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Geological and Geophysical Summary Report on the MERICO – ETHEL PROPERTY

James and Tudhope Townships, District of Timiskaming, Ontario Larder Lake Mining Division NTS 41P/16 and NTS 41P/9 80°-16.5'W - 47°-45'N RECEIVED

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GEOSCIENCE ASSESSMENT

Operated by: **CUSIL VENTURE CORPORATION** #507-595 Howe Street Vancouver, British Columbia V6C 2T5

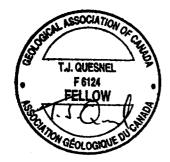
By:

T.J. Quesnel B.Sc.

and

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January 21, 1998



TUDHOPE

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Certificate of Qualifications (T.J. Quesnel) Certificate of Qualifications (Lawrence Othmer) Geology. Trench 1 Geology. Trench 2 Geology. Trench 3 Geology. Trench 4 Summary Analysis Merico – Ethel Property, Samples Collected 1997 Whole Rock Analysis Diabase – Merico Shaft Area Samples Assay Certificate, Swastika Laboratories. Certificate #7W-4126-RA1. Assay Certificate, Swastika Laboratories. Certificate #7W-4463-RA1. Quantec IP Inc. – Main Body of Report (pages 3-15 from Quantec Report) Quantec Statements of Qualifications - 5 pages

SUMMARY

The Merico - Ethel Property consists of 21 unpatented mining claims (71 claim units), in James and Tudhope Township, Larder Lake Mining Division, Ontario. During October 15 – November 15, 1997 the author conducted geological mapping and sampling of the central portion of the Merico-Ethel Property.

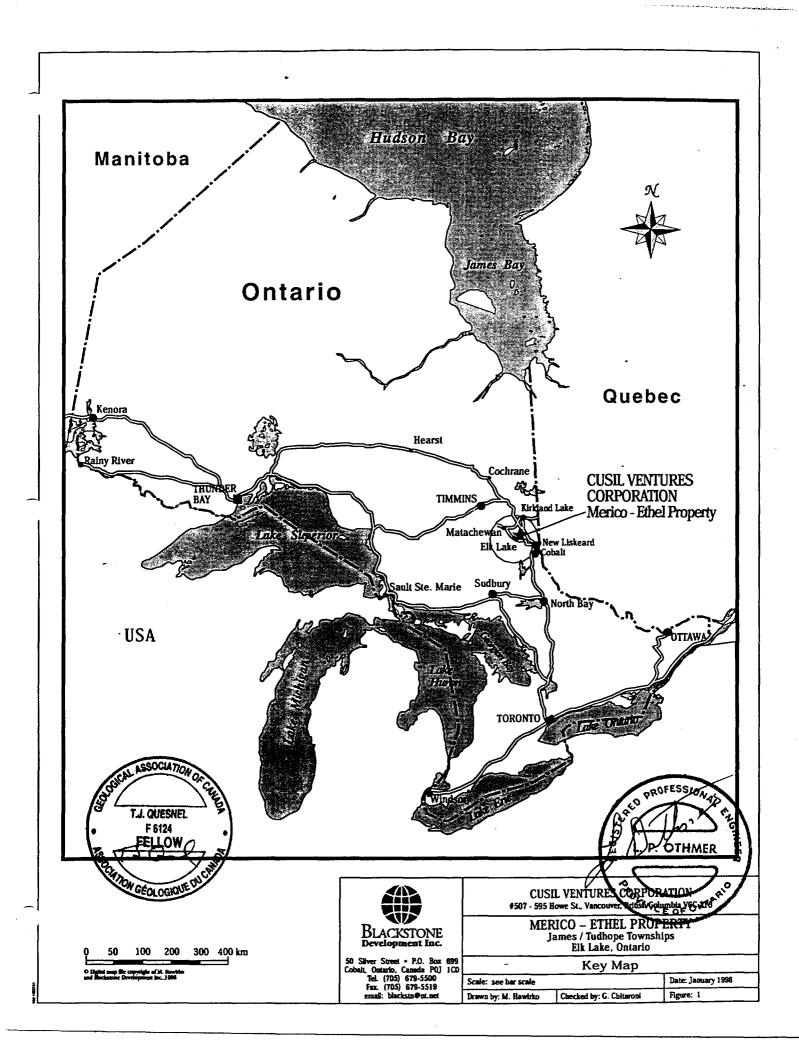
Between September 1st and November 1st 1997 a grid was cut totalling 38.0 km in length. The lines in Tudhope Twp were cut at magnetic north, while the lines in James Twp., were cut at grid north. Both grids were cut at a 100 metre line spacing and a 25 metre station interval. Two 50 meter spaced lines were cut adjacent to the Ethel adit and Merico shafts for better geophysical definition in these areas. Meegwich Surveys conducted a 38.0 km ground magnetic, survey. Quantec Consulting Inc. conducted 51.2625 km of time domain induced polarization surveys

The property is located approximately 170 km north north-west of North Bay, Ontario and is accessed from Kirkland Lake by Highways 66 to Highway 65 and thence Highway 560 to the property (Figure 1). Highway 560 bisects the northwestern portion of the property and access to the main mine workings is gained by 2 logging roads.

Mapping located and identified numerous old and new showings from which the author collected character samples of mineralization for analysis. Precious and base metal analysis identified significant Au, Ag, Cu and Co values. Existing trenches adjacent to the Merico shaft were also mapped and sampled (see appendix). The survey by Quantec has defined 7 First Priority IP anomalies that warrant advanced exploration. The Quantec anomalies are deeper in comparison to previous exploration work (depths between 100 and 300 meters) and it is anticipated that mineralization structures will continue and widen with depth.







Favourable geologic environments and past history for Cu and Au-Ag deposits justify advanced exploration. The following program is recommended:

Phase One

- 1. 4 diamond drill holes on Quantec IP Inc. First Priority Targets.
- 2. Detailed prospecting and sampling over areas of secondary priority.

COST ESTIMATE OF PHASE ONE

Diamond drilling 1200 m @ \$60/m	\$ 72,000
Core logging and drill logistics 15 days @ \$300 Lodging & Transportation 14 days @ 110/day	\$ 4,500 \$ 1,540
Prospecting & Geology 15 days @ \$300/day Lodging & Transportation 14 days @ 110/day	\$ 4,500 \$ 1,540
Assays and Rock Analyses	\$ 12,000
Contingency 12%	<u>\$ 11,439</u>
Total Costs	\$106,769





GEOGRAPHIC AND PHYSIOGRAPHIC POSITION.

The claims are centred at 80° 16.5'W longitude and 47° 45'N latitude in James and Tudhope Townships of the District of Timiskaming, Ontario which is found on map sheet NTS 41P/16 and NTS 41P/9 in the Larder Lake Mining Division as shown on Figure 1. The area is between elevations 300 and 350 meters above sea level.

As previously mentioned, the property is located approximately 170 km north north-west of North Bay, Ontario and is accessed from Kirkland Lake by Highways 66 to Highway 65 and thence Highway 560 to the property. Highway 560 bisects the north-western portion of the property and access to the main mine workings is gained by 2 logging roads.

The claims, which have modest relief, are covered by mixed forest, ponds and swamps. Highway 560 runs across the northern portion of the property. There are no major lakes or major man made features on the property

MAJOR MINING CAMPS IN NORTHEASTERN ONTARIO (Figure 2.)

Northeastern Ontario is the source of a major portion of Canadian mining production; part of which is compiled below.

Rouyn-Noranda Mining Camp

Past production (96,366,373 tonnes of ore) and reserves (35 166 300 tonnes) total 2,039,000 tonnes with 2,038,306 tonnes contained Cu, 947,000 tonnes Zn, 1,332,000 kg Ag and 341,000 kg Au.

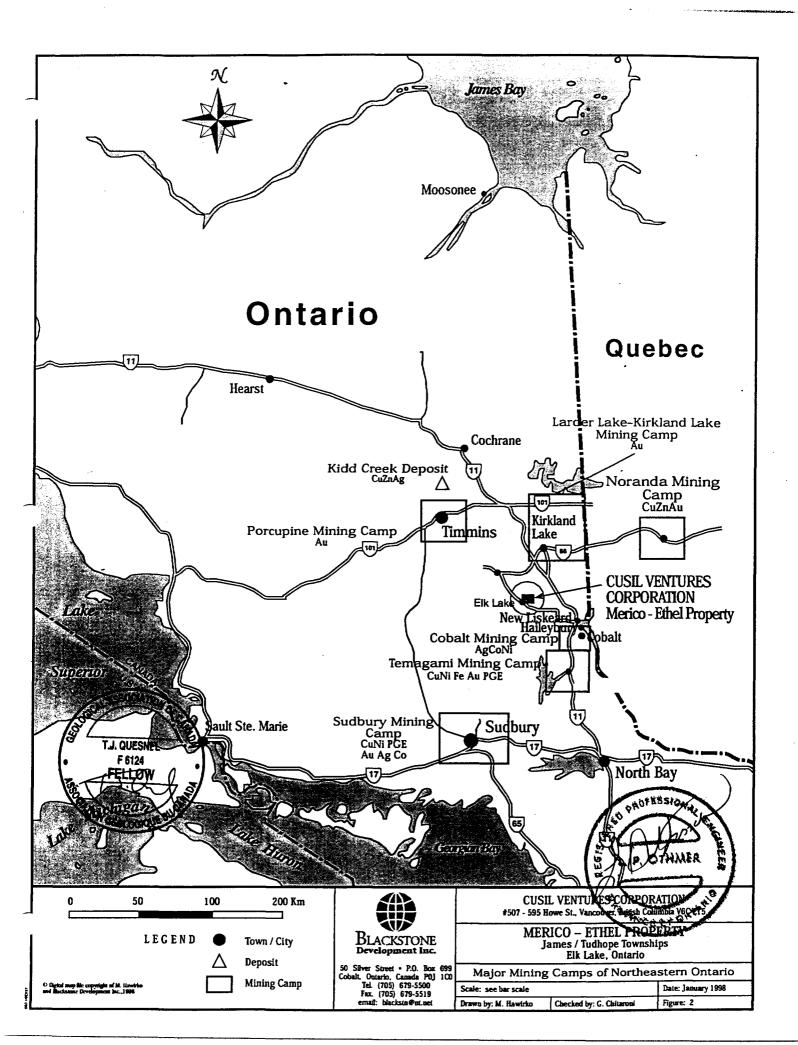
Kirkland Lake Mining Camp (Larder Lake Mining Division) The following production figure to 1995 for gold mines was reported by (MNDM Ontario) Resident Geologist Gerhard Meyer: 118,309,000 tonnes @ 10.4 gm/tonne = 1,228,000 kg Au.

Timmins Camp (Porcupine Mining Division)

Production to 1995 from the Timmins resident geologist's area included four polymetallic Cu-Zn massive sulphide deposits (Including Kidd Creek Mine) which produced 2,373,000 tonnes Cu and 6,880,000 tonnes Zn from 104,803,000 tonnes of ore. Also five polymetallic Ni-Cu sulphide deposits produced 25,000 tonnes Ni from 1,419,000 tonnes of ore.

Sudbury Mining Camp

Located 160 km south-southwest of the Ethel Merico property is the centre of the Sudbury Mining Camp 14 km north-west of the Grenville (geological) Subprovince. To 1994 Sudbury camp produced 9,072,000



tonnes Ni, 9,072,000 tonnes Cu, 54,431 tonnes Co, 124,414 kg Au, 778,000 kg platinum group metals (PGM) and 3,266,000 kg Ag from 725,748,000 tonnes of ore mined from post Archean rocks of the Sudbury Irruptive.

Temagami Mining Camp

Within the Temagami Mining camp the following drill indicated reserves are reported:

- b. Copperfields Mining Corp. Ltd. "Pyrite Zone" 698,532 tonnes @ 1.04% Cu and 0.46% Ni.
- b. Kanichee Mining Inc. 1,871,522 tonnes at 0.41% Cu and 0.26% Ni.
- b. Stroud Resources Lecky Property, also known as Little Dan, Manitoba or Eastern Property 307,410 tonnes at 0.27 oz Au.
- b. Diadem Teck Strathcona Twp. Northeastern arm of Lake Temagami. 453,592 tonnes at 0.5% cu and 0.1% Ni to 122 metres.

Past Production from the Temagami Mining Camp includes:

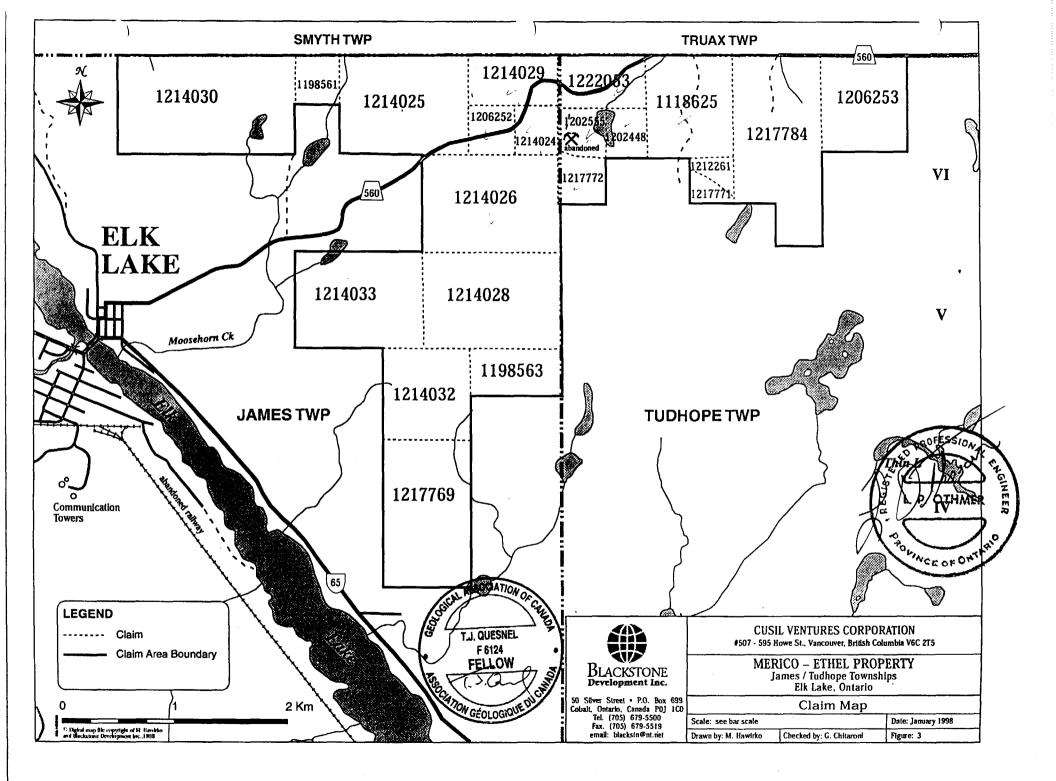
- b. 30,430 tonnes Cu, 5812 kg Ag and 316 Kg Au from 467,567 tons mined by Copperfields Mining Corp. Ltd. At a 4% cut off grade and
- b. 45 tonnes Cu, 30 tonnes Ni, 1 kg oz Au, 28 kg Ag, 3 kg Pt and 6 kg Pd from 3010 tonnes by Kanichee Mining Inc. from its Ajax (Caniptau) Mine during 1963.

PROPERTY DEFINITION. Figure 3

The property consists of the following claims in the Larder Lake Mining Division:

The claims are under option to and registered under the name of Cusil Venture Corporation (MNDM Client #303596) Total Claims: 21 – Total Claim Units: 71

Claim #	Units	Due Date	Status	Township
L 1217769	6	Sept. 11, 1998	Active	James
L 1214033	6	Sept. 11, 1998	Active	James
L 1214032	4	Sept. 11, 1998	Active	James
L 1214030	8	Sept. 11, 1998	Active	James
L 1214029	2	July 12, 1998	Active	James
L 1214028	6	June 28, 1998	Active	James
L 1214025	6	May 9, 1998	Active	James
L 1214024	1	May 9, 1998	Active	James
L 1206252	1	March 5, 1998	Active	James
L 1198563	2	Sept. 11, 1998	Active	James



L 1198561	1	Sept. 11, 1998	Active	James
L 1214026	6	May 9, 1998	Active	James
L 1202555	1	April 26, 1998	Active	Tudhope
L 1202448	1	April 26, 1998	Active	Tudhope
L 1212261	1	Sept. 11, 1998	Active	Tudhope
L 1206253	4	March 5, 1998	Active	Tudhope
L 1118625	4	Oct. 21, 1998	Active	Tudhope
L 1217772	1	Sept. 24, 1998	Active	Tudhope
L 1217784	7	June 5, 1999	Active	Tudhope
L 1222053	2	May 15, 1999	Active	Tudhope
<u>L 1217771</u>	<u>1</u>	Sept. 24 1998	Active	Tudhope
21 Claims	71 units			•

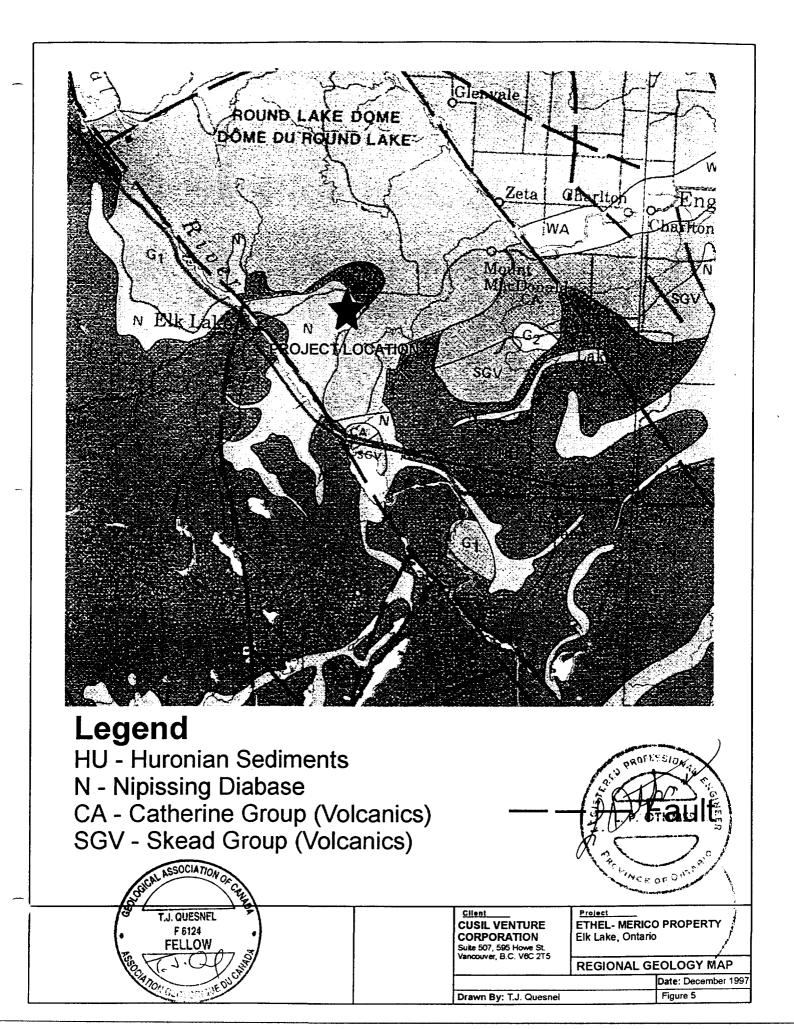
REGIONAL GEOLOGY

The best documented regional geology is found on Ontario Geological Survey Map 2484 titled "Lithostratigraphic Map of the Abitibi Subprovince" which is duplicated as Figure 4 in this report at scale 1:500 000 and from Geology of the Hill Lake Area, District of Timiskaming, Ontario Geological Survey Geological Report 250 (presented below). The Abitibi Subprovince of Archean age volcanics, sediments and intrusives is commonly called the Abitibi Greenstone Belt.

"The townships of James and Tudhope are underlain by Early Precambrian metavolcanics of the Abitibi Greenstone Belt that have been unconformably overlain by the sedimentary rocks of the Cobalt Group, part of the Huronian Supergroup which is Middle Precambrian in age.

The metavolcanics are subdivided into three groups which are from the oldest to the youngest: The Wabewawa Group, the Catharine Group, and the Skead Group. These groups form a southeast-facing homoclinal sequence approximately 11 000 m thick. The Wabewawa Group, composed of interbedded high magnesium tholeiitic basalt, high iron tholeiitic basalt, komatiitic basalt and ultramafic flows, is 1800 to 3000 m thick. The Catharine Group is 4400 m thick, conformably overlies the Wabewawa Group, and consists of high iron tholeiitic basalt. The Skead Group, 4480 m thick, is composed of interdigitated to graded, calc-alkalic andesitic to dacitic quartzfeldspar porphyry, pyroclastic breccia, tuff-breccia, lapilli-tuff, lapillistone and tuff, and conformably overlies the Catharine Group. None of these volcanics outcrop on the Merico - Ethel Property.

Various intrusions are associated with the metavolcanic groups. The Wabewawa Group has been intruded by small, localized gabbros and a



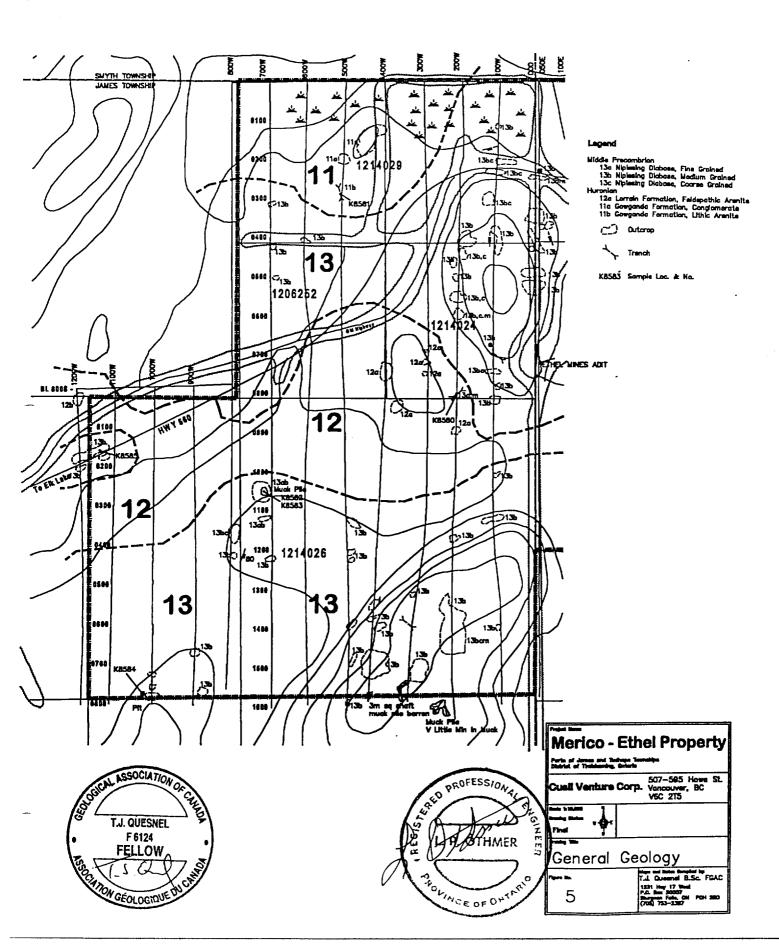
layered ultramafic sill situated at Charlton. The Skead Group, in Bryce and Tudhope Townships, has many diverse intermediate and felsic porphyries associated with it. The largest, the Britcanna Porphyry, is located between the Catharine and the Skead Groups. Smaller dikes and irregularly-shaped bodies of these porphyries are also scattered throughout the Catharine and Skead Groups in Bryce and Tudhope Townships.

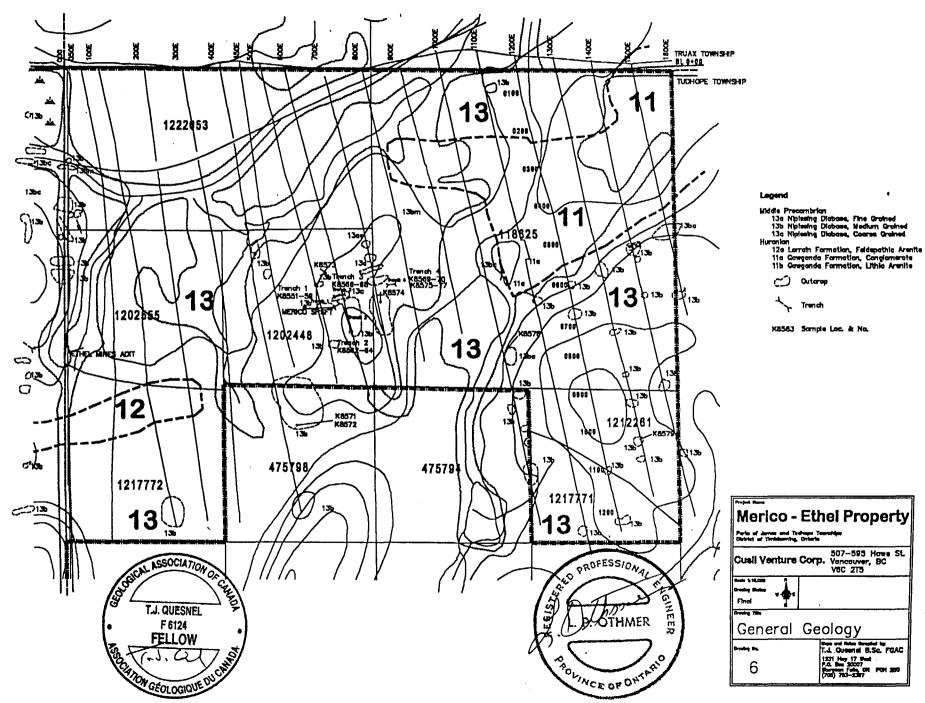
The Round Lake Batholith, composed of foliated to cataclastic tonalite to trondhjemite and the younger granodioritic Hope Lake Stock, have intruded the base of the Wabewawa Group east of the Cross Lake Fault and the base of the Catharine Group west of the fault. Fine-grained pebble-bearing and nonpebble-bearing lamprophyre dikes have intruded the metavolcanics and the Round Lake Bathotith. Diabase dikes were the last intrusive rocks emplaced during the Early Precambrian."

