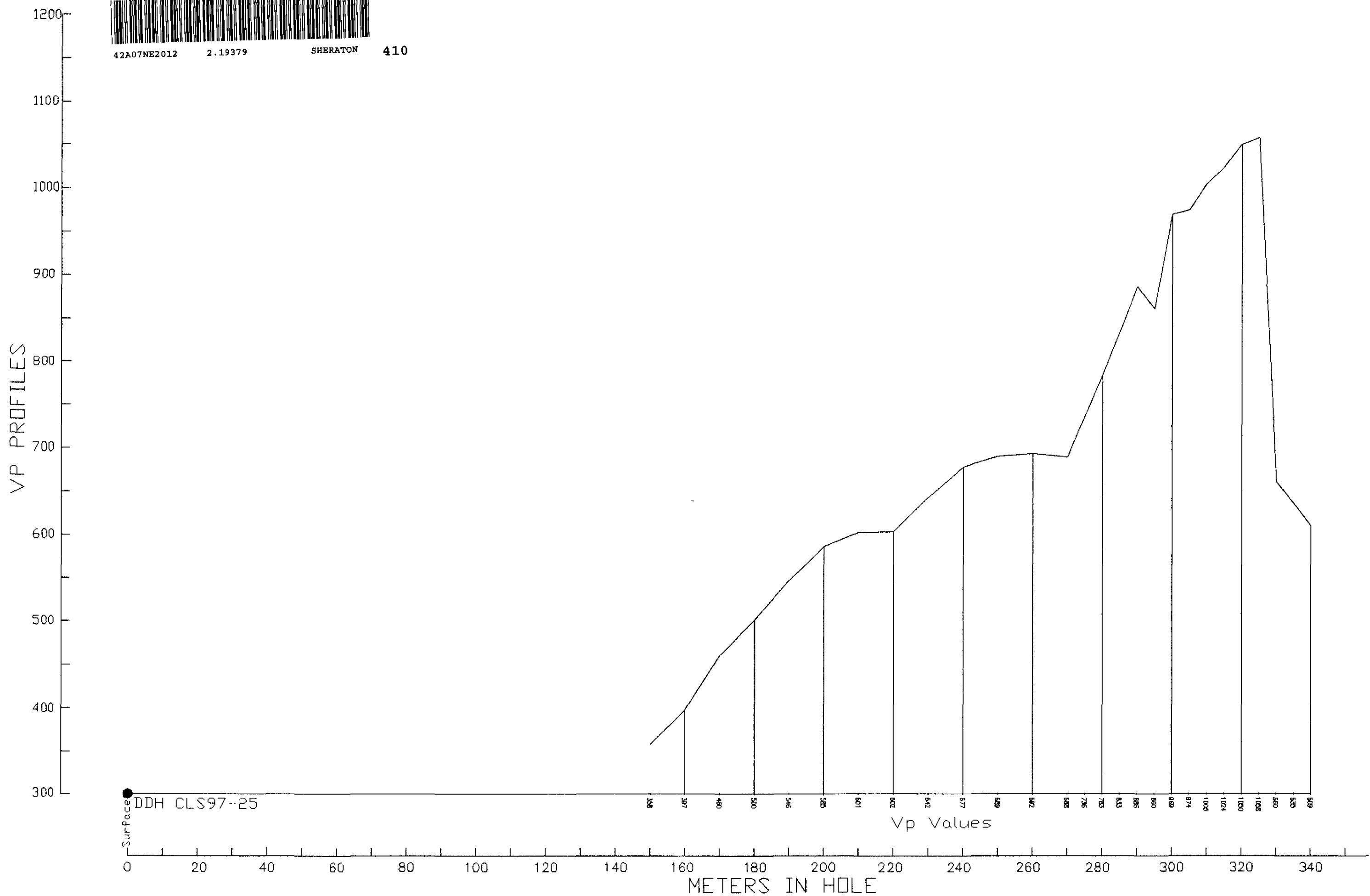
42A07NE2012 2.19379



# HOLE CLS97-25



42A07NE2012 2.19379 SHERATON 410



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode

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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

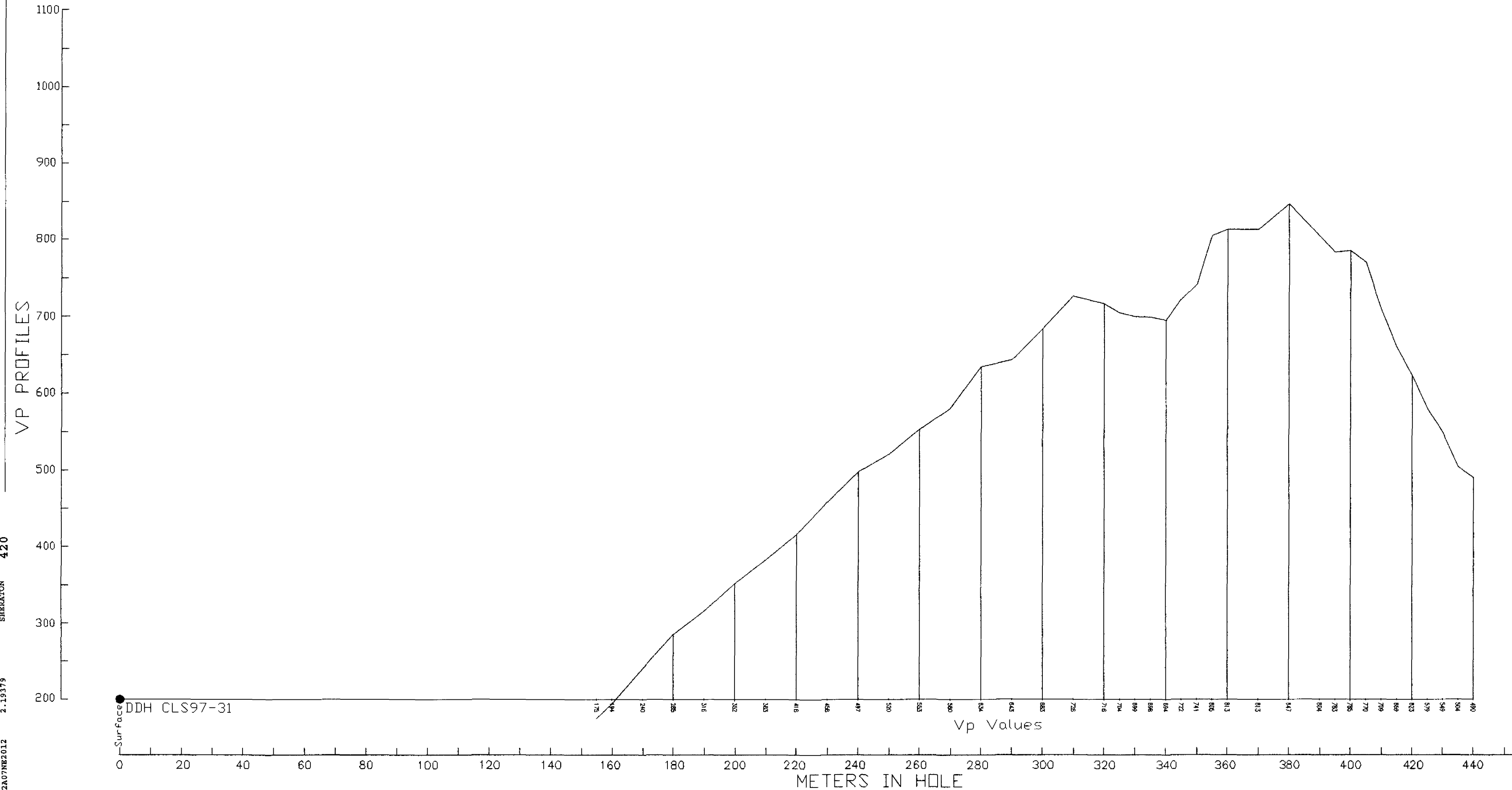
PROPERTY: SHERATON TWP.

TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-17 AT 355m

Profile Scale: 1cm=40%	Profile Base: 300 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
NTS:	Job No.: E-292

# HOLE CLS97-31



P1-Fixed Potential  
P2-Moving Potential  
C1-Charge Electrode  
C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**  
P.O. Box 1880, P4N-7X1  
Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 706-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

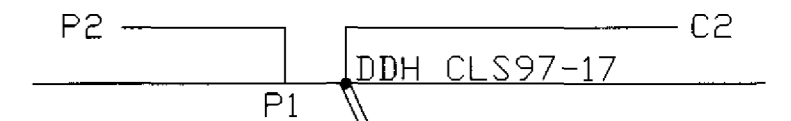
**DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY**

**CHARGE IN HOLE CLS97-17 AT 355m**

Profile Scale: 1cm=40%	Profile Base: 200 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292



# HOLE CLS97-32



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1680, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

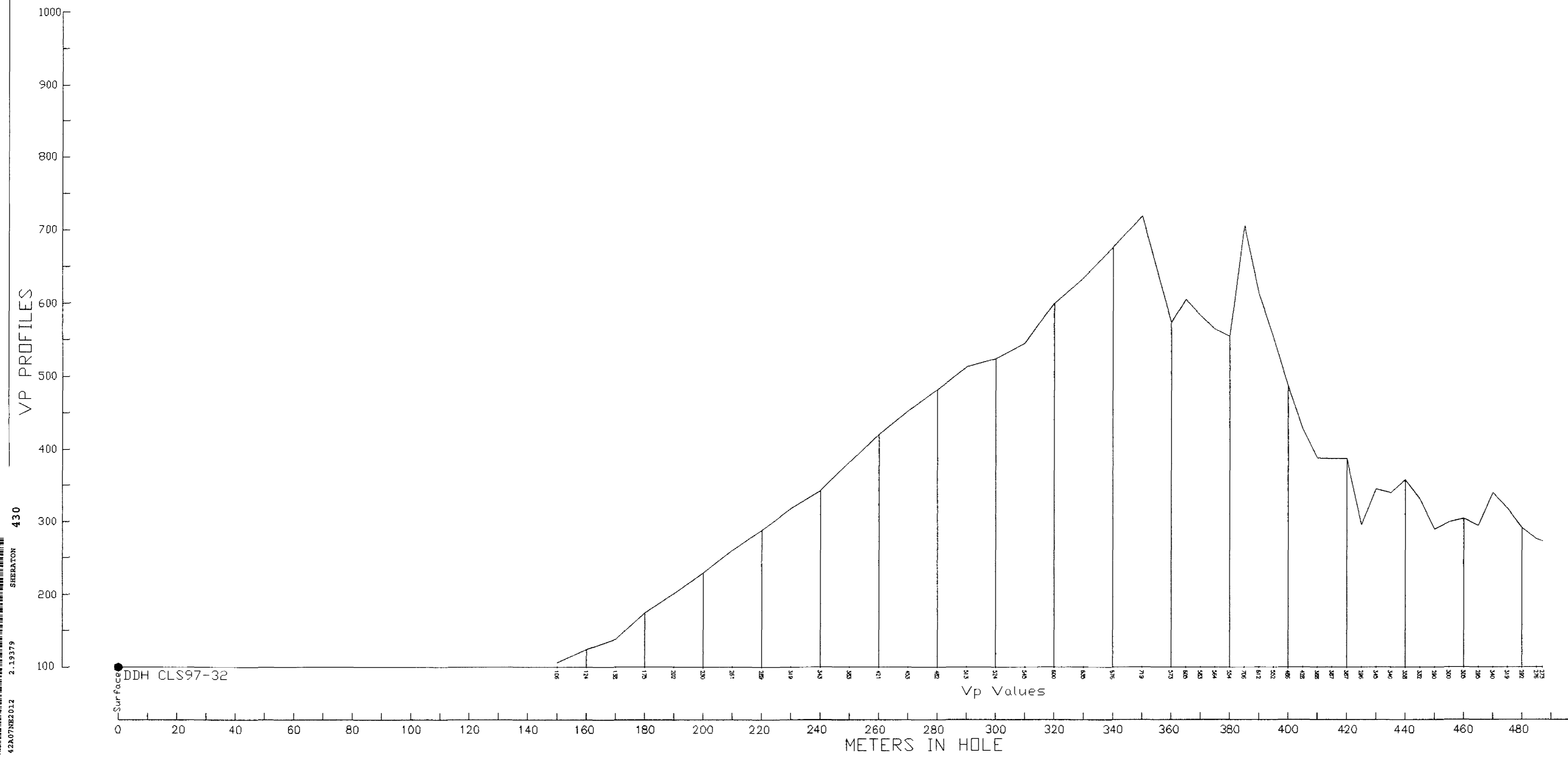
CLIENT: **CROSS LAKE MINERALS LTD.**

PROPERTY: **SHERATON TWP.**

TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

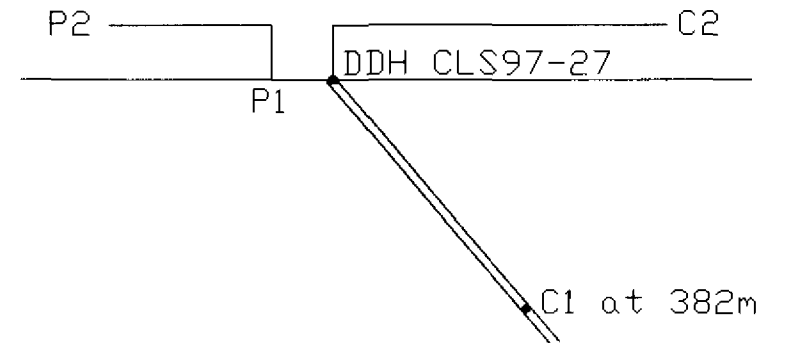
**CHARGE IN HOLE CLS97-17 AT 355m**

Profile Scale: 1cm=40%	Profile Base: 100 V.P.
Date: Jan. 1998	Scale: 1:1000 NTS:
Drawn: P.Gauthier	Interp: J.C.Grant Job No.: E-292



42A07NE2012 2.19379 SHERATON 430

# HOLE CLS97-6



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**

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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY

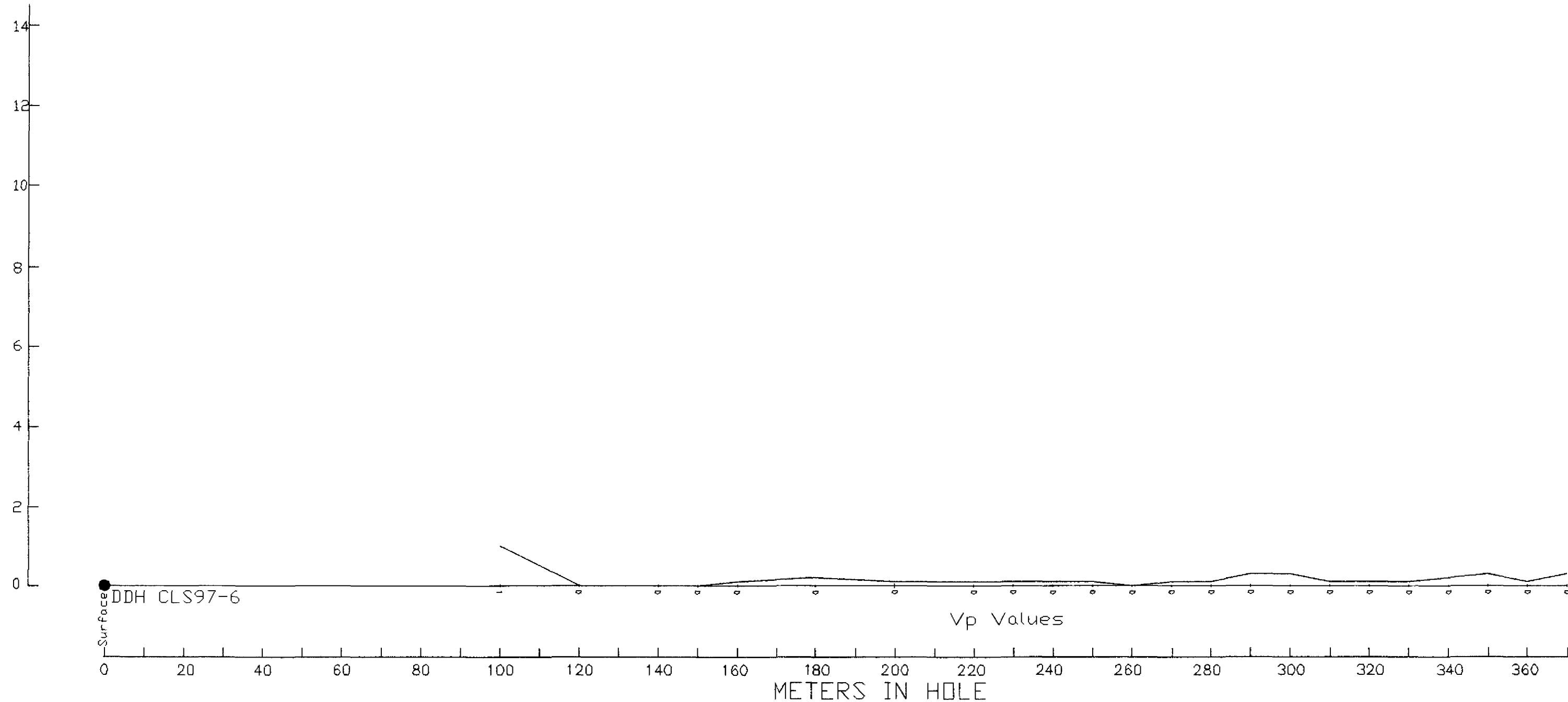
CHARGE IN HOLE CLS97-27 AT 382m

Profile Scale: 1cm=1% | Profile Base: 0 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

