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Haddington Resources Ltd.

Report of 1995 Exploration
Magnetics, Induced Polarization, Geological Mapping
Soil Geochemistry and Bedrock Sampling

Sheraton, Timmins, and Egan Tp. Claims

Porcupine and Larder Lake Mining Divisions

Ontario

NTS 42- A- 7

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May 1996

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Introduction

An exploration programme of geophysics, geochemistry, geological mapping and bedrock sampling was undertaken during the 1995 summer field season. The work was funded jointly by Haddington Resources Ltd. and Silverstone Resources Ltd.

A study of previous work and other relevant data, was done by T. Beesley and N. MacIsaac. Beesley has summarized this in his report of April 1995 and proposed the work program. Line cutting was done in July and August 1995. The programme of bedrock sampling, geological mapping, and soil geochemistry was conducted concurrently with the line cutting from 12th to 27th July 1996. The magnetic survey was done in July and August and the IP survey was run in August 1995. Report writing and drafting was done at various times after the field work with the final work, the mapping, geochemistry and showing sampling and drafting being done in May 1996.

The objectives of the programme were (1) to follow-up and confirm the two areas of significant gold mineralization reported by R. Kaltwasser in Sheraton Township (in the southeast corner of the township near the line with Egan Township and in north part of Lot 2 Con 1), (2) to systematically sample the showings, (3) to map the showings and the surrounding exposures (4) to cover a large area of the property with a magnetic survey to aid in geological interpretation and (5) to survey select, high potential areas with induced polarization to locate sulphide concentrations and areas of high resistivity which are favourable for gold deposits.

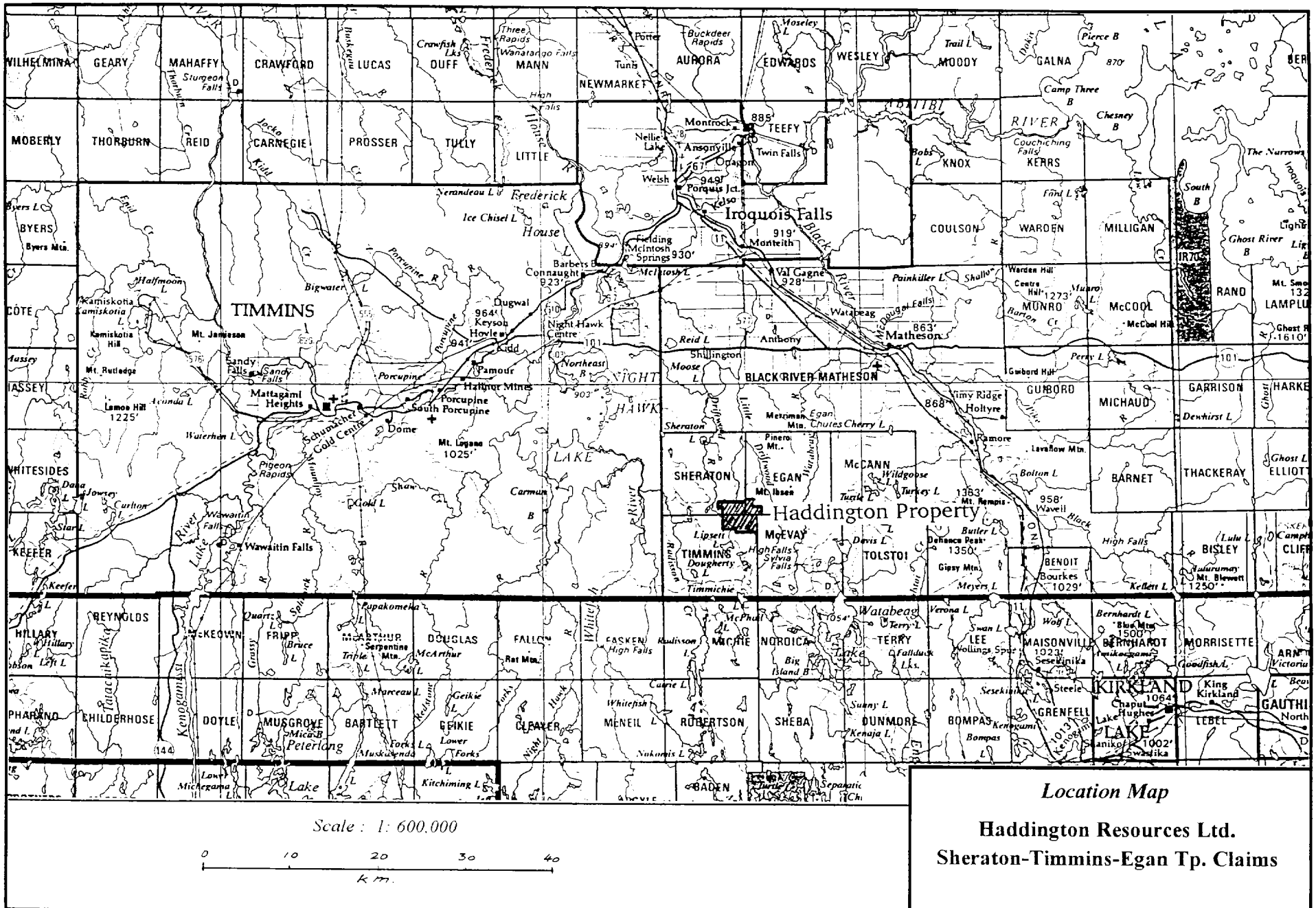
Outcrop in the area is sparse. On the west side, along the 'west access road', considerable sand overburden is present, presumably the reworked part an esker system that passes through Kettle Lakes along Highway 67. East of this sand-cover, large areas of clay overburden were noted. Although overburden depths are not known, it is suspected that it is relatively deep. e.g. the Kasba Creek on the KW No. 1 base line cuts through an estimated 15 to 20 m of overburden.

A grid of 100m spaced picket lines was cut over a large part of the claim group. The lines are laid out from a base line oriented at an azimuth of approximately 115°. This work was contracted to Timmins North Exploration, (Denis LaForest) of Timmins.

Location and Access

The claim groups are centred near the mutual corners of the three townships of Sheraton, Egan and Timmins. Sheraton and Egan lie in Cochrane District and Timmins Township lies in Timiskaming District. There is also an east-west division of the claim block with Sheraton and Timmins lying in the Porcupine Mining Division and Egan Township within the Larder Mining Division. The claims lie 50 km ESE of Timmins and 25km SW of Matheson.

Access is via the all weather, Gibson Lake road which starts at a point on Highway 101, some 3 km. east of its intersection with Highway 67. At approximately 28 km. south of Highway 101 a branch road leads off to the east to Camp Katapao on Lipsett Lake some 3.5 km from the turn off on the Gibson Lake road. This branch continues beyond Camp Katapao to the east and north. This north trending road gives access to the west part of the claims. (This is referred to as the West Access Road.) The track leading to the Kaltwasser Main Showing lies about 4.5 km. to the NE of Camp Katapao. The south and east parts of the property are accessible by an access road which branches from the Katapao road a short distance NE of Camp



Location Map

Haddington Resources Ltd.

Sheraton-Timmins-Egan Tp. Claims

Fig. 1

Katapao. Part of this road are negotiable only with a 4 wheel drive vehicle. The Gibson Lake road is not normally snow ploughed during the winter.

Description of Claims

The holdings consist of a contiguous group of 70 units in SE Sheraton, NE Timmins and SW Egan Townships as shown in Fig. 2. They are held by Haddington under two separate options. The first of these, the northern part, known as the Kaltwasser-Demarchi group, is held under option from Richard Kaltwasser (50%) and David Demarchi (50%). The larger southern and southeastern part known as the "Timmins Group" is held under option from J.M. Gervais, D. Lalonde, J. Robert and G. Ross. Details of the claims are shown in Table I, below. Two patented claims surrounding the shaft in about the centre of the group are not included in the holdings.

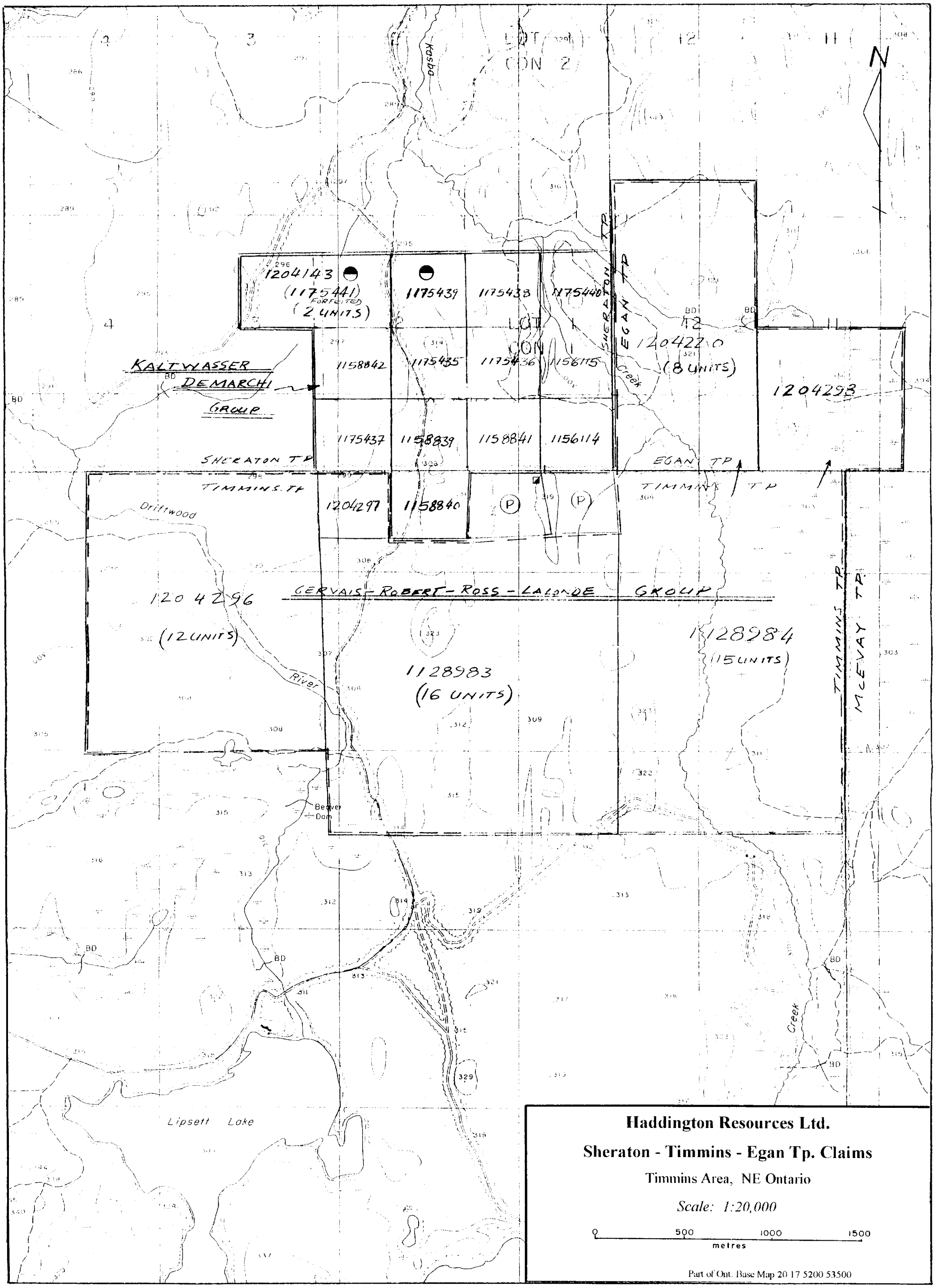
Table I List of Mineral Claims

Kaltwasser - Demarchi Group

	Claims	Units	Expiry Date
Sheraton Township	1156114	1	97/08/09
	1156115	1	97/08/09
	1158839	1	97/12/31
	1158841	1	97/12/31
	1158842	1	98/02/27
	1175435	1	97/02/27
	1175436	1	98/02/27
	1175437	1	98/02/27
	1175438	1	97/07/31
	1175439*	1	96/07/31
	1175440	1	97/08/24
	1204143*	2	97/09/26
Timmins Township	1158840	1	97/12/31
Total Units Kaltwasser -Demarchi Group		**14**	

* Surface rights to claim 1175439 owned by R. Boissoneault & D Duchesne of Rutherglen, ON & to the east 1/2 of 1204143 by R & C. Mann of Stockbridge, Mich., USA. Claim 1175441 lapsed in Aug. and was restaked as 1204143.

"Timmins Group"	Claims	Units	Expiry Date
Timmins Township	1128983	16	96/10/07
	1128984	15	96/10/07
	1204296	12	96/10/07
	1204297	1	96/10/07
Egan Township	1204220	8	96/10/07
	1204298	4	93/10/07
Total Units Timmins Group		**56**	



Haddington Resources Ltd.

Sheraton - Timmins - Egan Tp. Claims

Timmins Area, NE Ontario

Scale: 1:20,000

0 500 1000 1500
metres

Part of Ont. Base Map 20 17 5200 53500

One claim in the extreme NW corner of the Kaltwasser-Demarchi group, 1175,441 inadvertently lapsed in August 1995 and was re-staked as claim 1,204,143. Unfortunately, the assessment credits applicable to the old claim have been lost.

History & Previous Work

The area has been mapped by government agencies only on reconnaissance scale. It lies near the east edge of O.D.M. Map 49h (at 1 mile to the inch) and it is briefly described in Annual Report XLIX Pt. IV 1940 by L.G. Berry.