A Nipissing Diabase Sill, which covers the majority of the area in which the property is located, contains most of the economically interesting features described in this report. The sill overlies Gowganda and Lorrain Formation sediments.

LOCAL GEOLOGY

The property is mainly underlain by fine to coarse grained Nipissing gabbrodiabase, which forms a sill up to 30 meters in thickness, dipping and thickening to the SW, overlying the Gowganda Formation (Cobalt Group) conglomeritic to arenaceous sediments. These gently dipping rocks generally form the basement, but can also be seen outcropping along the northern and eastern perimeter of the mapped area, where the diabase pinches out. An occurrence of Lorrain Formation arkoses, which represents the uppermost Cobalt stratigraphy, also occurs in the west-central survey area, where the diabase cover rocks are locally eroded. Archean granitic rocks of the Round Lake Batholith also found along the Northwestern corner of the mapping area, and regionally form the deep, unconformable basement. Outcrop exposure is poor, due to a thin blanket of glacial moraine sediments, which thicken to the north and south-west, following local drainage patterns. (see Figures 5 and 6)





PREVIOUS WORK

This property and the immediate area have a long history of prospecting done between the early 1900's to the early 1970's. Numerous Au, Ag, Cu, showings were identified. The bulk of exploration and development work has taken place on the Ethel Copper Mine Deposit and in the Merico shaft area. General details on this work is presented below from the Ontario Geological Report and Assessment Work Files.

Ethel Copper Mines

The first work done on the property was probably about 1911, on claim 18423 where a shaft of unknown depth was sunk on a vein said to contain silver. On claim 10316, three holes, totaling 850 feet were diamond drilled in 1952. Intersections averaging 2.99% copper for a core length of 1.5 feet (0.457 m); 0.39% copper over 2 feet (0.61 m); and 4.91% copper over 5 feet (1.5 m) were obtained.

In 1960 an inclined adit was driven along the mineralized zone for a distance of 90 feet, and subsequently extended another 60 feet (18.3 m). The zone exposed over the first 90 feet (27.4 m) has been systematically sampled on the back at 2 to 3-foot intervals, and averaged 3.14% copper and contain minor values in gold and silver across an average width of 7.0 feet (2.13 m). Face sampling of the next 50 feet (15.2 m) is reported to show an average 3.98% copper across an average width of 5.8 feet (1.77 m). Three horizontal diamond drill holes have been drilled from the adit workings, one hole to the north, and 2 sub-parallel holes to the south. The 2 holes to the south intersected a narrow copper-bearing zone approximately 60 feet (18.3 m)south of the shaft. One sample showed a copper content of 6.70% across 1.2 feet (0.36 m). The hole to the north did not intersect anything of interest.

During May and June 1961, geophysical surveys were conducted along the main copper-bearing zone and elsewhere on the property using both electromagnetic and induced polarization techniques. Following this 7,574 (2308 m) feet of **shallow** diamond drilling was carried out. As a result of this work a portion of the mineralized zone, a total distance of 550 feet (167.6 m), across a width of 6.3 feet ((1.92 m), to a depth of 110 feet (33.5 m), was found to contain an estimated 35,000 tons averaging 3.15% copper before allowance for dilution. With a 15% dilution allowance, tonnage is increased to 40,250 and grade was reduced to 2.73%. It is estimated that approximately 20,000 tons of these reserves have been extracted leaving 20,000 tons remaining. Actual copper production values are not available.

In July 1962 an agreement was made between Ethel Copper Mines Limited and St. Lucie Syndicate, giving the Syndicate the right to explore and mine the property. In October 1962, the Syndicate's interest in the agreement was transferred to the St. Lucie Exploration Company Limited.

Under the agreement this company carried on underground development and mining operations until the surface plant was destroyed by fire in January 1963. Following this, St. Lucie terminated the agreement and all interest in the claims was returned to Ethel Copper Mines Limited. All claims are now under the control of Cusil Venture Corporation. Presently these workings are inaccessible.

Merico Shaft

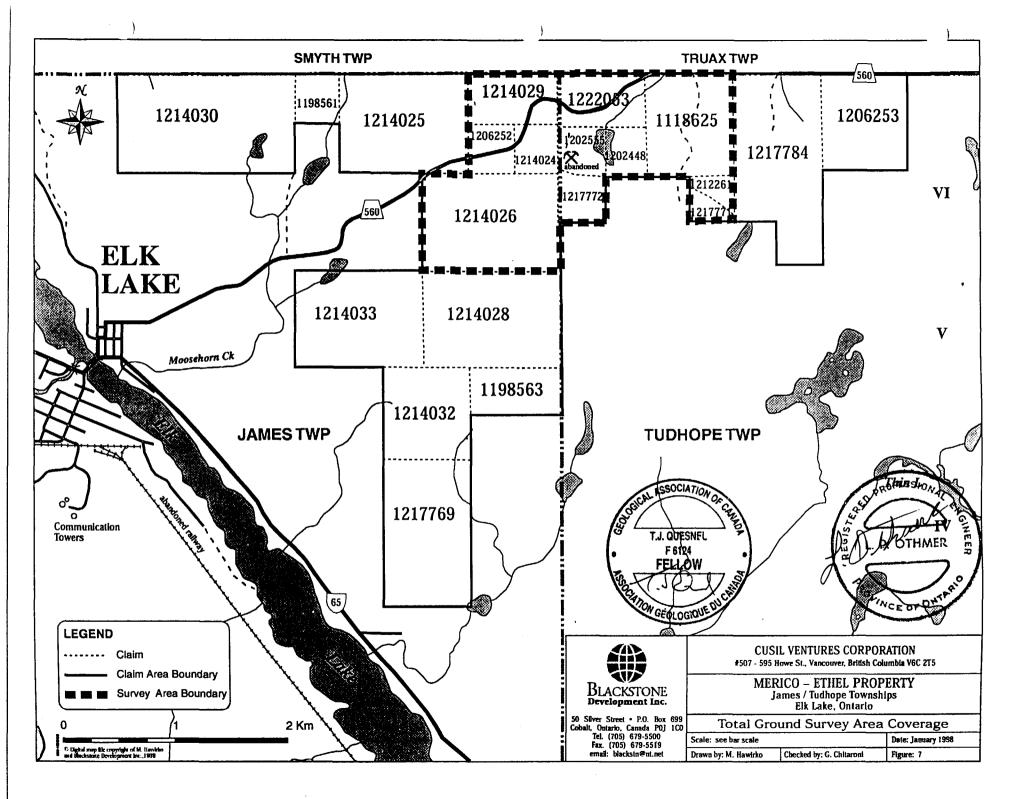
Merico Explorations Limited formerly held two claims in the SW ¼, SE ¼ N, ½ of lot 12, concession VI, Tudhope Township. Originally these claims were owned by the Toledo Silver Mines Limited and the claim in the SE ¼ was known as the Bradshaw claim, Toledo Mine (Assessment Files, Resident Geologist's Office, Ontario Ministry of Northern Development and Mines, Kirkland Lake). The shaft, now flooded, which can be seen at surface, has been reported to be up to 250 feet (76.2 m) deep. The vein, trends at Az 250° and dipping 70°N, was found in a 3 to 4 foot (0.9 – 1.2 m) wide fracture zone and has been outlined by stripping and small trenches. The vein is not associated with any aplite dikes and has been mapped and sampled as trench 1 (see appendix).

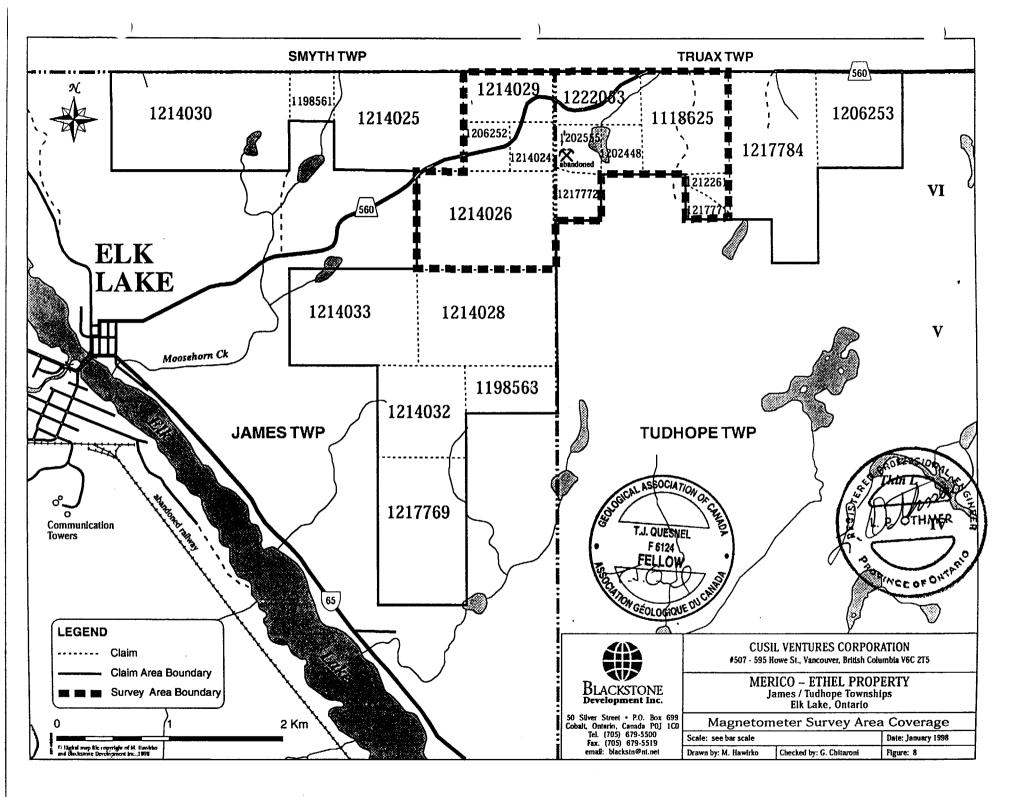
SUMMARY OF WORK PROGRAMS. Figures 7 to 9

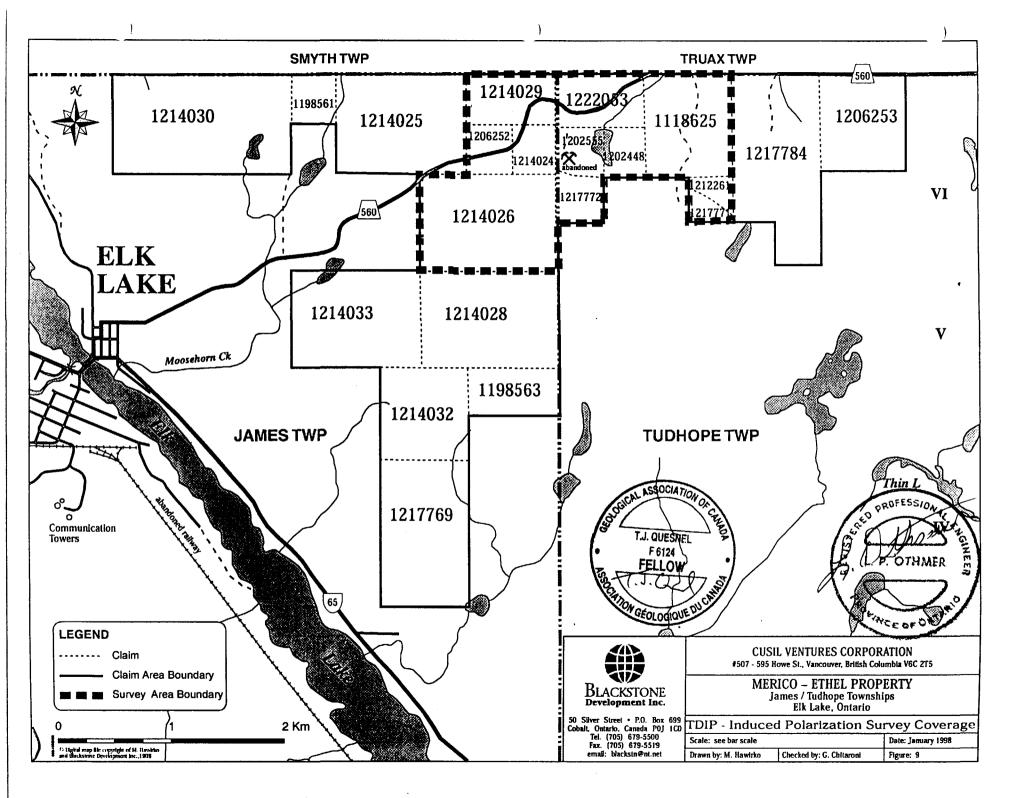
During October and November, 1997 the author conducted geological mapping at 1:5,000 with detailed mapping of trenches. This work was done in conjunction with sampling mineralized areas in the trenches and character sampling of selected pieces of mineralization over the remainder of the mapped portion of the property.

In 1997, project supervision was performed by T.J. Quesnel B.Sc FGAC, Lawrence Othmer P.Eng, Eugene Larabie P.Eng and Gino Chitaroni, geologist and president of Blackstone Development Inc. This work was performed on two grids, a west and an east grid separated by the north-south township line between James and Tudhope Townships near the centre of the property.

A total of 38.0 km of line cutting was performed in 1997. Meegwich Inc. completed a Magnetometer Survey on the grid and Quantec Consulting Inc. performed a Time Domain Induced Polarization (TDIP) over the entire grid.







MAGNETIC SURVEY Figure 10

Meegwich Consultants Inc. has identified a strong north-east trend of linear to semi-massive highs. Overall the magnetic responses reflect the underlying non homogeneous geology well. The diabase is known to reflect differing degrees of magnetism. Quantec's 7 high priority drill targets coincide well with areas of high and low local magnetism within area A'.

TDIP INDUCED POLARIZATION SURVEY

Quantec Consulting Inc. conducted a TDIP survey (Figures 11-19) to "locate and delineate potential copper/cobalt/silver/gold bearing sulphide mineralization hosted in vein structures within generally flat lying mafic intrusive rocks, for the purposes of drill targeting. Additionally to locate potential continuation of potential mineralized zones in underlying basement rocks."

Quantec has identified numerous subvertical anomalies, recommending seven anomalies for first priority follow-up work. These seven anomalies are all contained within Area A' on the Interpretation Map, adjacent to the workings around the Merico shaft. The comprehensive anomaly list and summary report by Quantec are included in the appendices of this report.

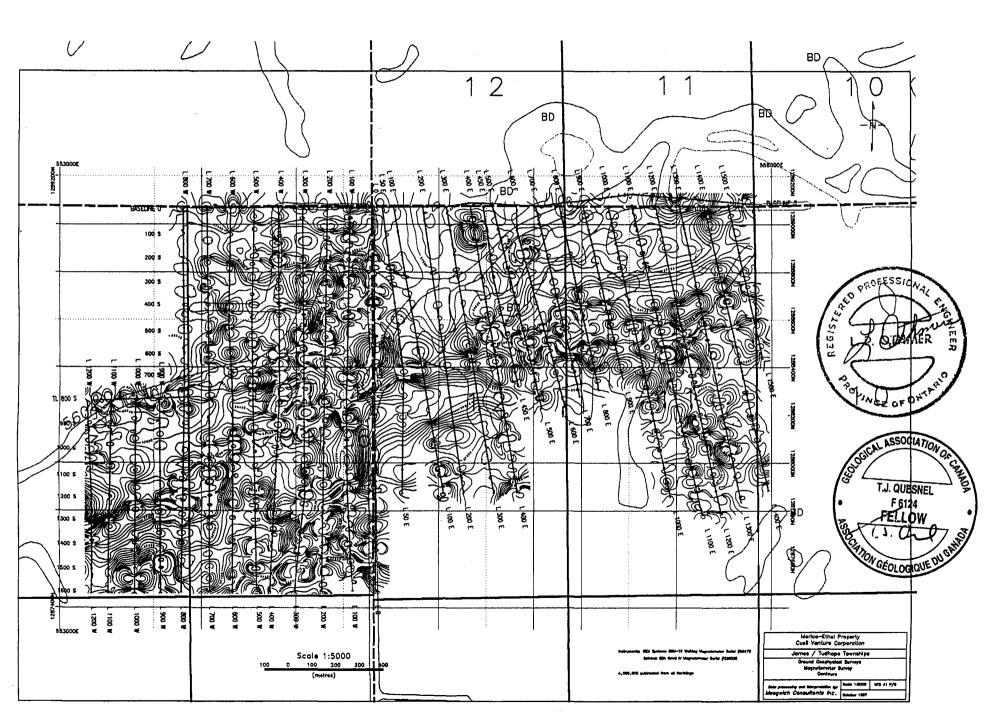
1997 GEOLOGY WORK PROGRAM Figures 5, 6 & Appendix – Trench Maps 1-4

During the mapping of the grid many old trenches were identified and sampled. Mineralization is mainly contained in small 2 to 10 cm veins within the Nipissing Diabase. However on two occasions mineralization was noted within the underlying sediments. An old trench to the north of Highway 560 on Line 500W contained Gowganda Sediments with a small vein of chalcopyrite in the muck adjacent to the trench. Also a large muck pile adjacent to a reported shaft on Line 700W at 1050S contained Lorrain sediments with a small chalcopyrite vein trending vertically across bedding. This would indicate that mineralization does indeed continue downward into the strata underlying the Nipissing Diabase, lending credence to the deeper trends identified by Quantec Consulting at levels greater than 100m below surface.

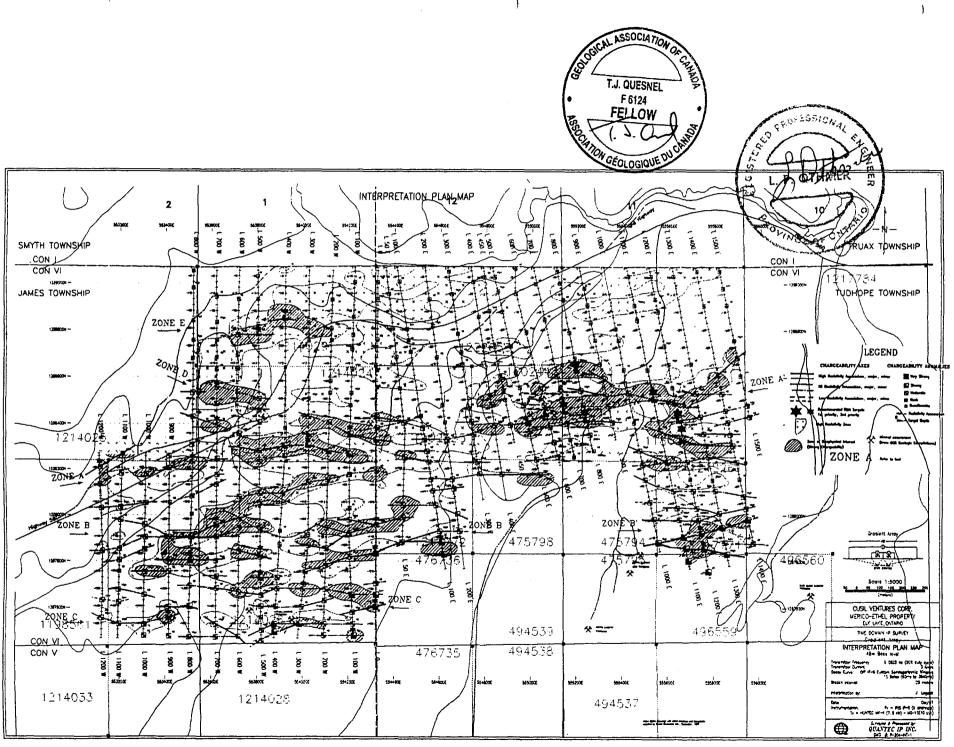
Trench mapping around the Merico Shaft identified several areas of known mineralization which have been noted before. These areas are indicators that the mineralization possibly extends downward, perhaps swelling out when deepening into the sediments below.

A small vein of chalcopyrite mineralization was noted north-east of the adjacent

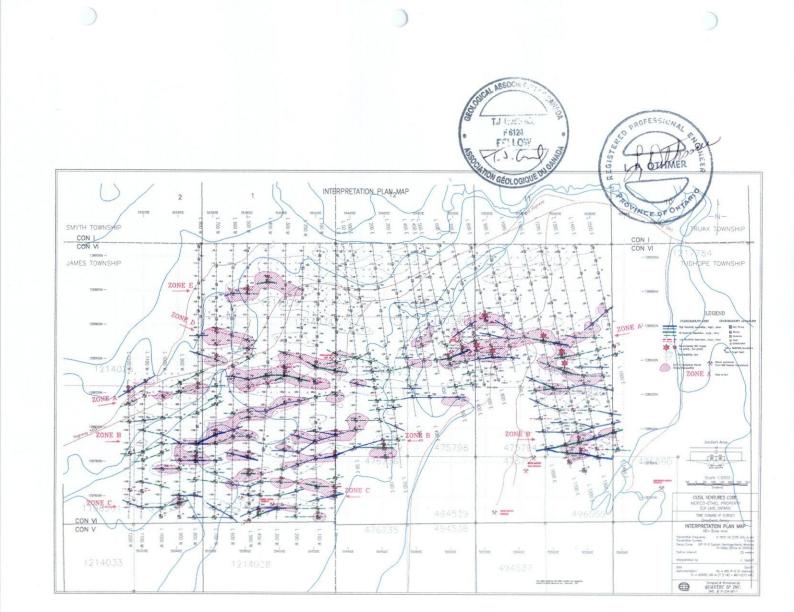
Silver Jackpot Mine workings. This may represent a continuation of mineralization from that property. Quantec has identified 2 second priority dill targets in the area adjacent to this mineralization.

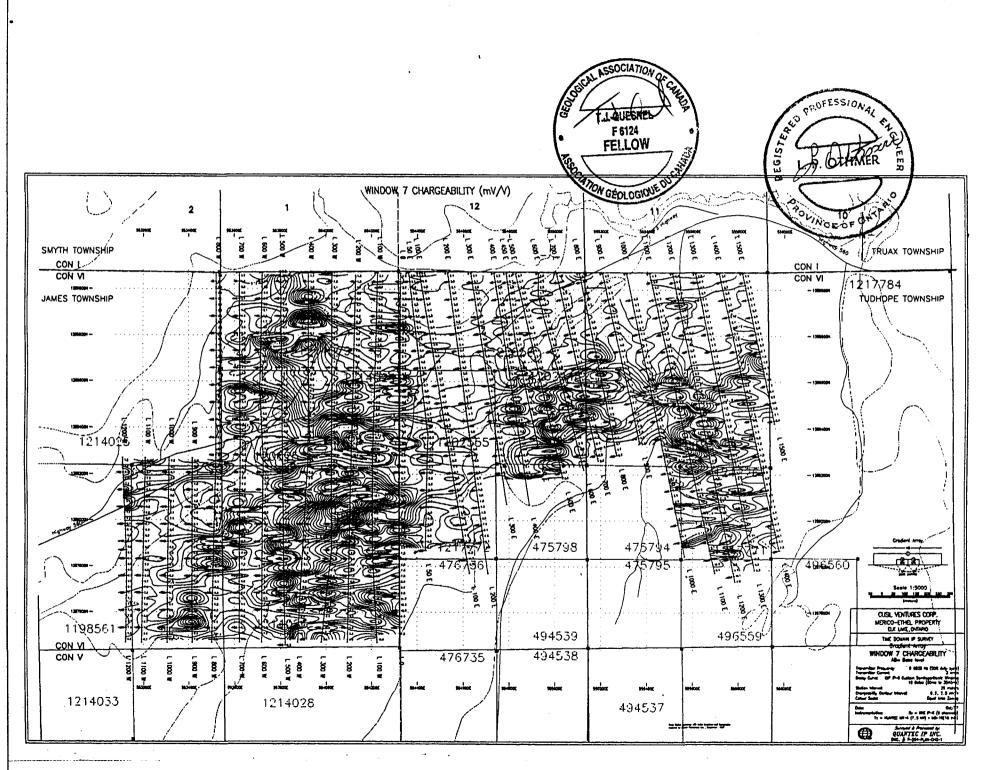


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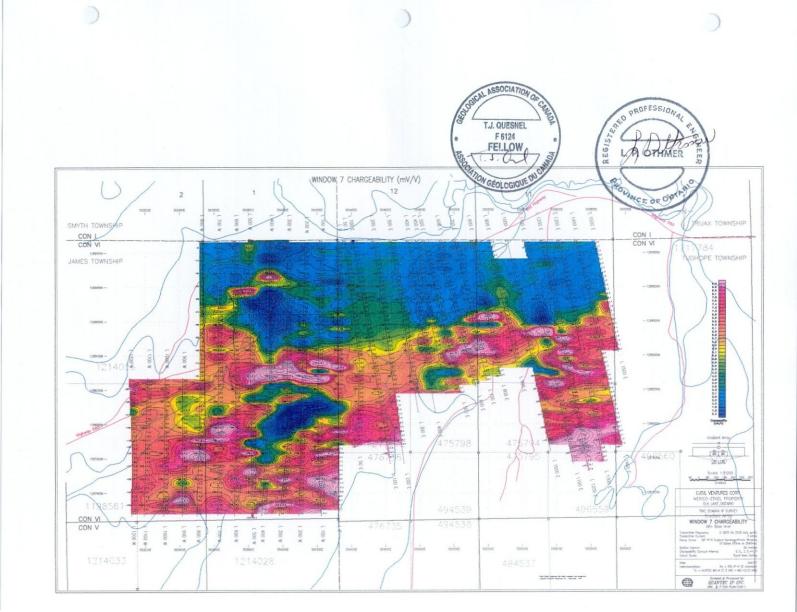
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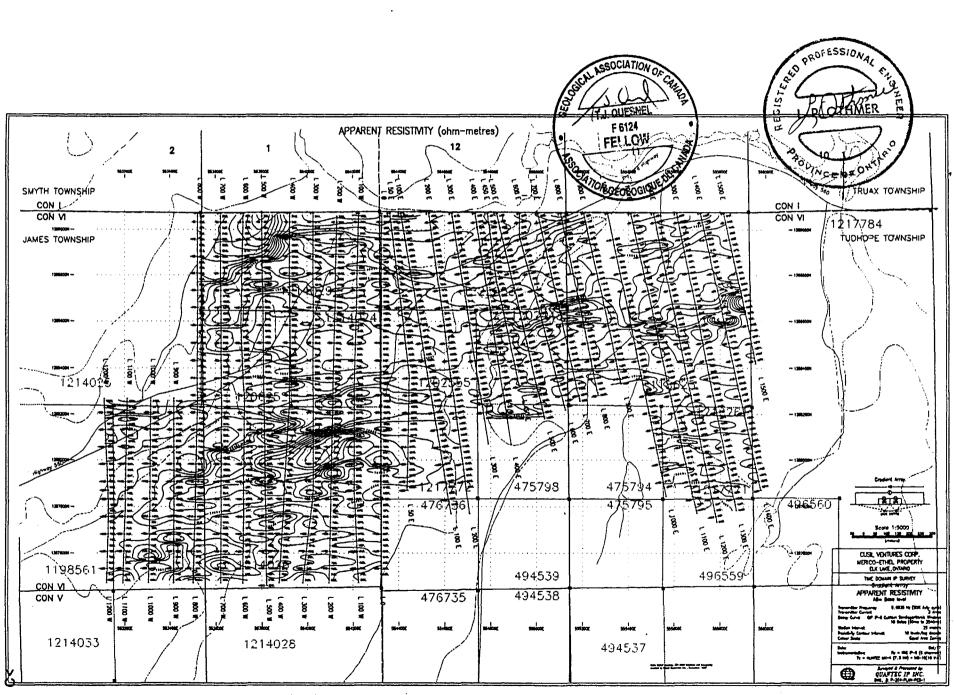