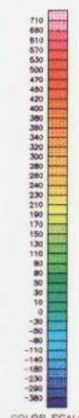
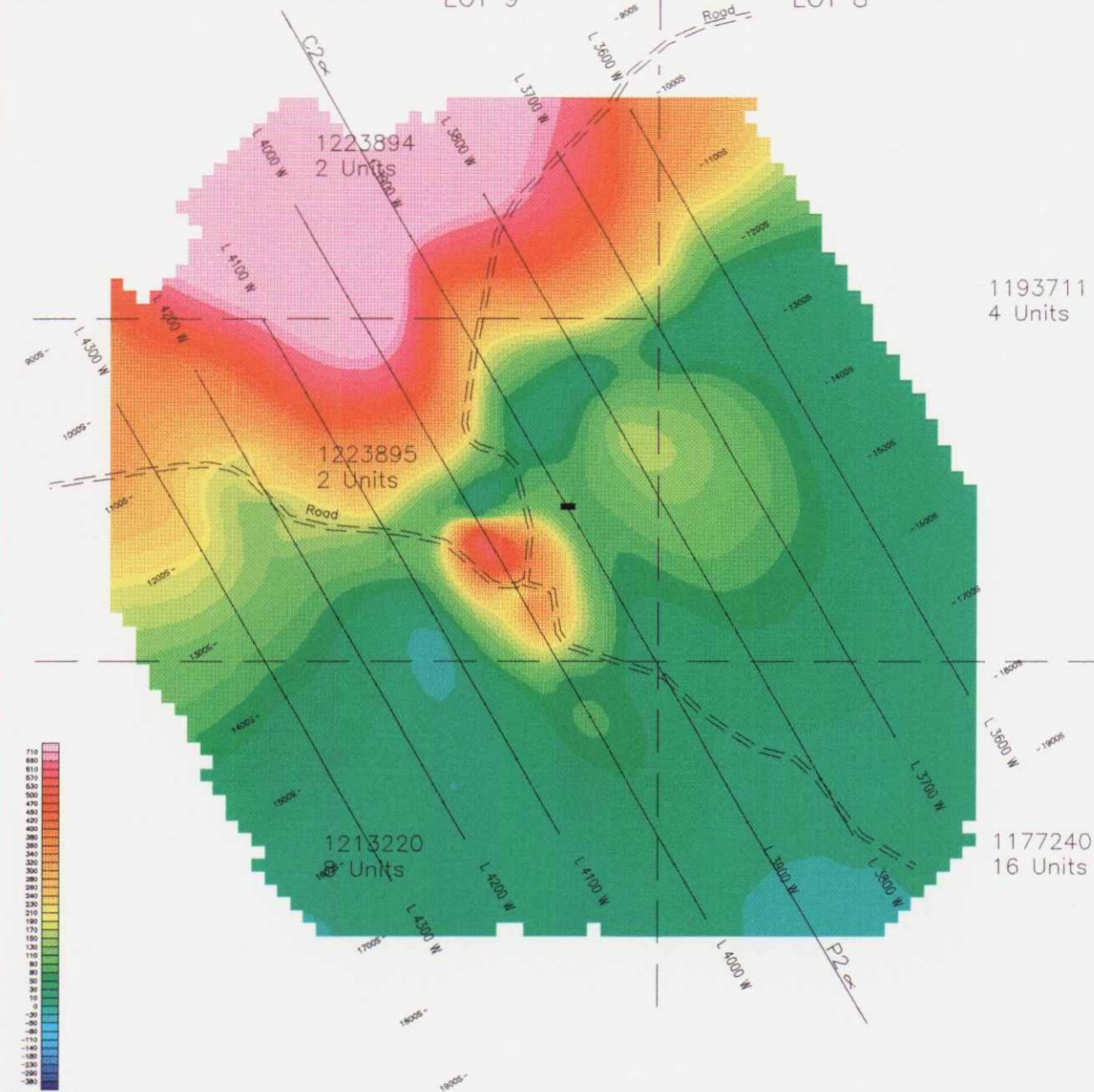
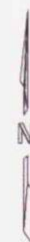
Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-292

VP PROFILES



LOT 9

LOT 8

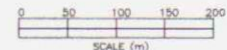


**LEGEND**  
 Receiver: BRGM IP-4  
 Transmitter: Terraplus Inc. VP-3000 3.5kw gen.  
 Current injection: L3900mW/1660mS (382m in hole)  
 Conductor Zone:  
 Contour Interval: 0, 10, 20, 30, 40, 50, 60, .....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 1.5 amp



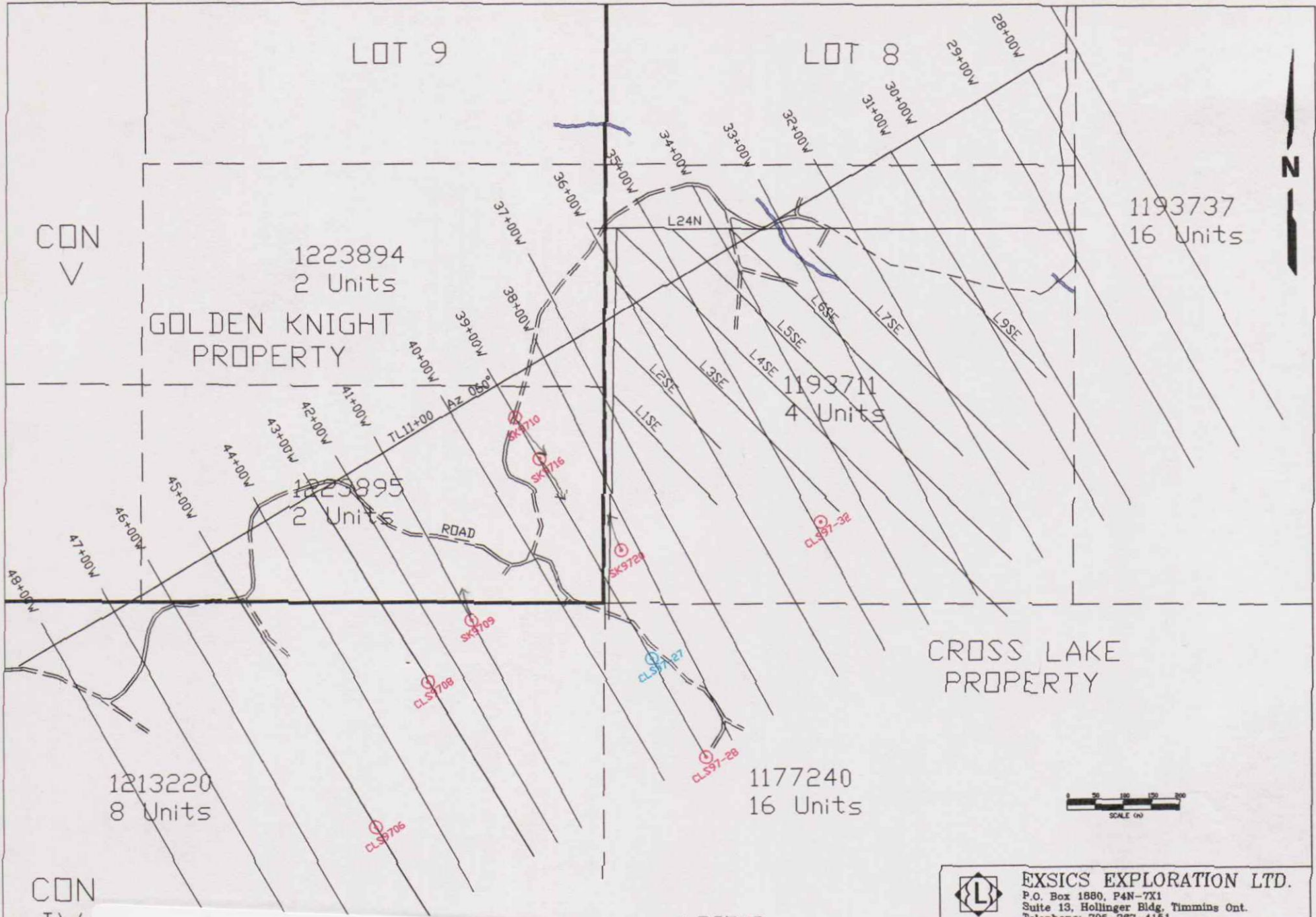
42A07NE2012 2.19379 SHERATON 450

■ -Surface Expression of C1



<b>EXSICS EXPLORATION LTD.</b> P.O. Box 1886, P4N-7X1 Suite 13, Hoffinger Bldg, Timmins Ont. Telephone: 705-287-4151		
CLIENT:	CROSS LAKE MINERALS LTD.	
PROPERTY:	SHERATON TWP.	
TITLE:	MISE-A-LA-MASSE SURFACE SURVEY	
Date: Jan. 1998	Scale: 1:2500	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No: E-292





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1223894  
2 Units

GOLDEN KNIGHT  
PROPERTY

1193737  
16 Units

1193711  
4 Units

1223895  
2 Units

ROAD

CROSS LAKE  
PROPERTY

1213220  
8 Units

1177240  
16 Units

CON  
IV

LEGEND

- ⊙ CLS97-27 CURRENT INJECTION HOLES
- ⊙ CLS97-28 HOLES COMPLETED



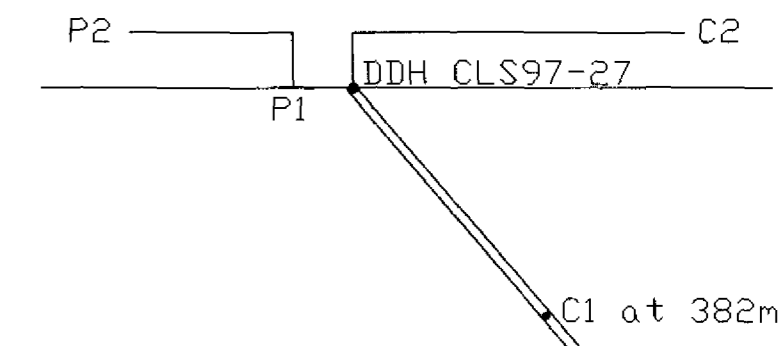
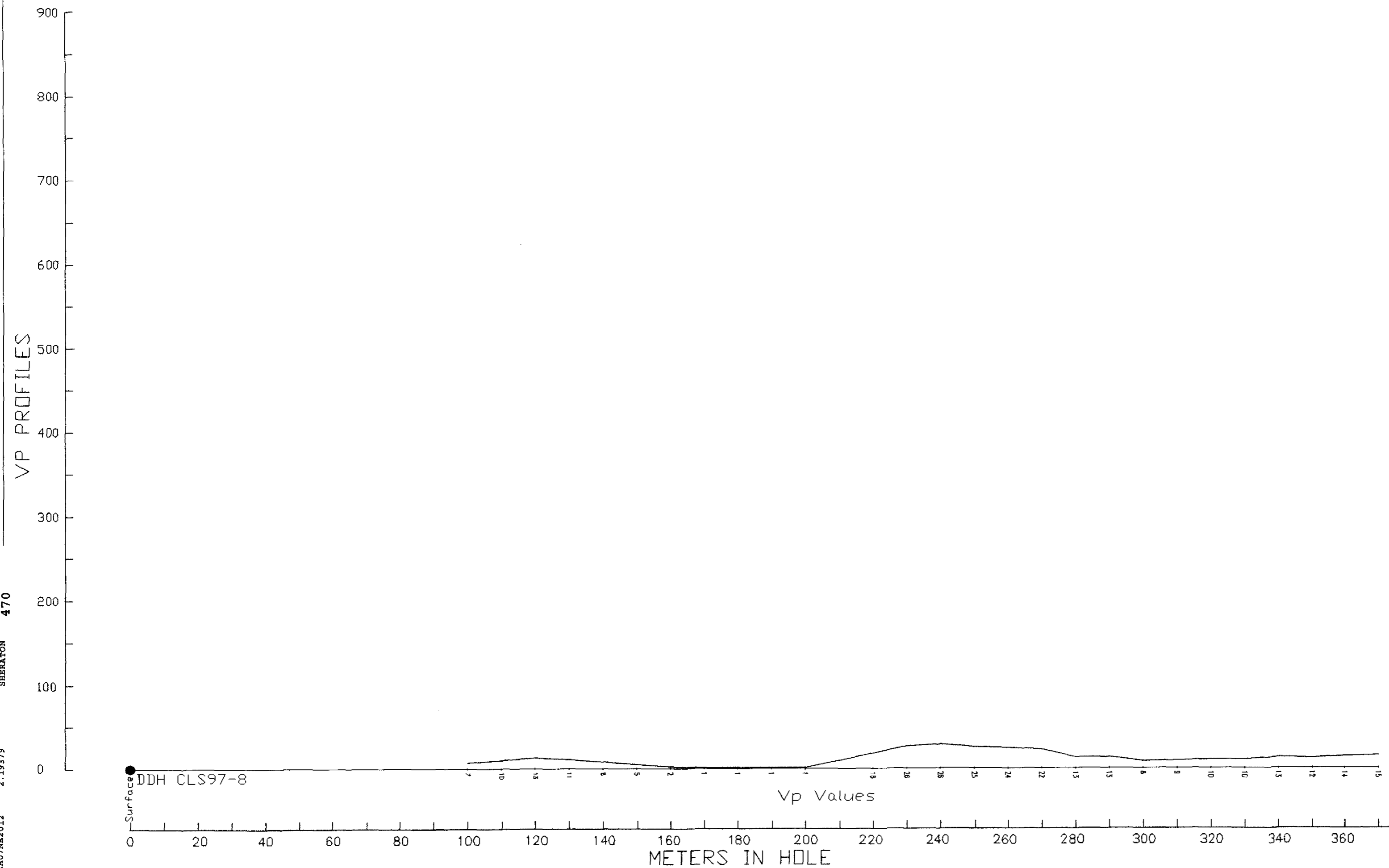
42A07NE2012 2.19379 SHERATON 460



EXSICS EXPLORATION LTD.  
P.O. Box 1880, P4N-7X1  
Suite 13, Hollinger Bldg. Timmins Ont.  
Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.		
PROPERTY: SHERATON TWP.		
TITLE: DRILL COLLAR LOCATION FOR MISE-A-LA-MASSE 1998 SURVEY HOLES READ WITH CURRENT IN HOLE CLS97-27		
Date: April 1998	Scale:	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313