A thorough review of previous work and data available on the property was done by Beesley and described in his report of April 1995. The following section draws from Beesley's report and assessment work up to 1988 it taken, with minor alterations, from Beesley's report

Two claims were staked by L.A. Blanchette and Napoleon Seguin in the northeastern corner of Timmins Township in 1910 and 1911. These, now patented claims 34452 and 34453 are surrounded by the Kaltwasser-Demarchi and Timmins Group but are not included in the Haddington holdings. An exploration shaft was sunk to 40 FT on the western claim in 1910 to test the narrow quartz veins at the contact of feldspar porphyry dykes and chlorite schists. The quartz veins with abundant pyrite locally yielded high gold values in grab samples. In 1937, Blanchette-Porcupine Mines sank numerous diamond drill holes in the area of the shaft, but no logs are available.

In 1947, five holes drilled at right angle to ENE-striking porphyry dykes, in the eastern claim of what was at that time referred to as the Bulter Claims. Narrow quartz stringers with pyrite were noted, but no gold values were reported.

In 1974, stripping and trenching were reported from the 'Lloyd Dolan' claims, including the southern part of the present Kaltwasser-Demarchi and some of the Timmins group claims. Gold values were reported from the current Kaltwasser-Demarchi claim 1158840 (the one claim in the group from Timmins Tp.) and from further to the south and east.

Johns-Manville Canada Inc. held claims over much of the current holdings and carried out geological and geophysical surveys, and stripping and trenching between 1981 and 1984. Gold values are reported from samples of quartz veins in feldspar porphyry dykes. According to Kaltwasser some of the Johns-Manville work consisted of exploration of the gabbro in current claim 1158840 for platinum. No platinum was found.

In 1987, Placer-Dome Inc. held 15 units in the SE part of Sheraton Township, including the northern most tier of the Kaltwasser-Demarchi claims. They carried out magnetometer and VLF-EM surveys. In 1988, T. McAllister held the southeastern part of the current Kaltwasser-Demarchi claims and conducted magnetometer and VLF-EM surveys. In 1988, Kimex Inc. did magnetic and VLF-EM surveys over the western part of the Kaltwasser-Demarchi group, as well as to the west and northwest of the group, and over the Timmins Group. A strong SE - trending VLF - EM anomaly indicates a structure starting in the area south of the main Kaltwasser-

Demarchi showing in SE Sheraton Township and extending across the Timmins Group to the large batholithic plutons to the east.

In the fall of 1990, Richard Kaltwasser and David Demarchi re-discovered significant gold values in an old rock trench in the southeast corner of Sheraton Township. Some of the better grab samples from the trench assayed up to 5.1 g/t and 110 g/t gold. This trench is part of what is referred to here as the Main Showing. Kaltwasser and Demarchi staked claims and initiated exploration of the area. Most of this work was financed through OPAP grants. (Ontario Prospectors Assistance Program). In 1992, they undertook a programme of power stripping. Chip sampling of the Main Showing was done and values up to 13.17 g/t Au over 0.61m (north wall of rock trench) were found. In 1993, they did magnetic surveys and geological mapping over part of their claims. In 1994, Kaltwasser and Demarchi, (1)conducted soil geochemical survey over the section between the Main Showing and what is referred to here as the NW Stockwork, (2) extended the magnetic survey into the SE corner of Sheraton Township, and (3) excavated 8 trenches at various locations on the property. On the bases of the soil geochemistry, Kaltwasser postulated the existence of an auriferous horizon or structure extending roughly from the NW Stockwork to the Main Showing

Regional Geology and Mineral Deposits

The claims are about 45 km. ESE of the Timmins 'Complex' and 20 km. south of the Destor-Porcupine deformation zone. Published maps show a relatively simple geology with mafic volcanics large trondhjemite batholiths protruding into the area from the south, east and northeast. However, both the adjacent areas, to the west, the Shaw Dome (Shaw, Eldorado, Langmuir, and Carman Township) and to the east, (Black, Benoit Township.) show fairly complex, well differentiated volcanic suites. It seems likely that the apparent simplicity in the Sheraton area is, at least in part, related to the poor exposure and lack of detailed mapping. In this regard, some intermediate to felsic volcanics have been recognized on the property by recent work and in this programme.

Stratigraphically the Sheraton volcanics appear to fit into Pyke's tholeiitic, Upper Supergroup. 'Formational trends' are generally ESE and dips are mostly steep. Trondhjemitic batholiths intrude the volcanics in NW McEvay, NE Timmins and in central and west Egan Tp. Parts of these plutons are thought to lie to the NE, SE and south parts of the claim group. Within the claims, where examined by the author, some re-crystallization is apparent, presumably from the contact effects of these plutons. The mafic volcanics, particularly the variolitic types (presumably Fe-tholeiites) are commonly magnetic, possibly as a result of hornfelsing associated with these batholiths.

Many dykes, of a set of NNW trending, generally feldspar porphyritic diabase to gabbro, are present in the region as mapped by Berry. These are thought to be part of the late Archean, Matachewan swarm.

Although fairly strong deformation of the variolitic basalts and intermediate to felsic volcanics, is apparent in the mapped area, no major deformation zones have been previously documented in the area.

The assumed position of the main branch of the Cross Lake Fault, a fault the Lake Temiskaming Rift set, is interpreted through the west part of the claims. Although this has been suggested as a possible site for gold mineralization, these faults are relatively late, (some are still active) and no known gold mineralization is elsewhere associated with them. It is thought unlikely that they are significant as a locus of gold mineralization.

The only gold occurrences in the general area are those within the property or on the patented claims (surrounded by the property) in NE Timmins Township. On the patented claims, gold occurs in quartz-pyrite +/-molybdenite veins in the shaft area. On the property gold occurs in minor quartz veins with pyritic selvages as at the Main Showing and at Trench #8. A short distance to the north of the property, in Lots 2 and 3, Con. II and III of Sheraton Township, drilling by Kamscotia intersected significant amounts of pyrite - pyrrhotite and chalcopyrite mineralization.

Geological Mapping, Soil Geochemistry, Bedrock Sampling

The supervision of the work and mapping was done by the author. Field assistants, J. Nash of Winnipeg and B. Beecham of North Bay, Ontario did the soil sampling and bedrock sampling and helped in prospecting and outcrop stripping. The crew was accommodated at JD Cottages located on Highway 101 at the Frederick House River and commuted each day to the property.

Geology

The general area between the NW Stockwork (See Fig. 3) and the SE corner of Sheraton Township was mapped. However, lines were not systematically traversed. Rather areas of known outcrop identified in previous work and by the line cutting crews were covered. The work is recorded in Fig. 3.

As is typical in the region, outcrop is sparse. Most of the outcrop areas seem to contain large diabase dykes. It appears that the diabases, which are relatively resistant support the higher bedrock areas and facilitate the exposures of volcanics along the flanks of the exposures. These outcrop areas are probably not typical of area as a whole.

Lithology: Most of the area is underlain by fine to medium grained massive to pillowed mafic volcanics. Variolitic types were 'split out'. The variolitic types are commonly magnetic through the general area of the NW Stockwork and Trench # 8. Streaky banded, fine grained mafics are recognized as deformed variolitic flows. There are at least two horizons within the variolitic flows with fine silicified breccias which are thought to be altered hyaloclastites.

In the northeast outcrop area (claim 1175440), massive, to flow structured, mafic volcanics, here and there, contain felsic patches and streaks. It is not know if this is a primary feature or some sort of alteration, possibly albitization. There are no significant sulphides with the

felsic patches. Some massive, felsic volcanics with blue to grey quartz phenocrysts, in the same area, are probably tuffs and other pyroclastics.

Dark grey, vitreous, locally spherulitic, massive to coarse tuff breccias occur in the shaft area and trend into the patented claims in Timmins Township. They are also exposed just west of the patents where a whole rock analyses gives a Si02 content of 61.5 %. Their WNW projection is marked by 'formational' magnetic highs. What causes these highs is not apparent, as exposed felsic were not noted to be magnetic.

A small intrusion of coarse grained, feldspar porphyry in the NW quartz stockwork was noted. The porphyry is fractured, altered and quartz veined as with the volcanics.

In the NW corner of Lot 2, Con. VI, Timmins, a lens shaped stock of coarse varied textured leucodiorite-gabbro intrudes between intermediate-felsic volcanics to the north and pillowed, mafic flows to the south. Small blue quartz phenocrysts are present in places. The diorite resembles the upper varied textured layers of the Proterozoic, Nipissing Diabase (Cobalt Camp), but it is cut by an apparent, late Archean, Matachewan diabase and hence, is probably Archean. The apparent magnetic expression of the diorite extends about 0.5 km west and about 1 km. to the eastsoutheast of the outcrop area.

Numerous coarse, porphyritic diabase (or gabbro) dykes cut most other rock types including the mafic flows, deformed felsic intrusives, undeformed feldspar porphyry dykes and small hornblende lamprophyre dykes These late diabase are themselves cut by small (2 to 50cm) very fine grained, diabase ('basalt') dykelets at the main showing Most exposed diabases is strongly magnetic.

Structural Geology: As noted above general trends of volcanics are 110 to 120°. Dips are near vertical to steeply north. In a few places dips as low as 60° are noted. Isolated pillows in the NW outcrop area appear to face south suggesting the sequence is slightly overturned.

Most of the variolitic mafic volcanics are mostly strongly deformed and are typically streaky banded In contrast, most of the fine grained, pillowed to massive and coarse mafic volcanics are only weakly deformed.

Zones of strong deformation are present in the intermediate to felsic unit mapped in the northeast part of claim 1158840 (Timmins Tp) and through the shaft area. In the shaft area these are marked by sericite-chlorite schists. The leucodiorite intrusive, claim 1158840 appears to intrude a strongly sheared and crumpled zone at the south contact of the intermediate to felsic unit. Here chlorite schists (sheared mafic volcanics possibly with deformed sediments from the mafic unit to the south) are crumpled into north plunging chevron folds.

A broad, magnetic 'low' coincides, more or less, with the 0+00 base line and passes south of Main Showing. Beesley notes a VLF anomaly on the east-southeast extension of this zone. Coincident conductors are noted in the IP survey in the area the base line and 11E to 13E. These features may mark an extensive zone of strong deformation, and possibly including late faults.

Alteration: The gold values seen around the main showing and in the NW outcrop area are closely confined to quartz veins and their immediate selvages and haloes. Except for some pale bleaching alteration at the main showing, there is not much pervasive alteration. A little Fe-carbonate

weathering occurs on the lower level (west side) of the Main Showing. Possible patchy albitization as noted above, is present in the NE area, but there are no associated gold values.

The NW Stockwork is characterized by quartz flooding and some silicification and clay mineral alteration of the wall rock. However, no significant gold has been found in this feature

There is considerable development of white mica (or sericite) and some quartz in the certain layers in the shaft area. Some low gold values are associated with the accompanying sulphides. Gold has been reported at the shaft (patented claims) in quartz-pyrite-molybdenite veins within these quartz-sericite altered rocks.

Prospecting

Prospecting was undertaken with geological mapping. Considerable moss stripping was done and rough chip samples taken of veins and sulphide concentrations. Results of this sampling are shown in Table I and sample points are shown on Fig. 3. Except for one minor gold concentration located on claim 1158840, only disappointingly low gold values were returned from sampling done away from the known showings.

Bedrock Sampling

The main showing area (L21+50E/2+50N) was channel sampled with a diamond bladed cut-off saw, as shown in fig. 4. Channels are about 2.5 cm. wide and 2 cm to 3 cm deep. Sampling included sulphide concentrations and quartz veins and appreciable amounts of wallrock. On the NW showing no water was available for diamond saw cutting and the sampling was done by moil and hammer, supplemented by 6 deeper grab samples. The results of this work are described below.

Soil Geochemistry

A total of 73, B-2 soil samples were collected over the western part of the Kaltwasser claims from Line 7E to 14E. Due to large areas of sand or swamp cover no samples were collected from many of the localities and the coverage is too incomplete to be effective. One isolated anomaly occurs immediately down-ice from the NW Stockwork. A second anomaly occurs on L12E/1+00S.

Showings and Mineral Occurrences

NW Stockwork: At L 9E/2+50N an impressive, 5 to 25 % stockwork of quartz with a little pyrite and specular hematite and a trace of chalcopyrite is exposed near the 'west access' road. The two exposures suggest the stockwork has a strike length of at least 40m and width of at about 20m. Most of the stockwork is in altered mafic volcanics, but at the west side some of the stock work is in a very coarse feldspar porphyry dyke. The structure seems to lie at the south boundary of the variolitic mafic flow units. The two exposures of the stockwork (exposed in work by Kaltwasser and Demarchi) were systematically sampled. Although no gold values are present in this exposure, the stockwork is a 'strong' structure and occurs within a broad IP anomaly. More extensive trenching is warranted.