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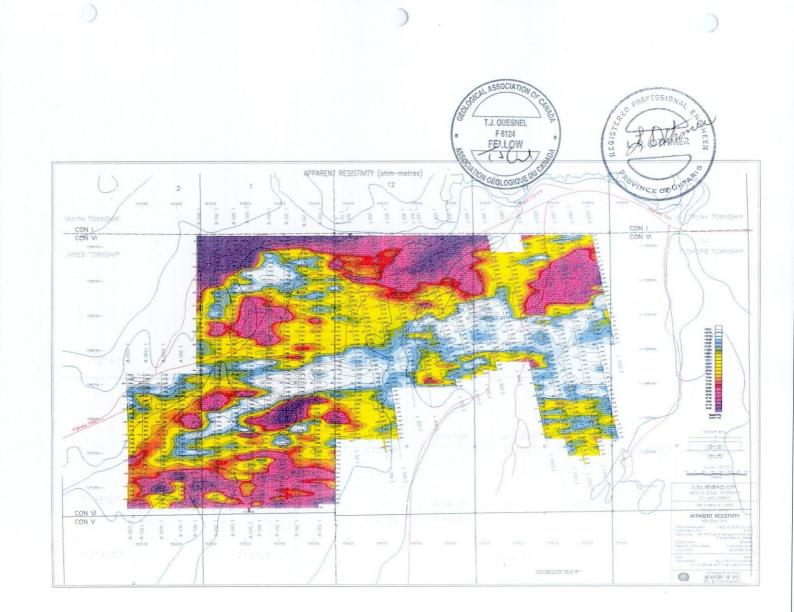
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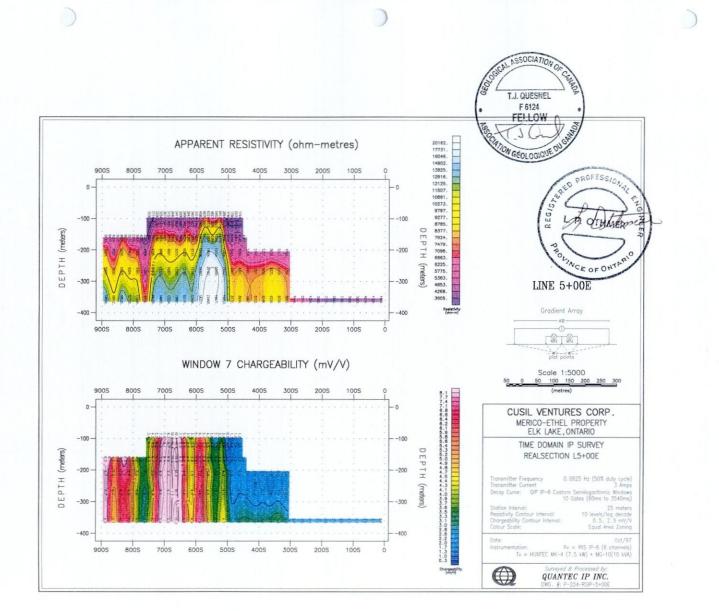


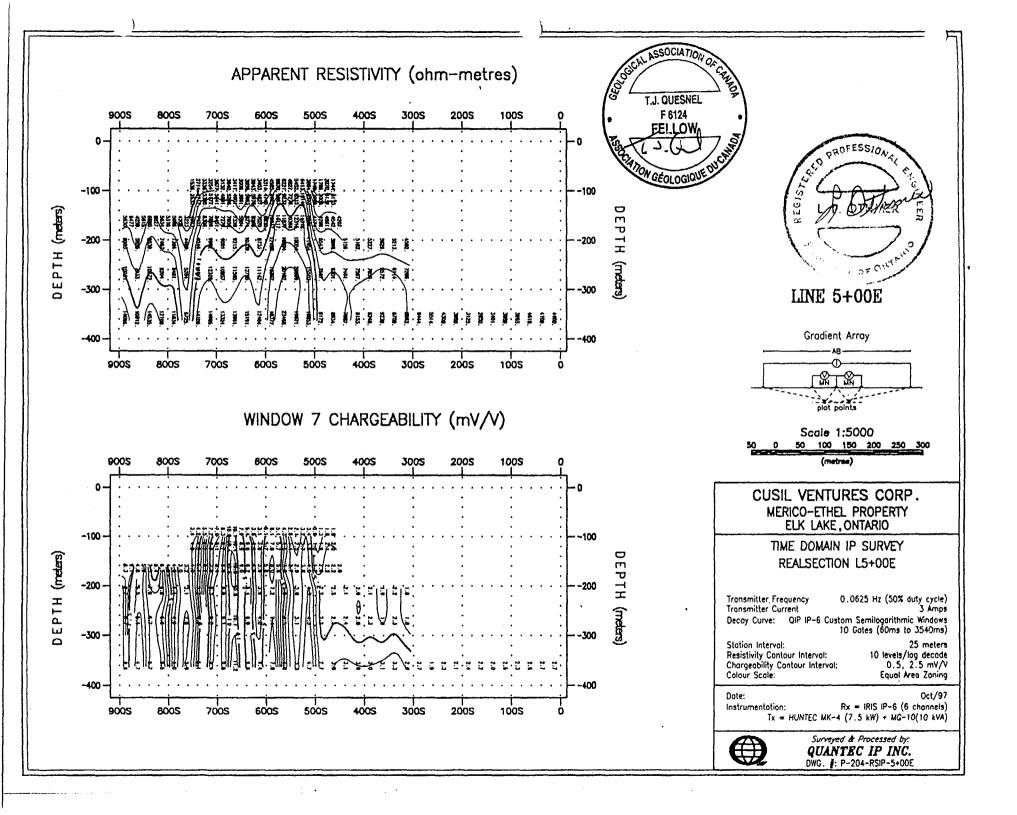


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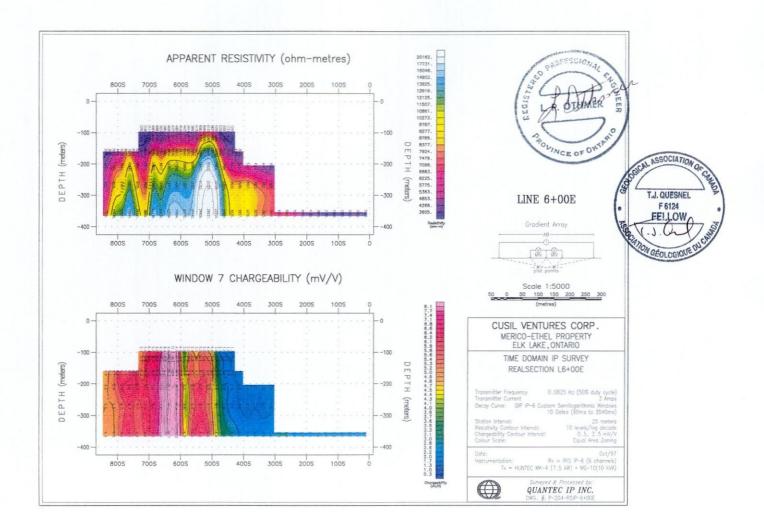


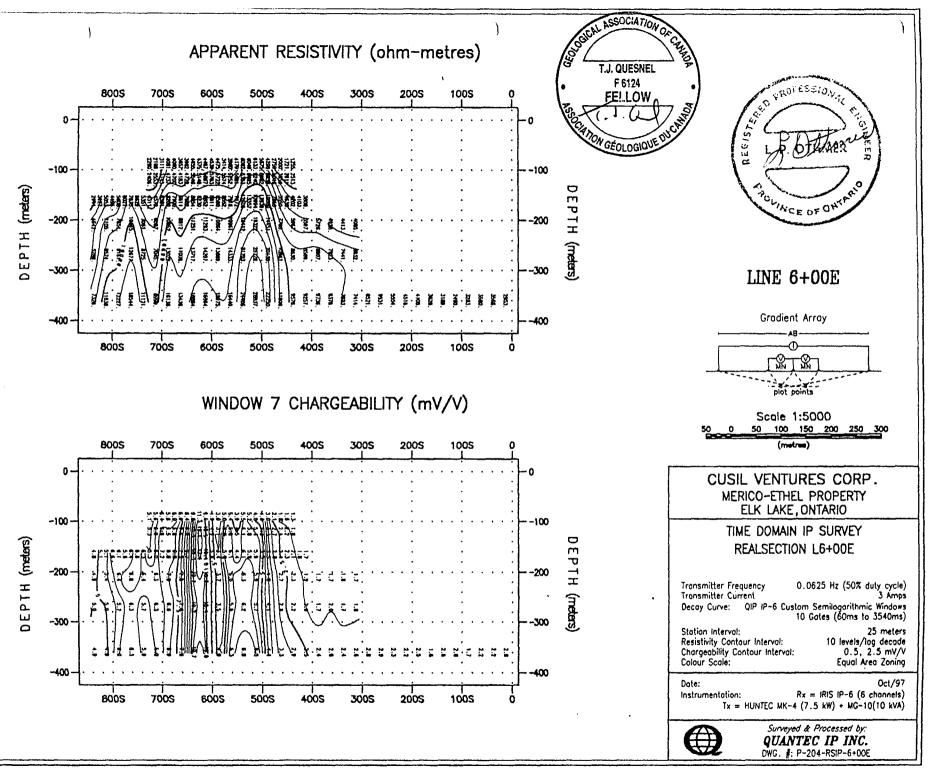






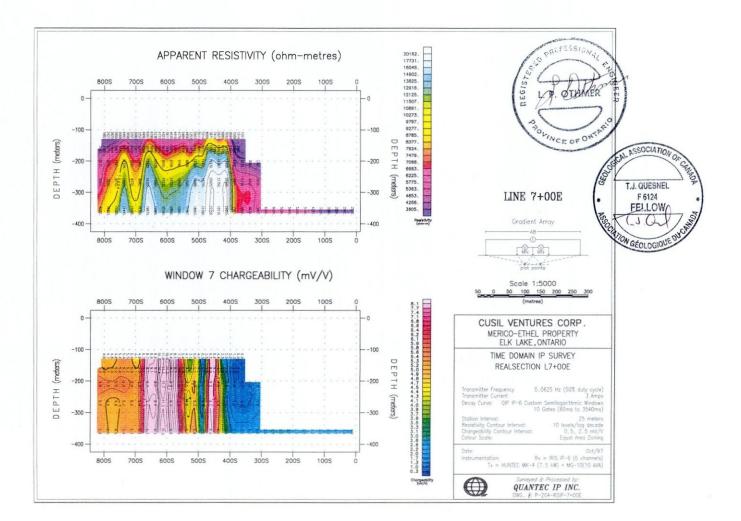


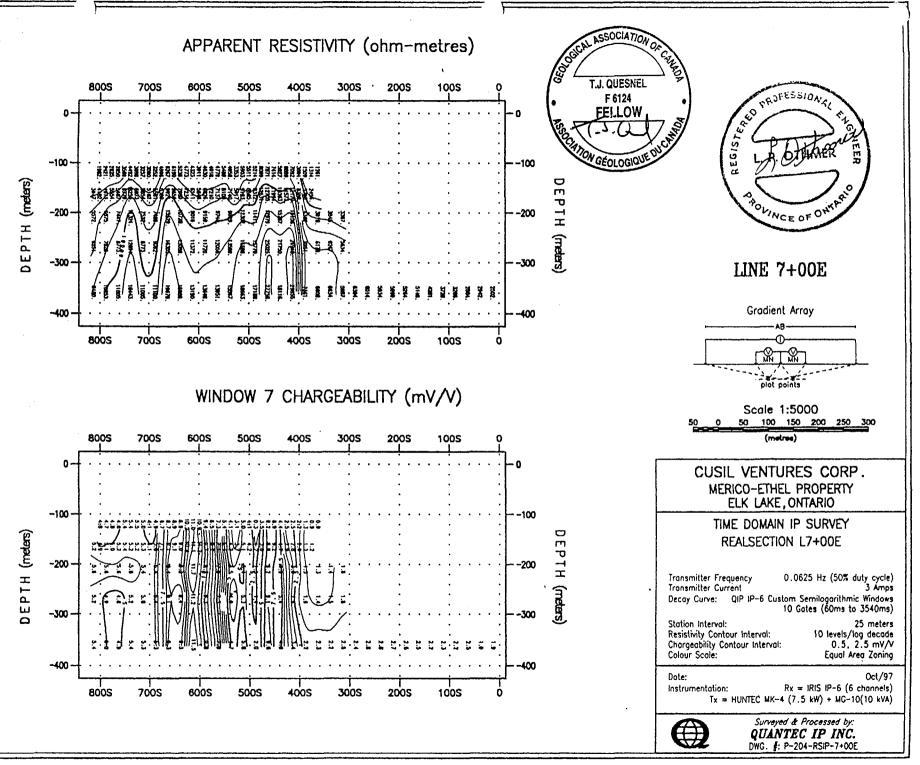




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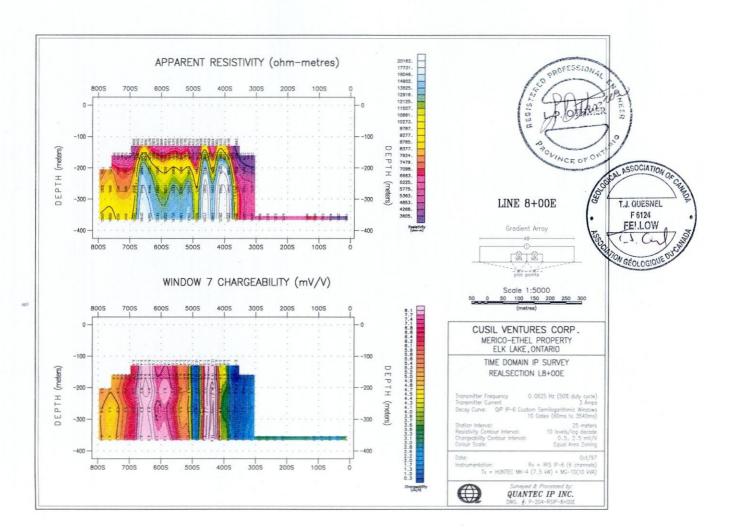
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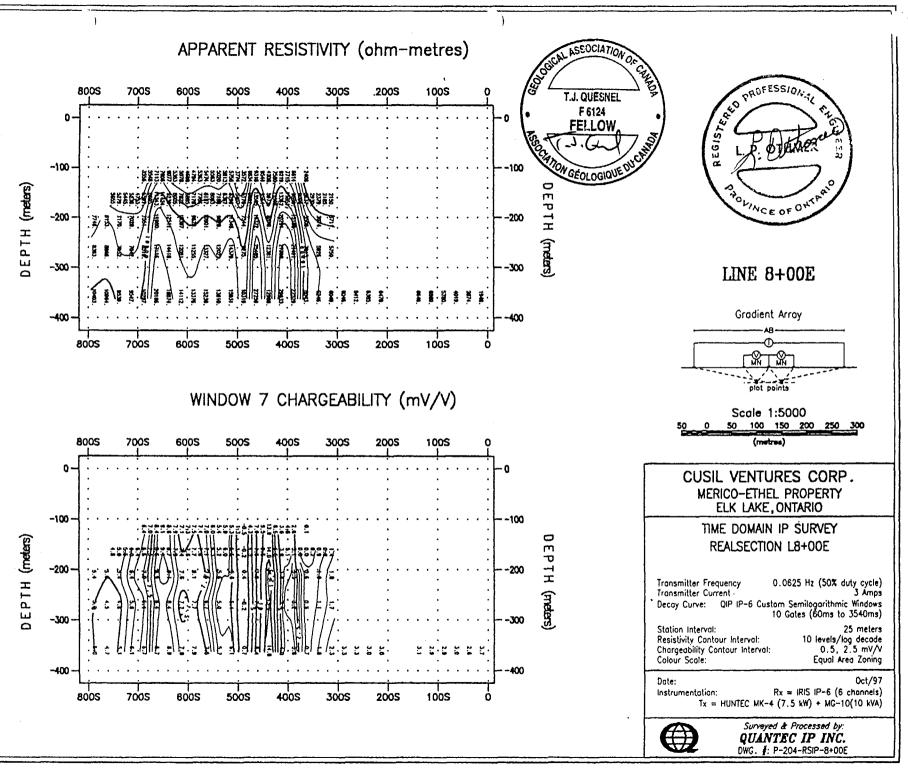


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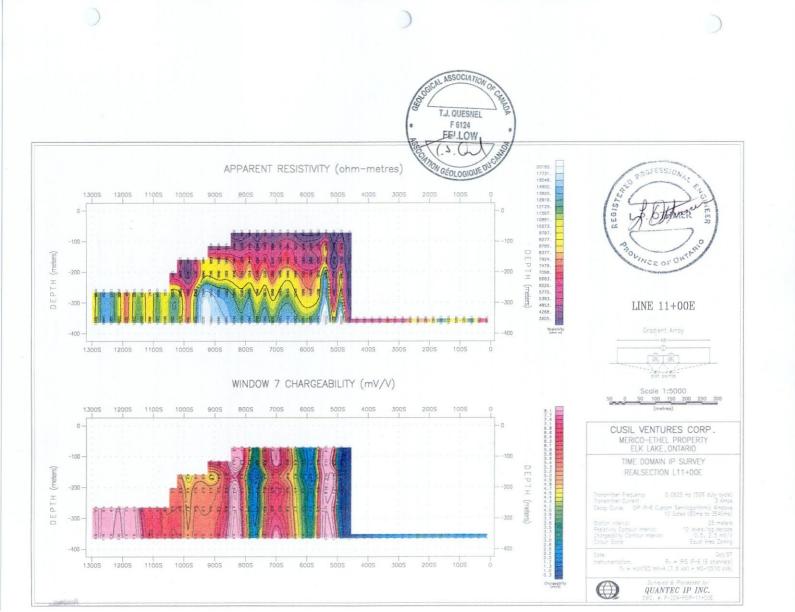


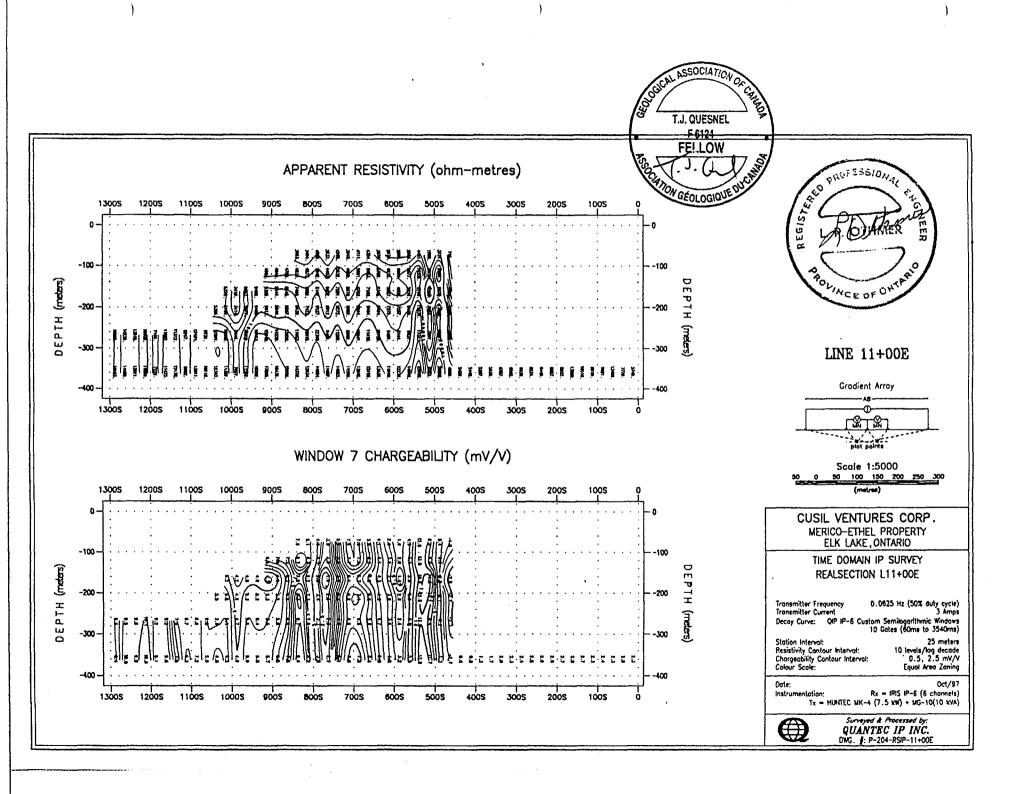
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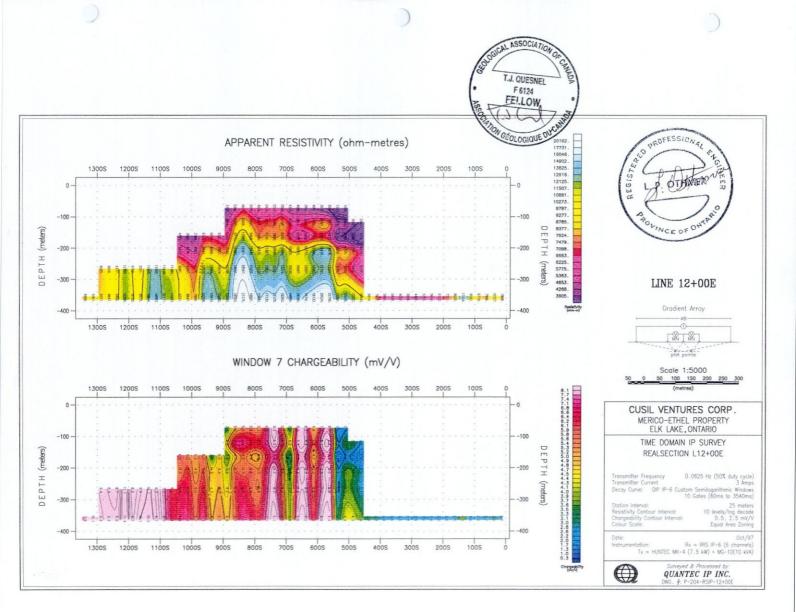


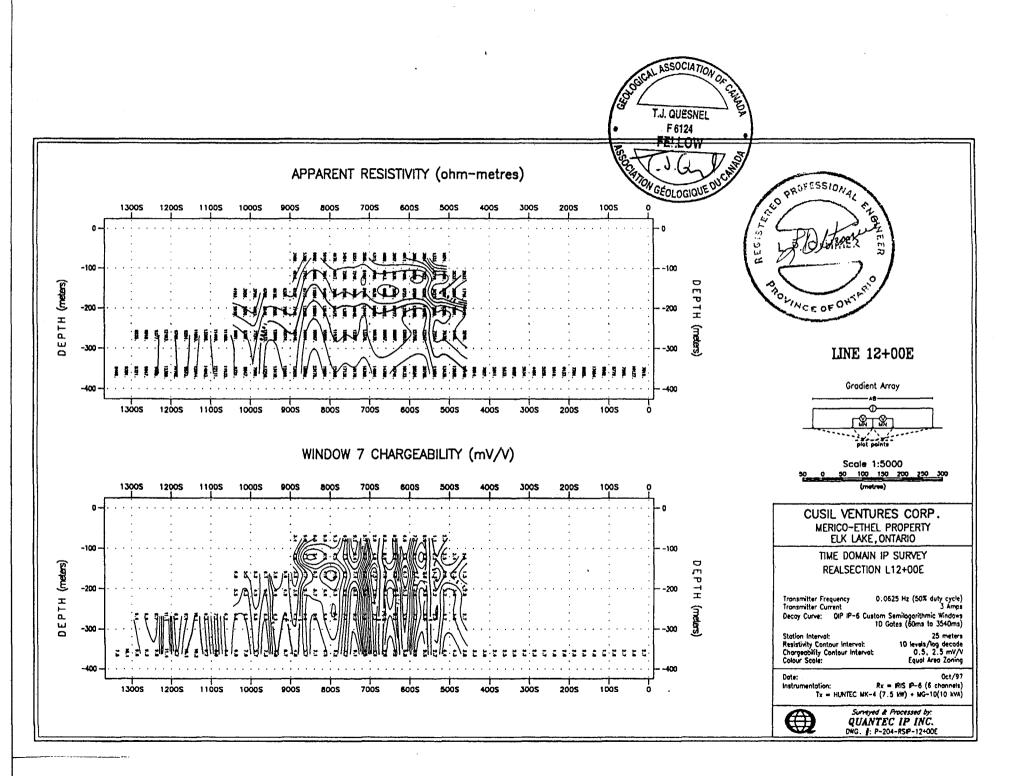
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RECOMMENDATIONS

These recommendations are based on the results and conclusions provided by Quantec IP Inc.'s TDIP field survey and real section results.