# HOLE CLS97-8



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

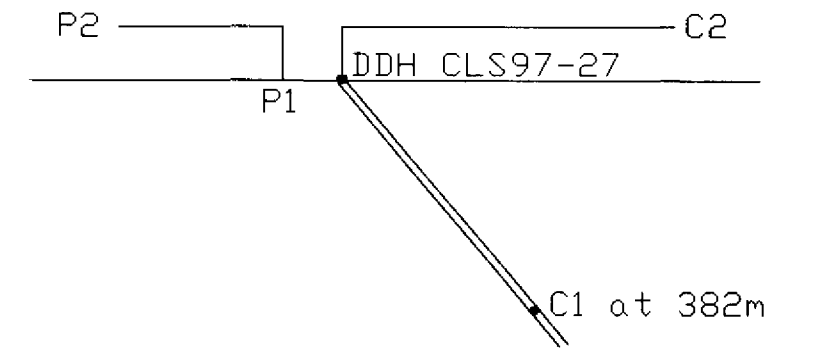
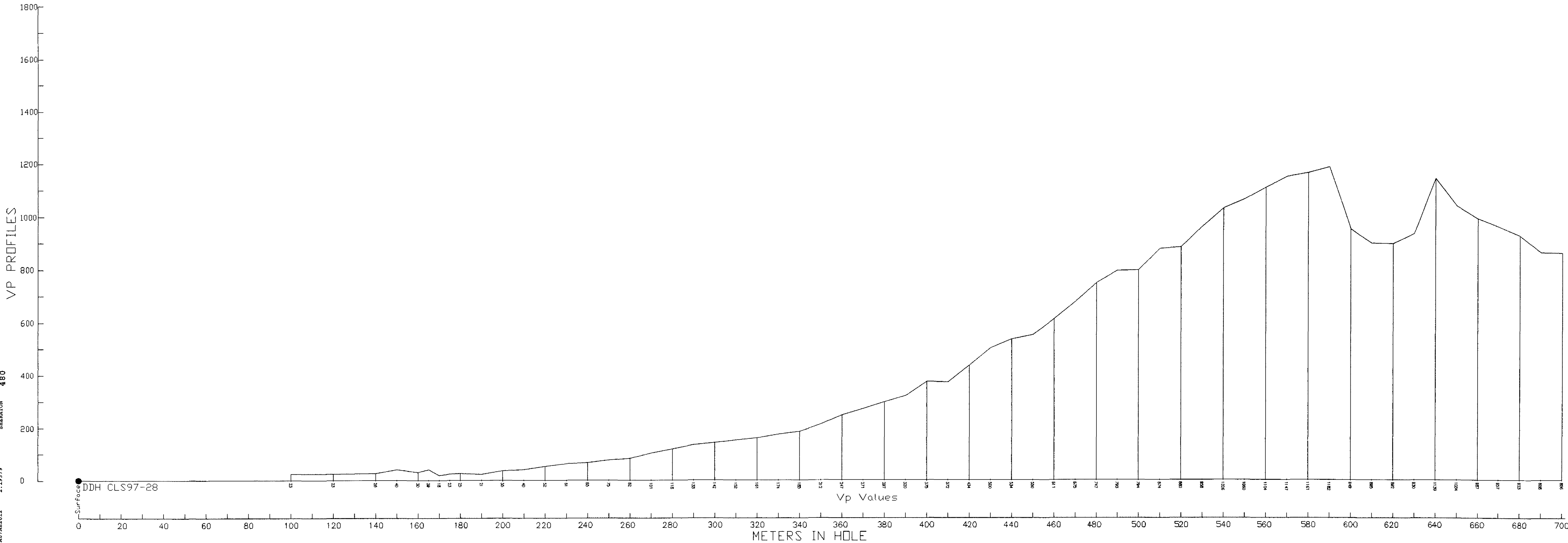
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

**CHARGE IN HOLE CLS97-27 AT 382m**

Profile Scale: 1cm=40%	Profile Base: 0 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P. Gauthier	Interp: J.C. Grant
	Job No.: E-292



# HOLE CLS97-28



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode

480  
 SHERATON  
 2.19379  
 42A07NE2012

**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4161

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

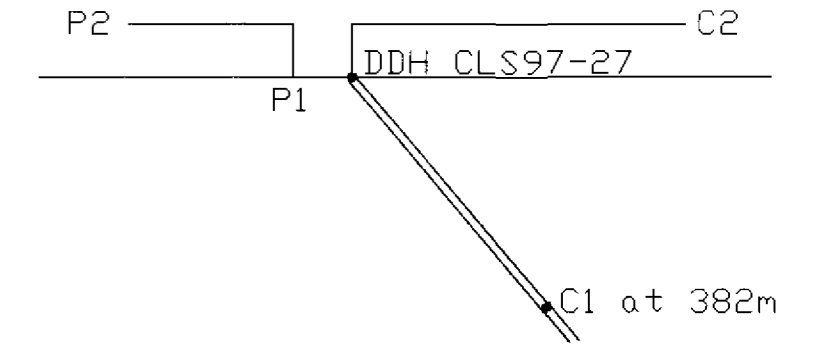
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-27 AT 382m

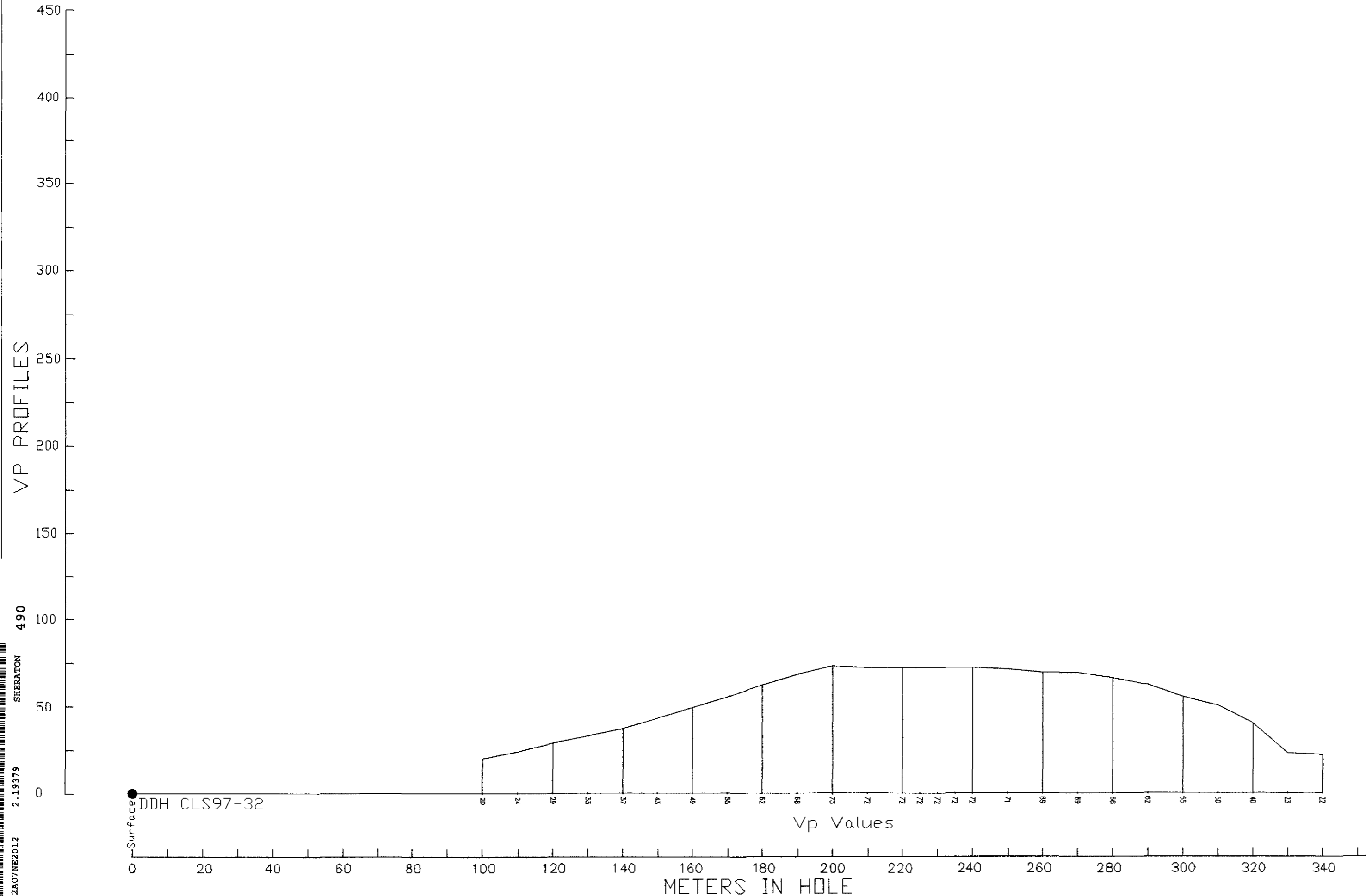
Profile Scale: 1cm=80%	Profile Base: 0 V.P.
Date: Jan. 1998	Scale: 1:1000 NTS:
Drawn: P.Gauthier	Interp: J.C.Grant Job No.: E-292



# HOLE CLS97-32



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-27 AT 382m

Profile Scale: 1cm=20% | Profile Base: 0 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-292

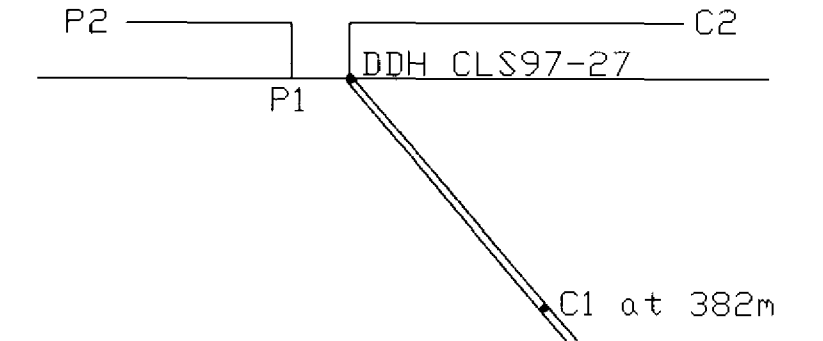
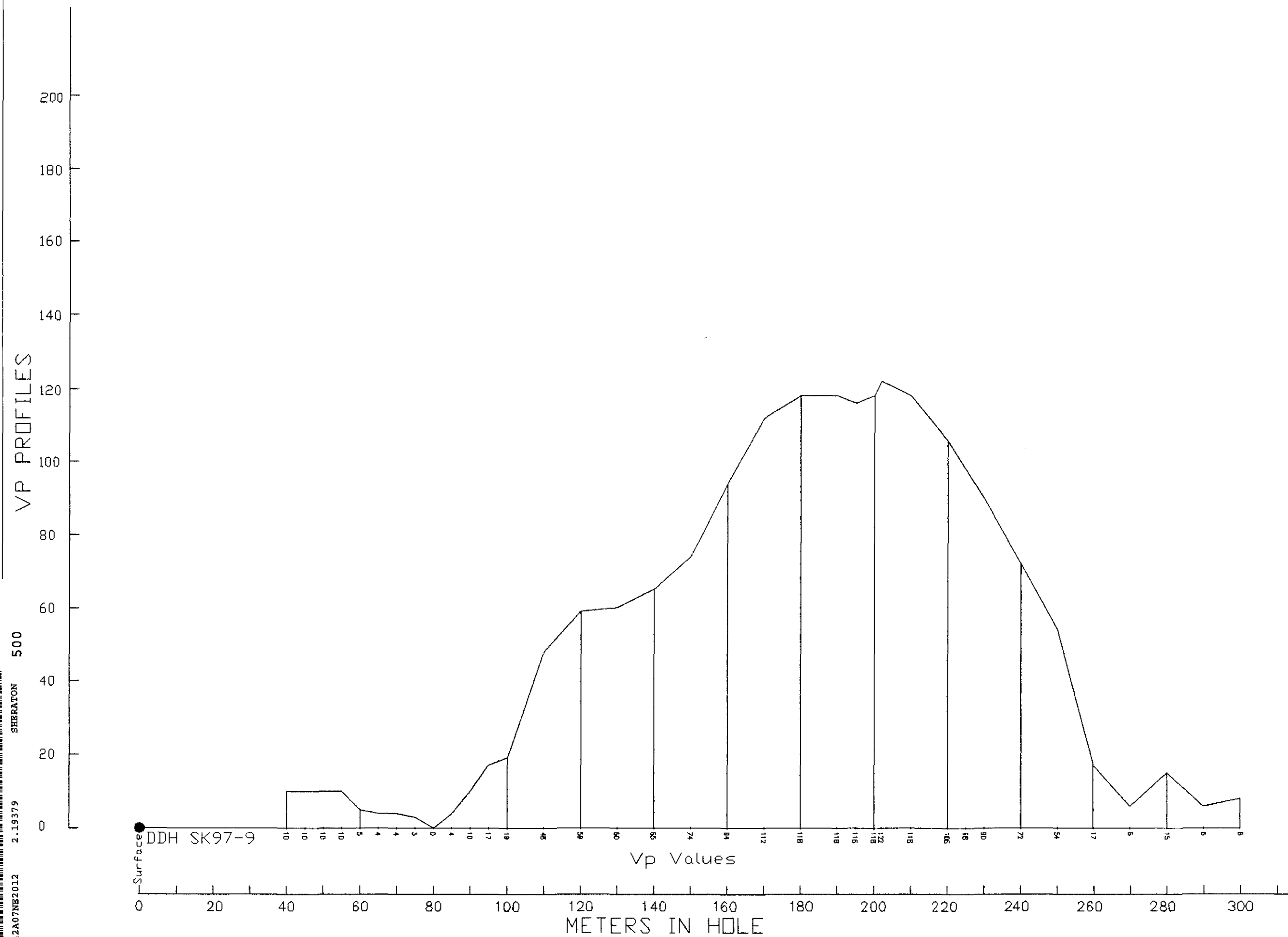


SHERATON 490

2-19379

42A07NE2012

# HOLE SK97-9



P1-Fixed Potential  
P2-Moving Potential  
C1-Charge Electrode  
C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**

P.O. Box 1880, P4N-7X1  
Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

**DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY**

**CHARGE IN HOLE CLS97-27 AT 382m**

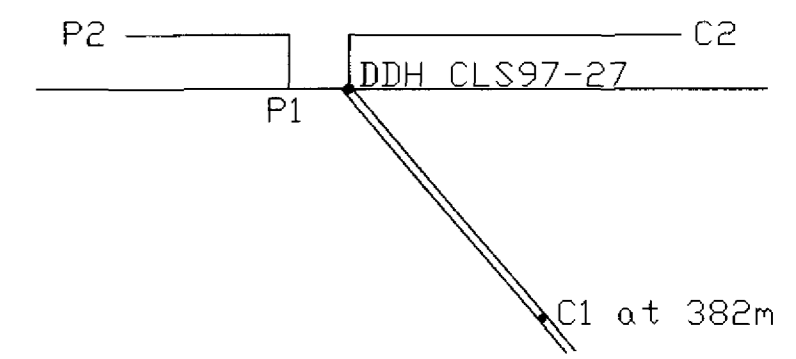
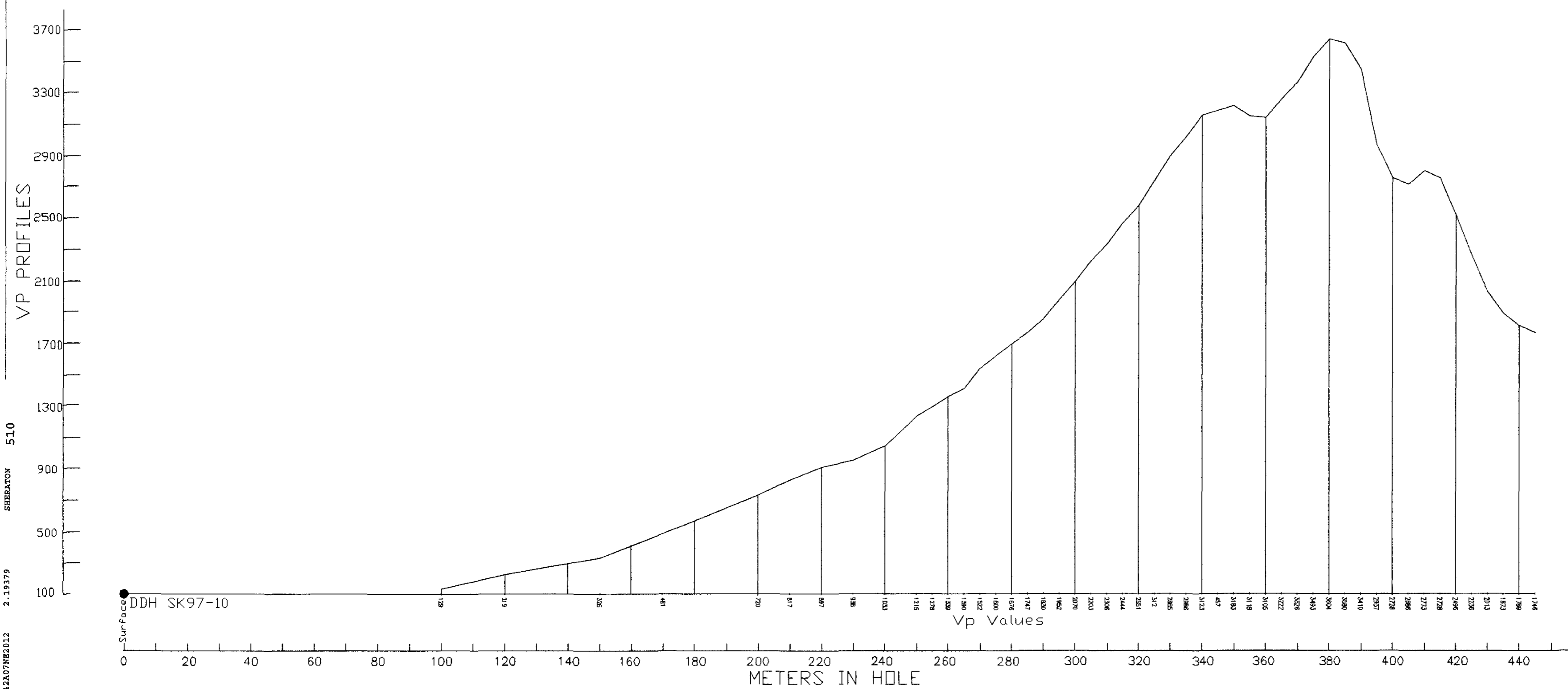
Profile Scale: 1cm=10% | Profile Base: 0 V.P.