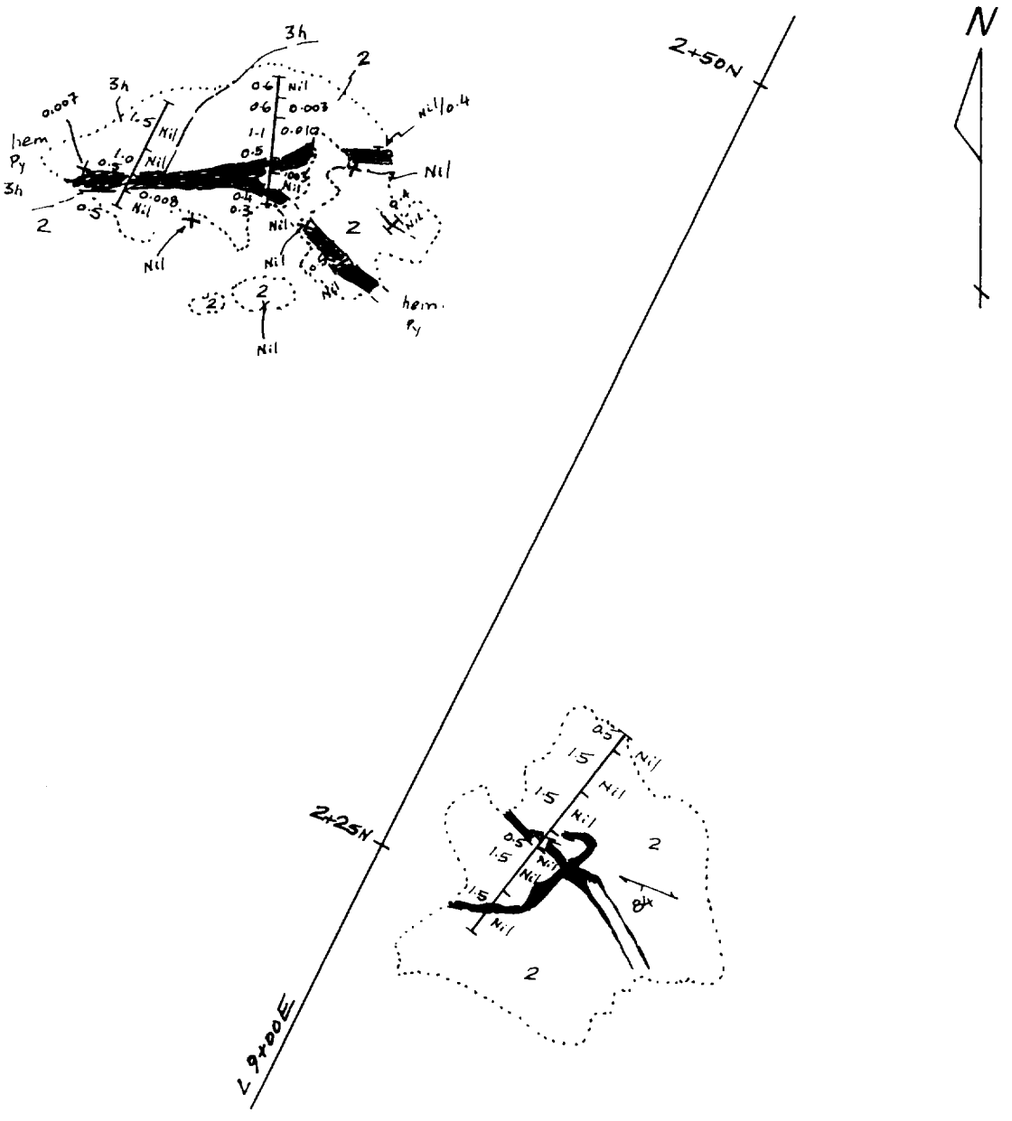
Trench #8 Area: Within the same general area, centred at L10E/3+75N, Kaltwasser found significant gold values apparently related to small quartz-pyrite(+/- chalcopyrite) pods.

Table II

Sheraton-Timmins Claims, Bedrock Sample Record

Sample #	Field #	Co-ord Line	Distance From Line	ppb Au	Description and Remarks
14597	B-2	L9E / 2+35N	5 mE	7	Lean white qtz stockwork in mafic bx
14598	B-3	L9E / 2+42N	12 mW	Nil	qv stockwork in alt mafic volc F.P.
14599	B-5	L10E / 3+85N	6 mE	17	Pods, qtz-Py sh'd con'td mafic volc
14600	B-6	L10E / 3+60N	27 mE	10	10cm-1m qtz vein with Py'c salvage
24901	B-8	L11E / 2+00N	on line	7	0.5-1m qv minor Py salvage in 2e
24906	J.Nash	19+05E / 1+45S		3	Shaft Area
24951	B-11	21+62 / 2+63		7	qv tr Py in F.P. dyke
24952	B-12	22+10E / 2+08N		10	
24953	B-13	22+17E / 2+25N		nil	
24954	B-14	22+15E / 2+16N		3	trench qtz veinlets in felsic dyke
24955	B-15	11+64E / 2+15N		nil	qv in mafic volc
24956	B-16	11+46E / 2+35N		3	qv in mafic volc (2e)
24957	B-17	11+66E / 2+42N		3	10-15 cm qv in mafic volc
					& heavy Py salvage
24958	B-20	10+35E / 3+60N		nil	Collected by W.Nash mafic,
					fine diss'd Py
24959	B-21	19+85E / 1+48S		48	Heavy Py in bed in volc's (Exhalite)
24960	B-22	L20E / 3+00S		24	Heavy Py in bed in volc's (Exhalite)
24961	B-23	19+05E / 1+90S		31	Py pods in chl.sch. Argillite
24962	B-25	19+65E / 1+10S		nil	10-15cm qv + weakly Py'c salvage
					in banded mafic volcanic
24963	B-26	19+93E / 1+45S		69	Alt'd F.P. sill with Py'c qtz veins
					sill in Py'c exhalite
24964	B-32	13+25E / 4+17N		nil	5cm qv. minor Py
24965	B-34	L17E / 7+95N		41	5cm qv. at mafic volc-diab contact
24966	B-41	16+20E / 3+88S		10	2cm qv in felsic volcanic
					with 5-10% Py
24972	B-47	14+92E / 4+63S		24	c.g. hornblende gabbro with Py v'lets
24973	B-48	15+07E / 4+67S		31	10cm wh. qtz No Py
24974	B-49	14+62E / 4+80S		10	white qtz+Py up to 30cm ct
					sheared volc. + leuco gabbro
24975	B-53	16+68E / 5+65S		1056	white qtz + Fe dol veins 5cm to 30cm
					in tight fold in F.P. in shear mafic volc

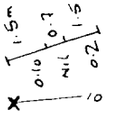
Sample #	Field #	Co-ord Line	Distance From Line	ppb Au	Description and Remarks
24926	same	14+30E / 3+90N		nil	Qtz vein; Hematite in fracture tr Py
24927	same	14+37E / 3+70N		3	Black felsic rock; 5% Py
24928	same	13+56E / 2+80N		nil	Sh'rd pillow basalt; minor qtz
					stockwork in shear plane; <1% Py
					strike at 130'
24929	same	13+56E / 2+80N		nil	2-3% Py, small carb veinlets; black
					felsic rock
24930	same	17+35E / 7+35N		nil	Black "felsic "; 5% Py cubes, diss'n,
					& veinlets along fract.
24931	same	14+25E / 3+75N		nil	Qtz in black felsic; with chl, 1-2% Py
					and some cubes &deciminated
24937	same	38+90E / 8+70S		9	Sh'd pillowed basalt, 1% Py
					with feldspar bands? strike at 100'
24938	same	38+90E / 7+83S		3	Qtz vn; hematite; 3% Py @8cm wide
					in pillowed basalts
24939	same	37+24E / 9+78N		nil	10-20 cm. 10-20% Py, carb'd shear
					in maf. volc.



LEGEND

2	*Mafic Volcanic + fine quartz stockwork*	*Prominent quartz veins*
3 (h)	*Coarse feldspar porphyry*	

SYMBOLS AND ABBREVIATIONS



Moil cut channels
metres, g/t Au
grab sample, g/t Au

Py	*pyrite*
hem	*specular hematite*

NW Stockwork
Kaltwasser-Demarchi Claims
Lot 2, Con. I
Sheraton Township
Scale: 1:200

Mapped by J. Nash

9c

Kaltwasser reported assays of grab samples up to 3500 ppb Au. However, our grab samples here returned no significant gold values. This area is at the north side of the variolitic unit, at its contact with massive, medium to coarse grained volcanics. The veins appear to be associated with a competency contrast between the ductile variolitic flows and more competent medium to coarse grained volcanics. The quartz-sulphide pods are small and have very little continuity and appear to have very limited potential.

Main Showing: Gold values here (1 g/t Au or greater) have been traced, along about a 25 m, nearly north-south strike length and where best developed up to a width of 2 metres. They occur on a west facing north-south stripped outcrop. The values are associated with fairly wide defuse pyrite selvages about small (generally 1 cm. or less), white quartz veins which occupy discontinuous NNW striking fractures. The outcrop contains multiple ages of dykes including conformable deformed fine grained felsic sills, cross-cutting feldspar porphyry, lamprophyre, diabase and fine 'basalt' dykes. However, the gold values are within mafic volcanic rocks. Geology and assays are shown in Fig. 4. The better values are as follows:

29.35 g/t Au / 0.4m on west side of showing;
8.61 g/t Au / 0.4m south edge of rock trench
18.45 g/t Au / 0.5m on north side of rock trench; within zone of 5.25 g/t / 2.1m

Unfortunately there is very little strike continuity to these values and the values do not extend any appreciable distance into the wallrocks. Two lines of IP were surveyed over this showing, but there is only a weak response which does not suggest the present of better hidden mineralization.

Shaft Area: Part of the intermediate volcanic unit exposed in the shaft area and farther to the west in the NE corner of claim 115884, carries appreciable concentrations of pyrite. This is as pyritic quartz veins, pyritic sericite-chlorite schists, scattered streaks and blebs and as heavy (up to 1m massive pyrite) exhalative pyrite. Gold is reported in quartz-pyrite (+/-) molybdenite veins within these sulphide concentrations at the shaft on the patented claims. This unit, according to the magnetics, strikes SE diagonally across the patented claims onto the Haddington holdings to the southeast. To the WNW, the magnetics suggest the unit extends to the western extent of the property. The IP chargability anomalies extend from where coverage begins on L16E/4+00S, northwestward to L11E/2+10S. The IP anomalies coincide with the projection of the felsic to intermediate unit and may indicate extensions of the sulphide zones (and associated gold values) reported at the shaft.

Claim 1158840: One minor gold value, 1056 ppb Au in a grab sample was found with white quartz and quartz-Fe carbonate veins in feldspar porphyry and sheared volcanics along the periphery of the leucodiorite in claim 1158840. Considerable trenching was done in this general area, apparently by Johns-Manville. As noted previously, the shear zone into which the diorite intrudes is likely a much more extensive structure than exposed.

Discussion and Recommendations

Significant concentrations of gold occur at the Main Showing. However, the values appear to be related to 'small structures' and they do not seem to have a geophysical signature that can be used to trace them under the extensive overburden. At Trench #8, gold is restricted to small isolated veins. At neither of these showings is there extensive, alteration, nor does there seem to be much chance of developing substantial tonnages.

The pyritic sericite-chlorite schists exposed in the shaft area, in contrast to the Main Showing and Trench #8, mark a geological environment similar to some large tonnage gold deposits. The IP chargeability anomalies located from 400 to 900m west-northwest of the shaft on the Kaltwasser-Demarchi claims warrant carefully follow-up. As well, the presumed extensions of the zone on the Timmins Group southeast of the patents deserves follow-up. It is recommended that the 2 patented claims be acquired and the IP survey be extended eastward to cover the extensions of the shaft area sulphides, to the extent of the anomaly. Even after such a survey, the property would be an early exploration stage and it is anticipated that a considerable amount of either diamond drilling or overburden drilling would then be necessary to identify gold concentrations within the belt. It would probably be necessary to test the anomaly on about 200m to 400m spacing.

Although only speculative, the inferred deformation zone along the 0+00 base line may be an extensive structure with gold potential. Because of the apparent deep overburden, significant mineralization along the structure could go undetected by the IP survey. If drilling is done to test the IP anomalies, this structure should be tested by at least one hole.

Although this property is only slightly above the 'grass roots' level of 'development', the mineralized intermediate-felsic volcanics throught the shaft area have potential to host a major gold deposit and exploration of this structure should be pursued.

A.W. Beecham
Haileybury, Ontario
21 May 1996

GEOLOGICAL ASSOCIATION OF CANADA
A. W. BEECHAM
23/5/96
FELLOW

References

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---------- (Jun 1994) Summary Report of the Magnetometer Survey, Mapping and Prospecting, Sheraton Tp., parts of Lots 1,2 & 3, Con. 1, Porcupine Ming Division. Assessment report;

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Middleton R.S. (1976) Gravity Surveys and Geological Structures in Timmins and Matheson Area Dist. of Cochrane, Timiskaming and Sudbury;

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O. D. M. Map 31D, Watabeag Area, ODM.

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Appendix I

Whole Rock Analyses

ART BEECHAM
ATTN: ART BEECHAM

TSL/ASSAY. ; Laboratories
1270 FEWSTER DRIVE, UNIT 3 MISSISSAUGA.ONTARIO L4W-1A4
PHONE #: (905)602-8236 FAX #: (905)206-0513

REPORT No. : M56030
Page No. : 1 of 1
File No. : AG26RA
Date : AUG-28-1995

5W-3346-RG1

I.C.A.P. TOTAL OXIDE ANALYSIS

Lithium MetaBorate Fusion

SAMPLE #	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	TiO2 %	MnO %	P2O5 %	Ba ppm	Sr ppm	Zr ppm	Y ppm	Sc ppm	Be ppm	Co ppm	Cr ppm	Cu ppm	Ni ppm	V ppm	Zn ppm	Nb ppm	Rb %	LOI %	TOTAL %
24982	61.50	11.94	8.81	4.44	4.81	2.80	0.26	0.80	0.08	0.16	150	160	230	56	21	< 1	20	885	40	80	155	40	< 30	<0.05	2.82	98.44

TSL/95

SIGNED :

Appendix II

Bedrock Gold Assays

Established 1928

Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

5W-3024-RG1

Company: **HADDINGTON RESOURCES LTD**
Project: Haddington
Attn: A. Beecham/N. MacIsaac

Date: JUL-26-95

We hereby certify the following Geochemical Analysis of 50 Rock samples submitted JUL-20-95 by .