PHASE 1

Diamond Drilling

A 1200 m diamond drill program hole is recommended to test 4 of the 7 Quantec First Priority Targets.

Hole 1

Hole 1 should be collared at 700E, 442S, azimuth 169 degrees at an inclination of -50 degrees. This will intersect the Quantec First Priority Drill Target (700E, 612S, depth of 200 – 300 m) at a depth of 200m. This hole is 300m in length.

Hole 2

Hole 2 should be collared at 800E, 268S, azimuth 169 degrees at an inclination of -50 degrees. This will intersect the Quantec First Priority Drill Target (800E, 438S, depth of 200 – 300 m) at a depth of 200m. This hole is 300m in length.

Hole 3

Hole 3 should be collared at 1100E, 420S, azimuth 169 degrees at an inclination of -50 degrees. This will intersect the Quantec First Priority Drill Target (1100E, 525S depth of 100 - 150 m) at a depth of 125m. This hole is 200m in length.

Hole 4

Hole 4 should be collared at 1200E, 520S, azimuth 169 degrees at an inclination of -50 degrees. This will intersect two Quantec First Priority Drill Targets. The first (1200E, 650S depth of 125 - 200 m) at a depth of 150m, and the second (1200E, 738S depth of 100 - >200 m) at a depth of 245m. This hole is 400m in length.

Geological Mapping and Prospecting

Second priority target areas as well as areas outside the currently mapped areas on the remainder of the property should be prospected

PHASE 2

Phase 2 exploration activities including additional diamond drilling are contingent on the results of Phase 1 exploration. Follow up of the remainder of Quantecs First Priority drill targets is anticipated as well as any additional mineralization provered by Phase 1 prospecting.



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Bedrock geology of Ontario, east-central sheet; Ontario Geological Survey, Map 2543, scale 1:1 000 000

Ontario Geological Survey 1992.

Tectonic Assemblages of Ontario, east-central sheet; Ontario Geological Survey, Map 2577, scale 1:1 000 000

Quantec IP Incorporated, 1997

Geophysical Survey, Summary Interpretation Report regarding the Gradient – Realsection TDIP Induced polarization survey on the Merico-Ethel Property, James and Tudhope Twp., near Elk Lake, ON, on behalf of Cusil Venture Corp., Vancouver, BC.

APPENDIX

Certificate of Qualifications (T.J. Quesnel) Certificate of Qualifications (Lawrence Othmer) Geology. Trench 1 Geology. Trench 2 Geology. Trench 3 Geology. Trench 4 Summary Analysis Merico – Ethel Property, Samples Collected 1997 Whole Rock Analysis Diabase – Merico Shaft Area Samples Assay Certificate, Swastika Laboratories. Certificate #7W-4126-RA1. Assay Certificate, Swastika Laboratories. Certificate #7W-4463-RA1. Quantec IP Inc. – Main Body of Report (pages 3-15, Appendix C and D from Quantec Report) Quantec Statements of Qualifications - 5 pages

Section Section 2.

CERTIFICATE OF QUALIFICATIONS

I, Treffle Jay (T.J.) Quesnel, of 1231 Highway West, Sturgeon Falls, Ontario hereby certify that:

- 1. I am a FELLOW of the Geological Association of Canada, No. F6124.
- 2. I am a Certified Professional Geologist (CPG) of the American Institute of Professional Geologists, No. 9186.
- 3. I am a graduate of Lake Superior State University in Sault Ste. Marie, Michigan with a Bachelor of Science, Geology, 1987, and Cambrian College School of Mineral Resource Technology, Diploma of Technology, Geological Engineering, Sudbury, Ontario 1985.
- 4. I have been practising my profession since graduation.
- 5. The information contained in this report is the result of work done by myself and the references cited.
- 6. I have no direct or indirect interest in the properties or securities of Cusil Venture Corporation nor do I expect to receive any such interest or securities.
- 7. I consent to the use of this report titled "GEOLOGICAL AND GEOPHYSICAL SUMMARY REPORT on the ETHEL - MERICO PROPERTY" and dated January 21, 1998 in a prospectus, statement of material facts, or other public documents.

Respectfully submitted

T.J. Quesnel B.Sc., FGAC. January 21, 1998



CERTIFICATE OF QUALIFICATIONS

- I, Lawrence P. Othmer of 3 Martin Drive, Cobalt, Ontario, do hereby certify that:
- A. My address is 3 Martin Drive, Coleman Twp., RR#1, Cobalt, Ontario, P0J 1C0, Home Telephone 705-679-8113.
- B. I am a Registered Professional Engineer in the Province of Ontario #35002013 Mining 1970.

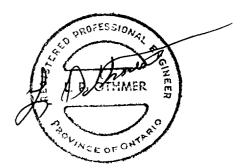
This Certificate of Qualifications is based on the following sources of information.

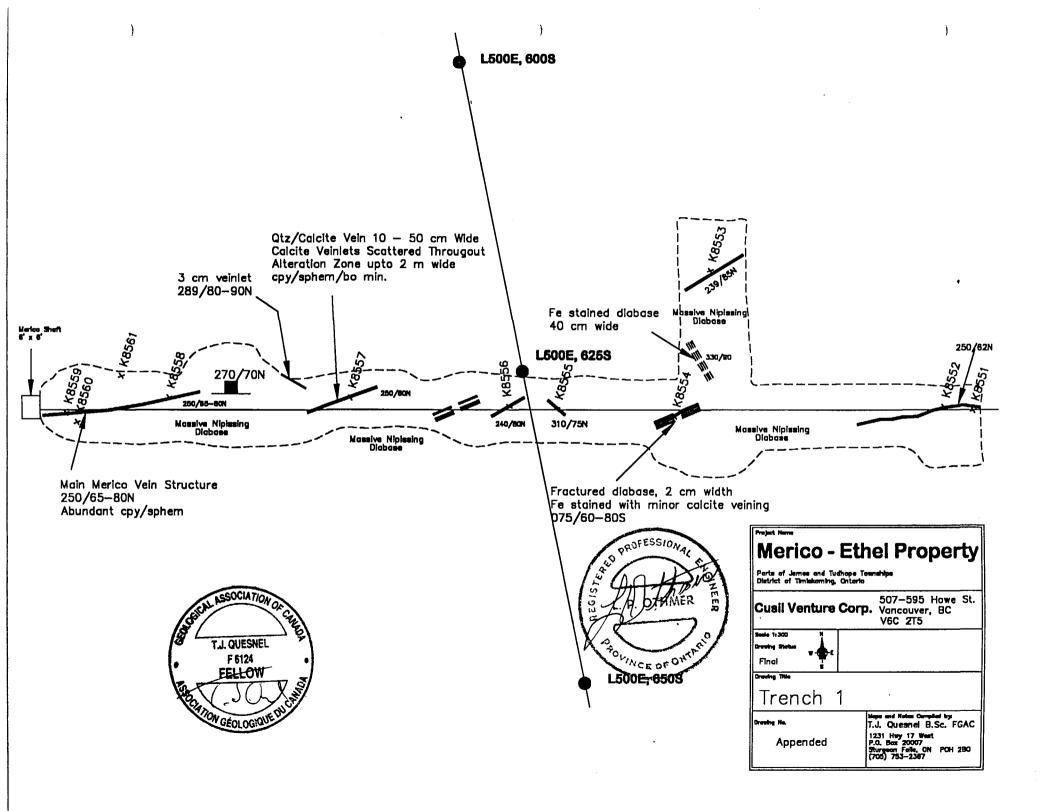
- As a representative of Cusil Venture Corporation visitations and examination of Merico -Ethel Property in James and Tudhope Townships, Northern Ontario, during the period of Technical Surveys by Quantec Consulting Inc. of Timmins, Ontario and Meegwich Inc. of Temagami, Ontario. This work was done during the months of October and November 1997.
- 2. The information contained in this report is the result of work done by myself and the references cited.
- 3. My forty years (40) experience in the mining industry as Mining Engineer, Mine Superintendent, Mine Manager in the Cobalt and Temagami Areas in which time a practical knowledge on the area mining and geology was acquired.
- 4. I consent to the use of this report titled "GEOLOGICAL AND GEOPHYSICAL SUMMARY REPORT on the ETHEL - MERICO PROPERTY" and dated January 21, 1998 in a prospectus, statement of material facts, or other public documents.

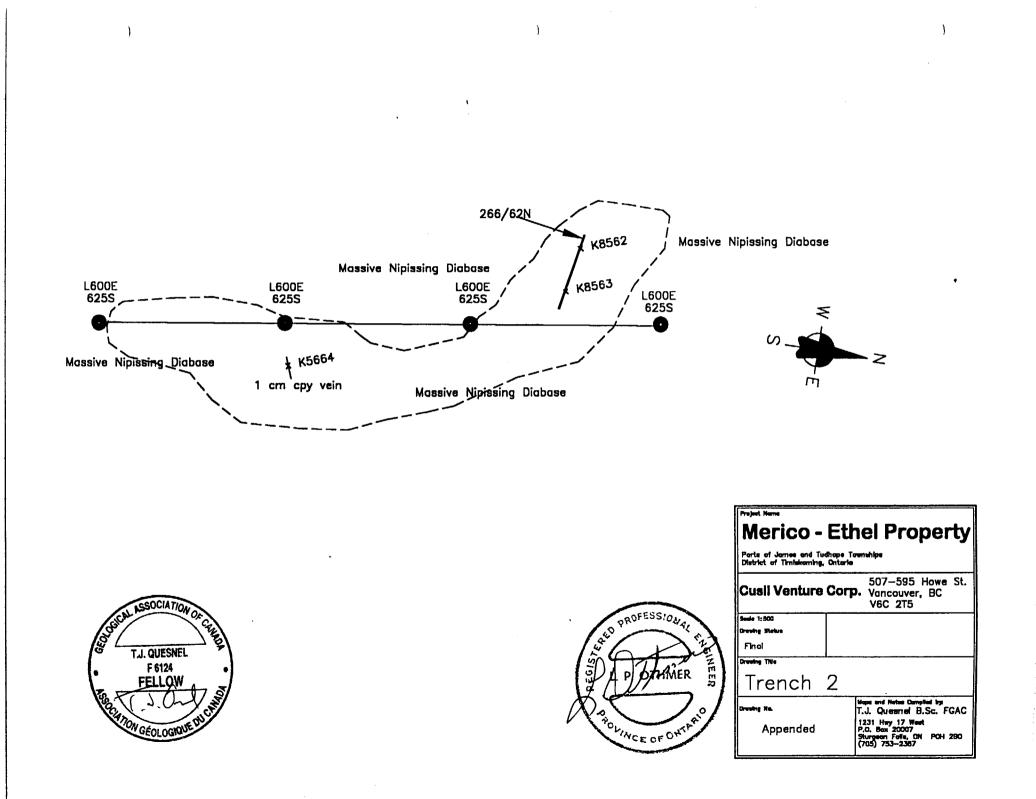
I have no direct or indirect interest in the properties or securities of Cusil Venture Corporation nor do I expect to receive any such interest or securities.

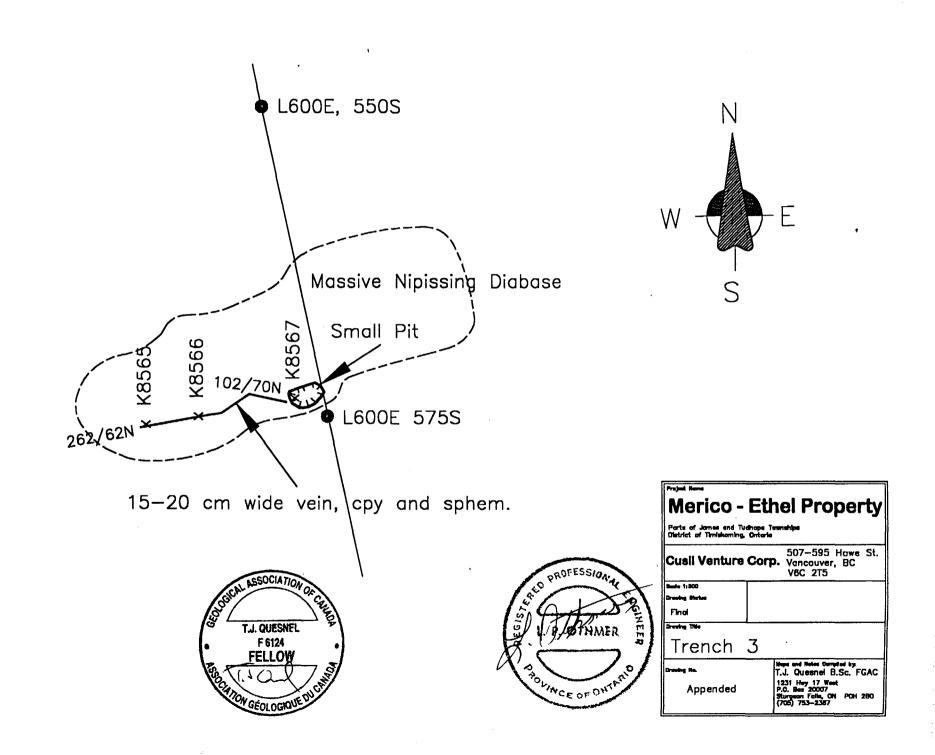
Dated this 21st day of January 1998 at Cobalt, ON.

L.P. Othmer, P. Eng.



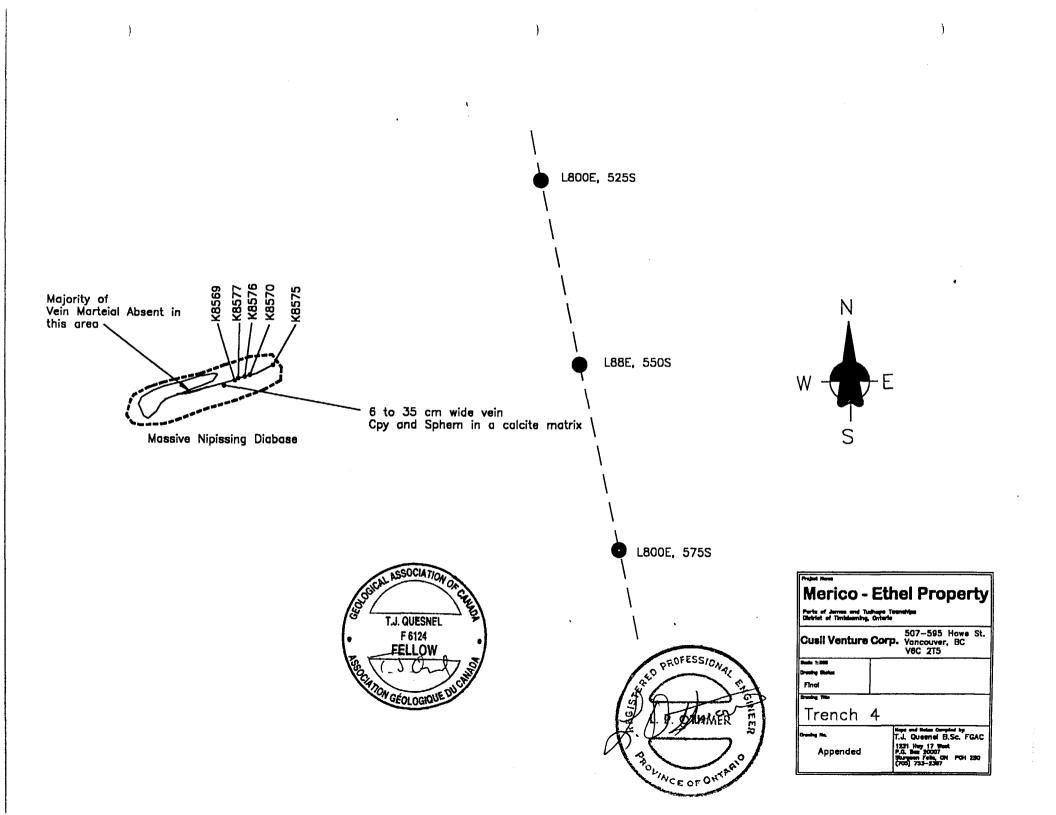






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Proj:Herico-Ethe Bample:Grab 74-4127-Bai	L PROPERTY						I. (C.A.		TOT				ALYS	SIS					le No. te		0C28RA NOV-05		
Sample (5107 A120 X X	3 Fe20: %) CaO X	HgO \$	Na 20 X	K20 ¥	T102 \$	MaQ X	P205 1	Ba · pps	Sr ppa	Ir Ppa	рр а Ү	8c ppe	Nb Pp=	8+ PP=	ЪЪш NT	bba Cs	Cu PP n	v PP n	Cu ppm	bba Eu	LOI X	TOTAL
K 8560 K 8561	46.34 13.9 49.38 15.8									70 100		50 40	16 10		< 30 < 30	2 1		330 525	265 300	165 180	75 60	• • •		99.85 99.76

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Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928 <u>Assay Certificate</u>

7W-4126-RA1

Company: CUSIL VENTURES CORPORATION

Date: OCT-27-97

Project: Merico-Ethel Property

Aun: G. Chitaroni

We hereby certify the following Assay of 18 Grab samples submitted OCT-17-97 by .

Sample Number	Au g/tonne	Au Check g/tonne	Ag g/tonne	Co %	Cu %	Ni %	
K 8551	3.08	2.58	2.6	0.60	2.21	0.015	
K 8552	12.00	11.93	6.6	0.35	8.48	0.011	
K 8553	2.64	-	3.8	0.013	3.29	0.002	
K 8554	0.04	-	1.0	0.055	0.39	0.013	
K 8555	0.31	-	3.1	0.007	1.56	0.003	
K 8556	3.05		5.1	0.018	1.00	0.004	
K 8557	0.23	· -	0.3	0.005	0.32	0.004	
K 8558	2.95	-	3.5	0.097	4.98	0.010	
K 8559	3.53	-	14.2	0.28	10.94	0.020	
K 8562	4.77	-	4.7	0.148	5.72 -	0.008	
K 8563	11.52	10.90	11.2	0.21	11.68	0.011	
K 8564	2.02	-	0.8	0.018	0.77	0.009	
K 8565	5.35	5.35	7.1	0.54	8.68	0.022	
K 8566	6.17	-	6.3	0.113	3.05	0.005	
K 8567	3.05	-	7.2	0.41	9.00	0.027	
K 8568	0.50		10.8	1.26	24.42	0.038	
K 8569	22.53	22.83	5.5	0.006	2.50	0.004	
K 8570	0.93	-	0.9	0.002	1.85	0.003	

One assay ton portion used.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0 Telephone (705)642-3244 Fax (705)642-3300



Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

7W-4463-RA1

Date: NOV-21-97

Company: CUSIL VENTURE CORPORATION

Project: Merico Ethel Property

Assay Certificate

Attn: G. Chitaroni

We hereby certify the following Assay of 15 Grab samples submitted NOV-12-97 by .

Sample Number		u Check g/tonne	Au A PPB	u Check PPB	Ag g/tonne	Co %	Cu %	Ni %
		gr conne						
K-8571	2.28	-	2280	-	0.61	0.55	6.54	0.174
K-8572	2.85	2.67	2846	2674	0.58	3.72	8.60	0.247
K-8573	0.05	-	55	-	0.01	0.009	0.485	0.004
K-8574	0.03	-	33	-	0.08	0.356	2.59	0.044
K-8575	3.39	3.15	3394	3154	0.06	0.008	1.60	0.003
K-8576	1.85		1851		0.04	0.006	4.12	0.002
K-8577	2.78	3.57	2777	3566	0.08	0.003	8.86	0.001
K-8578	0.01	-	14	-	0.01	0.002	0.048	0.004
K-8579	1.23	1.41	1234	1406	0.17	0.116	5.93	0.011
K-8580	0.40	-	398	-	0.01	0.003	2.86	0.006
~ K-8581	0.81		813		0.04	0.148	3.12	0.025
K-8582	0.36	-	358	-	0.03	0.486	1.12	0.015
K-8583	0.03	-	31	-	0.15	0.004	11.84	0.001
K-8584	3.02	2.95	3017	2949	0.04	0.023	0.174	0.004
K-8585	0.03		26		0.03	0.021	2.73	0.006

One assay ton portion used.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario POK 1T0 Telephone (705)642-3244 Fax (705)642-3300

Sample locations, descriptions and assays, for Cusil Ventures Corp., Ethel Merico Property, Elk Lake, Ontario 1997

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Sample #	Location	Description	Au g/tonne	'Ag g/tonne	Co %	Cu %	Ni %
K8551	Trench 1	Vein material, vuggy qtz/carb., up to 25% cpy and sphem, minor py, over 12 cm	3.08	2.6	0.60	2.21	0.015
K8552	Trench 1	Vein material, up to 25% cpy and minor sphem in qtz/carb matrix, gossan rich	12.00	6.6	0.35	8.48	0.011
K8553	Trench 1	Vein material, over 20 cm, qtz/calcite matrix with up to 5% cpy, bo, sphem	2.64	3.8	0.013	3.29	0.002
K8554	Trench 1	Vein material, over 3 cm small calcite veinlet with minor iron carb. Up to 7% cpy with assoc. bornite. This vein system dips south	0.04	1.0	0.055	0.39	0.013
K8555	Trench 1	Qtz. Calcite veining with massive sphem and assoc cpy. Sample consists mainly of sphem over 5 cm	0.31	3.1	0.07	1.56	0.003
K8556	Trench 1	Vein material over 6 cm, qtz/carb matrix with 5% cpy & sphem, min dominantly cpy	3.05	5.1	0.018	1.00	0.004
K8557	Trench 1	Most easterly portion of main vein by shaft. Over 11 cm up to 75% sphem with assoc. cpy and bornite.	0.23	0.3	0.005	0.32	0.004
K8558	Trench 1	Over 30 cm, Main Merico vein. Mainly cpy min, in spider web type calcite veining. Cpy massive across 4 cm in middle of vein system. Very sparse sphem, with cobalt bloom scattered throughout	2.95	3.5	0.097	4.98	0.010
K8559	Trench 1	Across 32 cm, veining adjacent to shaft, min cpy and cobalt bloom. Small 1cm cpy veinlets perpendicular to main strike.	3.53	14.2	0.28	10.94	0.020
K8562	Trench 2	Qtz carb vein, over 13 cm. Cpy min only. Large amounts residual copper bloom. Cpy massive.	4.47	4.7	0.148	5.72	0,008
K8563	Trench 2	Qtz carb vein, over 10 cm. Cpy min only. Large amounts residual copper bloom. Cpy massive - up to 75% of sample.	11.52	11.2	0.21	11.68	0.011
K8564	Trench 2	1 cm wide cpy veinlet, qtz matrix, scattered cpy.	2.02	0.8	0.018	0.77	0.009
K8565	Trench 3	Large qtz carb vein over 47 cm. South ¼ of vein dominated by massive sphem, north ¼ dominated by cpy massive in places. Vein dips north.	5.35	7.1	0.54	8.68	0.022
K8566	Trench 3	Chip sample across 27 cm mineralization predominantly cpy and sphem	6.17	6.3	0.113	3.05	0.05
K8567	Trench 3	Chip sample across 20 cm very weathered mineralization dominated by cpy up to 25%. Large calcite veining adjacent to min.	3.05	7.2	0.41	9.00	0.027
K8568	Trench 3	Grab Sample. Massive cpy from pity	0.50	10.8	1.26	24.42	0.038
K8569	Trench 4	Chip sample across 13 cm cpy in calcite up to 3% with minor sphem	22.53	5.5	0.006	2.50	0.004
K8570	Trench 4	Chip sample across 34 cm mainly barren calcite veining but 3 prominent cpy – sphem veining contained within.	0.93	0.9	0.002	1.85	0.003
K8571	450E - 944S	Over 8 cm, diss cpy in sugary qtz carb vein, abundant cobalt bloom, up to 15% cpy	2.28	0.61	0.55	6.54	0.174
K8572	450E - 940S	Over 10 cm, diss py and cpy up to 20% with heavy co bloom and malachite in wavy qtz carb vein.	2.85	0.58	3.72	8.6	0.247
K8573	525E - 575S	5 cm grab sample of vein material from old pit. Unable to find direction, min 50% sphem in tight qtz matrix with 3% diss cpy.	0.05	0.01	0.009	0.485	0.004
K8574	700E - 570S	Small isolated vein, 4cm of 75% sphem with diss cpy e-w trending, vert dip.	0.03	0.08	0.356	2.57	0.044
K8575	Trench 4	Over 7 cm, diss cpy (7%) and sphem, (5%) in hard qtz carb matrix	3.39	0.06	0.008	1.60	0.003
K8576	Trench 4	Over 6 cm Massive sphem (75%) and cpy (25%)	1.85	0.04	0.006	4.12	0.002
K8577	Trench 4	Over 6 cm Massive sphem (75%) and cpy (25%), in calcite matrix.	2.78	0.08	0.003	8.86	0.001
K8578	1000E - 800S	Medium Grained, unaltered Nipissing diabase with vf diss py, <1%	0.01	0.01	0.002	0.048	0.004
K8579	1300E - 1025S	Over 4 cm, massive sphem and cpy vein in qtz carb matrix, min up to 100% in places.	1.23	0.17	0.116	5.93	0.011
K8580	200W - 800S	Cpy, py and bo in a qtz carb martix. Grab sample of float by trench. Some malachite staining.	0.040	0.01	0.003	2.86	0.006
K8581	500W - 310S	2 cm qtz/carb vein with 15% cpy and malachite stain. From side of old trench/pit	0.81	0.04	0.148	3.12	0.025
K8582	700W – 1050S	Grab sample from muck pile, qtz carb veining with up to 15% cpy in diabase "breccia"	0.36	0.03	0.486	1.12	0.015
K8583	700W – 1050S	Grab sample from muck pile, qtz carb veining with up to 60% cpy in diabase "breccia"	0.03	0.15	0.004	11.84	0.001
K8584	1025W - 800S	5 cm qtz carb vein with 5% cpy, cobalt bloom and malachite stain.	3.02	0.04	0.023	0.174	0.004
K8585	1150W – 175S	5 cm calcite vein with 3% cpy along contact with wall rock	0.03	0.03	0.021	2.73	0.006

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- QIP Project No: P-204
 - Project Name: Merico-Ethel Project
- Survey Period Covered: October 21st to November 13TH, 1997
- Survey Type: Time Domain Induced Polarization
- Client: Cusil Ventures Corp. Suite 507, 595 Howe Street Vancouver, BC V6C-2T5
- Representative: Mr. Gene Larabie
- Objectives:
 - 1. Exploration objectives:

To locate and delineate potential copper/cobalt/silver/gold bearing sulphide mineralization hosted in vein structures within generally flat lying mafic intrusive rocks, for the purposes of drill targeting. Additionally to locate potential continuation of potential mineralized zones in underlying basement rocks.