Date: Jan. 1998 | Scale: 1:1000 | NTS:

Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-292



# HOLE SK97-10



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode

42A07NE2012 2.19379 SHERATON 510

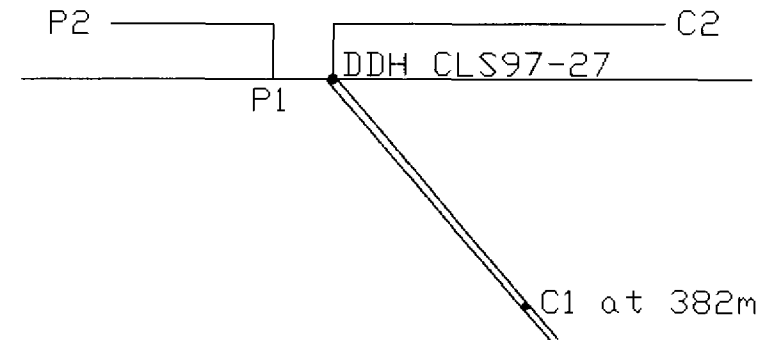
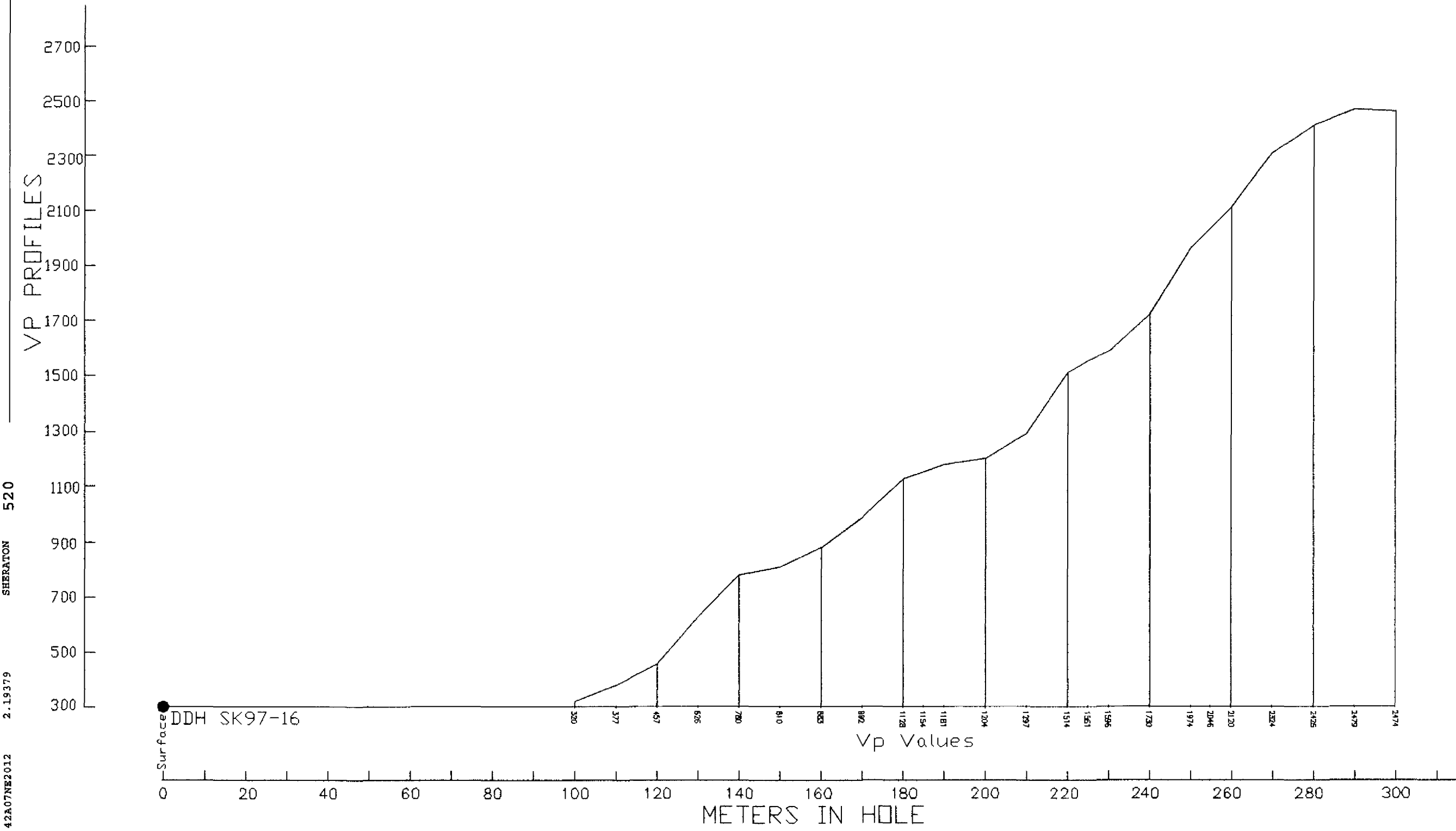
**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.  
 PROPERTY: SHERATON TWP.

TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-27 AT 382m  
 Profile Scale: 1cm=200% | Profile Base: 100 V.P.  
 Date: Jan. 1998 | Scale: 1:1000 | NTS:  
 Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-292

# HOLE SK97-16



P1 - Fixed Potential  
 P2 - Moving Potential  
 C1 - Charge Electrode  
 C2 - Infinity Electrode

42A07NE2012 2.19379 SHERATON 520



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

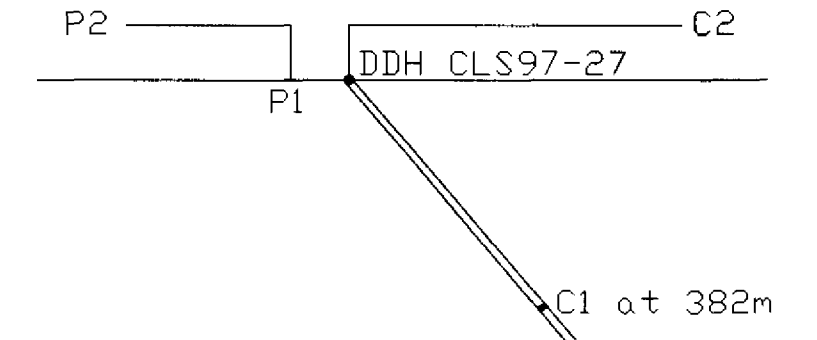
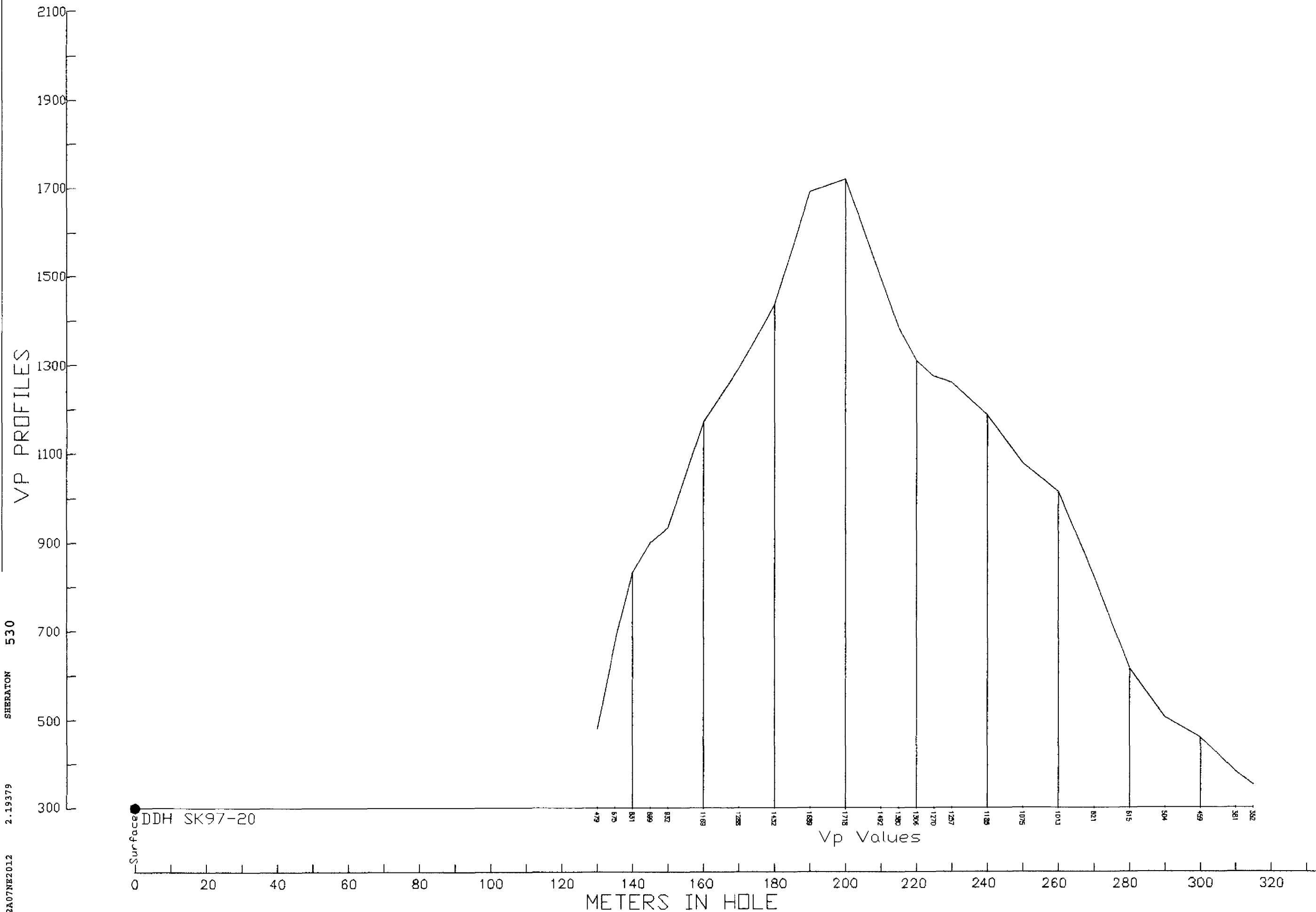
TITLE:

## DOWN HOLE MISE A LA MASSE POTENTIAL (NORMAL) ARRAY

CHARGE IN HOLE CLS97-27 AT 382m

Profile Scale: 1cm=150%	Profile Base: 300 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-292

# HOLE SK97-20



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

TITLE:

## DOWN HOLE MISE A LA MASSE POTENTIAL (NORMAL) ARRAY

CHARGE IN HOLE CLS97-27 AT 382m

Profile Scale: 1cm=80%	Profile Base: 300 V.P.
Date: Jan. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
NTS:	Job No.: E-292





540

SHERATON

2.19379

42A07NE2012

LOT 9

LOT 8

1223894  
2 Units

1193711  
4 Units

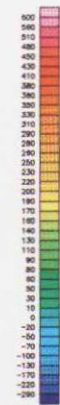
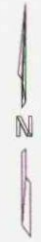
1223895  
2 Units

1213220  
8 Units

1177240  
16 Units

CON  
V

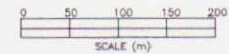
CON  
IV



COLOR SCALE

**LEGEND**  
 Receiver: BRGM IP-4  
 Transmitter: Terraplus inc. VIP-3000 3.5kw gen.  
 Current injection: L3490mW/1600mS (577.3m in hole)  
 Conductor Zone:  
 Contour Interval: 0, 10, 20, 30, 40, 50, 60, .....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 2 amp

■ -Approx. Surface Expression of C1



	EXSICS EXPLORATION LTD.		
	P.O. Box 1880, P4N-7E1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT:	CROSS LAKE MINERALS LTD.		
PROPERTY:	SHERATON TWP.		
TITLE:	GRID A	MISE-A-LA-MASSE SURFACE SURVEY	
Date: Mar. 1998	Scale: 1:2500	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313	



550  
SHERATON  
2-19379  
42A07NE2012

LOT 9

LOT 8

1223894  
2 Units

1223895  
2 Units

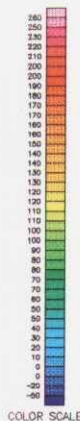
1213220  
8 Units

1193711  
4 Units

1177240  
16 Units

CON  
V

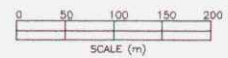
CON  
IV



COLOR SCALE

**LEGEND**  
Receiver: BRGM IP-4  
Transmitter: Terraplus Inc. VIP-3000 3.5kw gen.  
Current Injection: L3490mW/1600mS (377.3m in hole)  
Conductor Zone:  
Contour Interval: 0, 10, 20, 30, 40, 50, 60, .....  
Reading Interval: 25m  
Plotting Values: Potential (mv)  
Current: 2 amp

— -Approx. Surface Expression  
of C1



SCALE (m)