Sample Number	Au PPB	Au Check PPB	Au g/tonne	Au Check g/tonne
14597	7	-	-	-
14598	Nil	-	-	-
14599	17	-	-	-
14600	10	-	-	-
24901	7	-	-	-
24902	86	-	-	-
24903	195	219	-	-
24904	7	-	-	-
24905	Nil	-	-	-
30960	Nil	-	-	-
30961	17	-	-	-
30962	713	1097	1.10	-
30963	75	-	-	-
30964	21	-	-	-
30965	7	-	-	-
30966	147	-	-	-
30967	21	-	-	-
30968	261	-	-	-
30969	3	-	-	-
30970	7	-	-	-
30971	10	-	-	-
30972	10	-	-	-
30973	17	-	-	-
30974	1104	-	1.10	-
30975	991	-	-	-
30976	14	-	-	-
30977	127	-	-	-
30978	7	-	-	-
30979	17	-	-	-
30980	8709	8503	8.71	8.50

Certified by G. Pelletier

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

Established 1928

Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

5W-3024-RG1

Company: **HADDINGTON RESOURCES LTD**
Project: Haddington
Attn: A. Beecham/N. MacIsaac

Date: JUL-26-95

We hereby certify the following Geochemical Analysis of 50 Rock samples submitted JUL-20-95 by .

Sample Number	Au PPB	Au Check PPB	Au g/tonne	Au Check g/tonne
30981	130	-	-	-
30982	1293	-	1.29	-
30983	103	-	-	-
30984	17417	19474	17.42	19.47
30985	1509	-	1.51	-
30986	79	-	-	-
30987	41	-	-	-
30988	1851	-	1.85	-
30989	1234	-	1.23	-
30990	319	-	-	-
30991	41	-	-	-
30992	1337	-	1.34	-
30993	24	-	-	-
30994	10	-	-	-
30995	Nil	-	-	-
30996	1039	-	1.04	-
30997	2537	-	2.54	-
30998	3	-	-	-
30999	29692	29006	29.69	29.01
31000	432	387	-	-

Certified by _____

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

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Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

5W-3060-RG1

Company: **HADDINGTON RESOURCES LTD**

Date: AUG-02-95

Project:

Attn: A. Beecham/W. Nash

We hereby certify the following Geochemical Analysis of 31 Rock samples submitted JUL-24-95 by .

Sample Number	Au PPB	Au Check PPB
24906	3	-
24907	7	10
24908	Nil	-
24909	Nil	-
24910	Nil	-
24911	Nil	-
24912	3	-
24913	10	-
24914	3	-
24915	Nil	3
24916	Nil	-
24917	Nil	-
24918	Nil	-
24919	Nil	-
24920	Nil	-
24921	Nil	-
24922	Nil	-
24923	Nil	-
24924	Nil	-
24925	Nil	-
24926	Nil	-
24927	3	-
24928	Nil	-
24929	Nil	-
24930	Nil	Nil
24931	Nil	-
24932	7	-
24933	Nil	-
24934	Nil	Nil
24935	Nil	-
24936	Nil	-

Certified by G. Gibbs

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244 FAX (705) 642-3300

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Assaying - Consulting - Representation

Geochemical Analysis Certificate

5W-3088-RG1

Company: **HADDINGTON RESOURCES LTD**
Project: HDD
Attn: A. Beecham/W. Nash

Date: AUG-04-95

We hereby certify the following Geochemical Analysis of 13 Rock samples submitted JUL-26-95 by .

Sample Number	Au PPB	Au Check PPB
24951	7	-
24952	10	-
24953	Nil	Nil
24954	3	-
24955	Nil	Nil
24956	3	-
24957	3	-
24958	Nil	-
24959	48	-
24960	24	24
24961	31	-
24962	Nil	-
24963	69	-

Certified by G. Thomas

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

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Geochemical Analysis Certificate

5W-3110-RG1

Company: **HADDINGTON RESOURCES LTD**

Date: AUG-08-95

Project:

Attn: A. Beecham/W. Nash

We hereby certify the following Geochemical Analysis of 15 Rock samples submitted JUL-28-95 by .

Sample Number	Au PPB	Au Check PPB	Au g/tonne	Au Check g/tonne
24937	7	10	-	-
24938	3	-	-	-
24939	Nil	-	-	-
24964	Nil	-	-	-
24965	41	-	-	-
24966	10	-	-	-
24967	20777	-	20.78	-
24968	52458	52320	52.46	52.32
24969	274	291	-	-
24970	199	-	-	-
24971	34	-	-	-
24972	24	-	-	-
24973	31	-	-	-
24974	10	-	-	-
24975	1056	-	1.06	-

Certified by G. Thompson

P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244 FAX (705) 642-3300

Appendix III

Soil Geochemical Analyses

Bondar Clegg
Inchcape Testing Services

Geochemical
Lab
Report

REPORT: 095-40418.0 (COMPLETE)

REFERENCE: -

CLIENT: HADDINGTON RESOURCES
PROJECT: HADDINGTON

SUBMITTED BY: AB
DATE PRINTED: 11-AUG-95

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	AU	GOLD FIRE ASSAY	72	1 PPB	FIRE ASSAY	FIRE ASSAY-DCP

SAMPLE TYPES	NUMBER
SOIL	72

SIZE FRACTIONS	NUMBER
-80	72

SAMPLE PREPARATIONS	NUMBER
DRY, SIEVE -80	72

REPORT COPIES TO: MR. WALTER NASH
A.W. BEECHAM
FAX TO: MR. BEECHAM
FAX TO: MR. NASH

INVOICE TO: MR. WALTER NASH

Bondar-Clegg & Company Ltd.
5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada
Tel: (613) 749-2220, Fax: (613) 749-7170

Bondar Clegg
Inchcape Testing Services

Geochemical Lab Report

REPORT: 095-40418.0 (COMPLETE)

DATE PRINTED: 11-AUG-95
PROJECT: HADDINGTON PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	AU PPB
L7+00E-1+75N		<1
L7+00E-2+00N		<1
L7+00E-2+25N		<1
L7+00E-3+25N		<1
L7+00E-4+00N		<1
L7+00E-4+25N		<1
L7+00E-4+50N		<1
L8+00E-3+50N		<1
L8+00E-3+75N		<1
L8+00E-4+00N		<1
L8+00E-4+25N		<1
L8+00E-4+50N		<1
L9+00E-1+50N		20
L9+00E-1+75N		<1
L9+00E-2+00N		<1
L9+00E-3+00N		8
L9+00E-3+25N		<1
L9+00E-4+25N		<1
L10+00E-1+00N		<1
L10+00E-1+25N		<1
L10+00E-1+50N		<1
L10+00E-1+75N		<1
L10+00E-2+25N		<1
L11+00E-BL0+00		<1
L11+00E-0+25N		<1
L11+00E-0+50N		<1
L11+00E-0+75N		<1
L11+00E-1+25N		<1
L12+00E-2+00S		<1
L12+00E-1+75S		<1
L12+00E-1+50S		<1
L12+00E-1+25S		<1
L12+00E-1+00S		26
L12+00E-0+75S		<1
L12+00E-0+25S		<1
L12+00E-0+00N		<1
L12+00E-0+25N		<1
L12+00E-1+00N		<1
L12+00E-1+75N		<1
L12+00E-2+00N		<1
L12+00E-2+25N		<1
L12+00E-2+75N		<1
L13+00E-1+00S		<1
L13+00E-0+75S		<1
L13+00E-0+50S		<1
L13+00E-0+25S		<1
L13+00E-0+00		1
L13+00E-0+25N		2
L13+00E-0+50N		<1
L13+00E-0+75N		2
L13+00E-1+00N		1
L13+00E-3+25N		<1
L13+00E-3+50N		<1
L13+00E-3+75N		<1
L13+00E-4+00N		<1
L13+00E-4+25N		<1
L13+00E-4+50N		<1
L13+00E-4+75N		1
L14+00E-0+75S		<1
L14+00E-0+50S		<1
L14+00E-0+25S		<1
L14+00E-1+50N		1
L14+00E-1+75N		1
L14+00E-2+00N		<1
L14+00E-2+25N		<1
L14+00E-2+50N		1
L14+00E-2+75N		1
L14+00E-3+00N		<1
L14+00E-3+25N		2
L14+00 -3+75N		4
L14+00E-4+00N		<1
L14+00E-4+25N		<1

Bondar-Clegg & Company Ltd.
5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada
Tel: (613) 749-2220, Fax: (613) 749-7170

REPORT: 095-40418.0 (COMPLETE)

DATE PRINTED: 11-AUG-95
PROJECT: HADDINGTON

STANDARD NAME	ELEMENT UNITS	AU PPB
UMT-1 CANMET STD		44
Number of Analyses		1
Mean Value		44.0
Standard Deviation		-
Accepted Value		-
ANALYTICAL BLANK		<1
Number of Analyses		1
Mean Value		0.5
Standard Deviation		-
Accepted Value		1
MAFIC ROCK STANDARD		28
Number of Analyses		1
Mean Value		28.0
Standard Deviation		-
Accepted Value		-

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REPORT: 095-40418.0 (COMPLETE)

DATE PRINTED: 11-AUG-95
PROJECT: HADDINGTON PAGE 3

SAMPLE NUMBER	ELEMENT UNITS	AU PPB	SAMPLE NUMBER	ELEMENT UNITS	AU PPB
L8+00E-3+75N		<1			
Duplicate		<1			
L12+00E-1+25S		<1			
Duplicate		<1			
L13+00E-4+00N		<1			
Duplicate		<1			

Bondar-Clegg & Company Ltd.
5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada
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Appendix A

Report of Line Cutting and Magnetic Survey

by: R.J. Daigle

Geophysical Agenda

Line Cutting

Haddington Resources Ltd, Toronto, ON, awarded Timmins North Exploration the line cutting contract on the TES (Timmins-Egan-Sheraton) Property in the summer on 1995. Line cutting crews completed a near ninety eight (97.6) kilometer grid by August, 1995. The baseline start point, located at the junction of Timmins-Egan-Sheraton Township lines is where the crews orientated the baseline with an Azimuth of north one twenty degrees true (N120 T). The baseline, confined by claim lines (property boundary) at both limits, measures three and a half kilometers (3.5 km). Cross-lines, turned at ninety degrees to the baseline also end at claim lines at both east and north borders. Five cross-lines at the south-east limit stop at the property border, the remainder of the cross-lines stop at a tie line 1500 S. Two other tie lines, 1000 S and 1000 N run parallel to the baseline from the west boundary to the east boundary. The cross-lines, separated by a 100 meter interval tally 84590 meters, the tie lines tally 9525 meters. The picketed stations at 25 meter intervals govern the entire grid.

Total Field Magnetic Survey Procedure

The magnetic survey, awarded to M.C. Exploration Services Inc., S. Porcupine, Ontario, commenced in July, 1995 and ended by August, 1995. Geophysical crews, Denis Crowley, Don Caron and Denis Young of Timmins used the TerraPlus GSM-19 magnetometers, Overhauser Sensor to read the Total Magnetic Field with a 0.2 nanoTesla accuracy and 0.01 nanoTesla resolution. The base station location, 1375 E/ 1490 S, near the junction of tie line 1500 S and the access road monitored the diurnal drift at 30 second intervals and smoothed the data with a 57900 nanoTesla Reference Field. Crews read 7855 stations, sampling the entire grid lines at a 12.5 meter interval (half-stations) with the data ranging from 48636 nT to 69836 nT. The average total field for the property measures 58634 nanoTesla.

The survey results, downloaded to PC daily, plotted on Plan 2 (pocket) were processed using Geosoft. Figure 2-1 and 2-2 (following pages) condense the results (1:20,000) to support evaluation.

Equipment Specification and Survey Procedures along with author certification can be found in the reports addendum.

Total Field Magnetic Survey Results

The average magnetic intensity of 58634 nanoTesla is conformable to an underlay of intrusive rocks. The above background magnetic susceptibilities encompassed by dotted lines on Figure 2-1 infers iron rich basalts are also present on the property. A swarm on near NS trending diabase dikes (matachewan swarm) intrude the theorized geology. Displacement of the dikes in several localities in conjunction with shadow plotting helped delineate trends of several faults plotted on Figure 2-1. Several broad mag lows (below 58500 nT) coarsely paralleling the baseline in Sheraton Township insinuates that a probable large fault trends north of east. East of the Sharaton-Egan township line the trend of the theorized fault becomes obscured (perhaps due to overburden cover).

Total Field Magnetic Survey Conclusion

The survey lines, with an Azimuth of N30 T weakens the delineation of the diabase dikes. Therefore the axis of the dikes plotted are proximate between the lengthy trend between the lines. The grid also bisects several faults at a poor angle, thus restricting delineation when shadow plotting. The main geology cuts the grid at a good angle, but interpretation becomes unfavourable with a varying cover of overburden in several localities. The blanket of muskeg, esker, etc.., weakens interpretation if one looks for folds in the geology that may perhaps control the inclusion of auriferous zones. However, an obvious fold seen at line 900 E/ 250 N is where stockwork has been mapped. It appears that the auriferous zones mapped in 1995 by A Beecham occur north of the trend of broad magnetic lows.

DATE; Jan 23, 96

R. J. Daigle

GEM Systems Advanced Magnetometers GSM-19

GEM Systems Inc
52 West Beaver Creek Road, Unit 14
Richmond Hill, Ontario
Canada, L4B-1L9

V. 4.0

Phone; (905) 764- 8008
Fax ; (905) 764- 9329

1.0 Instrument Description

·The sensor is a dual coil type designed to reduce noise and improve gradient tolerance. The coils are electrostatically shielded and contain a proton rich liquid in a pyrex bottle, which also acts as an RF resonator.