2. Geophysical objectives:

To establish the IP/Resistivity anomaly signatures associated with sulphide mineralization and potential alteration consistent with the target model, investigating to depths up to 300 meters.

• Report Type:

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Summary Interpretation, suitable for assessment filing

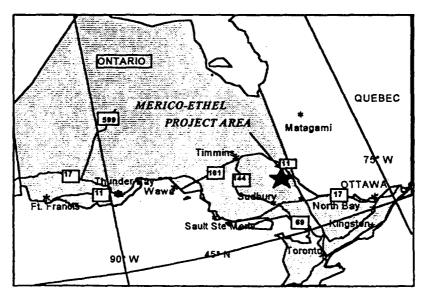


Figure 1: General Survey Area Location.

Cusil Ventures Corp. Merico-Ethel Property RSIP

22 GENERAL SURVEY DE TAILS

- 2.1 LOCATION
 - Township or District: James and Tudhope Twp.
 - Province or State: Ontario
 - Country: Canada
 - Nearest Settlement: Elk Lake, Ontario
 - NTS Map Reference: 31M/5
 - Mining Claims Surveyed:¹
 - a) James Twp.: 1214024, 1214025, 1214026, 1214029, 1214030, 1206252, 1198561
 - b) <u>Tudhope Twp.:</u> 1222053, 1202448,1217772,1118625,1212261,1217771,1217784,496559 475794,475798,476736,
- 2.2 ACCESS
- Moose Lake Motel, Elk Lake, Ontario Base of Operations: Mode of Access to Property: East on Hwy. 560 out of Elk Lake for approx. 8 km in pick up truck, then south on log roads.. Truck and foot Mode of Access to Grid: Hwy. 560 Nearest Road: 2.3 SURVEY GRID Local exploration grid (non-UTM ref.) Coordinate Reference System: N-011° and N-000° Line Direction: Line Separation: 100 meters 25 meters and 12.5 meters Station Interval:

¹ Ref. Cusil Ventures Corp. Merico-Ethel Property Claim/Line Location map (Boreal Res. Inc., 11/97).

SURVERANCE): I CHAINER CARACTER

3.1 GENERALITIES

- Survey Dates: October 21ST to November 13TH, 1997
- Survey Period: 24 days
- Survey Days: 20.5 days
- Weather Days: 1.5 day
- Preparation Days: 0 day
- Mob/Demob Days: 2 days
- Total km Surveyed: 51.2625 km

3.2 PERSONNEL

 Project Supervisor: G.R. Jeff Warne, Geophysicist, Porcupine, ON
 Field Supervisor: K. MacKenzie, Geophysicist, Sidney, NS
 Field Assistants: Chris Sawyer, Mississauga, ON Dave Gouthro, Sidney, NS Dave MacGillivary, Timmins, ON

3.3 SPECIFICATIONS

.

Array: Multiple Gradient (see Figure 2)
MN (Receiver Dipole Separation): 25 metres, 12.5 meters
Sampling Interval: 25 meters
Total Gradient AB Blocks: 4
Total Realsections: 6
Approximate Arial Coverage: 4.3 km²

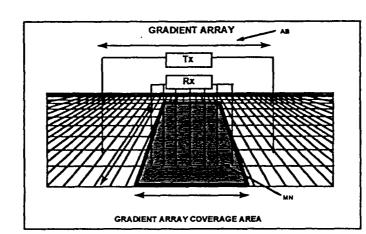


Figure 2: Gradient Array Layout.

3.4 SURVEY COVERAGE

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- Reconnaissance: 34.825km (see Table I)
- Detail / Follow-up: 14.0375 km (see Table II)
- Overlap: 2.4 km (see Table III)
- Total km Surveyed:

51.2625 km

LINE	MIN. EXTENT	MAX. EXTENT	LENGTH (m)		
12+00W	800S	1600S	800		
11+00W	800S	1600S	800		
10+00W	800S	1600S	800		
9+00W	. 800S	1600S	800		
8+00W	0S	1600S	1600		
7+00W	0S	1600S	1600		
6+00W	0S	1575S	1575		
5+00W	05	1600S	1600		
4+00W	0S	1600S	1600		
3+00W	05	1600S	1600		
2+00W	0S	1600S	1600		
1+00W	0S	1600S	1600		
0+00	0S	1600S	1600		
0+50E	0S	1200S	1200		
1+00E	05	1275S	1275		
2+00E	05	1200S	1200		
3+00E	0\$	900S	900		
4+00E	05	900S	900		
4+50E	0\$	750S	750		
5+00E	08	900S	900		
6+00E	05	850S	850		
7+00E	05	8258	825		
8+00E	0\$	800S	800		
9+00E	05	750S	750		
10+00E	100S	1200S	1100		

Table I Reconnaissance Survey Coverage, Merico-Ethel Project.

LINE	MIN. EXTENT	MAX. EXTENT	LENGTH (m)
11+00E	05	1300S	1300
12+00E	05	1350S	1350
13+00E	05	1300S	1300
14+00E	0S	1200S	1200
15+00E	0S	650S	650
TOTAL			34825

Table I (cont.): Reconnaissance Survey Coverage.

• Detailed (Realsection) Coverage

LINE	# DEPTH LEVELS	MIN. EXTENT	MAX. EXTENT	TOTAL LENGTH (m)
Block B				
5+00E	5	300S	9005	2312.5
6+00E	5	300S	850S	2175
7+00E	4	300S	825S	1950
8+00E	4	300S	800S	1800
Block A				
11+00E	5	450S	1300S	2900
12+00E	5	450S	1300S	2900
TOTAL				14037.5

Table II: Realsection Survey Coverage.

LINE	BLOCKS SURVEYED	MIN. EXTENT	MAX. EXTENT	LENGTH (m)
4+00W	A&B	500S	1550S	1050
3+00E	B&C	300S	9005	600
10+00E	A&B	300S	1050S	750
TOTAL				2400

Table III: Overlap Survey Coverage.

3.5 INSTRUMENTATION

- Receiver: IRIS IP-6 (time domain / 6 channels)
- Transmitter: Huntec MK-4 (7.5 kW)
- Power Supply: Kohler MG (2 cyl. / 25 HP) with 30 kVA Westinghouse Alternator (400 Hz / 110V out)

Cusil Ventures Corp. Merico-Ethel Property RSIP

3.6 TDIP PARAMETERS

Input Waveform:	0.0625 Hz square wave at 50% duty cycle
-	(8 seconds On/Off)

Receiver Sampling Parameters: semi-logarithmic (see Table III)

Measured Parameters:

- 1) Chargeability in millivolts/Volt (10 time slices + total area under decay curve)
- 2) Primary Voltage in millivolts and Input Current in amperes for Resistivity calculation according to the gradient array geometry factor.

Slice	Duration (msec.)	Start (msec.)	End (msec.)	Mid-Point (msec.)
Td	60	0	60	
т ₁	60	60	120	80
т2	60	120	180	150
Тз	60	180	240	210
Τ4	60	240	300	270
T5	360	300	660	480
Т6	360	660	1020	840
τ ₇	360	1020	1380	1200
Тв	720	1380	2100	1740
Тց	720	2100	2820	2460
Т10	720	2820	3540	3180
Total Tp	3540			

Table IV: Decay Curve Sampling.

3.7 MEASUREMENT ACCURACY AND REPEATABILITY

- Chargeability: generally less than ± 0.5 mV/V but acceptable to ± 1.0 mV/V.
- Resistivity: less than 5% cumulative error from Primary voltage and Input current measurements.

3.8 DATA PRESENTATION

• Maps:

<u>Geophysical Survey Plan Maps</u>: Posted/contoured compilation plan map of Channel 7² Chargeability and Apparent Resistivity (compiled from reconnaissance gradient AB Blocks A to D), overlain onto UTM topographic/claim base map, at 1:5000 scale.

<u>"Realsection" Detail Survey Maps</u>: Stacked posted/contoured depth section maps of Channel 7Chargeability and Apparent Resistivity, at a scale of 1:5000 meters.

² Chargeabilities presented represent 7TH channel/time-gate, which was substituted for Total Chargeability to minimized the effects of possible EM-coupling (K. Blackshaw, QIP, pers. comm., 11/97).

QIP P-204

Cusil Ventures Corp. Merico-Ethel Property RSIP

Maps (cont.):

Interpretation Plan Map:

Interpreted chargeability anomalies, correlated into axes, and zones of contrasting high/low resistivity, as well as interpreted structures, all overlain onto UTM topographic/claim base map, at 1:5000 meter scale.

• Digital:

Raw data:

IP-6 digital dump file (See also Appendix C).

Processed data:

Geosoft .XYZ format.

using the following format:

Column 1 = Line (X Position), in meters Column 2 = Station (Y Position), in meters Column 3 = Channel 7 Chargeability (see Table III), in mV/V Column 4 = Apparent Resistivity, in Ω-m Column >5 = TDIP Spectral Estimates, derived using IPREDC[™]

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A RESULTS AND INTERPRETATION

4.1 OVERVIEW

The Gradient Realsection IP/Resistivity surveys over the **Merico-Ethel Property** were designed to first establish resistivity and chargeability signatures associated with known mineralization, then to identify potential drill-targets consistent with the target model elsewhere on the property. The exploration target consists of vein/shear-hosted copper/cobalt/silver/gold bearing disseminated to stringer sulphides, associated with pervasive quartz-carbonate alteration, and occurring along subvertical structures both in the diabase-sill and possibly also extending from the metasedimentary basement rocks.

The property is mainly underlain by Nippissing gabbro-diabase, which forms a 0->30m thick sill dipping/thickening to the SW, overlying Cobalt Group Gowganda Formation conglomeritic to arenaceous sediments. These gently dipping rocks mainly form the basement, but also outcrop along the northern and eastern perimeter, where the diabase pinches out. A small occurrence of Lorrain Formation arkoses, which represents the uppermost Cobalt stratigraphy, also occurs in the west-central survey area, where the cover rocks are locally eroded. Archean granitic rocks of the Round Lake Batholith also lie along the NW corner of the survey area, and form the deep, unconformable basement regionally (ref. Cusil Ventures Corp., <u>Merico-Ethel Property OGS Underlay</u>, 1:10000 scale, TJ Quesnel, 1997). Outcrop exposure is poor, due to a thin blanket of glacial moraine sediments, which thicken to the north and south-west, following drainage patterns.

Mineral occurrences on the property consist of: a) the Ethel Copper Mine (ECM) in James Twp., which encompasses a main incline shaft near L0-L1W/≈7S and other workings between L2W-L6W/≈14S (ref. OGS Geologic Compilation, <u>Mickle and James Townships</u>, Map 2501, 1968); and b) the Merico Mine workings (MMW) in Tudhope Twp., near L5E/6S. The area has been extensively explored for copper-silver, dating back to the early century, with the Ethel Copper mine in operation for a brief period in the mid-1960's. The central and eastern half of the property remain relatively unexplored /poorly documented and concentrated on the Merico site where a shaft and several pits predate the Ethel Copper in the early 1960's (from OMNDM Report, <u>Cobalt District</u>, 1996). Other nearby copper-silver occurrences include the Silver Jackpot/Northern Silver Fox Mine, and a vein system 800m further east - both of which lie just south of the survey coverage in Lots 12-11 of Conc. VI, respectively (ref. OGS Geologic Compilation, <u>Hill Lake</u>, Map 2501, 1985). The mineral occurrences are polymetallic/polymineral and typically form narrow (1-3m) steeply dipping quartz-carbonate altered, vein-shear systems, which follow ESE, ENE and NNE strike directions and host 3-25% copper and attendant Au-Ag-Co, within chalcopyrite, bornite and specularite.

Previous geophysics on the property include IP\Resistivity by McPhar Geophysics in 1961, which outlined the mineralization surrounding Ethel Copper adit, as well as Self-Potential at Merico, in 1953, which delineated the showing (ref. BE MacKean, <u>Elk Lake Area</u>, OGS Report, 1968). More recently, ground magnetics and VLF-EM have been undertaken in 1995 (ref. DJ McCormack and H Bes, <u>Merico-Ethel</u> <u>Project</u>, 1995 OPAP Report; GJ Gerehty, <u>Tudhope Twp. Plan No. M252</u>, Magnetic and VLF Survey Report, 01/96), in the central portion of the present survey area, but along differing survey lines. Presently, a ground magnetic survey has been undertaken concurrently with the IP\Resistivity (ref. Meegwich, 1997), the results of which can be used for comparison. The present Gradient IP\Resistivity survey consists of reconnaissance gradient coverage over most of the grid area, with detailed Realsection coverage limited to six (6) lines in the eastern half of the property, which is the area of greatest exploration interest. The Gradient-Realsection technique was chosen based on its combined high resolution and deep penetration capabilities, having the ability to detect and characterize targets at depths of several hundred metres, and to determine the possible extension of mineralization into the deeper basement.

4.2 GRADIENT-REALSECTION SURVEY RESULTS

The IP\Resistivity and TFM/VLF results successfully discriminate signatures potentially associated with lithology, fault-fracture structures, chemical alteration, and, most importantly, chargeability responses related to sulphides and, potentially, precious and base metals mineralization. The geophysical compilation/interpretation plan presents the interpreted anomaly axes - highlighting the strength and resistivityassociation of the IP axes, which relates to their source/alteration type: a) High resistivity IP axes, related to disseminate sulphides possibly associated with guartz-carbonate altered vein systems; b) Nil p and contact-type IP axes likely to correspond to more weakly-altered &/or thin/buried sulphides zones; and c) Low resistivity IP axes generally relating to either subcropping mineralized, clay-altered faults or possibly stringer sulphide mineralization. The line-to-line correlation of anomalies into axes is based primarily on resistivity association (i.e. resistive and conductive anomalies never aligned along the same axis due to likely dissimilar mineralogy/alteration/origin). It is clear, however, that, depending on the conditions and the target-model, all anomaly types could represent equally valid exploration targets - even the weakest anomalies in areas of deeper OB cover. In assessing their relative importance of chargeability features. insofar as the relative percent composition and width, equal amounts of mineralization in low, nil and high IP axes are likely to produce progressively weaker anomalies - as noted in Appendix C. In order to better visualize the relationships between the IP and Resistivity, contrasting zones of high/low resistivity have been identified on the interpretation plan, using the cross-hatching, to highlight potential geologic contacts, alteration zones and fault-fracture structure. Finally, zones of strong chargeability have also been identified on the interpretation plan-map, as these represent the areas most favourable to host economic mineralization, based on the target model.

The IP\Resistivity response at Ethel-Merico is characterized by the presence, of two to three eastwesterly bands of moderate to high chargeability, which extend across the central and southern part of the survey area and directly coincide with broad zones of high resistivity - suggesting an EW structural control to the mineralized quartz-carbonate altered system across the property. All known mineralized showings, including the ECM and MMW, are also contained within these zones, which is significant. Both the apparent resistivity and chargeability plans emphasize ENE, EW and ESE trends - agreeing with the geologic and structural directions. The measured chargeabilities vary between 0-13mV/V, and anomalies falling into the weak to mod-strong range - consistent with <2-5% bulk disseminated sulphides. The lack of very strong IP (>20mV/V) indicates that strong concentrations of sulphides are either absent or more deeply buried. The chargeabilities are strongest to the south and weaken progressively northward - either as a result of thickening overburden and/or due to thinning of the diabase cover rocks which are the more favourable geologic host for mineralization. If the contrasting chargeabilities are due to thicker overburden, rather than bulk mineralization, then anomalies from the two contrasting regions of overburden cover need to be considered separately - with differences likely to exceed 50% for axes of similar bulk composition. The IP axes are strike-extensive (>100-500m), but display significant variations in strength - reflecting pinching/swelling of mineralization along strike. In cross-section/Realsection, the chargeability anomalies display little or no vertical layering, except for possible slight increases across Nippissing/Gowganda contact and in the deeper basement - which are both significant to the exploration model, as this reaffirms the subcropping and subvertical nature and the hydrothermal control to the sulphide mineralization, which is unrelated to lithology.

The apparent resistivities show a moderate range, varying between 2k-35k ohm-metres, which is consistent with lower porosity units and the absence of strong/thick concentrations of sulphides (or graphite) as also suggested in the IP results. The glacial overburden's thin and poorly conductive nature affects the gradient resistivity results to a lesser extent than the IP or Magnetics - with narrow lineaments clearly visible throughout the property, except to the far-north and south, where stronger, linear resistivity lows, devoid of correlative IP (i.e. barren/unmineralized) likely represent deeper, graben-like overburden troughs. In contrast, the linear high resistivity zones generally correlate with highly polarizeable material, and therefore likely relate to quartz-carbonate altered mineralization - otherwise, to barren zones of outcrop or less porous rocks. As noted in the magnetics (ref. Meegwich, 1997), there appears to be little direct correlation between the bedrock geologic contacts and the IP\Resistivity, except for a general less-

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ening of the chargeability and resistivity along the northern rim of the property, which is either explained by changing lithology (Gowganda) or geomorphology (overburden), as noted. The Lorrain sediment uplift in the west-central grid is also indiscernible in the Gradient results - except possibly as a poorly defined resistivity high. It is likely that this poor geologic correlation is due to the flat-lying and thin/variable nature of the Nippissing diabase cover overlying the Gowganda basement rocks, as compared to the relatively deep exploration depth obtained from the reconnaissance gradient coverage, which exceeds 350m. In Realsection, however, the shallow south-dipping Nippissing diabase correlates well with a lowresistivity layer observed to extend from its thinnest point near 4S-5S across L5E- 8E, while it is also more flat-lying across L11E-12E (K. Blackshaw, QIP, pers. comm., 12/97).

The IP\Resistivity signatures show good anomaly correlation with known showings, including a) the Ethel Copper adit (L0/688S) which lies in an area of interest and coincides with a moderately strong IP axis, lying along a geoelectric contact which follows an ENE-trend - agreeing with the key structural direction; b) the Merico workings (between L5E/638S to L7E/538S) which also coincides with an area of interest, including possible cross-cutting ENE, ESE and EW strong IP axes - also agreeing with the mapped geologic trends; and c) other ECM workings in the south-west survey area are closely related to several short EW to ENE-oriented, mod-strong, high to nil resistivity IP axes. The VLF-EM and magnetics coverage described by Gerehty (01/96) and McCormack (01/96) is limited to the north-central portion of the present survey area (118625-West, 1222053-East and 120448-West), but were collected along different cut/survey lines - making direct comparisons difficult. However, of the five VLF conductor axes picked, only one correlates with a narrow zone of IP\Resistivity low and furthermore none is polarizeable. Hence, we conclude that the VLF-EM features, if real, represent open faults and contacts which are barren/unmineralized and therefore of limited economic or geologic interest. The most recent ground magnetic coverage by Meegwich (09/97) indicates that, as with the IP\Resistivity, the variation in magnetic susceptibilities also do not correlate with geologic contacts. The magnetic high lineaments appear to map more mafic/magnetite-rich phases of the Nippissing diabase. On the other hand, a broad ENE-trending magnetic low indicated through the east-central portion of the survey, which was suggested to possibly represent a zone of alteration/magnetite-depletion in the diabase, also coincides with a region of high resistivity - agreeing with an interpreted zone of quartz-carbonate alteration. It is clear, however, that as well as offering better resolution and penetration, the Gradient chargeabilities and resistivities are in all likelihood better indicators of mineralization and type-alteration than the ground magnetics.

As many as sixty (60) moderate to strong IP axes of significance have been defined, and these have been loosely grouped and named Zones A-E, based on their close spatial proximity and strike trend, as shown on the interpretation plan map The weakest IP signatures have been identified in plan, but not correlated from line-to-line, in order to better visualize the best drill-targets on the property. The most significant chargeability signatures have been prioritized according to their relative strength and anomalydefinition in Realsection, and are described in Table V. Although nearly all the strongest chargeability anomalies represent good drill-targets, the list presented in Table V is designed to help direct DDHtesting into the best portion of each major axis. For the most part the axes are ESE to ENE trending, following the known structural trends. The strongest IP axes are concentrated through the central portion, along Zones A-A', where the strongest high resistivity band occurs, suggesting a major qtz-altered structural zone, and coinciding with the ECM and MMW showings, as well as all the highest priority axes lying further east. A second and third zone of strong IP occurs further south along Zones B-B' and Zone C, which also lie on-strike with the Silver Fox deposits, but less highly resistive (less altered?), weaker / more discontinuous (less mineralized ?) than A and are also not characterized in Realsection. The strength of IP axes decreases markedly to the north, possibly largely due to heavier overburden cover although gradient-analysis of the data suggest that the buried zones are also possibly more weakly mineralized to the north. Zones D-E are exceptions, which despite being relatively smaller and weaker, coincide with anomalous resistivity high (qtz-altered ?), resembling A. If their IP responses have also been attenuated due to overburden, these could potentially host stronger mineralization than indicated and also possibly represent significant cross-cutting features - these too have not been adequately characterized for drill-targeting.

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In Realsection, the axes appear to be subvertically dipping, thin (<25m), and subcropping to partly buried and associated with horst-like high-resistivity structures - suggesting a deeper hydrothermal source. The chargeabilities in Realsection also suggests that the sulphide mineralization, across **Zone A'** and **B'**, is vertically continuous, with occasional pinching/swelling possibly along the diabase/sediment contacts. The IP also strengthens in the deeper AB levels which suggests that the sulphide mineralization, across **Zone A'** tion extends from surface into the deeper sedimentary basement, as hoped, possibly below 300m depths.

The chargeability axes are equally divided between high and nil trends, with the low-resistivity axes being the fewest. The high to nil resistivity axes best represent disseminated sulphides within quartz-carbonate altered, EW to ESE shears and likely represent good exploration targets. The nil to conductive axes, which make up the bulk of the highest priority targets, either represent sulphide mineralized, open or clay-altered-faults or, more importantly structurally controlled stringer to semi-massive sulphide mineralization - with the greater sulphide content overprinting the lower porosities associated with the attendant quartz-carbonate alteration - making these the highest priority targets.

NAME	LINE	STATION	STRENGTH	RESISTIVITY ASSOCIATION	DEPTH	PRIORITY	COMMENT
Zone A	1200W	863S	Mod-Strong	High	_	2	Probable qtz-altered disseminated sulphides
	800W	838S	Mod-Strong	Low	-	2	Possible clay-altered or stringer sulphides
	300W	762S	Strong	Nil	_	2	Possible weak-attered, thin/diss. sulphides
	100W	712S	Strong	Nil	-	2	Possible weak-attered, thin/diss. sulphides
Zone A'	500E	675S	Strong	Nil	150+>250m	2	Possible weak-attered, thin/diss. sulphides
	600E	625S	Strong	High	150+>300m	2	Probable qtz-altered disseminated sulphides
	700E	612S	Strong	Low	200+>300m	1	Possible clay-altered or stringer sulphides
	800E	438S	Strong	Low	200+>300m	1	Possible clay-altered or stringer sulphides
	800E	650S	Strong	High	200+>300m	1	Probable gtz-altered disseminated sulphides
	1100E	525S	Strong	Nil	<100+>150m	1	Possible weak-attered, thin/diss. sulphides
-	1100E	825S	Strong	Nil	<150+>200m	1	Possible weak-altered, thin/diss. sulphides
	1200E	650S	Strong	Nil	<125+>200m	1	Possible weak-altered, thin/diss. sulphides
	1200E	738S	Strong	Nil	<100+>200m	1	Possible weak-altered, thin/diss. sulphides
Zone B	800W	1262S	Strong	High	-	2	Probable gtz-altered disseminated sulphides
	700W	1112S	Strong	High	i _ ·	2	Probable gtz-altered disseminated sulphides
•	500W	1238S	Mod-Strong	High		2	Probable qtz-altered disseminated sulphides
	000E	1112S	Mod-Strong	High	-	2	Probable qtz-altered disseminated sulphides
	000E	1238S	Strong	High	-	2	Probable qtz-altered disseminated sulphides
Zone B'	1200E	1138S	Mod-Strong	Nil	-	2	Possible weak-altered, thin/diss. sulphides
	1200E	1212S	Strong	High	_	2	Probable qtz-altered disseminated sulphides
Zone C	1000W	1512S	Strong	Nil	-	2	Possible weak-attered, thin/diss. sulphides
	500W	1338S	Mod-Strong	Nil	-	2	Possible weak-altered, thin/diss. sulphides
	400W	1562S	Strong	Nil	-	2	Possible weak-altered, thin/diss. sulphides
	300W	1388S	Mod-Strong	Nil	-	2	Possible weak-altered, thin/diss. sulphides
	100W	1588S	Mod-Strong	Nil	-	2	Possible weak-altered, thin/diss. sulphides
	000E	1112S	Mod-Strong	High	-	2	Probable gtz-altered disseminated sulphides
	000E	1238S	Strong	High	-	2	Probable qtz-altered disseminated sulphides
	000E	1450S	Strong	High	-	2	Probable gtz-altered disseminated sulphides
Zone D	700W	512S	Moderate	Low	-	2	Possible buried, clay-rich, stringer sulphides
	700W	662S	Moderate	Nil		2	Possible buried, weakly-altered sulphides
Zone E	500W	288S	Mod-Strong	Nil	-	2	Possible buried, weakly-altered sulphides
	400W	212S	Mod-Strong	Nil	-	2	Possible buried, weakly-altered sulphides

Table V: Recommended Targets for Follow-up at Ethel-Merico.