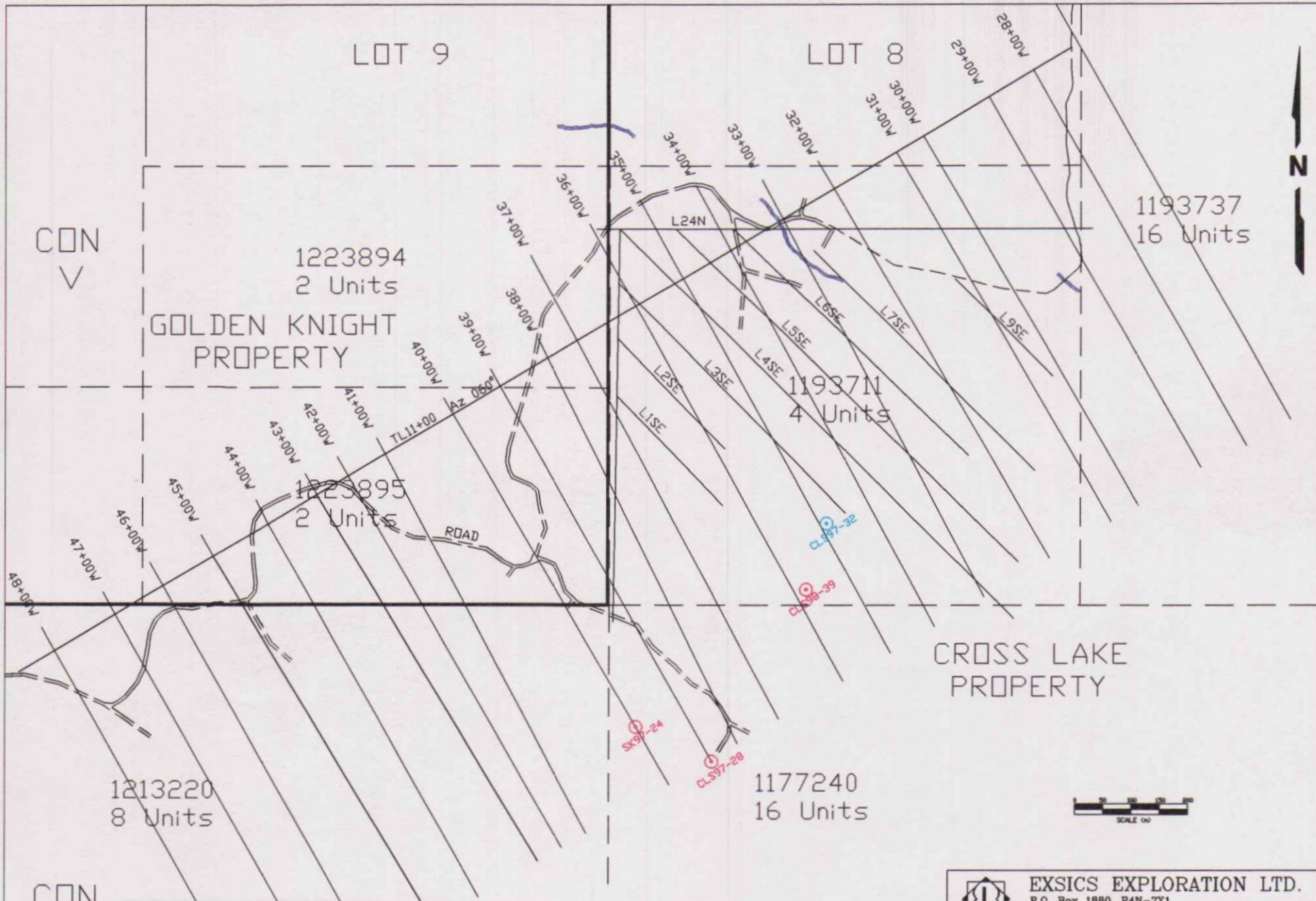


	EXSICS EXPLORATION LTD.		
	P.O. Box 1080, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
CLIENT:	CROSS LAKE MINERALS LTD.		
PROPERTY:	SHERATON TWP.		
TITLE:	GRID B MISE-A-LA-MASSE SURFACE SURVEY		
Date: Mar. 1998	Scale: 1:2500	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313	









CON  
V

CON  
IV

LOT 9

LOT 8

1223894  
2 Units  
GOLDEN KNIGHT  
PROPERTY

1193737  
16 Units

1193711  
4 Units

1825895  
2 Units

1213220  
8 Units

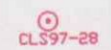
CROSS LAKE  
PROPERTY

1177240  
16 Units

LEGEND




CURRENT INJECTION HOLES



HOLES COMPLETED

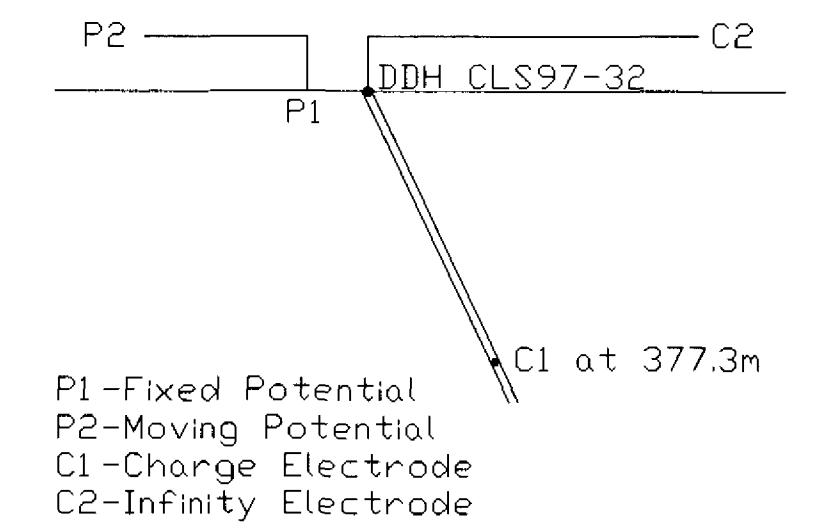
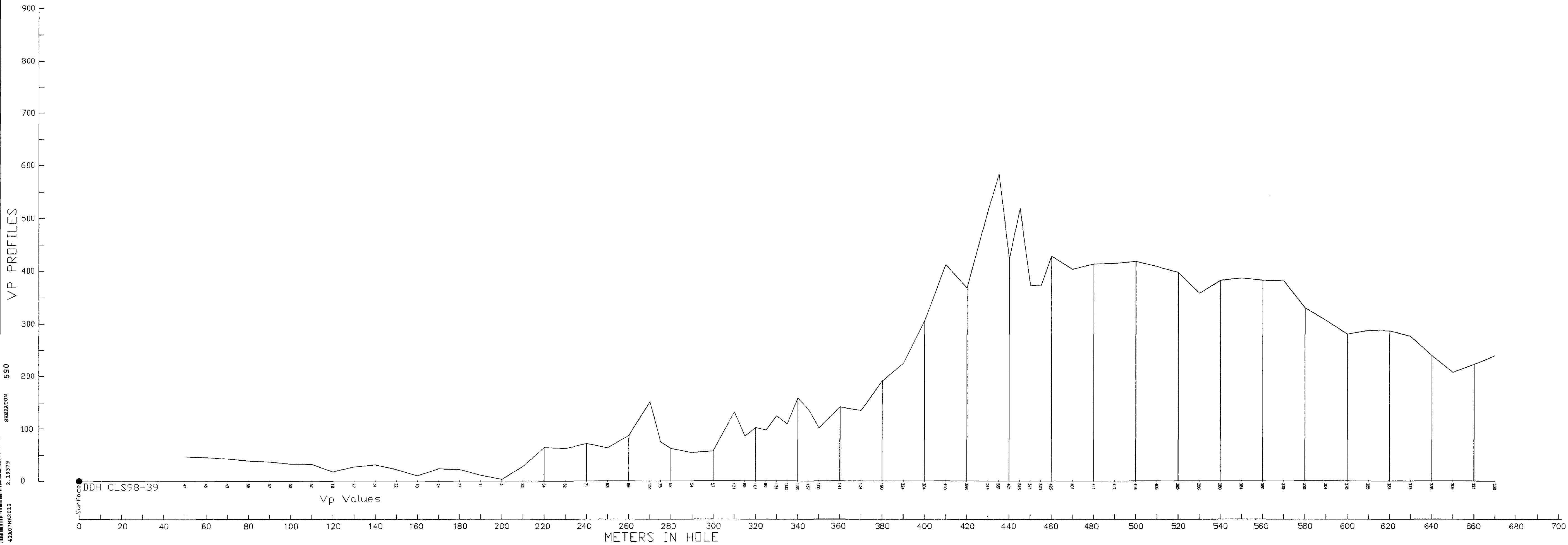


42A07NE2012    2.19379    SHERATON    570

 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-287-4151		
CLIENT: CROSS LAKE MINERALS LTD.		
PROPERTY: SHERATON TWP.		
TITLE: DRILL COLAR LOCATION FOR MISE-A-LA-MASSE 1998 SURVEY HOLES READ WITH CURRENT IN HOLE CLS97-32		
Date: April 1998	Scale:	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-313



# HOLE CLS98-39



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4161

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

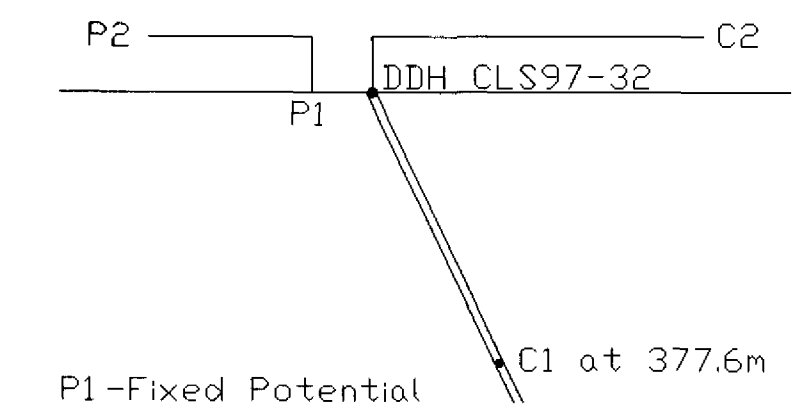
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-32 AT 377.3m

Profile Scale: 1cm=40%	Profile Base: 0 V.P.
Date: Mar. 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-313

590  
 SHERATON  
 2-19379  
 42A07ME2012

# HOLE SK97-24



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode

**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.

PROPERTY: SHERATON TWP.

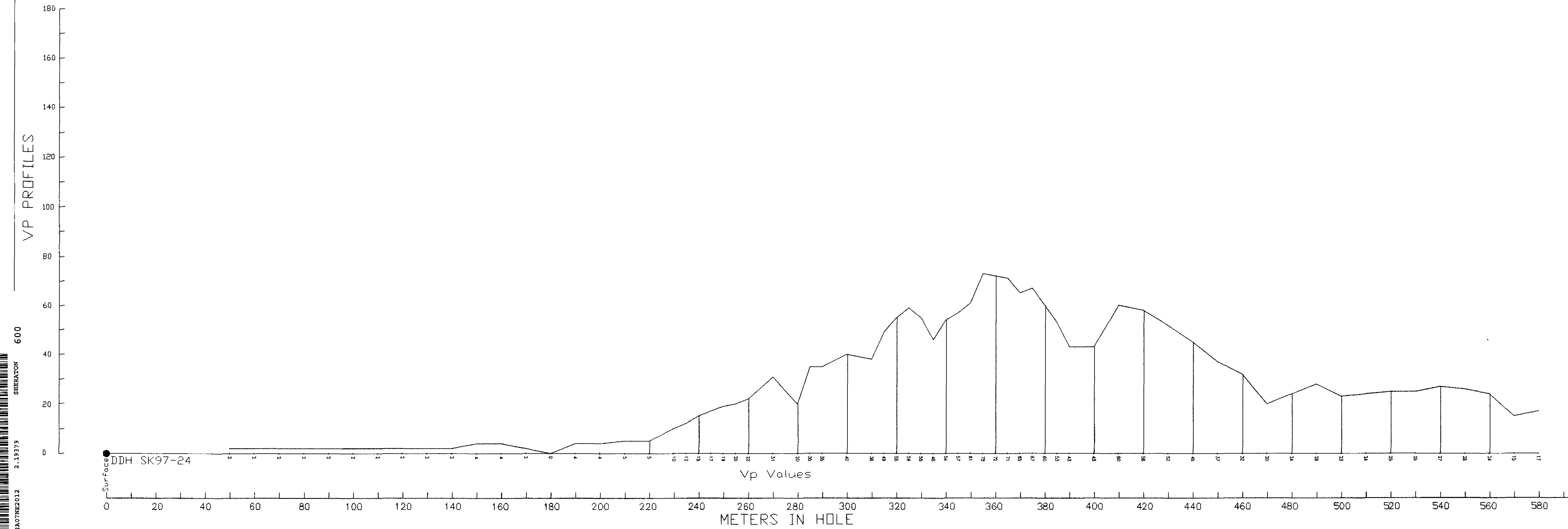
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE CLS97-32 AT 377.6m

Profile Scale: 1cm=10% | Profile Base: 0 V.P.

Date: Mar. 1998 | Scale: 1:1000 | NTS:

Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-313



42A07NE2012 2.1.19379 SHERATON 600



LOT 10

LOT 9

LOT 8

LOT 7

N

CON  
V

GOLDEN KNIGHT  
PROPERTY

1223894  
2 Units

1193737  
16 Units

1223890  
2 Units

1223895  
2 Units

1193710  
4 Units

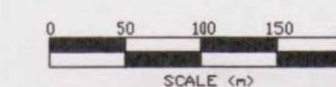
1213220  
8 Units

CROSS LAKE  
PROPERTY


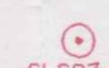
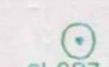
1177240  
16 Units

2.19379

RECEIVED  
APR 12 1998  
GEOSCIENCE ASSESSMENT  
OFFICE



LEGEND

-  CLS97-28 CURRENT INJECTION HOLES
-  CLS97-28 HOLES COMPLETED
-  CLS97-28 HOLES IN PROGRESS

NOTE: MAGNETIC DECLINATION: 11° West

**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: CROSS LAKE MINERALS LTD.  
 PROPERTY: SHERATON TWP.

TITLE: DRILL COLLAR LOCATION  
 FOR MISE-A-LA-MASSE 1998 SURVEY

Date: April 1998 Scale: 1:5000 NTS:  
 Drawn: P.Gauthier Interp: J.C.Grant Job No.: E-313





LOT 11

LOT 10

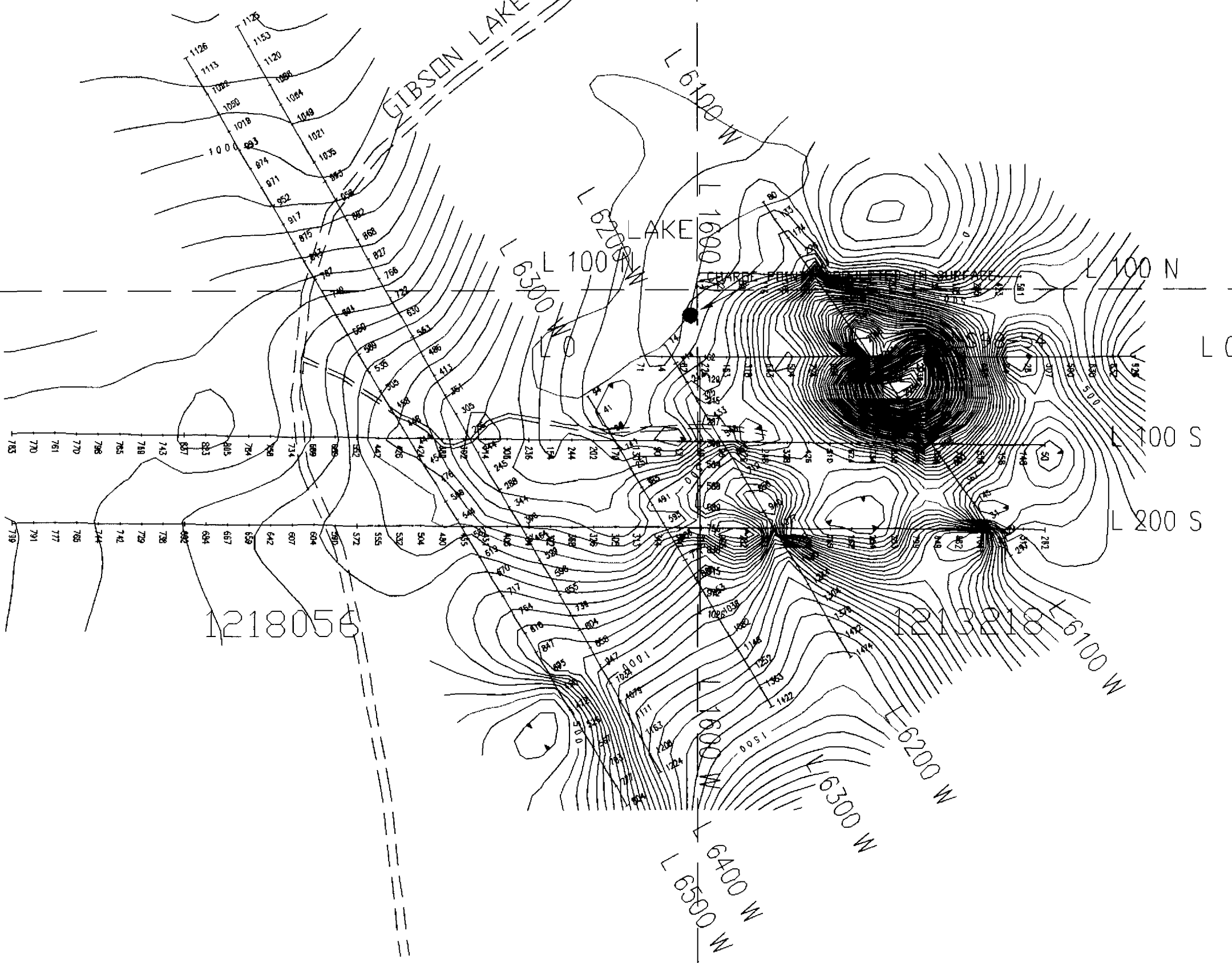
CON  
IV



L 6400 W 1218055  
L 6500 W

1213219

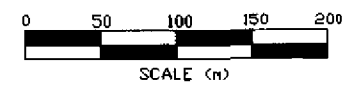
GIBSON LAKE ROAD



1218056

1213218

CON  
III



**LEGEND**  
 Receiver: IRIS ELREC-4  
 Transmitter: IRIS VIP 3000 3Kw generator  
 Current Injection: L0/1330mW (466m in hole)  
 Conductor Zone:  
 Contour Interval: 0,50,100,150,200,250,.....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 2.0 amp