·The sensor cable is coaxial, typically RG-58/U, up to 100m long.

·The staff is made of strong aluminum tubing sections. This construction allows for a selection of sensor elevations above the ground during surveys. For best precision the full staff length should be used. Recommended sensor separation in gradiometer mode is one staff section, although two or three section separations are sometimes used for maximum sensitivity.

·The console contains all the electronic circuitry. It has a sixteen key keyboard, a 4x20 character alphanumeric display, and sensor and power input/output connectors. The keyboard also serves as an ON-OFF switch.

·The power input/output connector also serves as a RS232 input/output and optionally as analog output and contact closure triggering input.

·The keyboard front panel, and connectors are sealed (can operate under rainy conditions)

·The charger has two levels of charging, full and trickle, switching automatically from one to another. Input is normally 110V 50/60Hz. Optionally, 12V DC can be provided.

·The all-metal housing of the console guarantees excellent EM protection.

2.0 Instrument Specifications

Resolution	0.01 nT, magnetic field and gradient
Accuracy	0.20 nT over operating range
Range	20,000 to 120,000 nT automatic tuning, requiring initial setup
Gradient Tolerance	over 10,000 nT/m
Operating Interval	3 seconds minimum, faster optional. Reading initiated from keyboard, external trigger, or carriage return via RS-232
Input/Output	6 pin weatherproof connectors
Power Requirements	12V, 200mA peak, 30mA standby, 300mA peak with Gradiometer
Power Source	Internal 12V, 1.9Ah sealed lead-acid battery standard, external source optional.
Battery Charger	Input; 110/ 220VAC, 50/60Hz and/or 12VDC Output; 12V dual level charging
Operating Ranges	Temperatures; -40°C to +60°C Battery Voltages; 10.0 V min to 15.0V max Humidity; up to 90% relative, non condensing
Storage Temperature	-50°C to +65°C
Dimensions	Console; 223 X 69 X 240 cm Sensor Staff; 4 x 450mm sections Sensor; 170 x 71 mm diameter Weight; Console 2.1Kg Staff 0.9Kg Sensors; 1.1Kg

Magnetic Survey

Theory;

The magnetic method is based on measuring alteration in the shape and magnitude of the earth's naturally occurring magnetic field caused by changes in the magnetization of the rocks in the earth. These changes in magnetization are due mainly to the presence of the magnetic minerals, of which the most common is magnetite, and to a lesser extent ilmenite, pyrrhotite, and some less common minerals. Magnetic anomalies in the earth's filed are caused by changes in two types of magnetization; (1) Induced, caused by the magnetic field being altered and enhanced by increases in the magnetic susceptibility of the rocks, which is a function of the concentration of the magnetic minerals. (2) Remanent magnetism is independent of the earth's magnetic field, and is the permanent magnetization of the magnetic particles (magnetite, etc..) in the rocks. This is created when these particles orient themselves parallel to the ambient field when cooling. This magnetization may not be in the same direction as the present earth's field, due to changes in the orientation of the rock or the field. The ***unit*** *of measurement (variations in intensity) is commonly known as the Gamma which is equivalent to the nanotesla (nT).*

Method;

The magnetometer, ***GSM-19*** *with an Overhauser sensor measures the* ***Total Magnetic Field*** *(TFM) perpendicular to the earth's field (horizontal position in the polar region). The unit has no moving parts, produces an absolute and relatively high resolution measurement of the field and displays the measurement on a digital lighted display and is recorded (to memory). Initially, the tuning of the instrument should agree with the nominal value of the magnetic field for each particular area. The Overhauser procession magnetometer collected the data with a* ***0.2 nanoTesla accuracy.*** *The operator read each and every line at a* ***12.5 m interval*** *with the sensor attached to the top of three (56cm) aluminum tubing sections. The readings were corrected for changes in the earth's magnetic field (diurnal drift) with a similar GSM-19 magnetometer, >>base station<< which automatically read and stored the readings at every 30 seconds. The data from both units was then downloaded to PC and base corrected values were computed.*

6.0 CERTIFICATION

I **Richard Daigle** residing at 1115 Maclean Dr, U15 in the city of Timmins, ON, Certify;

1. I have received an Electronic Technologist Certificate in 1979 from Radio College of Canada, Toronto, ON.

2. I have been computer literate and utilized geophysical equipment for fifteen years.

3. Experienced Max-Min (HLEM) interpretations along with field operations under the supervision of John Betz, 1979- 81.

4. Geophysicist Assistant for Kidd Creek Mines under the supervision of Mr. Doug Londry, 1981- 85.

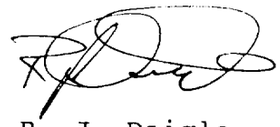
5. Fulfilled geophysical contracts in NE Ontario, 1985-87.

6. Fulfilled geophysical contracts (IP, HLEM, MAG, SP) along with property assessments in Eastern Canada, 1987- 92.

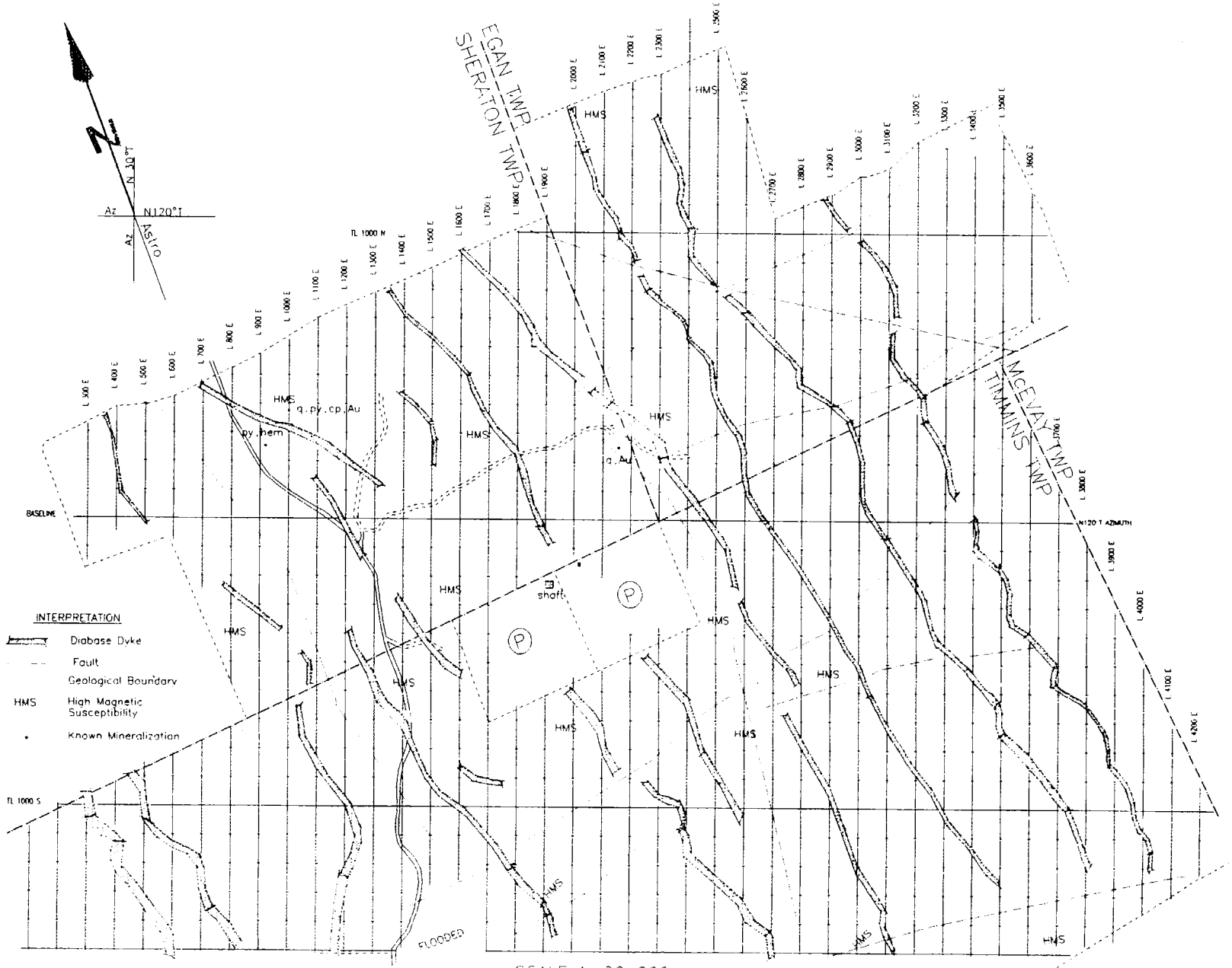
7. I have been employed by M.C. Exploration Services Inc as Geophysical Evaluator for the past four years.

8. I have no direct interest in the property reported upon.

DATE: Feb 20, 1996
Timmins, ON



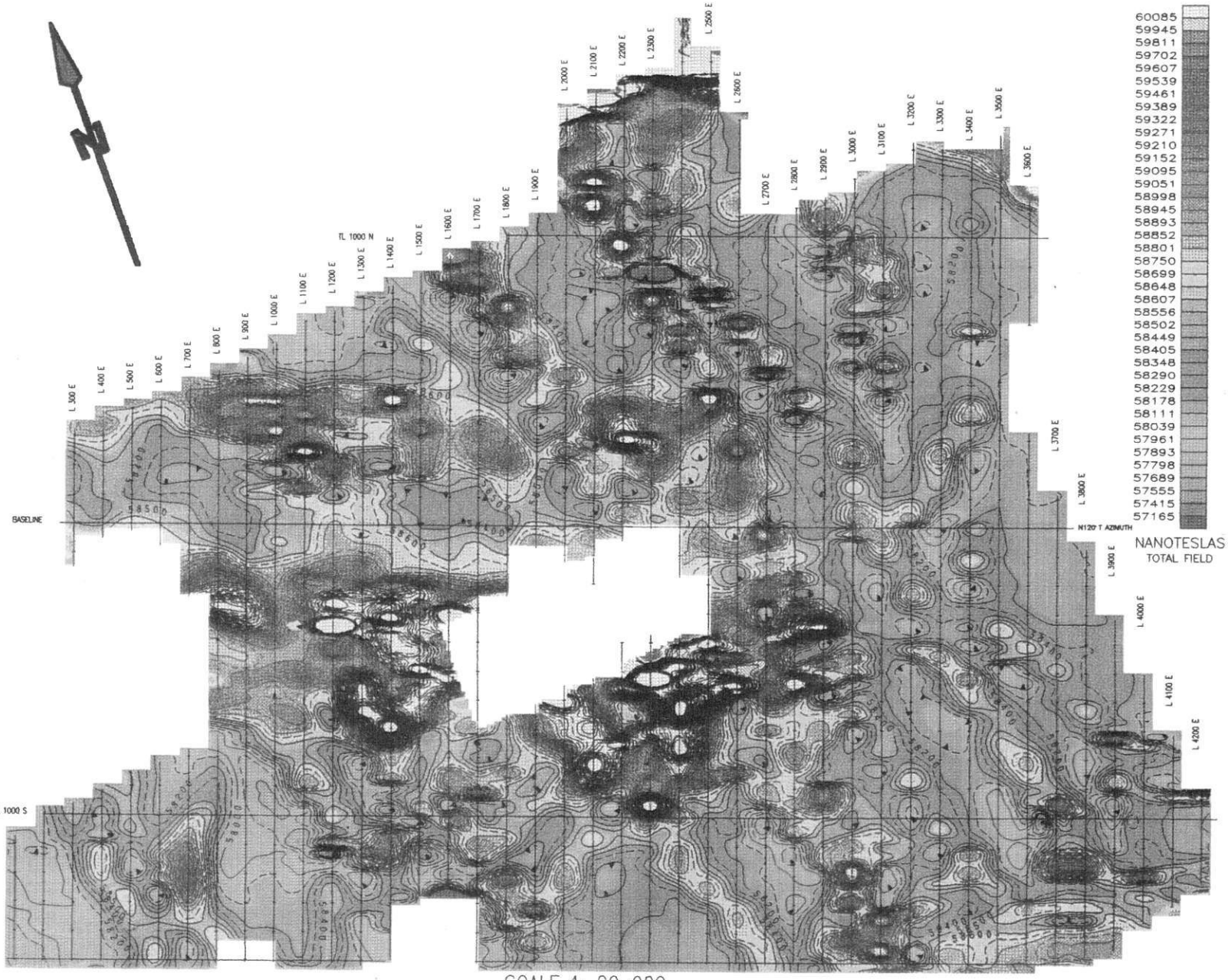
R. J. Daigle



SCALE 1: 20,000

FIGURE 2-1

TFM INTERPRETATION



SCALE 1: 20,000

FIGURE 2-2

TFM COLOUR CONTOURS

Appendix B

Logistical and Interpretation Report on an Induced Polarization Survey on the Sheraton Township Property, Porcupine Mining Division, Ontario for Silverstone Resources Ltd.

by: R.J. Meikle

LOGISTICAL AND INTERPRETATION REPORT

ON A

INDUCED POLARIZATION SURVEY

ON THE

SHERATON TOWNSHIP PROPERTY

PORCUPINE MINING DIVISION, ONTARIO

FOR

SILVERSTONE MINERALS LTD.

Submitted by: R.J. Meikle
Rayan Exploration Ltd.
Dec.12, 1995

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APPENDICES

LIST OF MAPS

INTRODUCTION

This report deals with the logistics of and interpretation of an Induced Polarization Survey carried out on the Sheraton Township Property. The I.P. Survey was carried out by Rayan Exploration Ltd., Timmins, Ont., on a contract basis for Silverstone Resources Ltd. This report is intended to be included in a more comprehensive report on the property written by Mr. Art Beecham, which covers property status, previous work, geology, location, etc.