S. GONGLUSION AND RECOMMENDATIONS

The Gradient-Realsection induced polarization and resistivity surveys over the **Ethel-Merico** property have successfully identified geophysical signatures, consistent with lithologies, structure, alteration and, most importantly, disseminated to possibly stringer sulphide mineralization, resembling the target model. In response to the survey objectives, all known mineralization have been shown to coincide with anomalous IP\Resistivity signatures, and at least seven (7) previously undiscovered high priority targets have been identified in the eastern half of the grid area, which are of significant strength and vertical extent, having been adequately characterized in Realsection, to merit immediate follow-up by drill-testing (see Table V). In addition, as many as twenty (20) high-second priority features have been identified which warrant ground follow-up, and possibly DDH-testing - although these resemble the high priority target signatures, these are mainly found in the west grid and have not been fully delineated in crosssection, thereby meriting a lesser priority (see Table IV). The IP axes of significance can be grouped into five (5) basic trends (A-E), which generally follow the key ENE, EW and ESE trends, and roughly coincide with broad linear zones of resistivity high - likely representing structurally-controlled, quartz-carbonate altered mineralized hydrothermal zones.

The main zone of interest (A) features a band of multiple, moderate to strong, mixed resistivity and ESE to ENE oriented IP axes which cross-cut the entire survey area and encompassing both the Ethel-Copper and Merico showings - it lies along a prominent ENE trending band of resistivity high, suggesting a major structural, guartz-carbonate altered zone of mineralization. In addition to the ECM and MMW, Zone A hosts several stronger IP responses west and east of the known showings which merit immediate follow-up. Zone B is a similar EW-trending, multiple horizon, lying 300-500m further south, which despite its weaker resistivity (possibly less altered) lies directly on strike with the Silver Jackpot workings - it reguires additional RSIP coverage to better target DDH-drilling. Zone C is the southernmost trend of interest, and is the least well-defined of the three major IP lineaments - it coincides with the southern Ethel-Copper mine workings and also suggests a spatial relationship with the south Silver Jackpot mineralization. Unless it has been fully DDH-tested, it's relative strength suggests it merits additional follow-up. To the northwest, in the area of deeper overburden, Zones D-E are smaller, shorter EW to ESE trends which coincide with high resistivity similar to Zone A. These both feature several moderate to strong IP responses, which if buried, could be more strongly mineralized relative to the southern region, and are therefore sufficient interest to merit additional follow-up - D in particular is aligned with the ECM and may represent an important cross-cutting mineralizing structure.

We recommend that these data be combined with the existing geoscientific information and the results more fully evaluated prior to drill-testing. The IP axes display a wide variety of strengths, resistivity associations and strike orientations, such that, on the basis of the geophysics alone, all the most significant axes would represent equally good targets. Particular attention should be given to the resistivity association, which relates to the type-alteration, as well as the indicate target-depth, particularly at the initial stages of drilling. Additional comparison between specific target signatures and known mineral resources may allow the identification of a key signature thereby providing a better prioritization of these targets. Due to poor vertical depth-control inherent with the gradient technique, we recommend that zones of interest receive additional detailed IP\Resistivity coverage prior to drill-targeting.

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We note that the moderate strength of the axes and the nil/low resistivity may be the result of their depth of burial and alteration nature rather than a direct reflection of their sulphide content - <u>all</u> zones appear to strengthen with depth. The VLF-EM survey results from a small survey area show poor correlation with the IP\Resistivity, and seem mainly related to barren contact-type structures or overburden features. The TFM-magnetics are also of limited use, relative to the IP, due to the thin/variable and flat-lying nature of the Nippissing diabase - although eastem **Zone A** partly coincides with a region of magnetic-low, possibly relating to hydrothermal alteration/magnetite-depletion. We note that the a weaker strength of axes to the north may be the result of less favourable host rock or deeper overburden - in which case, the two regions may have to be considered separately. However, there appears to be sufficient axes of interest in the south, which are indicated to be shallow-buried, deeply rooted/vertically extensive from the diabase into the basement, to adequately determine the mineral potential of the property during the next step of the exploration program.

RESPECTFULLY SUBMITTED

QUANTEC IP INC.

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Porcupine, ON December, 1997.

ASSIERIDECC

INSTRUMENT SPECIFICATIONS

IRIS ELREC 6 Receiver (from IRIS Instruments IP 6 Operating Manual)

Weather proof case

Dimensions: Weight:

Operating temperature:

Storage: Power supply:

Input channels: Input impedance: Input overvoltage protection: Input voltage range:

SP compensation: Noise rejection:

Primary voltage resolution: accuracy:

Secondary voltage windows:

Sampling rate: Synchronization accuracy: Chargeability resolution: accuracy:

Battery test: Grounding resistance: Memory capacity:

31 cm x 21 cm x 21 cm 6 kg with dry cells 7.8 kg with rechargeable bat. -20°C to 70°C (-40°C to 70°C with optional screen heater) (-40°C to 70°C) 6 x 1.5 V dry cells (100 hr. @ 20°C) or 2 x 6 V NiCad rechargeable (in series) (50 hr. @ 20°C) or 1 x 12 V external 6 10 Mohm up to 1000 volts 10 V maximum on each dipole 15 V maximum sum over ch. 2 to 6 6 automatic ± 10 V with linear drift correction up to 1 mV/s 50 to 60 Hz powerline rejection 100 dB common mode rejection (for Rs= 0) automatic stacking 1 µV after stacking 0.3% typically; maximum 1 over whole temperature range up to 10 windows; 3 preset window specs .plus fully programmable sampling. 10 ms 10 ms, minimum 40 μ V 0.1 mV/V typically 0.6%. maximum 2% of reading ± 1 mV/V for $V_p > 10 mV$ manual and automatic before each measurement 0.1 to 467 kohm 2505 records, 1 dipole/record

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IRIS IP 6 Dump File Format

* IP 6 (V9.1) *

#77 Jul 1 1980 11:57 dipole 1 trigger 1 domain Time T wave Programmable wind. Grad. RCTGL array

V= 331.605 Sp= -319 I= 1350.00 Rs= 0.50 Ro= 6679.4 Ohm-m M= 11.97 E= 0.4 M1= 40.44 M2= 33.55 M3= 29.48 M4= 26.68 M5= 20.95 M6= 15.52 M7= 12.50 M8= 9.77 M9= 7.50 M10= 6.05

cycle 19 Time= 2000 V_D= 1260 M_D= 40 T_M1= 20 T_M2= 30 T_M3= 30 T_M4= 30 T_M5= 180 T_M6= 180 T_M7= 180 T_M8= 360 T_M9= 360 T_M10= 360

Spacing config. : Imperial grid XP=-1300.0 Line= 400.0 D=-100.0 AB/2= 2500.0

#78 Jul 1 1980 11:57 dipole 2 trigger 1 domain Time T wave Programmable wind. Grad. RCTGL array

V= 265.781 Sp= 388 I= 1350.00 Rs= 1.41 Ro= 4687.7 Ohm-m M= 26.75 E= 0.0 M1= 76.18 M2= 66.06 M3= 59.31 M4= 54.53 M5= 44.38 M6= 34.29 M7= 28.35 M8= 22.83 M9= 18.06 M10= 14.96

cycle 19 Time= 2000 V_D= 1260 M_D= 40 T_M1= 20 T_M2= 30 T_M3= 30 T_M4= 30 T_M5= 180 T_M6= 180 T_M7= 180 T_M8= 360 T_M9= 360 T_M10= 360

Spacing config. : Imperial grid *XP=-1400.0 Line= 400.0 D=-100.0 AB/2= 2500.0

APPENDIXC	
INSTRUMENT SPECIFICATIONS	
Huntec Mk 4 Transmitter	
Power:	96-144 V line to neutral, 3 phase, 400 Hz (from Huntec generator set), 7500W
Output: Voltage:	100-3200 V dc in 10 steps
Current:	16A maximum on low ranges
Current regulator.	< 0.1% current change for 10% change in load resistance
Output frequency:	1/16 Hz to 1 Hz (time domain and complex resistivity); 1/16 Hz to 4 Hz (frequency domain)
Frequency accuracy:	± 50 ppm, -30°C to 60°C
Output duty cycle:	(Defined as ton/(ton + torr)) ½ to 15/16 in increments of 1/16 (time domain); 15/16 (complex resistivity); ¾ (frequency domain)
Output current meter:	Two ranges; 0-10A, 0-20A
Ground resistance meter.	Two ranges; 0-10 kohms, 0-100 kohms
Input voltage meter:	0-150V
Dummy load:	Two levels; 2000W, 6000W
Temperature range:	-34°C to 50°C
Size:	53 x 43 x 43cm
Weight:	50 kg

APPENDIXE

THEORETICAL BASIS

The "Realsection" survey design uses multiple gradient arrays - with variable depths of investigation controlled by successive changes in array size/geometry. The method of data acquisition and the "Realsection" presentation are based on the specifications developed by Dr. Perparim Alikaj, of the Polytechnic University of Tirana, Albania, over the course of approximately 20 years of application. This technique has been further developed for application in Canada during the past six years, in association with Mr. Dennis Morrison, president of Quantec IP Inc.

The Gradient Array measurements are unique in that they best represent a bulk average of the surrounding physical properties within a relatively focused sphere of influence, roughly equal to the width of the receiver dipole, penetrating vertically downward from surface to great depths. These depth of penetration and lateral resolution characteristics are showcased when presented in plan, however through the use of multiple-spaced and focused arrays, the advantages of the gradient array are further highlighted when the IP/Resistivity data are fully developed in cross-section, using Realsections.

The resistivity is among the most variable of all geophysical parameters, with a range exceeding 10⁶. Because most minerals are fundamentally insulators, with the exception of massive accumulations of metallic and submetallic ores (electronic conductors) which are rare occurrences, the resistivity of rocks depends primarily on their porosity, permeability and particularly the salinity of fluids contained (ionic conduction), according to Archie's Law. In contrast, the chargeability responds to the presence of polarizeable minerals (metals, submetallic sulphides and oxides, and graphite), in amounts as minute as parts per hundred. Both the quantity of individual chargeable grains present, and their distribution with in subsurface current flow paths are significant in controlling the level of response. The relationship of chargeability to metallic content is straightforward, and the influence of mineral distribution can be understood in geologic terms by considering two similar, hypothetical volumes of rock in which fractures constitute the primary current flow paths. In one, sulphides occur predominantly along fracture surfaces. In the second, the same volume percent of sulphides are disseminated throughout the rock. The second example will, in general, have significantly lower intrinsic chargeability.

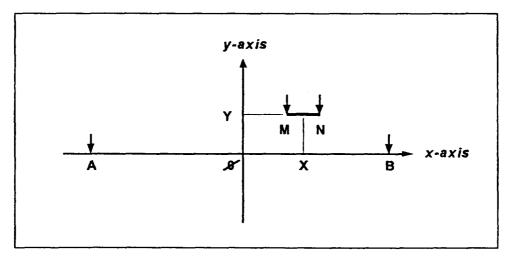


Figure D1:: Gradient array configuration

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Using the diagram in Figure D1 for the gradient array electrode configuration and nomenclature:², the gradient array apparent resistivity is calculated:

VD

where:

. .

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the origin 0 is selected at the center of AB the geometric parameters are in addition to a = AB/2 and b = MN/2 X is the abscissa of the mid-point of MN (positive or negative) Y is the ordinate of the mid-point of MN (positive or negative)

Gradient Array Apparent Resistivity:

$$\rho a = K \frac{r_{I}}{I} \text{ ohm-metres}$$
where: $K = \frac{2\pi}{(AM^{-1} - AN^{-1} - BM^{-1} + BN^{-1})}$
 $AM = \sqrt{(a + x - b)^{2} + y^{2}}$
 $AN = \sqrt{(a + x + b)^{2} + y^{2}}$
 $BM = \sqrt{(x - b - a)^{2} + y^{2}}$
 $BN = \sqrt{(x + b - a)^{2} + y^{2}}$

Using the diagram in Figure D2 for the Total Chargeability:

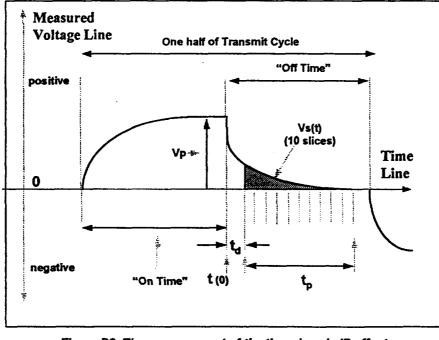


Figure D2 The measurement of the time-domain IP effect

² From Terraplus\BRGM, <u>IP-6 Operating Manual</u>, Toronto, 1987.

the total apparent chargeability is given by:

Total Apparent Chargeability:³

$$M_{T} = \frac{1}{t_{p}V_{p}} \sum_{i=1 \text{ to } 10} \int_{t_{i}}^{t_{i+1}} Vs \quad (t) \text{ dt } \quad \text{millivolts per volt}$$

where t_j , t_{j+1} are the beginning and ending times for each of the chargeability slices,

More detailed descriptions on the theory and application of the IP/Resistivity method can be found in the following reference papers:

Cogan, H., 1973, Comparison of IP electrode arrays, Geophysics, 38, p 737 - 761.

Langore, L., Alikaj, P., Gjovreku, D., 1989, Achievements in copper sulphide exploration in Albania with IP and EM methods, Geophysical Prospecting, 37, p 925 - 941.

QIP P-204

³ From Telford, et al., <u>Applied Geophysics</u>, Cambridge U Press, New York, 1983...

V55ENDIKEV

STATEMENT OF QUALIFICATIONS

I, G.R. Jeffrey Warne, hereby declare that:

- 1. I am a geophysicist with residence in South Porcupine, Ontario and am presently employed in this capacity with Quantec IP Inc. of Waterdown, Ontario.
- 2. I studied Engineering Geophysics in the Faculty of Applied Science at Queen's University in Kingston, Ontario, completing all but two of the course requirements for a B.Sc.(Eng.) in 1981.
- 3. I have practiced my profession continuously since May, 1981 in Canada, the United States and Chile.
- 4. I have no interest, nor do I expect to receive any interest in the properties or securities of Cusil Ventures Corp.
- 5. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Porcupine, Canada December, 1997

de l (or

G.R. Jeffrey Warne Senior Geophysicist General Manager - QIP

APPENDIX A

STATEMENT OF QUALIFICATIONS:

I, Jean M. Legault, declare that:

- 1. I am a consulting geophysicist with residence in South Porcupine, Ontario and am presently employed in this capacity with Quantec IP Inc. of Waterdown, Ontario.
- 2. I obtained a Bachelor's Degree, with Honours, in Applied Science (B.A.Sc.), Geological Engineering (Geophysics Option), from Queen's University at Kingston, Ontario, in Spring 1982.
- 3. I am a registered professional engineer, since 1985, with license to practice in the Province of Ontario (Reg. # 90531542).
- 4. I have practiced my profession continuously since May, 1982, in North-America, South-America and North-Africa.
- 5. I am a member of the Association of Professional Engineers of Ontario, the Quebec Prospectors Association, the Prospectors and Developers Association of Canada, and the Society of Exploration Geophysicists.
- 6. I have no interest, nor do I expect to receive any interest in the properties or securities of Cusil Ventures Corp.
- 7. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Porcupine, Ontario December., 1997

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Jean M. Legault, P.Eng. (ON) Chief Geophysicist Dir. Technical Services Quantec Group

APPENDIX A

STATEMENT OF QUALIFICATIONS:

I, Kevin Blackshaw, declare that:

- 1. I am currently employed by Quantec IP Inc. of Waterdown, Ontario as a field supervisor.
- 2. I graduated from Cambrian College in Sudbury, Ontario with a Geological Engineering Technology diploma in 1983.
- 3. I have continuously been employed in this field since graduation.
- 4. I have no interest nor do I expect to receive any interest in the properties or securities of Cusil Ventures Corp.

Porcupine, Ontario December., 1997

3

Kevin Blackshaw Operations Manager (QIP)

Cusil Ventures Corp. Merico-Ethel Property RSIP

APPENDIX A

STATEMENT OF QUALIFICATIONS:

I, Paul J. Plazek, hereby declare that:

- 1. I am a geophysicist with residence in Renfrew, Ontario and am presently employed in this capacity with Quantec Consulting Inc. of Porcupine, Ontario.
- 2. I am a graduate of Queen's University, Kingston, Ont., in 1989, with an Honours Bachelor of Science Degree in Geological Engineering.
- 3. I have practiced my profession in Canada since graduation.
- 4. I have no interest nor do I expect to receive any interest, direct or indirect, in the properties or securities of Cusil Ventures Corp.
- 5. I am the technical interpreter for this report; I constructed this report to the best of my ability with my current level of understanding.

Porcupine, Ontario December, 1997

Paul J. Plazek, B.Sc. Geophysicist Quantec Consulting

: 1

Technical Services

APPENDIX A

STATEMENT OF QUALIFICATIONS:

I, Andrew Oswald, declare that:

- 1. I am currently employed by Quantec Consulting Inc. of Porcupine, Ontario as a processing geophysicist.
- 2. I am a graduate of Cambrian College, Sudbury, ON, on May, 22,1996 with a Diploma in Geological Engineering Technology.
- 3. I have no interest nor do I expect to receive any interest in the properties or securities of **Cusil Ventures Corp.**
- 4. I am the technical writer for this report; I constructed this report and generated plots to the best of my ability with my current level of understanding.

Porcupine, Ontario December., 1997

Um2

Andrew Oswald Processing Geophysicist Quantec Technical Services



MAGNETOMETER SURVEY MERICO-ETHEL PROPERTY Tudhope/James Township Cusil Venture Corp. November 1997.

RECEIVED MAR - 3 1998 GEOSCIENCE ASSESSMENT OFFICE

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NTS 41 P/16 & 41 P/9

Merico-Ethel Property

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TUDHOPE

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2.0	Property
3.0	Location and Access
4.0	Geologic Setting
5.0	MagnetometerSurvey5.1Instrumentation5.2Survey Results
6.0	Conclusions and Recommendations

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Figure 2	Geology Map	
Figure 3	Location Map	

LIST OF MAPS

Magnetometer contour map

Meegwich Consultants Inc. P.O. Box 482, Temagami, Ontario P0H 2H0 Tel. (705) 569-2904 Fax. (705) 569-2817

<u>1.0</u> INTRODUCTION:

From October 1 to 31 of 1997, a program of linecutting and detail magnetometer surveying was carried out on the Merico-Ethel Property held by Cusil Venture Corporation Suite 1020, 510 Burrard St, Vancouver, B.C. V6C 3A8. The linecutting work was supervised by Dave Manol of Boreal Resources Inc. P.O. Box 100, Elk Lake, Ontario POJ 1GO. The magnetometer survey was supervised and reported on by David Laronde (Meegwich Inc.) of 407 Lakeshore Drive, P.O. Box 482, Temagami, Ontario POH 2HO.

Linecutting: A total of 38.0 km of linecutting was done from a 2.80 km long chainsawed baseline running at an azimuth of 000 degrees for control. Lines were spaced at 100 meters and stations chained in every 25 meters. The baseline was meant to follow the common east-west township boundary. GPS was used to track the actual line co-ordinates at 100 meter intervals along the lines.

2.0 PROPERTY:

The property is on the northern boundary of Townships, James and Tudhope. The 21 claims are one contiguous block covering parts of Conc IV,V and VI in James and Conc VI in Tudhope.

Meegwich Consultants Inc. P.O. Box 482, Temagami, Ontario P0H 2H0 Tel. (705) 569-2904 Fax. (705) 569-2817

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The 1072 hectare (2649 acre) property is composed of 21 claims of varying sizes for a combined total of 67 units.

James Twp. 13 claims - 46 units - 736 hectares - 1819 acres

Conc IV	1217769	6 units		
Conc V	1214028	6"	1214032	4 units
	1214033	6"	1198563	2 units
Conc VI	1214024	1	1214025	6"
	1214029	2	1214030	8
	1198561	1	3485	1 (patented)
	1206252	1	1198563	2

Tudhope Twp. 9 claims - 21 units - 336 hectares - 830 acres

Conc VI	1118625	4	1202555	1
	1202448	1	1206253	4
	1217772	1	1212261	0.5
	1217771	0.5	1217784	7
	1222053	2		

3.0 LOCATION AND ACCESS:

The property is situated 4 km east of the small village of Elk Lake which is some 55 km north-west of the town of New Liskeard as the crow flies.

The property has excellent access since Hwy 560 runs through the middle of it.

4.0 GEOLOGIC SETTING:

The property is underlain primarily by Precambrian Nipissing gabbro and Gowganda Formation sediments. A small patch of Lorrain Formation sediments and the edge of the Round Lake batholith are also noted. Structure trends north-east containing copper mineralization that appears to be confined to shear zones. Historical workings of shaft sinking and driving adits were done by Merico Explorations (Tudhope Tp.) and Ethel Copper (James Tp.). High grade copper values were encountered and continue to spur interest in base and precious metal exploration. Ethel Copper and Merico Explorations both performed advanced stage exploration on underground workings in shear zones containing promising grades of copper near the common township boundary of

James and Tudhope.

5.0 MAGNETOMETER SURVEY:

A total of 38.00 km was surveyed on a grid with 25 meter stations picketed on lines spaced at 100 meters. Readings were taken at 2.5 meter intervals (15,200 readings) but were plotted at 5 meter stations to facilitate plotting.

5.1 Instrumentation: Gem Systems GSM-19 overhauser magnetometers ser. No. 58479, 67559 were used for the survey in the "walking" mode. These instruments are state of the art micro-processor based and measure the earth's total magnetic field to an accuracy of 1/100th of a gamma. An EDA Omni IV base station was set up to monitor and correct for the diurnal variation during the course of the survey. The base station is accurate to 1/10th of a gamma.

5.2 Survey Results: The results are presented on contoured plans at 1:5000 scale.

The survey results are marked by north-east trending linear to semimassive highs. A more massive looking high is observed from L 0 to L 3 W from 200 to 800 S. A broken low trend can be seen crossing the grid diagonally from the south-west corner to the northeast corner of the survey area. Another low can be seen heading north-west from L 3 W at 800 S.

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The south-west corner of the survey area is mostly part of a low with a narrow high (dike) trending north-east.

Overall, the general appearance of the magnetic responses reflect non-homogeneous geology. There are many spotty high areas. The gabbro is known to occur in several grades with varying magnetic mineral content.

The low in the north-east claim is co-incident with mapped sediments. The low to the west side may quite possibly be a grade of gabbro with a reverse magnetic signature.

CONCLUSIONS AND RECOMMENDATIONS:

The magnetometer survey has outlined the gabbro and the sediments fairly well. Priority should be given to the gabbro since historic occurrences are associated with structure within this rock type. Several trends of faulting could be interpreted. Seeing that the existing mineralization (Merico and Ethel) is restricted to fault controlled vein systems it may be prudent to carry on identifying these features and test zones that have not already been drilled or worked. It is interesting to note cross structure or fracture sets with a south-east trend are mineralized as well as north-east trending. High grade copper values from past workings continue to spur interest in this mineral occurrence and potential remains high. Further follow-up recommended should consist of detail geological mapping and sampling to detect and delineate more mineralized fracture zones. Induced polarization should also be used to outline possible stockwork of veins and/or larger concentrations of mineralization that may be at depth.

Respectfully submitted,

David Laronde Geology Engineering Technologist

<u>References</u>

- 1986 Geology of the Hill Lake Area District of Timiskaming Ontario Geologic Survey - Report 250
- 1975 Ontario Geologic Survey Map 2205 Timmins-Kirkland Lake Geological Compilation Series 1:250,000
- 1968 Geology of the Elk Lake Area District of Timiskaming Ontario Dept. of Mines - Report 62

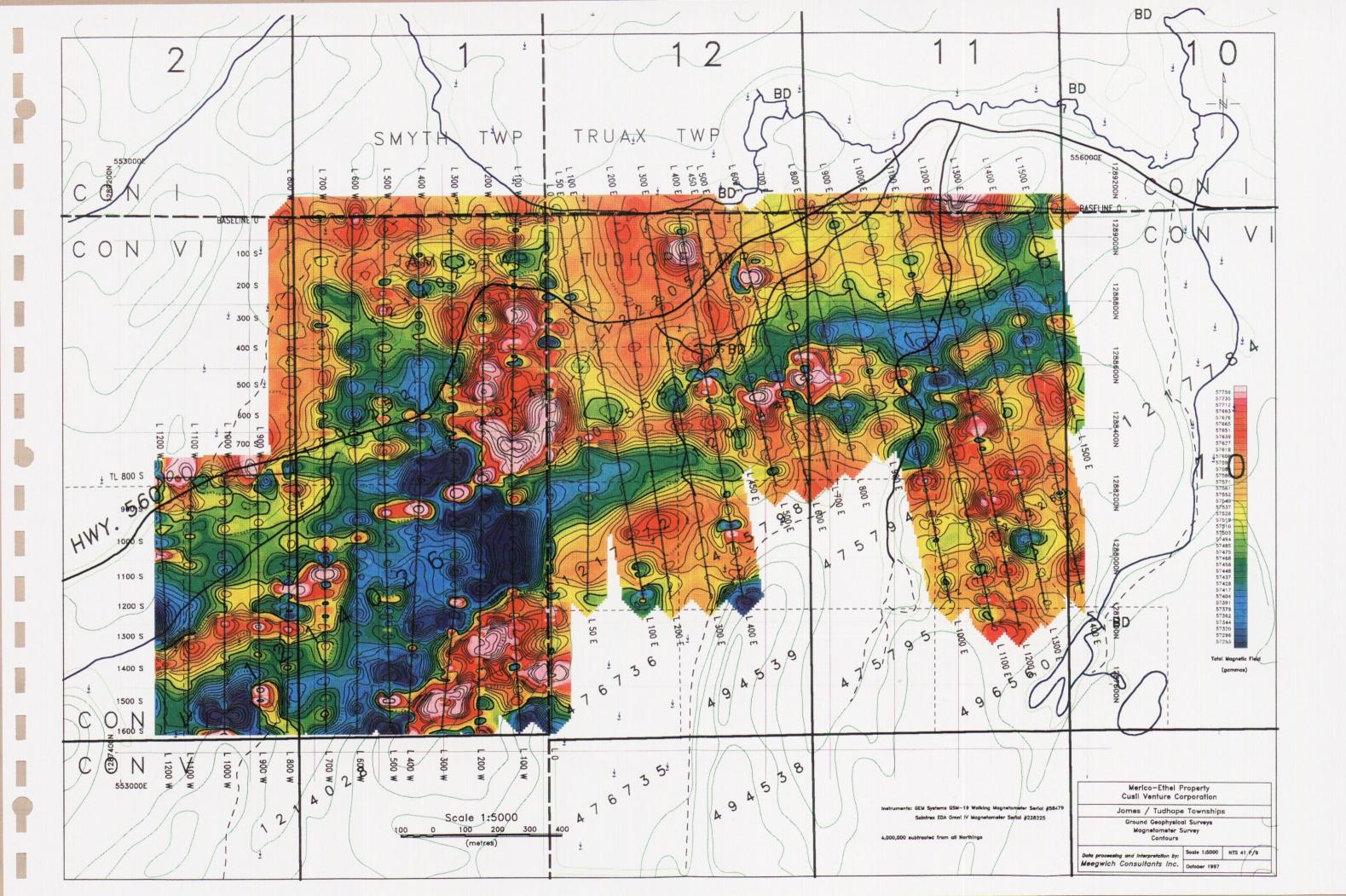
CERTIFICATE OF AUTHOR

- I, David Laronde of the town of Temagami, Ontario hereby certify:
 - 1. That I am a geology technologist and have been engaged in my profession for the past 16 years.
 - That I am a graduate of Cambrian College in Sudbury with a diploma in Geology Engineering Technology in 1979.
 - 3. That my knowledge of the property described herein was acquired by field work and documentation.