42A07NE2012 2.19379 SHERATON 620

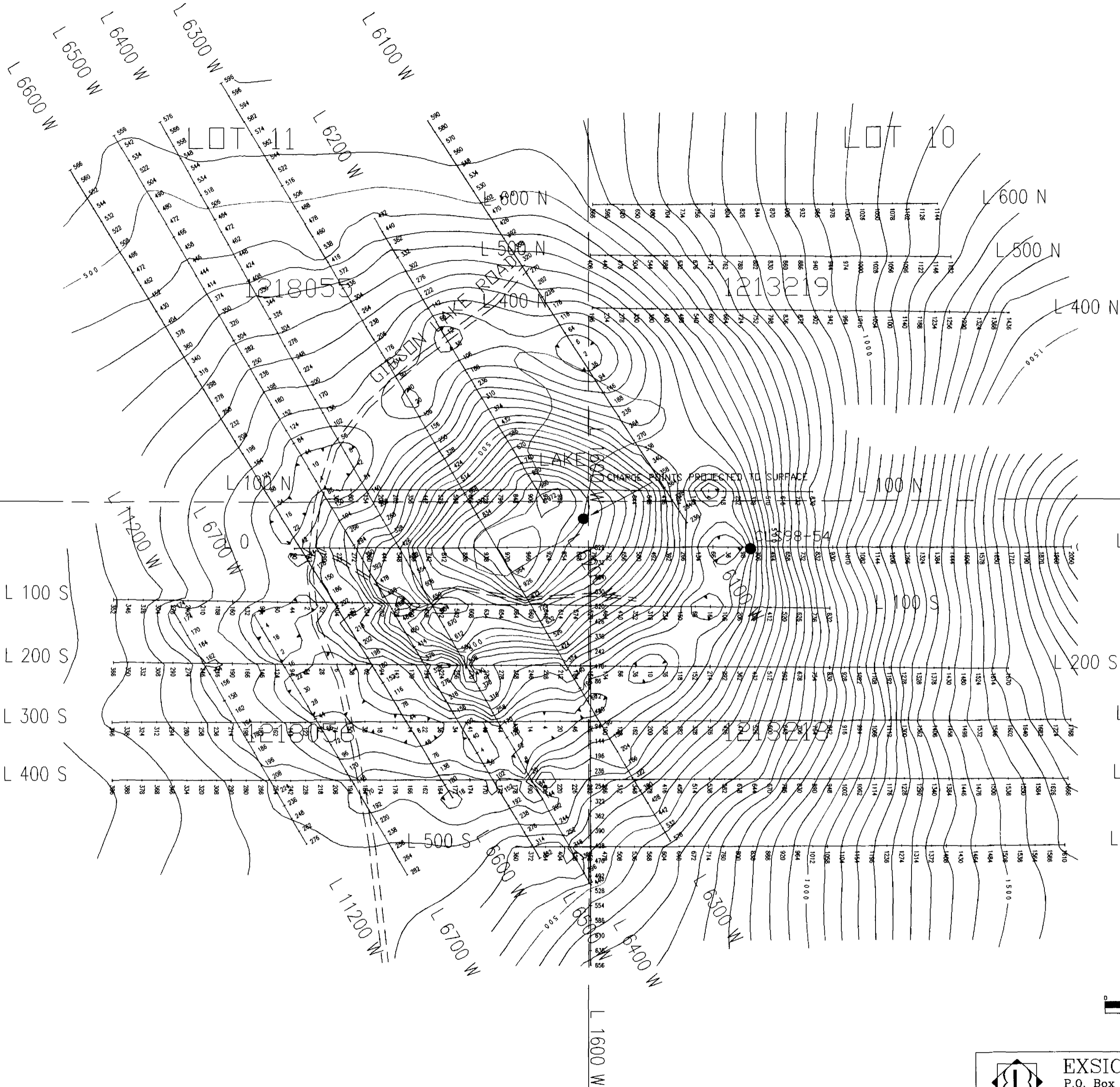


**EXSICS EXPLORATION LTD.**  
P.O. Box 1880, P4N-7X1  
Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151, 267-2424

**CLIENT: GOLDEN KNIGHT RESOURCES INC**  
**PROPERTY: SHERATON TWP JOINT VENTURE**

**TITLE: MISE-A-LA-MASSE**  
**CHARGE IN HOLE CLS98-54 AT 466m**

Date: June 1998 Scale: 1:5000 NTS:   
Drawn: P.Gauthier Interp: J.C.Grant Job No.: E-323

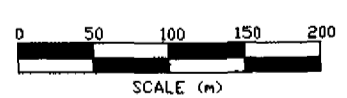


CON  
IV



L 300 S CON  
III  
L 400 S  
L 500 S

RECEIVED  
APR 12 1998  
GEOLOGICAL ASSESSMENT  
OFFICE



**LEGEND**  
 Receiver: IRIS ELREC-4  
 Transmitter: IRIS VIP 3000 3Kw generator  
 Current Injection: L0/1330mW (150m in hole)  
 C2: L0/500mW  
 Conductor Zone:  
 Contour Interval: 0,50,100,250,300,350,400,  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 2.0 amp



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151, 267-2424

**CLIENT: GOLDEN KNIGHT RESOURCES INC**  
**PROPERTY: SHERATON TWP JOINT VENTURE**  
**TITLE: MISE-A-LA-MASSE**  
**CHARGE IN HOLE CLS98-54 AT 450m**

Date: June 1998 Scale: 1:5000 NTS: *[Signature]*  
 Drawn: P. Gauthier Interp: J.C. Grant Job No.: E-323



LOT 12

LOT 11

LOT 10

LOT 9

LOT 8

LOT 7

BOND TWP.

SHERATON TWP.



1224469  
4 Units

1213533  
4 Units

(P)

1213271  
6 Units

(P)

1207094  
4 Units

CON VI

1213270  
2 Units

SHERATON LAKE

1207096  
4 Units

1224468  
4 Units

1204193  
4 Units

1223886  
2 Units

1223891  
2 Units

1213216  
2 Units

1219601  
4 Units

CON V

1223887  
2 Units

1223892  
2 Units

HEART LAKE

1223888  
2 Units

1223893  
2 Units

1193737  
16 Units

1218052  
4 Units

1218053  
4 Units

1223889  
2 Units

1223894  
2 Units

1193711  
4 Units

CON IV

1223890  
2 Units

1223895  
2 Units

1213221  
8 Units

1177240  
16 Units

1218054  
8 Units

1218055  
8 Units

FOGG LAKE

1213219  
6 Units

2.19379



CON III

1218056  
8 Units

1213218  
16 Units



● APPROX. LOCATION OF CHARGE POINT PROJECTED TO SURFACE

EXSICS EXPLORATION LTD.  
P.O. Box 1880, P4N-7E1  
Suite 13, Rolling Hill, Timmins Ont.  
Telephone: 705-867-4151  
CLIENT: GOLDEN KNIGHT RESOURCES INC.  
PROPERTY: SHERATON TWP.  
TITLE: DRILL COLLAR LOCATION  
MISE-A-LA-MASSÉ PHASE III  
Date: July 1998 | Scale: 1:10,000 | NTS  
Drawn: P. Gauthier | Interp.: J.C. Grant | Job No. E-323



LOT 9

LOT 8

CON  
V

1223894  
2 Units

1193711  
4 Units

650

SHERATON

1223895  
2 Units

ROAD

2.19379



42A07NE2012

1213220  
8 Units

1177240  
16 Units


CON  
IV

LEGEND

 SK97-24 CURRENT INJECTION HOLES

 CLS97-28 HOLES COMPLETED

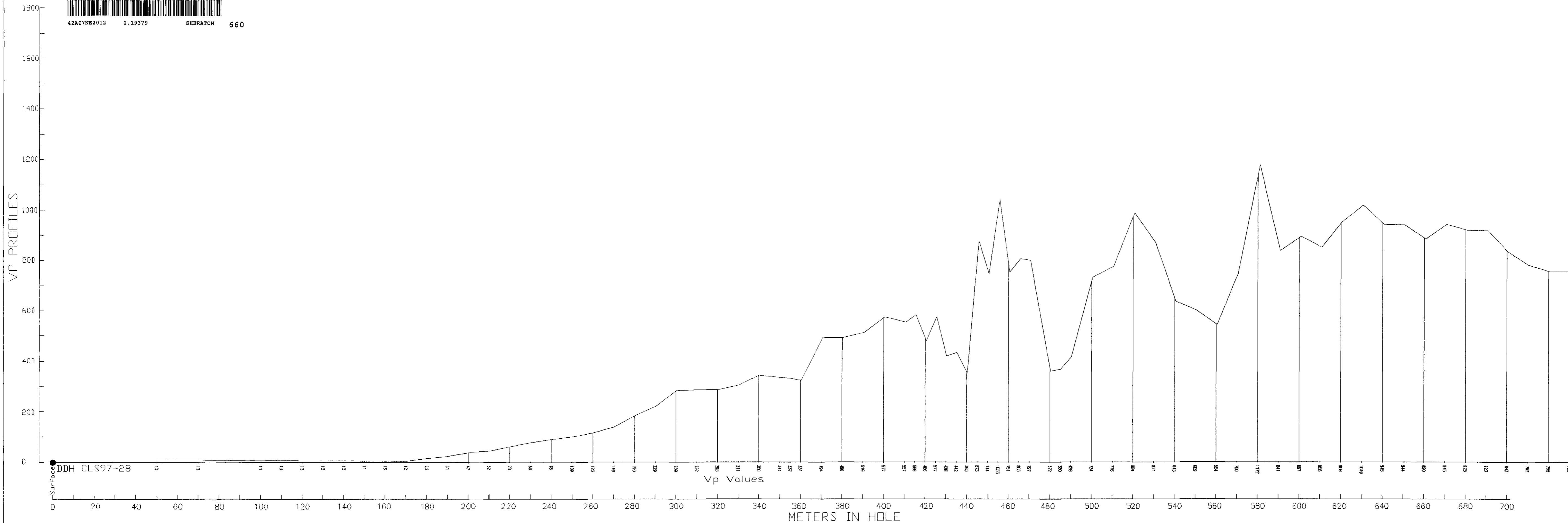


			EXSICS EXPLORATION LTD.		
			P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-287-4151, 287-2424		
CLIENT:			GOLDEN KNIGHT RESOURCES INC		
PROPERTY:			SHERATON TWP.		
TITLE:			DRILL COLLAR LOCATION FOR MISE-A-LA-MASSE 1998 SURVEY		
HOLES READ WITH CURRENT IN HOLE SK97-24 AT 355M					
Date: May 1998	Scale:	NTS:			
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-323			



42A07NE2012 2.19379 SHERATON 660

HOLE CLS97-28



P1-Fixed Potential  
P2-Moving Potential  
C1-Charge Electrode  
C2-Infinity Electrode

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Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151

CLIENT: GOLDEN KNIGHT RESOURCES INC  
PROPERTY: SHERATON TWP.

TITLE:  
DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY

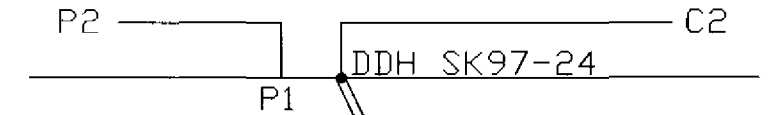
CHARGE IN HOLE SK97-24 AT 355m  
Profile Scale: 1cm=80% | Profile Base: 0 V.P.  
Date: May 1998 | Scale: 1:1000 | NTS:  
Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-323

# HOLE SK97-9



42A07NE2012 2.19379 SHERATON 670

VP PROFILES



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Telephone: 705-267-4151

CLIENT: GOLDEN KNIGHT RESOURCES INC

PROPERTY: SHERATON TWP.

TITLE:

DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY

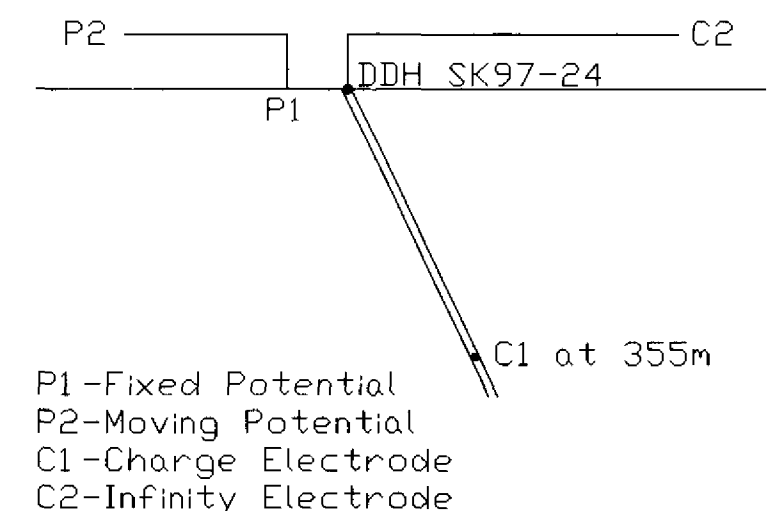
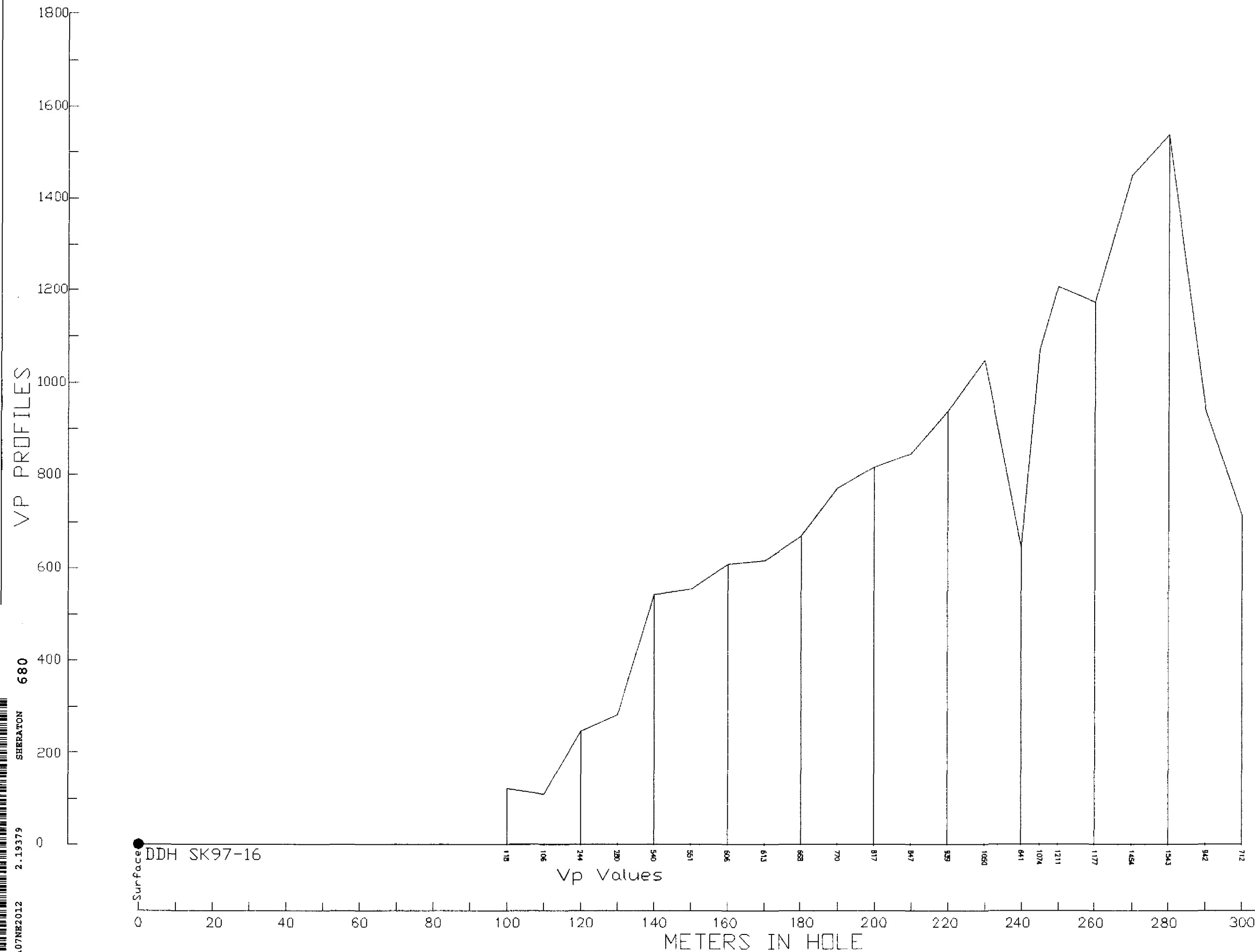
CHARGE IN HOLE SK97-24 AT 355m

Profile Scale: 1cm=20% | Profile Base: 0 V.P.