The I.P. Survey was carried out to test a number of areas of interest for significant amounts of sulphide mineralization.

PERSONNEL

The following personnel were directly involved in conducting the I.P. Survey on both properties:

W. Pearson	Operator	Timmins, Ontario
A. Durham	Helper	Timmins, Ontario
D. MacArthur	Helper	Timmins, Ontario
B. Norman	Helper	Timmins, Ontario
K. Giroux	Helper	Timmins, Ontario

INDUCED POLARIZATION SURVEY

The Induced polarization survey was carried out during the month of Aug./1995. Approximately 9km of grid lines were surveyed, which includes portions of lines 800E through 1600E as well as L2100E and L2200E. The following is a brief description of the theory and method used to conduct the survey.

The IP method involves applying voltage across two electrodes in a pulsed manner i.e. 2 seconds on, 2 seconds off. A second "dipole" or electrode pair, measures the residual potential or voltage between them after the voltage is shut off or during the 2 second off cycle. The potential is recorded at different times after the shut off. If, for example, there is sulphide mineralization within the measuring dipoles, they will be polarized or charges set up on the sulphide particles. This polarization gives the zone a capacitor effect, thereby blocking the current delay giving a higher chargeability reading.

A typical signature for many gold showings would be a chargeability high, resistivity high and magnetic low. This would be characteristic of a mineralized, highly altered carbonated and/or silicified zone. However, this is by no means the only geological setting for gold, therefore every profile should be looked at individually and correlated with all other geophysical-geological data.

Electrode Array

The electrode array used for the survey was the Pole-Dipole Array. In this array, one current electrode (C1) and two receiver or potential electrodes (P1,P2), are moved down a line in unison. A second current electrode (C2), is placed normal to the expected strike direction an infinite distance away, at least one km. The two current electrodes are hooked up to a motor-generator and a current applied across them, usually less than 3 amperes. The applied voltage is pulsed in a 2 second on, 2 second off pattern controlled by the transmitter.

Thus we have a single pole current electrode following a pair or dipole of potential electrodes moving down the line. The advantage of this "Pole-Dipole" array over the "Dipole-Dipole" array is a deeper current pattern between the infinite and moving current electrode, resulting in better penetration of conductive overburden. Also, this array is considerably faster in areas of high electrode contact impedance due to frozen and or rocky ground conditions because only one current electrode placement is needed for each reading. A disadvantage of the "Pole-Dipole" array is a slightly more ambiguous interpretation due to the assymetry of the array.

The distance between the potential electrodes is fixed, usually 25 or 50 meters and this is called the "a" spacing. When the potential dipole is positioned with one "a" spacing between the C1 and the nearest P1, it is called a "N=1" reading with a theoretical plot point at the intersection of a 45 degree line drawn down in a section format from the C1 and nearest P1. When this N=1 reading is finished, the C1 remains stationary and the P1P2 dipole moves ahead one "a" spacing and a N=2 reading is obtained. Using the above plot convention it can be seen that the plot point is now further from the C1 and deeper. This is repeated for as many "N" readings as desired.

IP Survey Parameters

The IP survey was carried out using the following parameters:

Method: Time Domain
Electrode Array: Pole-Dipole
"a" spacing: 25 meters
Number of Dipoles Read: 1-6 inclusive
Pulse Duration: 2 seconds on, 2 seconds off
Delay Time: 310 milliseconds
Integration Time: 140 milliseconds
Receiver: Scintrex IPR-12
Transmitter: Scintrex TSQ-3 3KVA.
Data Presentation: Individual Psuedosections.
Scale: 1:2500

SURVEY RESULTS

The I.P. Survey outlined four anomalous zones, two of which have been traced over several lines. This data will be correlated with a magnetic survey previously conducted by a separate contractor. The following is a description of these anomalies:

There are two main areas of interest. The first is a chargeable zone that extends from L900E to L1400E at approximately 200N to 300N. Individual psuedosections should be looked at in further detail for a more accurate location. This feature is shown to be fairly chargeable and tends to occur for the most part along the contact between a moderately resistive unit to the south and a resistive unit to the north. This change in resistance may be the result of a change in rock types, with the anomaly response indicating sulphide mineralization occurring on or near the contact. This feature is marked by a magnetic high which again is most likely outlining a change in geology.

The second area of interest extends from L1000E/200S to L1600E/300-500S. This feature remains open to the east. Again, for a more accurate location individual psuedosections should be refereed too. This zones chargeable response starts out weak on L1000E and becomes stronger to the east, with the strongest response occurring on L1400E. Although the resistive signature over this zone is not as well defined, the stronger chargeable responses to the east tend to occur within a more resistive environment. This may be an indication of sulphide mineralization occurring within a more silicious or altered geological environment. The magnetic signature for this feature is similar to that of the zone previously discussed. This suggests that these two zones may be situated within a similar geological environment.

L1500E was extended to test a separate area of interest to the south. A moderately chargeable zone was outlined from L650S to L830S. This is situated over a resistive unit with a conductive feature situated along the zone's extreme south flank. It is difficult to determine weather this conductive zone is associated with the chargeable response, or if it is marking a structure which terminates this zone to the south. This zone is also associated with a magnetic high, but differs from the two main zones as it is situated along the contact between background magnetics and magnetic highs to the north.

This same type of magnetic signature marks the last zone outlined, suggesting a similar geological setting. It is situated on L2200E from 200N to 275N, and remains open to the east. This chargeable response is shown to be shallow and resistive.

RECOMMENDATIONS AND CONCLUSIONS

Of the four zones discussed, the first two would seem to be of most interest, primarily because they received more complete coverage by the current I.P. Survey.

Based on the geophysical responses obtained, the first two main zones discussed appear to be situated within similar geological environments. The IP tends to be responding to a resistive unit or contact between resistive units. The anomalies occurring within these resistive units may be marking areas of increased silicification or alteration, which is a favourable gold environment.

The same can be said about the resistive units associated with some of the other zones. Although the remaining two zones also appear to be related to magnetic high units, they seem to be responding more to the contact between the background resistivity and the resistivity high. These highs may be responding to changes in geology such as ultramafic units or iron formation.

The first step in resolving these anomalies would be to compile the I.P. data with any other geological or geophysical data available on the property. After this if any of the zones are still in question, a geological mapping and sampling program should be carried out over all of the zones where outcropping is present. This might help determine the source of the magnetic features outlined, as they seem to be related in one way or another to the IP anomalies discussed. This might also help establish weather sulphide content can be related to gold values.

If the results warrant it, some of the zones outlined could be tested with diamond drilling.

If it is found that the gold values in this area are in any way related to the sulphide content, then none of the zones outlined in this report should be dismissed without further investigation. In addition, if this survey proves successful, consideration should be given to testing the remainder of the property with I.P. using these same parameters. This should be focussed primarily on any other magnetic features similar to the ones discussed in this report.

CERTIFICATION

I, Raymond Joseph Meikle of Timmins, Ontario hereby certify that:

1. I hold a three year Technologist Diploma from the Haileybury School of Mines, Haileybury, Ontario, obtained in May 1975.

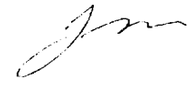
2. I have been practising my profession since 1973 in Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, NWT, Manitoba, Germany and Chile.

3. I have been employed directly with Teck Corporation, Metallgessellschaft Canada Ltd. Sabina Industries, .S. Middleton Exploration Services Ltd., self employed 1979-1985 (Rayan Exploration Ltd.) and currently with Rayan Exploration Ltd.

4. I have based conclusions and recommendations contained in this report on knowledge of the area, my previous experience and on the results of the field work conducted on the property during 1995.

5. I hold no interest, directly or indirectly in this property, nor do I expect to receive any interest or considerations from the property other than fees for services rendered.

R.J. Meikle
December 12, 1995



APPENDIX 'I'

SCINTREX

IPR-12 Time Domain Induced Polarization/Resistivity Receiver

Brief Description

The IPR-12 Time Domain IP/Resistivity Receiver is principally used in exploration for precious and base metal mineral deposits. In addition, it is used in geoelectrical surveying for groundwater or geothermal resources, often to great depths. For these latter targets, the induced polarization measurements may be as useful as the high accuracy resistivity results since it often happens that geological materials have IP contrasts when resistivity differences are absent.

Due to its integrated, lightweight, microprocessor based design and its large, 16 line display screen, the IPR-12 is a remarkably powerful, yet easy to use instrument. A wide variety of alphanumeric and graphical information can be viewed by the operator during and after the taking of readings. Signals from up to eight potential dipoles can be measured simultaneously and recorded in solid-state memory along with automatically calculated parameters. Later, data can be output to a printer or a PC (direct or via modem) for processing into profiles and maps.

The IPR-12 is compatible with Scintrex IPC and TSQ Transmitters, or others which output square waves with equal on and off periods and polarity changes each half cycle. The IPR-12 measures the primary voltage (Vp), self potential (SP) and time domain induced polarization (Mi) characteristics of the received waveform. Resistivity, statistical and Cole-Cole parameters are calculated and recorded in memory with the measured data and time.

Scintrex has been active in induced polarization research, development, manufacturing, consulting and surveying for over thirty years. We offer a full range of instrumentation, accessories and training.

The IPR-12 Receiver measures spectral IP signals from eight dipoles simultaneously then records measured and calculated parameters in memory.

Benefits

Speed Up Surveys

The IPR-12 saves you time and money in carrying out field surveys. Its capacity to measure up to eight dipoles simultaneously is far more efficient than older receivers measuring a single dipole. This advantage is particularly valuable in drillhole logging where electrode movement time is minimal.

The built-in, solid-state memory records all information associated with a reading, dispensing with the need for any hand written notes. PC compatibility means rapid electronic transfer of data from the receiver to a computer for rapid data processing.

Taking a reading is simple and fast. Only a few keystrokes are virtually needed since the IPR-12 features automatic circuit resistance checks, SP buckout and gain setting.

High Quality Data

One of the most important features of the IPR-12 in permitting high quality data to be acquired, is the large display screen which allows the operator easy real time access to graphic and alphanumeric displays of instrument status and measured data. The IPR-12 ensures that the operator obtains accurate data from field work.

The number and relative widths of the IP decay curve windows have been carefully chosen to yield the transient information required for proper interpretation of spectral IP data. Timings are selectable to permit a very wide range of responses to be measured.

Specifications

Inputs
1 to 8 dipoles are measured simultaneously.

Input Impedance
16 Megohms

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

Input Voltage (Vp) Range
50 µvolt to 14 volt

Chargeability (M) Range
0 to 300millivolt

Tau Range
1 millisecond to 1000 seconds

Reading Resolution of Vp, SP and M
Vp, 10 microvolt; SP, 1 millivolt; M, 0.01 millivolt/volt

solute Accuracy of Vp, SP and M
Better than 1%

Common Mode Rejection
At input more than 100db

Vp Integration Time
10% to 80% of the current on time.

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

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

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

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

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

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

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

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

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

Display Heater
Available for below -15°C operation.

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

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

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

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

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

Use of Non-Rechargeable Batteries
Can be powered by D size Alkaline batteries, but rechargeable batteries are recommended for longer life and lower cost over time.

Operating Temperature Range
-30°C to +50°C

Storage Temperature Range
-30°C to +50°C

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

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

Transmitters available

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

SCINTREX

In Canada

222 Snidercroft Rd.
Concord, Ontario
Canada, L4K 1B5

Tel.: (905) 669-2280
Fax: (905) 669-6403
Telex: (905) 06-964570

In the U.S.A.

85 River Rock Drive
Unit # 202
Buffalo, N.Y.
U.S.A. 14207

Tel.: (716) 298-1219
Fax: (716) 298-1317

IPR-12/94

APPENDIX 'D'

SCINTREX TSQ-3 3000 W

Time and Frequency Domain IP and Resistivity Transmitter

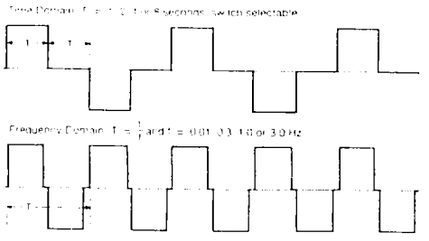
Function

The TSQ-3 is a multi-frequency, square wave transmitter suitable for induced polarization and resistivity measurements in either the time or frequency domain. The unit is powered by a separate motor-generator.

The favourable power/weight ratio and compact design of this system make it portable and highly versatile for use with a wide variety of electrode arrays. The medium range power rating is sufficient for use under most geophysical conditions.

The TSQ-3 has been designed primarily for use with the Scintrex Time Domain and Frequency Domain Receivers, for combined induced polarization and resistivity measurements, although it is compatible with most standard time domain and frequency domain receivers. It is also compatible with the Scintrex Commutated DC Resistivity Receivers for resistivity surveying. The TSQ-3 may also be used as a very low frequency electromagnetic transmitter.

Basically the transmitter functions as follows. The motor turns the generator (alternator) which produces 800 Hz, three phase, 230 V AC. This energy is transformed upwards according to a front panel voltage setting by a large transformer housed in the TSQ-3. The resulting AC is then rectified in a rectifier bridge. Commutator switches then control the DC voltage output according to the waveform and frequency selected. Excellent output current stability is ensured by a unique, highly efficient technique based on control of the phase angle of the three phase input power.



Waveforms output by the TSQ-3

Features

Current outputs up to 10 amperes, voltage outputs up to 1500 volts, maximum power 3000 VA.

Solid state design for both power switching and electronic timing control circuits.

Circuit boards are removable for easy servicing.

Switch selectable wave forms: square wave continuous for frequency domain and square wave interrupted with automatic polarity change for time domain.