Dated at Temagami this 2nd day of November 1997.

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David Laronde



INSTRUMENT SPECIFICATIONS

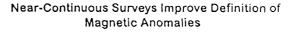
MAGNETOMETER / GRADIOMETER

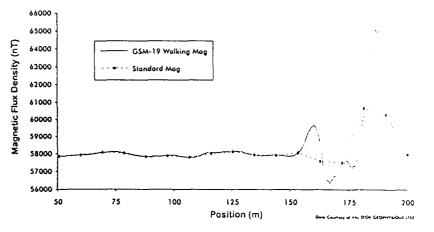
Resolution:	0.01 nT (gamma), magnetic field and gradient.
Accuracy:	0.2 nT over operating range.
Range:	20,000 to 120,000 nT.
Gradient Tolerance:	Over 10,000 nT/m
Operating interval:	3 seconds minimum, faster optional. Readings initiated from keyboard, external trigger, or carriage return via RS-232-C.
Input/Output:	6 pin weatherproof connector, RS-232C, and (optional) analog output.
Power Requirements:	12 V, 200 mA peak (during polarization), 30 mA standby. 300mA peak in gradiometer mode.
Power Source:	Internal 12 V, 2.6 Ah sealed lead-acid battery standard, others up-
	tional. An External 12V power source can also be used.
Battery Charger:	Input: 110 VAC, 60 Hz. Optional 110/220 VAC, 50/60 Hz.
	Output: dual level charging.
Operating Ranges:	Temperature: -40 °C to +60 °C.
	Battery Voltage: 10.0 V minimum to 15V maximum.
	Humidity: up to 90% relative, non condensing.
Storage Temperature:	-50°C to +65°C
Display:	LCD: 240 x 64 pixels, or 8 x 30 characters. Built in heater for opera-
	tion below -20°C
Dimensions:	Console: 223 x 69 x 240mm.
	Sensor staff: 4 x 450mm sections.
	Sensor: 170 x 71mm dia.
	Weight: Console 2.1kg, Staff 0.9kg, Sensors 1.1kg each.

"Walking" Magnetometer / Gradiometer

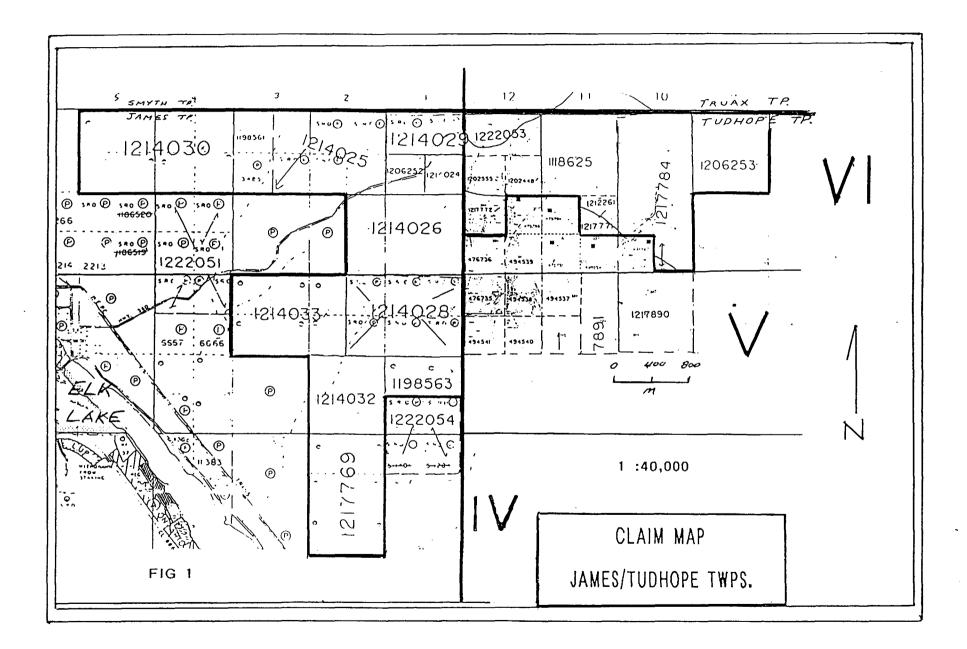
GEM Systems pioneered the GSM-19's innovative "Walking" option that enables acquisition of nearly continuous data on survey lines. Similar to an airborne survey in principle, data is recorded at discrete time intervals (up to 2 readings per second) as the instrument travels along the line. At each major survey picket (fiducial), the operator touches a designated key. The Walking Mag automatically assigns a linearly interpolated coordinate to all intervening readings.

A main benefit of the Walking option is that the high sample density improves definition of geologic structures. And because the operator can record data on a near-continuous basis, the Walking Mag increases survey efficiency and minimizes field expenditures -- especially for highly detailed ground-based surveys.

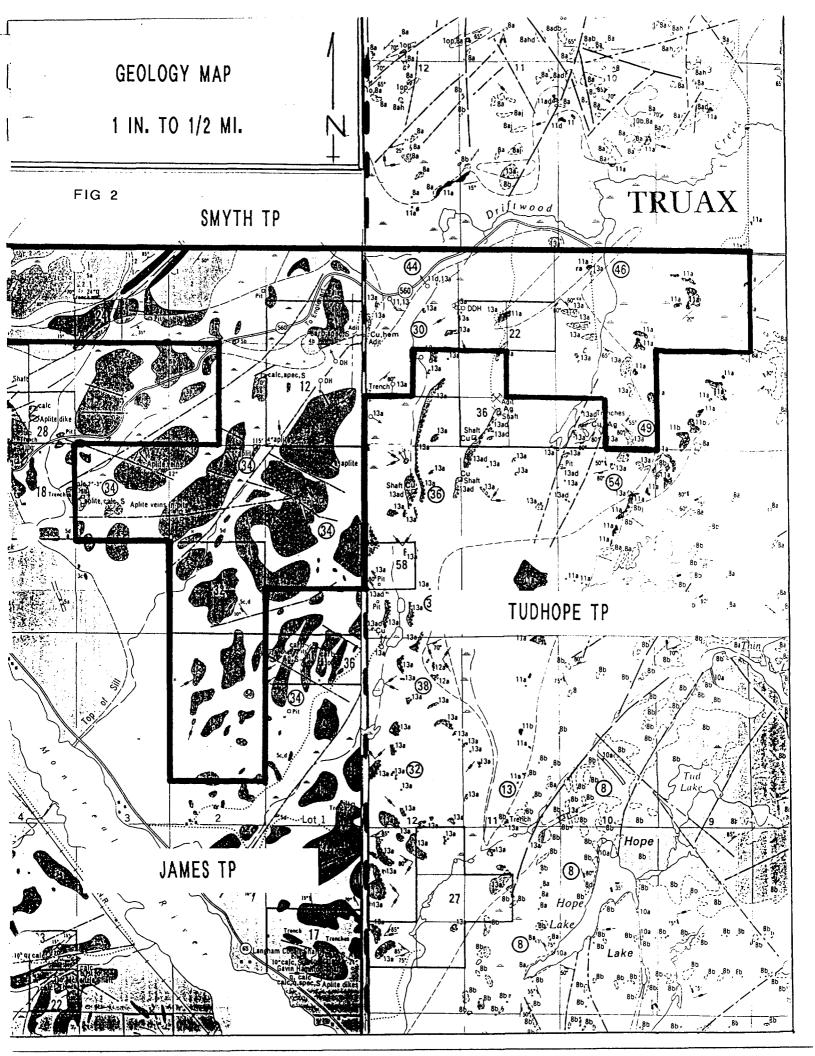


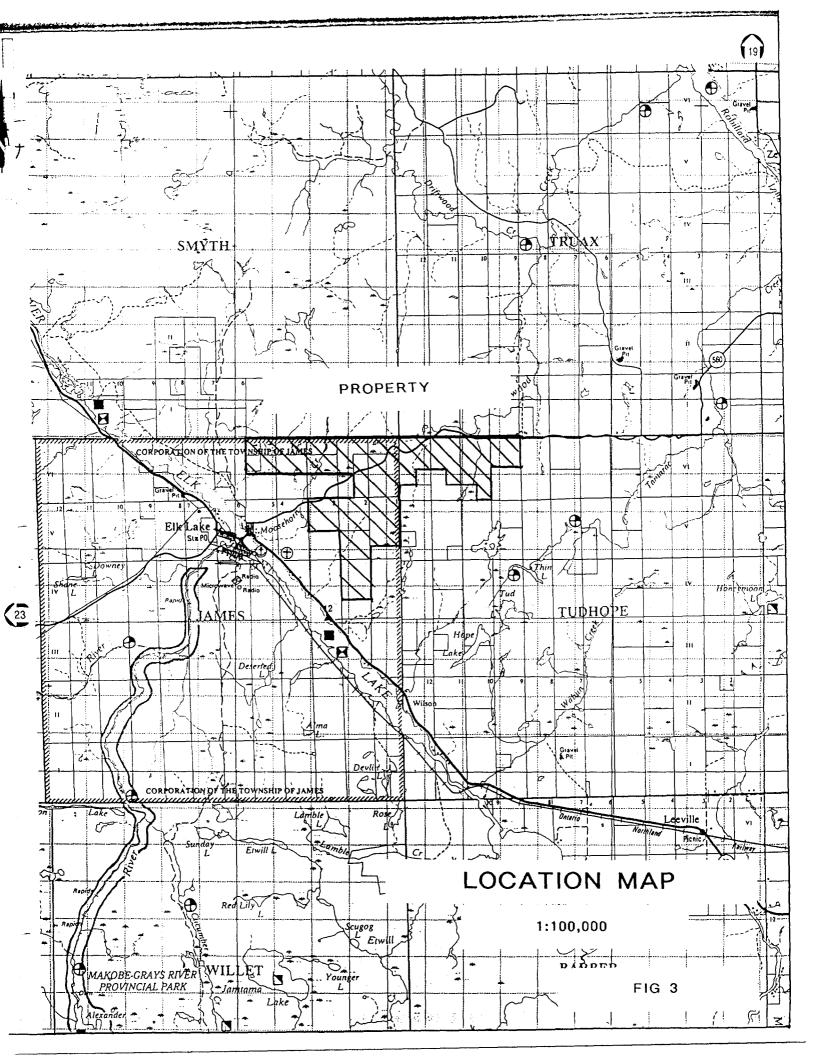


As shown above, near-continuous measurements increase definition. Results from a GSM-19 "Walking Mag" (273 readings over 150 m with 2 sec. cycle time) were compared with results from a standard magnetometer (13 readings over 150m).



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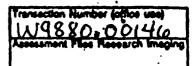




Ministry of Northern D and Mines n Development

Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990



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of subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the review the assessment work and correspond with the mining land holder. Recorder, Ministry of Northern Development and Mines, 6th Floor,

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240. - Please type or print in Ink. 5.94 · · ·

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Recorded holder(s) (Attach a list if necessary)	2.18267
	Client Number
Cusil Venture Corporation	303596
507-595 Howe Street	Telephone Number (604) 681-6466
Vancouver, B.C. V6C 2T5	Fax Number (604) 681-2161
ame	Client Number
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Type of work performed: Check (~) and report on only ONE of the following groups for this declaration. 2.

Geotec assays	chnical: prospecting, surve and work under section	eys, Physical: drillin 18 (regs) trenching and a	g, stripping, Rehabilitation
Work Type	•••	······································	Office Use
		achete and chain saw) ing and Sampling	Commodity
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Global Position	ning System Data (Il available)	Township/Area Tudhope and James	Mining Division hander have
		Mor G-Plan Number M0252 and M0225	Resident Geologist District Kirkland Lake
			• -

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.

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

Name L.P. Othmer P. Eng.	Telephone Number (705) 679-8113
Address 3 Martin Drive, RR #1, Cobalt, Ont.POJ	1CO Fex Number
Name T.J. Quesnel G.A.C.	Telephone Number (705) 753-2387
Address 1231 Hwy. 17 West P.O. Box 20007 Sturgeon Falls, Ont. POH 2B0	Fax Number (705) 753-6113
Name David Laronde	Telephone Number (705) 595-2904
Address P.O. Box 482 Temagami, Ont. POH 2HO.	Fax Number (705) 569-2817
Eugene Larabie Print Name) forth in this Declaration of Assessment Work having eaused the FEG or after its completion and, to the best of my knowledge, the annexe	1998 what I have personal knowledge of the facts se SESSMENT Lobe participand or witnessed the same during
Signature of Recorded Holder or Agent	Feb. 20, 1998
507-595 Howe St., Vancouver, BC V6C 2T5 (60	04) 681–6466 (604) 681–210
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2 Imendment 5146 b. Work to be recorded and distributed, its of the time the mining land where work was performed, at the lime ugned to claims that s performed. A map showing the must accompany this form,

work wi mining i polymn	Claim Kumber. Or I as done on other slights and, show in this the location number of an the claim map.	Number of Claim Units. For other mining land, Est hectares.	Value of work performed on this claim or other mining land.	Volue of work opplied to this cis)m.	Value of work engigered to obver mining claims.	Bank, Value of work to be distributed at a name date.
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, do becausy corning that the above work crecits are engines und RABIE subcoction 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous caims or for application to

the claim where the work was done Signature of Recorded Holder or Agent Aug

instructions for cutting back credits that are not approved. 8.

<u>Nex</u>

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:

I. 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 pecsation; or
 4. Credits are to be cut back as prioritized on the tradition appendix or st tologies. . . Crodits are to be cut back as prioritized on the track

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.

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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 (Received Stamp	Jniy	Deemed Approved Date	Date Notification Sent
		Date Approved	Total Value of Credit Approved
	RECEIVED	Approved for Recording by Mining	Recorder (Signature)
0240 (03/87)	MAR - 3 1998		
	GEOSCIENCE ASSESSMENT OFFICE		

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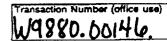
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Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit



Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontarlo, P3E 685.

		\approx	
Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilo- metres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
LINE CUTTING ALMETE AND CHAIN-SAW	\$1.4 kim	#347.00/Km	\$ 14360.00
1+9 Netometer SURJEY	38.0 km	8,160/Km	* 6,086.00
Trouces Polarization	51.26 km	695/ km	50
Seologisal Mapping	18 MAN DAYS	# 300 / DAY	\$ 5400,00
Assaying	40 ASSALJ	32/2522	1300.00
Associated Costs (e.g. supplies,	mobilization and demobilization).		
Moo & DEMO	bilization .		\$ 2400.00
Report waitin			8147.00
SUPERVISION			1500,00
TRAVE / inclu	ing truck Rental		7300.00
Transpo	ortation Costs		
Food a	nd Lodging Costs		
Geologist AND	SURVEY CREW	#59/ DAY	6325.00
	MAR - 3 1998	of Assessment Work	88,443,00
Calculations of Filing Discounts:			
If work is filed after two years a	GEOSCIENCE ASSESSMENTED of the nd up to five feets after performance his situation applies to your claims, us	e, it can only be claime	d at 50% of the Total
TOTAL VALUE OF ASSESSME			lue of worked claimed.

request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, <u>EUGENC</u> <u>(please print full name)</u>, do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on

the accompanying Declaration of Work form as <u>PRESIDENT OF CUSI</u> VENTURE COND. I am authorized

to make this certification.

0212 (02/96)

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** TOTAL PAGE.02 **

Ministry of Northern Development and Mines Ministère du Développement du Nord et des Mines

June 5, 1998

Eugene Larabie CUSIL VENTURE CORPORATION 507 - 595 HOWE ST. VANCOUVER, B.C. V6C-2T5



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

Telephone: (888) 415-9846 Fax: (705) 670-5881

Visit our website at: www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

Submission Number: 2.18261

 Subject: Transaction Number(s):
 W9880.00146
 Approval After Notice

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 Lucille Jerome by e-mail at jeromel2@epo.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

110

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

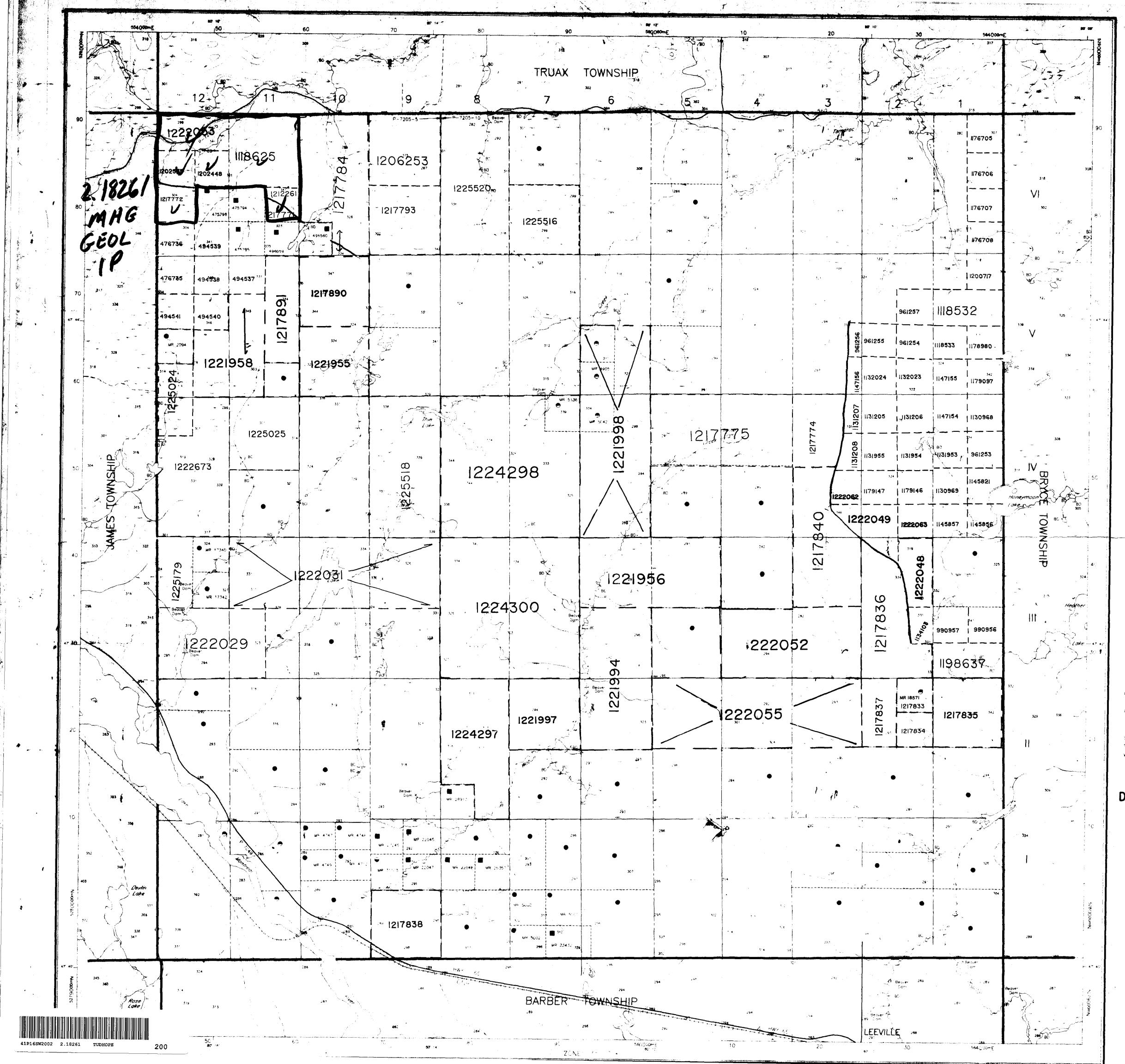
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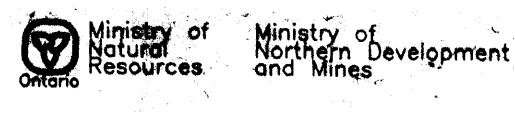
Work Report Assessment Results

2.18261 Submission Number: Assessor:Lucille Jerome Date Correspondence Sent: June 05, 1998 Transaction First Claim **Approval Date** Number Township(s) / Area(s) Number Status TUDHOPE, JAMES June 05, 1998 W9880.00146 1202555 **Approval After Notice** Section: 14 Geophysical MAG 14 Geophysical IP 12 Geological GEOL The revisions outlined in the Notice dated May 22, 1998, have been corrected. Accordingly, assessment work credit has been approved as outlined on the Declaration of Assessment Work Form accompanying this submission.

Correspondence to: Resident Geologist Kirkland Lake, ON

Assessment Files Library Sudbury, ON Recorded Holder(s) and/or Agent(s): Eugene Larabie CUSIL VENTURE CORPORATION VANCOUVER, B.C.





INDEX TO LAND DISPOSITION

PLAN . G`- 3724

TOWNSHIP

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TUDHOPE

M.N.R. ADMINISTRATIVE DISTRICT KIRKLAND LAKE

MINING DIVISION LARDER LAKE LAND TITLES/REGISTRY DIMSION TIMISKAMING

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REAS WITHDRAWN FROM DISPOSITION