Date: May 1998 | Scale: 1:1000 | NTS:

Drawn: P. Gauthier | Interp: J.C. Grant | Job No.: E-323

# HOLE SK97-16



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Telephone: 705-267-4161

CLIENT: GOLDEN KNIGHT RESOURCES INC  
PROPERTY: SHERATON TWP.

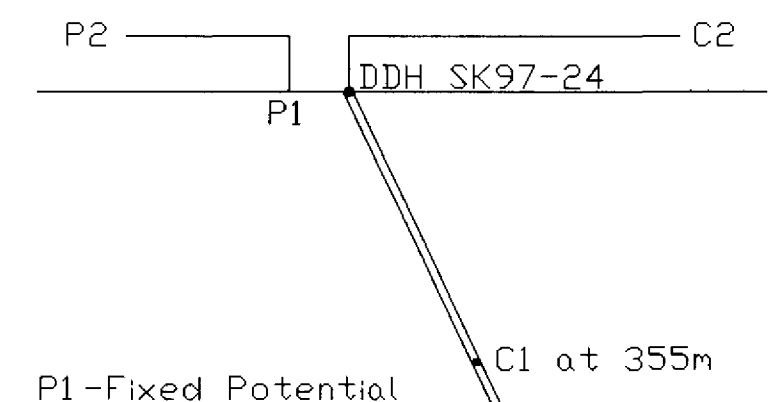
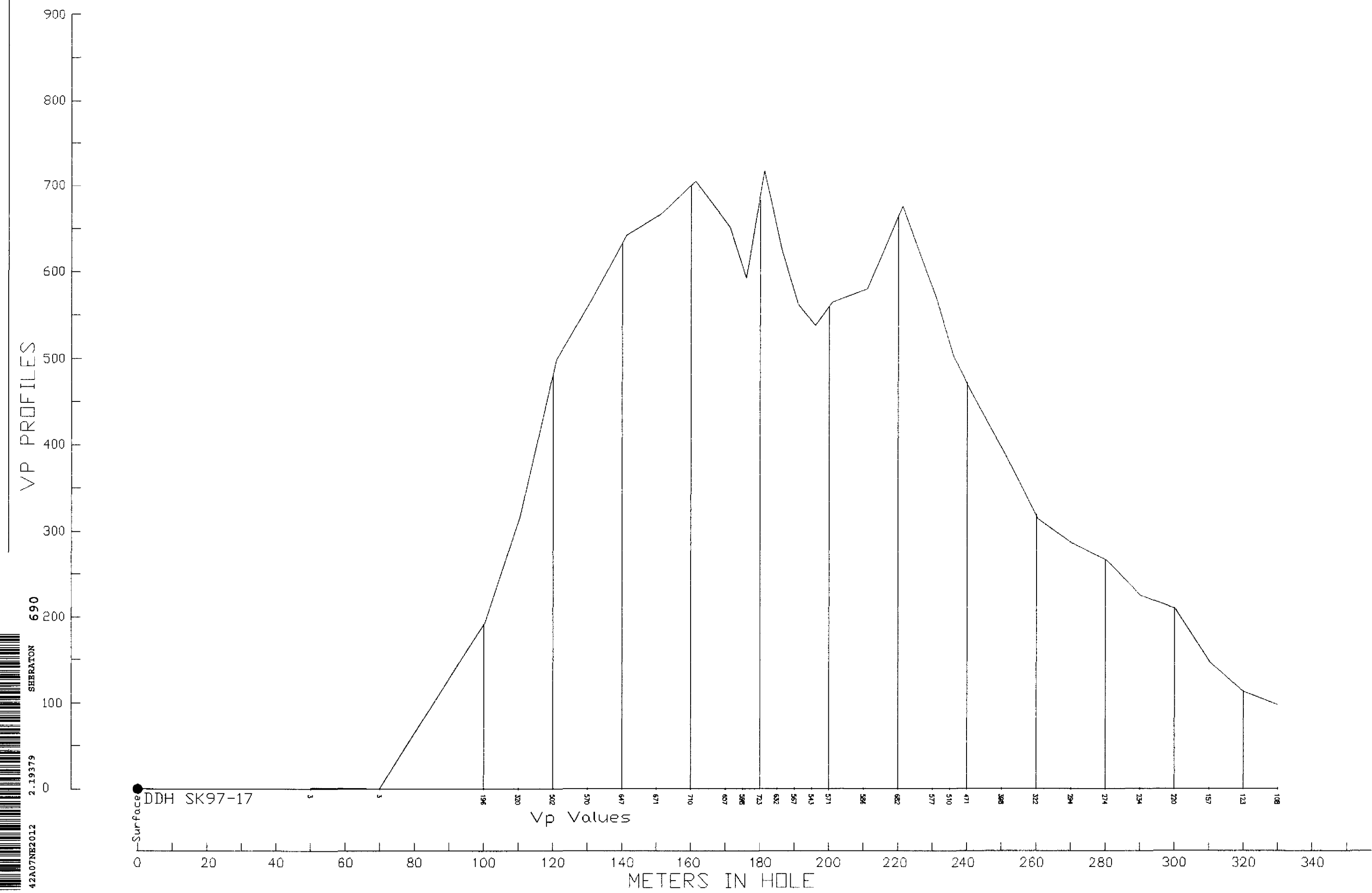
TITLE:  
**DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE SK97-24 AT 355m

Profile Scale: 1cm=80%	Profile Base: 0 V.P.
Date: May 1998	Scale: 1:1000
Drawn: P. Gauthier	Interp: J.C. Grant
NTS:	Job No.: E-323

42A07NE2012  
2.1.19379  
SHERATON  
680

# HOLE SK97-17



**EXSICS EXPLORATION LTD.**  
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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: GOLDEN KNIGHT RESOURCES INC  
 PROPERTY: SHERATON TWP.

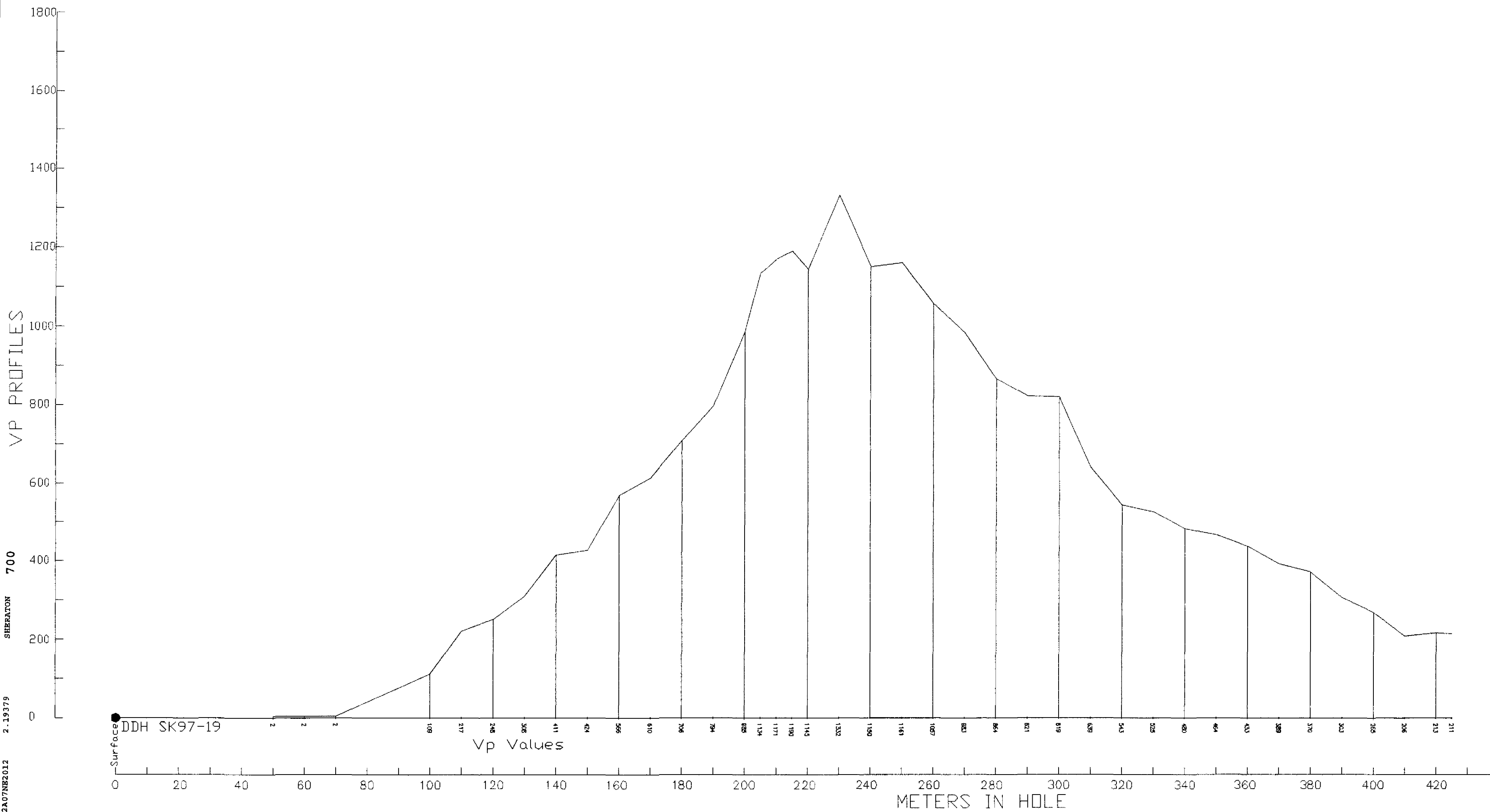
TITLE:  
**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE SK97-24 AT 355m

Profile Scale: 1cm=40% | Profile Base: 0 V.P.  
 Date: May 1998 | Scale: 1:1000 | NTS:  
 Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-323

42A07NE2012 2.19379 SHERATON 690

# HOLE SK97-19



P1-Fixed Potential  
P2-Moving Potential  
C1-Charge Electrode  
C2-Infinity Electrode



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Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151

CLIENT: GOLDEN KNIGHT RESOURCES INC  
PROPERTY: SHERATON TWP.

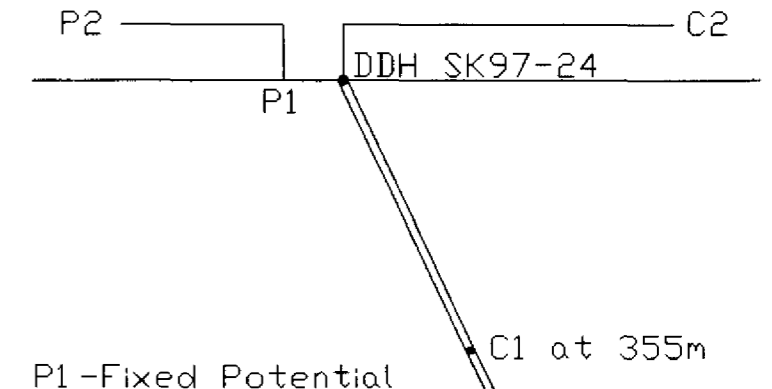
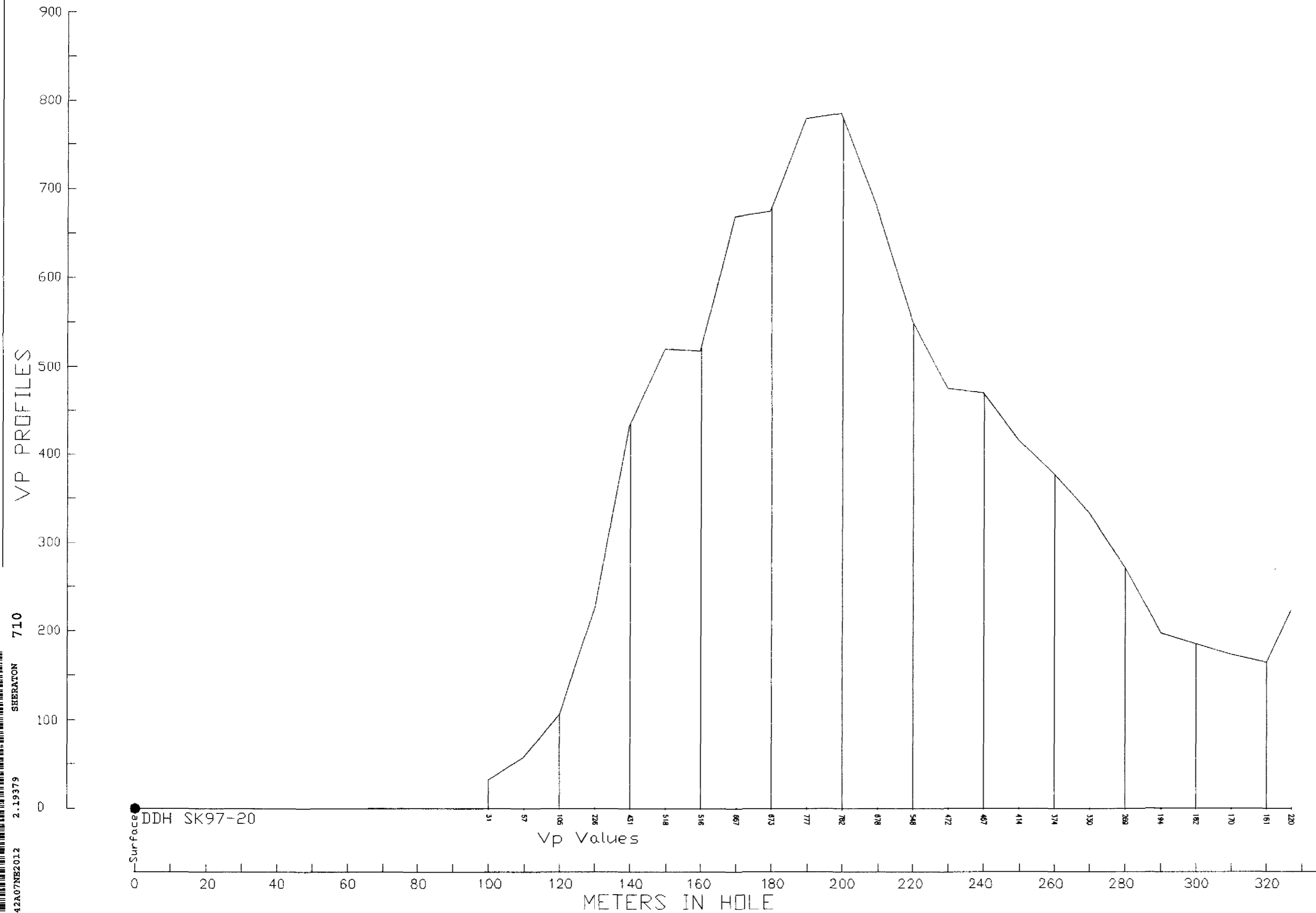
TITLE:  
**DOWN HOLE  
MISE A LA MASSE  
POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE SK97-24 AT 355m

Profile Scale: 1cm=80%	Profile Base: 0 V.P.
Date: May 1998	Scale: 1:1000
Drawn: P.Gauthier	Interp: J.C.Grant
	Job No.: E-323



# HOLE SK97-20



P1-Fixed Potential  
 P2-Moving Potential  
 C1-Charge Electrode  
 C2-Infinity Electrode



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 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151

CLIENT: GOLDEN KNIGHT RESOURCES INC

PROPERTY: SHERATON TWP.