Switch selectable frequencies and pulse times.

Overload, underload and thermal protection for maximum safety.

Digital readout of output current.

Programmer is crystal controlled for very high stability.

Low loss, solid state output current regulation over broad range of load and input voltage variations.

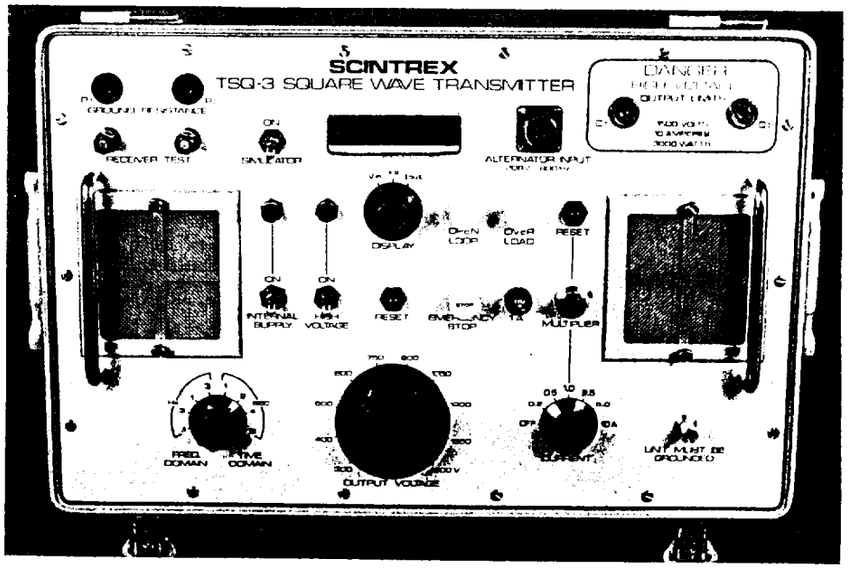
Rectifier circuit is protected against transients.

Excellent power/weight ratio and efficiency.

Designed for field portability; motor-generator is installed on a convenient frame and is easily man-portable. The transmitter is housed in an aluminum case.

The motor-generator consists of a reliable Briggs and Stratton four stroke engine coupled to a brushless permanent magnet alternator.

New motor-generator design eliminates need for time domain dummy load.



Technical Description of TSQ-3/3000W Time and Frequency Domain IP and Resistivity Transmitter

TSQ-3 transmitter with portable motor generator unit

Transmitter Console	
Output Power	3000 VA maximum
Output Voltages	300, 400, 500, 600, 750, 900, 1050, 1200, 1350 and 1500 volts, switch selectable
Output Current	10 amperes maximum
Output Current Stability	Automatically controlled to within ± 0.1% for up to 20% external load variation or up to ± 10% input voltage variation
Digital Display	Light emitting diodes permit display up to 1999 with variable decimal point; switch selectable to read input voltage, output current, external circuit resistance. Dual current range, switch selectable
Absolute Accuracy	± 3% of full range
Current Reading Resolution	10 mA on coarse range (0-10A) 1 mA on fine range (0-2A)
Frequency Domain Waveform	Square wave, continuous with approximately 6% off time at polarity change
Frequency Domain Frequencies	Standard: 0.1, 0.3, 1.0 and 3.0 Hz, switch selectable Optional: any number of frequencies in range 0 to 5 Hz.
Time Domain Cycle Timing	t:t:t:t;on:off:on:off:automatic
Time Domain Polarity Change	each 2t; automatic
Time Domain Pulse Durations	Standard: t = 1, 2, 4 or 8 seconds Optional: any other timings
Time and Frequency Stability	Crystal controlled to better than .01%
Efficiency	.78
Operating Temperature Range	-30°C to +50°C
Overload Protection	Automatic shut-off at 3300 VA
Underload Protection	Automatic shut-off at current below 75mA
Thermal Protection	Automatic shut-off at internal temperature of +85°C
Dimensions	350 mm x 530 mm x 320 mm
Weight	25.0 kg.
Power Source	
Type	Motor flexibly coupled to alternator and installed on a frame with carrying handles.
Motor	Briggs and Stratton, four stroke, 8 H.P.
Alternator	Permanent magnet type, 800 Hz, three phase 230 V AC
Output Power	3500 VA maximum
Dimensions	520 mm x 715 mm x 560 mm
Weight	72.5 kg
Total System	
Shipping Weight	150 kg includes transmitter console, motor generator, connecting cables and re-usable wooden crates

SCINTREX

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

Telephone: (416) 669-2280
Cable: Geoscint Toronto
Telex: 06-964570

Geophysical and Geochemical Instrumentation and Services

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim Timmins

Transaction Number: W960.00458

Mining Act Larder Lake W.9680.00462

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.16774

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations Recorder.
- A separate copy of this form must be co
- Technical reports and maps must accom
- A sketch, showing the claims the work is

42A07NE0020 2.16774 EGAN

g

900

Recorded Holder(s) RICHARD KALTWASSER (1) JACQUES ROBERT (2)	Client No. 150541 188148
Address (1) 448 - 8TH AVE BOX 34 MATHESON ONT. P0K 1N0 (2) 218 OGDEN AVE. TIMMINS ONT. P4N 1M9	Telephone No. (1) 705-273-2733 (2) 705-267-5225
Mining Division PORCUPINE & LARDER LK.	Township/Area TIMMINS/SHERATON/EGAN
	M or G Plan No. G-3971/M-314/M346
Dates Work Performed From: May 1/95	To: May 1/96

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	LINECUTTING, MAGNETIC, I.P. Geological and Geochemical Surveys
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

RECEIVED
SEP 17 1996
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs $ 82,017. ALL

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
TIMMINS NORTH EXPLOR. SERVICE LTD.	BOX 446 TIMMINS ONT. P4N 7E3
E.J. DAIGLE/NC EXPLOR. SERVICE	BOX 362 PORCUPINE ONT. P0N 1C0
KHYAN EXPLORATION LTD.	637 ALGONQUIN BLVD. SUITE 25, TIMMINS ONT. P4N 7E3
A.W. BEECHAM	540 BURKE AVE BOX 667 HAILEBURY ONT P0J 1K0

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

	Date	Recorded Holder or Agent (Signature)
I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	July/12/96	Melvine Isaac (Agent)

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying: NEIL MAC ISAAC BOX 662 SCHUMACHER ONT P0N 1G0

Telepone No.	Date	Certified By (Signature)
(705) 264-3531	July 12/96	Melvine Isaac

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
		Larry White	(C) JUL 22 1996 3:25
	Deemed Approval Date Oct 10/96	Date Approved	
	Date Notice for Amendments Sent		

0241 (03/91)

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Timmins W 9680.00458 * (Transaction No.)

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, 6th Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

Larder Lake → W 9680·00462 *

2.16774

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s)	RICHARD KALTWASSER ① JACQUES ROBERT ②	Client No.	150541 / 188148
Address	① 448 - 8th AVE BOX 34 MATHESON ONT. P0K 1N0 ② 218 OGDEN AVE. TIMMINS ONT. P4N 1M9	Telephone No.	① 705-273-273[illegible] ② 705-267-5225
Mining Division	PORCUPINE & LARDER LK.	Township/Area	TIMMINS/SHERATON/EGAN
M or G Plan No.	G-3971/M-314/M-346		
Dates Work Performed	From: MAY/95	To:	MAY/96

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	LINECUTTING, Magnetic, I.P., Geological and Geochemical Surveys
Physical Work, Including Drilling	
Rehabilitation	
Other Authorized Work	
Assays	
Assignment from Reserve	

RECEIVED
SEP 17 1996
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs $ 82,617.

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
TIMMINS NORTH EXPLOR. SERVICES LTD.	BOX 446 TIMMINS ONT. P4N 7E3
B.J. DAIGLE/MC EXPLOR. SERVICES	BOX 362 PORCUPINE ONT. P0N 1C0
RAYAN EXPLORATION LTD.	637 ALGONQUIN BLVD. SUITE 25, TIMMINS ONT. P4N
A.W. BEECHAM	540 ROURKE AVE. BOX 867 HAILEYBURY ONT. P0J 1K0

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date	Recorded Holder or Agent (Signature)
	JULY 12/96	[signature] (Agent)

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

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LARDER LAKE
MINING DIVISION
SEP 19 1996

Name and Address of Person Certifying
NEIL MAC ISAAC BOX 802 SCHUMACHER ONT P0N 1G0

Telephone No.	Date	Certified By (Signature)
(705) 264-3531	JULY 12/96	[signature]

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
	Deemed Approval Date: Oct 10/96	Date Approved	RECEIVED JUL 12 1996 9:25 PORCUPINE MINING DIVISION
	Date Notice for Amendments Sent		

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	P 1156 114	1	3784.	1200.	2584.	
	P 1156 115	1	3114.	1200.	1914.	
	P 1158 834	1	4922.	1200.	3305.	417.
	P 1158 840	1	3929.	1200.	2729	
	P 1158 841	1	4219.	1200.	3019.	
	P 1158 842	1	2718.	1200.	1518.	
	P 1175 435	1	4647.	1200.	3447.	
	P 1175 436	1	4557.	1200.	3357.	
	P 1175 437	1	1636.	1200.	436.	
	P 1175 438	1	3572.	1200	2372.	
	P 1175 439	1	4702	1200.	3502.	
	P 1175 440	1	3115.	1200.	1915.	
	P 1158 983	16	11,718.	14200.		
	P 1158 984	15	9,485.	18,000.		
	L 1204 220	8	9119	9600.		
	P 1204 296	12	3390.	14,400.		
	P 1204 297	1	618.	1200.		
	L 1204 298	4	2712.	4800.		
	18		82,017	81600.	30,098.	417.
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

0241 (03/91)

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MINING LANDS BRANCH

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of **beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.**

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Signature

Date

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des mines

Ontario

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Transaction No./N° de transaction
W960.00458

Mining Act/Loi sur les mines 2.16774

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain	1648.	1,648.
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type Linecutting	29,361.	
	Mag. Survey	10,486.	
	T.P. Survey	13,812.	53,659.
~~**Supplies Used Fournitures utilisées**~~	Type Geol. Mapping		
	Bedrock Samp.		
	Soil Geochem	20,000	
	ASSAYS/Report writing		20,000
Equipment Rental Location de matériel	~~Type~~		
	Total Direct Costs Total des coûts directs		75,307.

2. Indirect Costs/Coûts indirects

** **Note:** When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type Rental of		
	4X4 Suburban	320.	
			320.
Food and Lodging Nourriture et hébergement	CAMP Rental Food/Supplies	3510.	3510.
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		6710.
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		6710.
	Total Value of Assessment Credit (Total of Direct and Allowable indirect costs) / **Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles**		82017

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SEP 17 1996
MINING LANDS BRANCH

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.

2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.

2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
× 0.50 =	

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JUL 12 1996

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Agent I am authorized
(Recorded Holder, Agent, Position in Company)

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature	Date
[signature]	July 12/96

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

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

Telephone: (705) 670-5853
Fax: (705) 670-5863

October 1, 1996

Roy Spooner
Mining Recorder
4 Government Road East
Kirkland Lake, ON
P2N 1A2

Dear Sir or Madam:

Submission Number: 2.16774

Subject: Transaction Number(s): W9680.00462

After reviewing the Work Report(s) we have prepared this letter and the attached summary, which lists the results of our review. Requirements of the Assessment Work Regulation may not have been fully met. Please examine the summary to determine the next course of action concerning the identified Work Report(s).

NOTE: The 90 day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, is no longer in effect for this submission.

PLEASE NOTE ANY REQUESTED REVISIONS MUST BE SUBMITTED IN DUPLICATE.

If the anniversary dates for the mining claims affected by this correspondence have not passed, a number of options are available. Please contact the Mining Recorder to discuss these options.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705)670-5858.

Yours sincerely,

ORIGINAL SIGNED BY
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

Correspondence ID: 10252
Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.16774

Date Correspondence Sent: October 01, 1996 **Assessor:** Lucille Jerome

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9680.00462	1204220		Approval	October 01, 1996

Section:

Correspondence to:

Mining Recorder
Kirkland Lake, ON

Resident Geologist
Kirkland Lake, ON

Assessment Files Library
Sudbury, ON

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

Neil MacIsaac
SCHUMACHER, ONTARIO

RICHARD F. KALTWASSER
MATHESON, Ontario

JACQUES ROBERT
TIMMINS, Ontario

Correspondence ID: 10252

EGAN TOWNSHIP

LARDER LAKE MINING DIVISION
DISTRICT OF COCHRANE

M.346

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

SCALE 40 CHAINS TO ONE INCH

CURRIE TWP.

VI

V

IV

III

II

I

McCANN TWP.

SHERATON TWP.

M.N.R.

MRO

LUP

River

Waldybeeg

2.16774
GEOL
MAG
IP
ASSAYS

1217561 | 1217562 | 1217563 | 2111 | 2110 | 1214071 | 1217564 | 1217524 | 1217525 | 1204220 | 1204298 | 1219400 | 1218945 | 1217523 | 1217522

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

12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

McEVAY TWP.

LEGEND.

LEASES
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
CANCELLED
IMPROVED ROADS
TRAILS
L MRO
S.R.O
C.

PATENTED LANDS (P)
CROWN LAND SALES (S)
LICENSE OF OCCUPATION LO
LOCATED LANDS Loc

400' Surface rights reservation around all lakes and rivers.