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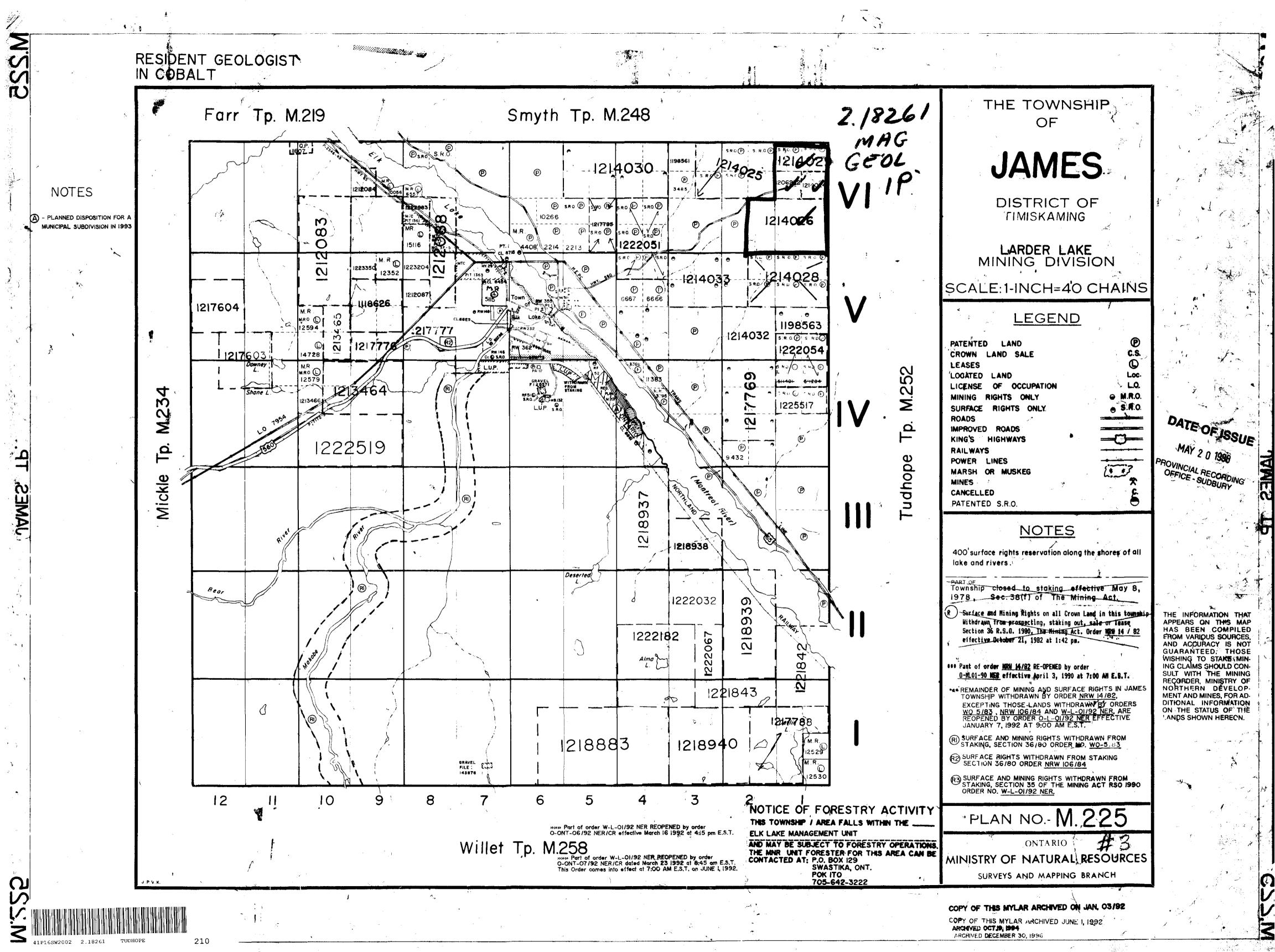
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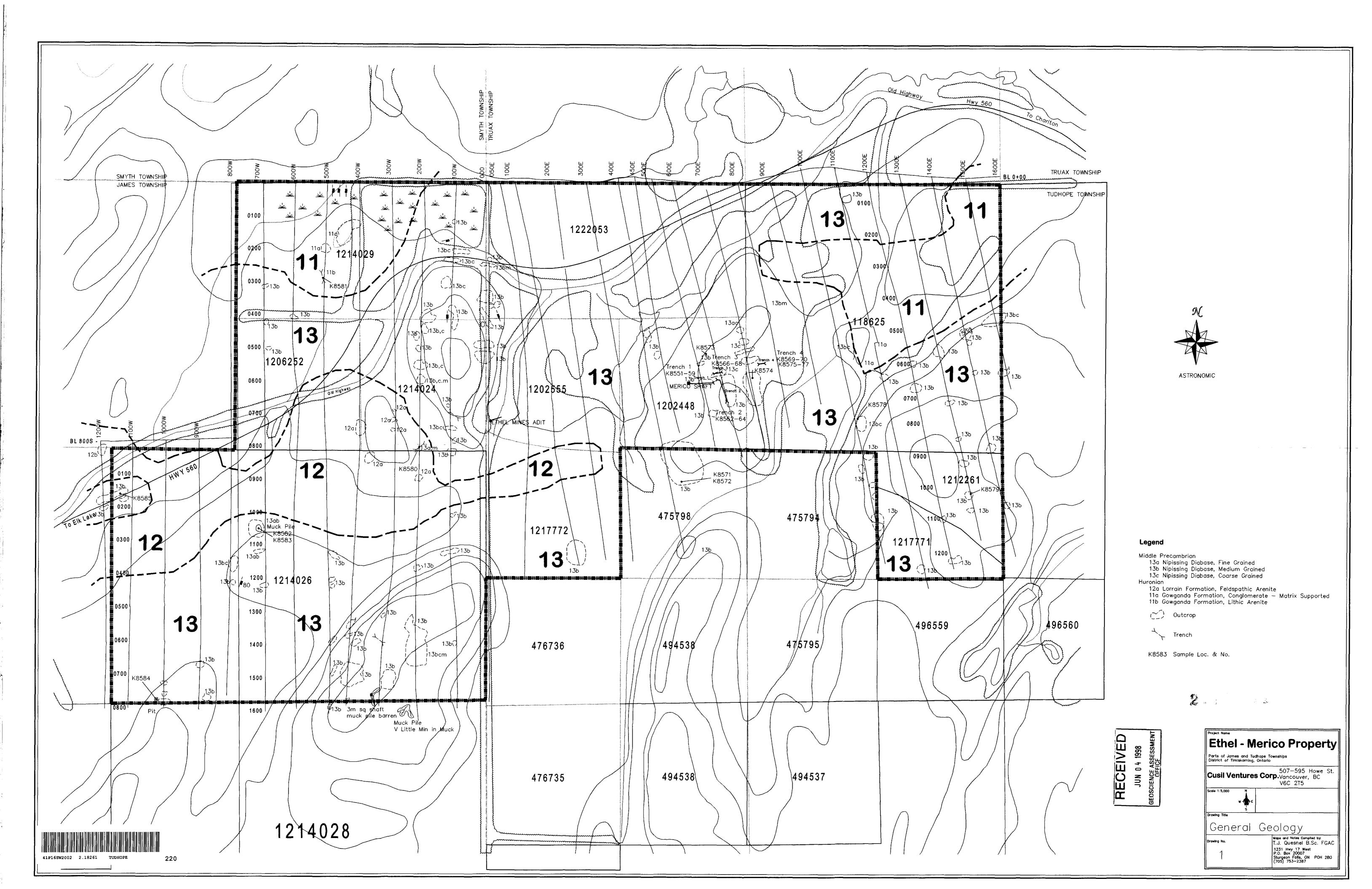
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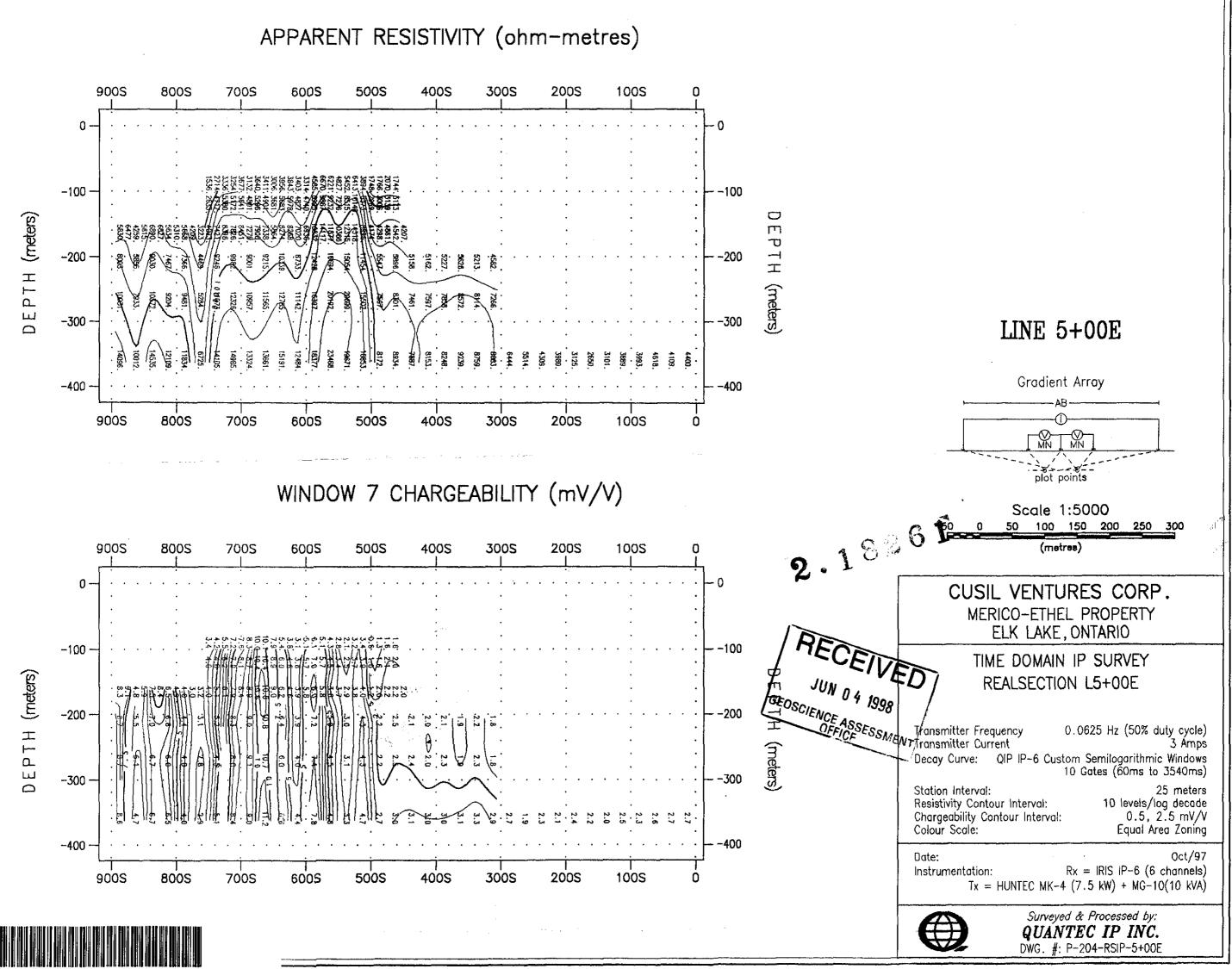
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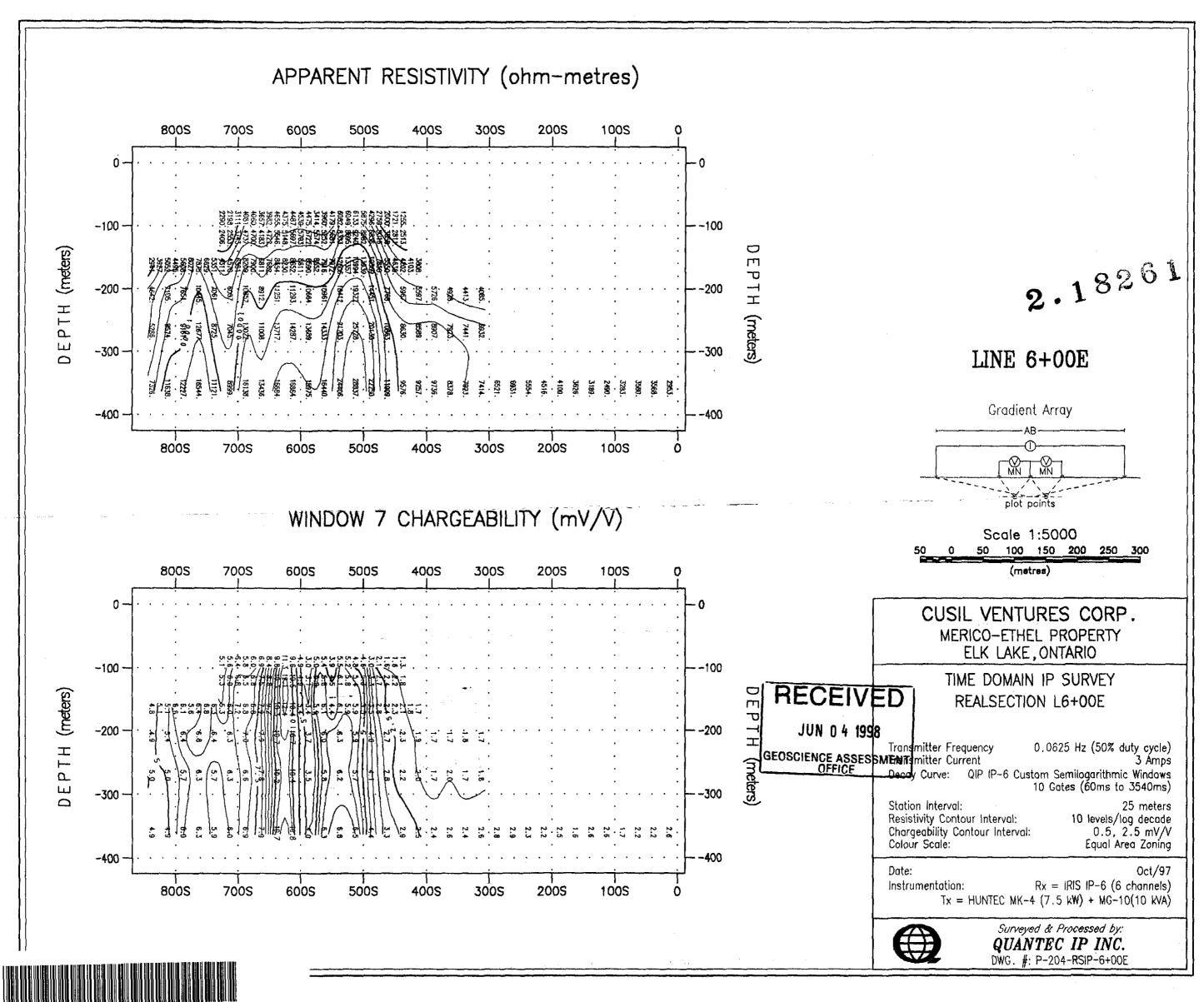




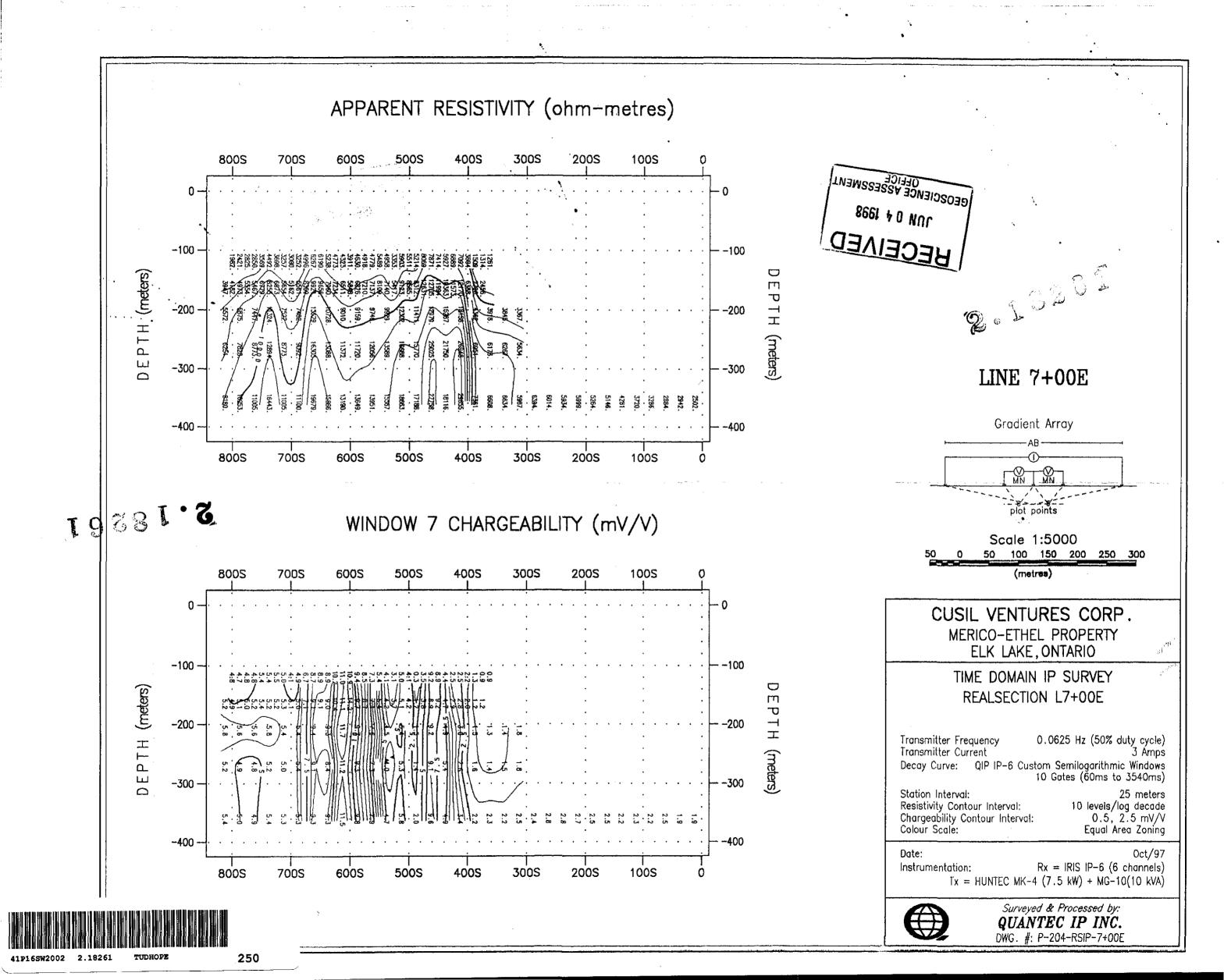
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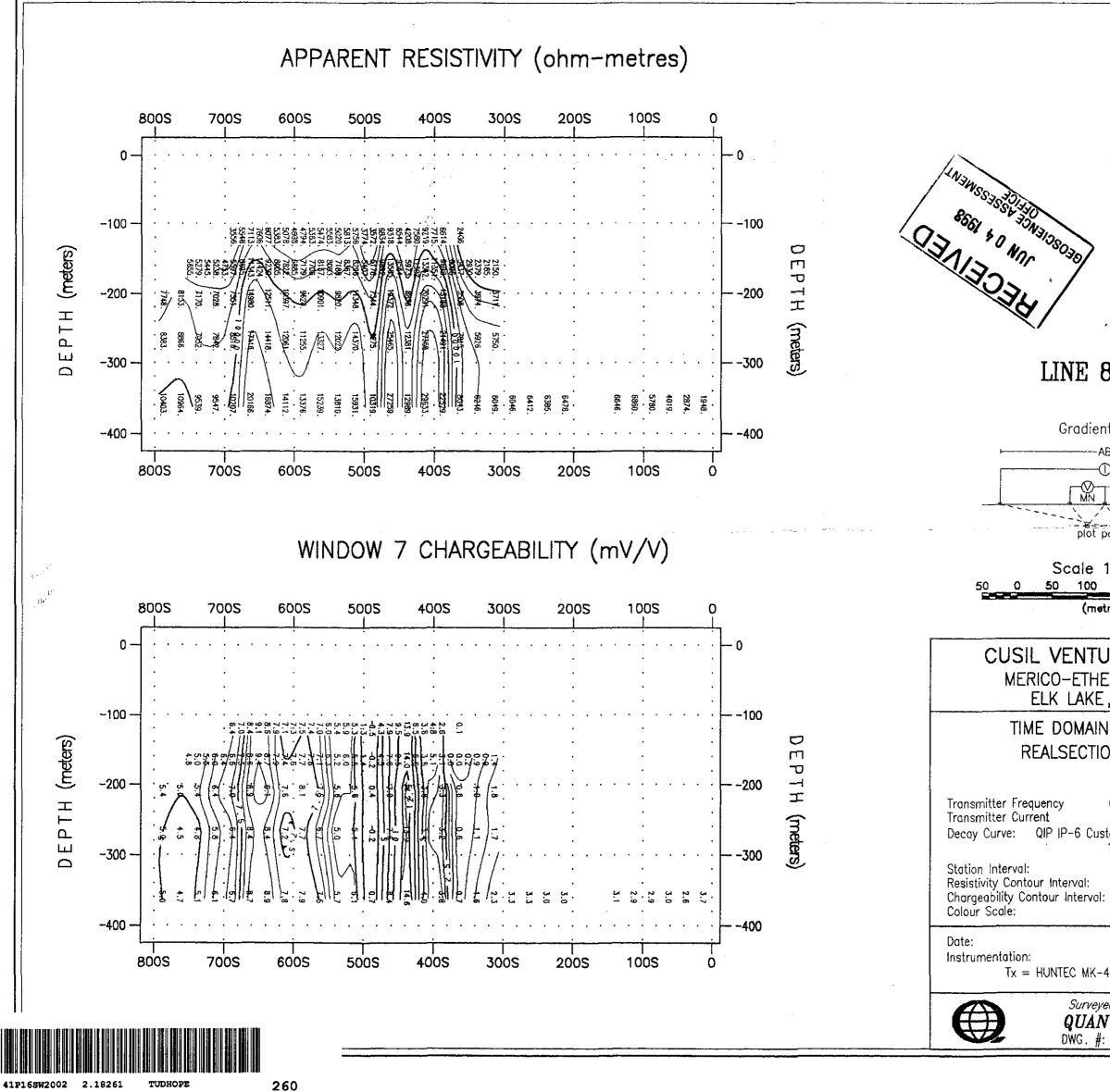
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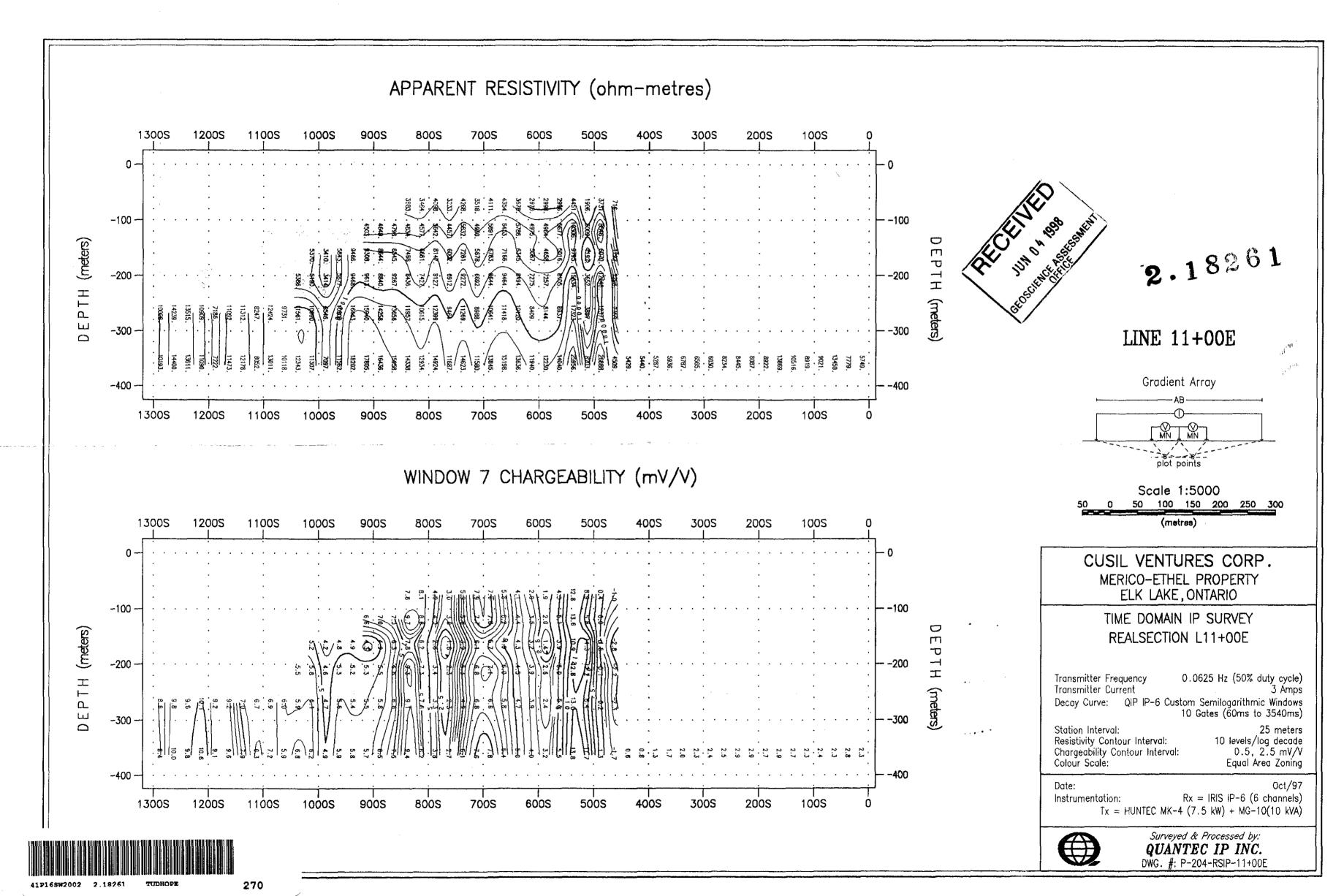


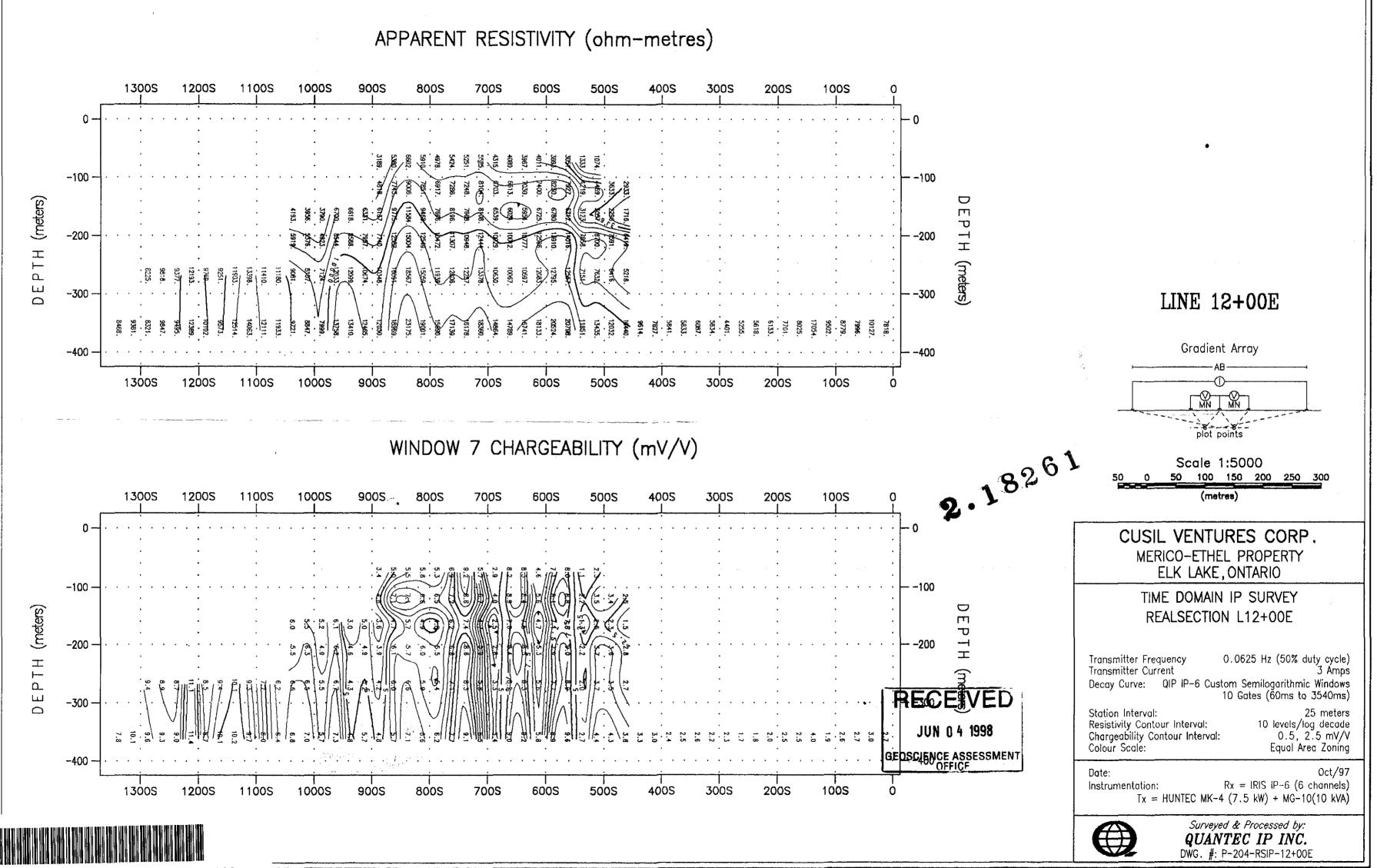
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WANTEC IP INC. NG. #: P-204-RSIP-8+00E	





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