TITLE:

**DOWN HOLE  
 MISE A LA MASSE  
 POTENTIAL (NORMAL) ARRAY**

CHARGE IN HOLE SK97-24 AT 355m

Profile Scale: 1cm=40% | Profile Base: 0 V.P.

Date: May 1998 | Scale: 1:1000 | NTS:

Drawn: P.Gauthier | Interp: J.C.Grant | Job No.: E-323



710

SHERATON

2-19379

42A07NE2012





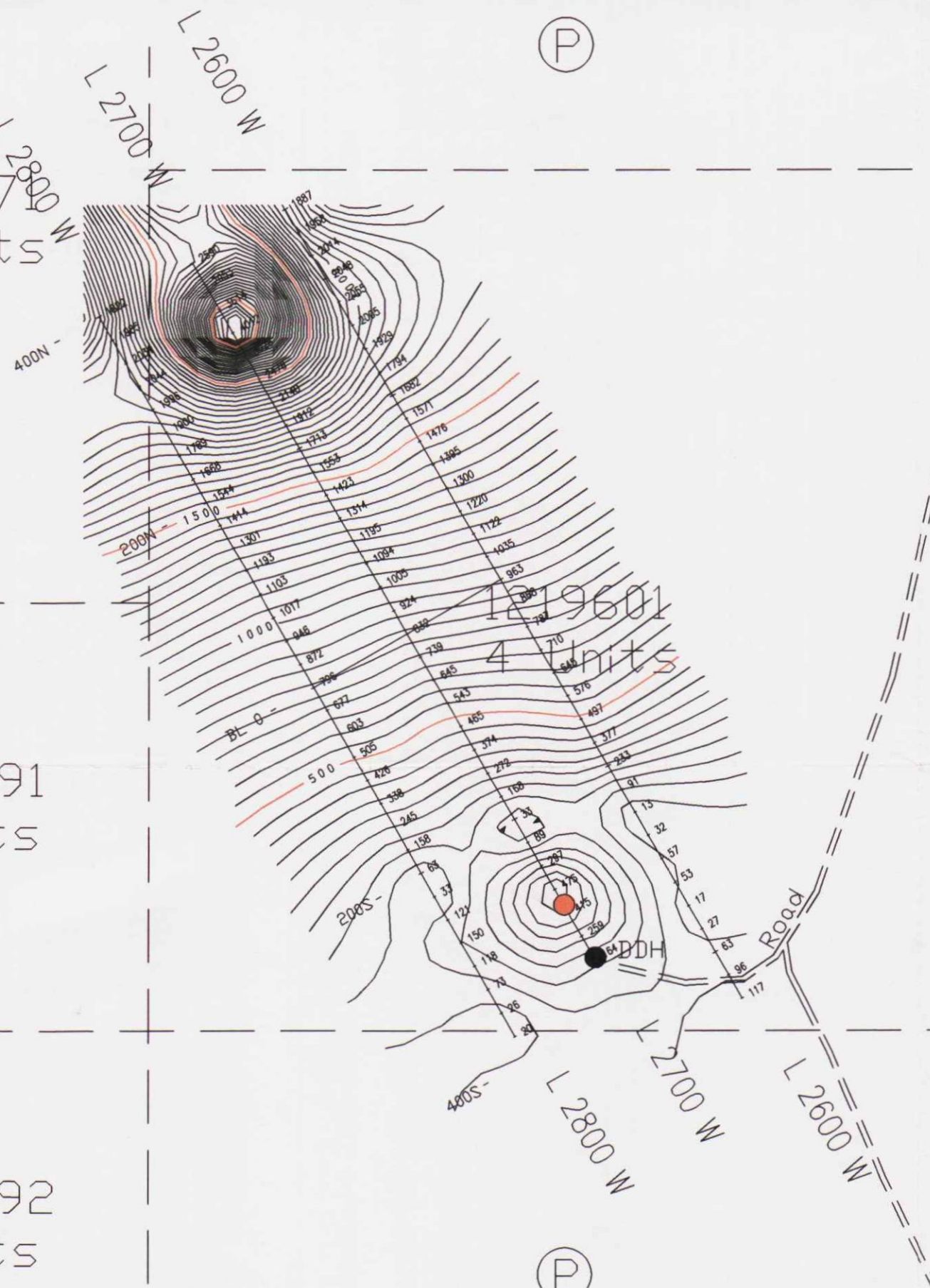
42A07NE2012

2.19379

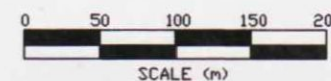
SHERATON

720

N

1213270  
6 Units1223891  
2 Units1223892  
2 Units

RECEIVED  
APR 12 1999  
GEOSCIENCE ASSESSMENT  
OFFICE



## LEGEND

Receiver: BRGM IP-2  
Transmitter: Scintrex Ipc-7 2.5Kw generator  
Current Injection: L27mW/350mS (88.9m in hole)  
Conductor Zone:  
Contour Interval: 0,50,100,150,200,250,.....  
Reading Interval: 25m  
Plotting Values: Potential (mv)  
Current: 1.0 amp

● Appr. location of current projected to surface

C1-Located on line 27W at 700N

P1-Located on line 27W at 400S



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Suite 13, Hollinger Bldg, Timmins Ont.  
Telephone: 705-267-4151, 267-2424

CLIENT: GOLDEN KNIGHT RESOURCES INC

PROPERTY: SHERATON LAKE OPTION

TITLE:

MISE-A-LA-MASSE

HOLE SKG97-14 Current at 88.9m down hole

Date: June 1998

Scale: 1:5000

NTS:

Drawn: P.Gauthier

Interp: J.C.Grant

Job No.: E-323



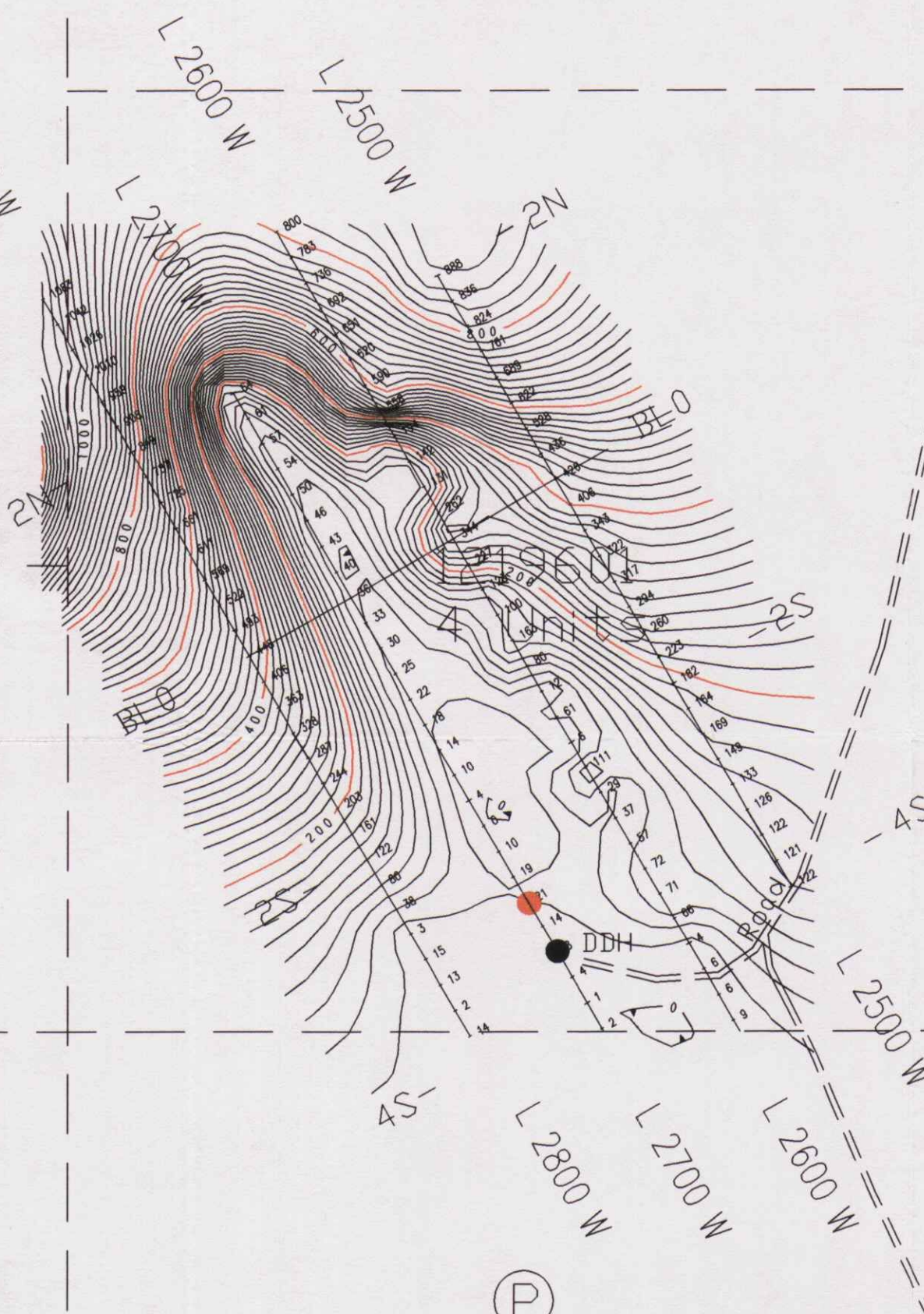
(P)



42A07NE2012 2.19379 SHERATON 730



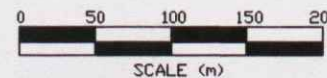
1213271  
6 Units



1223891  
2 Units

1223892  
2 Units

(P)



**LEGEND**  
 Receiver: BRGM IP-2  
 Transmitter: Scintrex Ipc-7 2.5Kw generator  
 Current Injection: L27mW/350mS (72.4m in hole)  
 Conductor Zone:  
 Contour Interval: 0,20,40,60,80,100,.....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 1.0 amp

● Appr. location of current projected to surface  
 C1-Located on line 27W at 700N  
 P1-Located on line 27W at 400S



**EXSICS EXPLORATION LTD.**  
 P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151, 267-2424

CLIENT: GOLDEN KNIGHT RESOURCES INC

PROPERTY: SHERATON LAKE OPTION

TITLE: MISE-A-LA-MASSE

HOLE SKG97-14 Current at 72.4m down hole

Date: June 1998	Scale: 1:5000	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-323

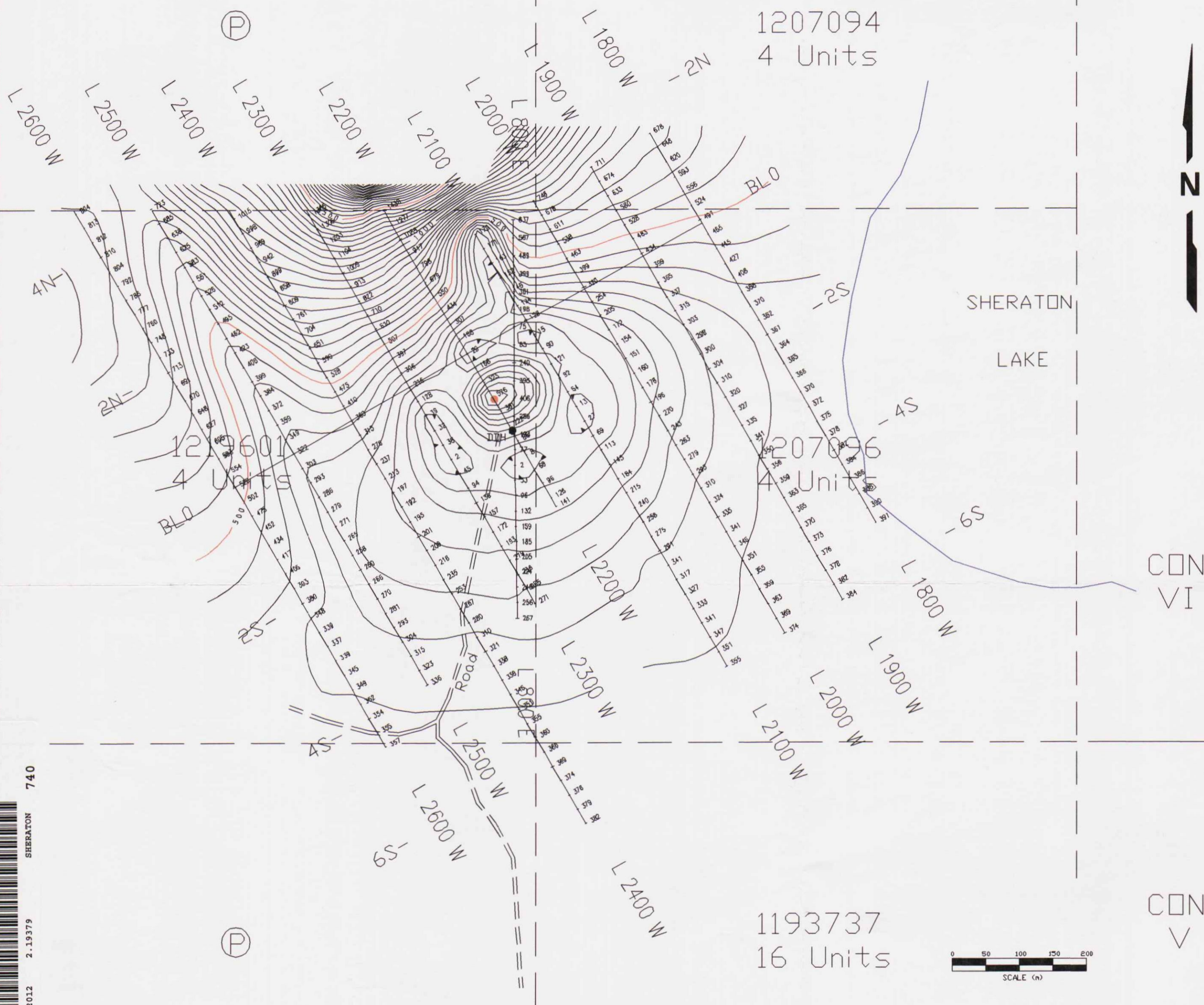


LOT 8

LOT 7

1207094

4 Units

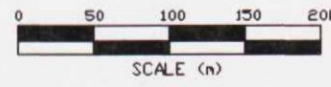


1207096

4 Units

1193737

16 Units



**LEGEND**  
 Receiver: BRGM IP-2  
 Transmitter: Scintrex Ipc-7 2.5Kw generator  
 Current Injection: SKG97-2, L22mW/133mS (82m in hole)  
 Conductor Zone:  
 Contour Interval: 0,50,100,150,200,250,.....  
 Reading Interval: 25m  
 Plotting Values: Potential (mv)  
 Current: 1.7 to 2 amp

- Appr. location of current projected to surface
- C1-Located on line 22W at 500N
- P1-Located on line 22W at 175S

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CLIENT: GOLDEN KNIGHT RESOURCES INC			
PROPERTY: SHERATON LAKE OPTION			
TITLE: MISE-A-LA-MASSE HOLE SKG97-2			
Date: June 1998	Scale: 1:5000	NTS:	
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-323	