NOTICE OF FORESTRY ACTIVITY
THIS TOWNSHIP / AREA FALLS WITHIN THE ONTARIO PAPER FOREST MANAGEMENT AGREEMENT
AND MAY BE SUBJECT TO FORESTRY OPERATIONS.
THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT: 896 RIVERSIDE DR.
TIMMINS, ONT.
P4N 3W2
705-267-7951

M. 346

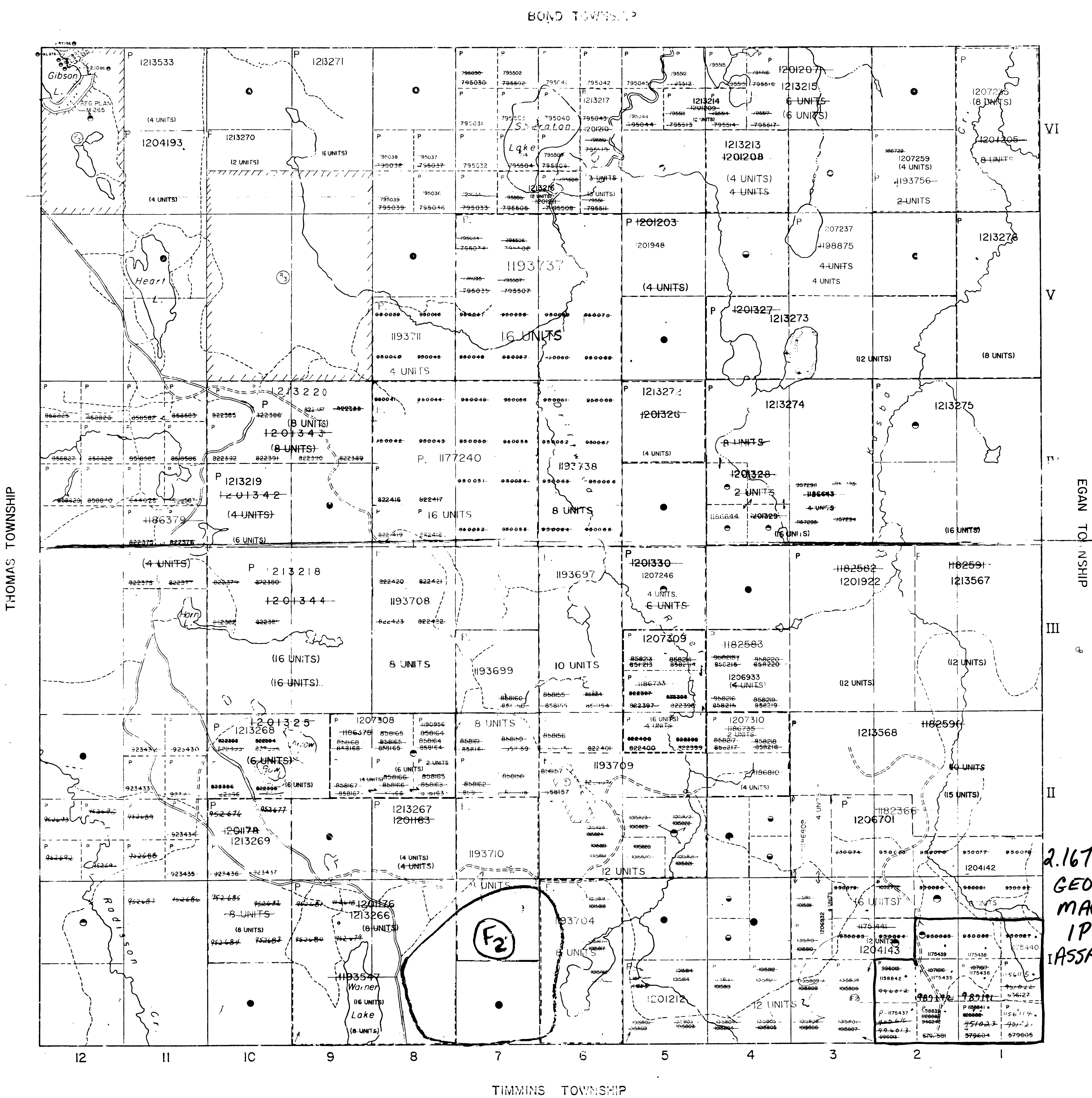
EGAN Tp.

M. 346

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No	Date	Disposition	File
(R1)	W68/77	4/8/77	S.R.O.	177198
(R2)	NWR 16/82	19/11/82	SR & MR	
(R3)	NWR 41/83	22/06/83	SR & MR	



2.16774 GEOL MAG IP ASSAYS

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

LEGEND

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

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT

PATENT, SURFACE & MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LEASE, SURFACE & MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LICENCE OF OCCUPATION
ORDER-IN COUNCIL
RESERVATION
CANCELLED
SAND & GRAVEL

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, [illegible] CHAP. [illegible] SEC. 63, SUBSEC. 1

SCALE 1: [illegible]

NOTES

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

THIS TWP. IS SUBJECT TO [illegible] 1996. FURTHER INFORMATION AVAILABLE [illegible]

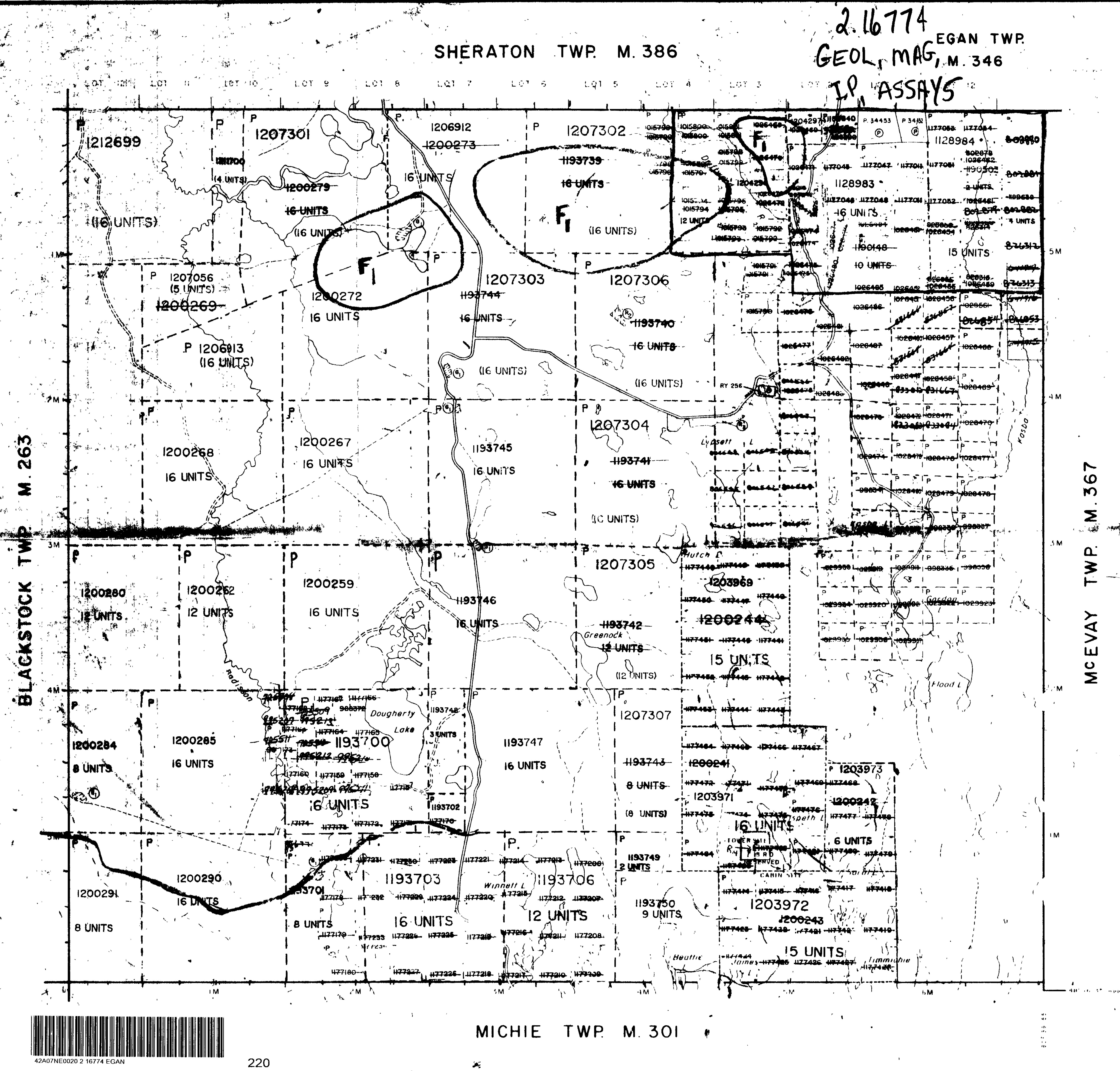
TOWNSHIP
SHERATON
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION 2.16774
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources
Ministry of Northern Development and Mines
Ontario

CA BY AL oct 28 86
B.B

Number
G-3971

210



NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O. 1970.

	Order No.	File	Date	Disposition
(R1)	W.67/77	192164	28/6/77	S.R.O.
(R2)	W.86/77	188543	27/10/77	S.R.O.
(R3)	W.19/78	188543	10/10/78	S.R.O.
(R4)	W 34/85	188543	10/10/85	S.R.+M.R.

SAND and GRAVEL

(Q) Quarry Permit

(F1) THIS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1995/96. FURTHER INFORMATION IS AVAILABLE ON FILE.

LEGEND

PATENTED LAND	(P) or ●
PATENTED FOR SURFACE RIGHTS ONLY	
LEASE	
LICENSE OF OCCUPATION	L.O.
CROWN LAND SALES	C.S.
LOCATED LAND	Loc.
CANCELLED	C.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
HIGHWAY & ROUTE NO.	(17)
ROADS	
TRAILS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	

*used only with summer resort locations or when space is limited

TOWNSHIP OF

TIMMINS

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE 1 INCH = 40 CHAINS (1/2 MILE)

DATE MARCH 71 | PLAN NO. M.314

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

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

2.16774

M.314

TIMMINS TWP.

M.314

SHERATON TP.

EGAN TP.

McEWAN TP.

TIMMINS TP.

FLOODED

TL 1000 N

TL 1000 S

BASELINE

N120°T AZIMUTH

L 300 E
L 400 E
L 500 E
L 600 E
L 700 E
L 800 E
L 900 E
L 1000 E
L 1100 E
L 1200 E
L 1300 E
L 1400 E
L 1500 E
L 1600 E
L 1700 E
L 1800 E
L 1900 E
L 2000 E
L 2100 E
L 2200 E
L 2300 E
L 2500 E
L 2600 E
L 2700 E
L 2800 E
L 2900 E
L 3000 E
L 3100 E
L 3200 E
L 3300 E
L 3400 E
L 3500 E
L 3600 E
L 3700 E
L 3800 E
L 3900 E
L 4000 E
L 4100 E
L 4200 E

LEGEND

Total Field Magnetic Plan

58000 nanoTesla Base Removed

CONTOURS

Pen 1; 100 nT Interval, ~~57000-60000nT~~

Pen 2; 200 nT Interval, 50000-69000nT

Pen 3; 500 nT Interval, 50000-65000nT

Base Station; 1375E\ 1475S

57900nT Reference Field

7855 Stations Read @ 12.5m; 97.6Km

48636 to 69836nT Range, 68634nT mean

INSTRUMENTS

TERRAPLUS GSM - 19, portable unit

TERRAPLUS GSM - 19, base station

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SEP 11 1995
MINING LANDS SECTION

PLAN 2

Haddington Resources Ltd

Magnetic Survey
TES Grid

Timmins/ Sheraton/ Egan Twp's, NTS: 42-A / SE
Porcupine Mining Division

Timmins North Expl. / DATA; MCX/ Drafted; Geosoft Aug 95

Scale 1:5000
100 0 100 200 300
(meters)

42A07NE0080 2 16774 EGAN

230

N

P120443
(P1175441)
FORFEITED

P-1175439

"Trench #8"

NW. Stockwork

P-1175438

P-1175440

P-1158842

P-1175435

P-1175436

P-1156115

L-1204220

Creek

Main Showing

P-1175437

P-1158839

P-1158841

P-1156114

Shaft Area

CON. 1

LOT 2

LOT 1

Sheraton Tp

Timmins Township

Timmins Tp.

Sheraton Tp.
Egan Tp.

P-1158840

P-34453
(P)

P-34452
(P)

P-1128984

GEOLOGICAL LEGEND

11 Lamprophyre
10 Late diabase dykes; p10 porphyritic; [10] interpreted from magnetics
9 Granitoids; (a) granite, (b) syenite, (d)ganodiorite , (e) trondjemite

8 ***Altered and Metamorphosed Rocks***
(l) Chlorite schist

5 ***Mafic and Ultramafic Intrusives***
(a) Peridotite (b) Serpentinite
(c) Gabbro
(f) Fine, grained, mafic
(l) leuco diorite, gabbro

4 ***Sediments***
(a) Argillite
(b) Greywacke
(c) Chert
(d) i/b, fine felsic tuff, & chert
(e) Sulphide-rich exhalites
(f) Magnetite iron formation
(g) Conglomerate
(h) Argillite, chert, siltst. graphite
(i) Feldspathic quartzites
(s) Siltstone +/- argillite

3 ***Intermediate to Felsic Volcanics and Subvolcanic Intrusives***
(a) Rhyolite flows
(k) Fine grained felsic intrusives
(c) Quartz (+/- feldspar)phyric tuffs
(l) Fine, bedded tuff, ash
(e) Quartz (+/- feldspar)phyric flows
(m) Spherulitic, felsic flows
(g) Dacitic, f.sp. phyric tuff, tuff Bx
(p) Felsic, hornblende porphyritic dyke
(h) Dacite porphyry intrusives (F.P. porphyry intrusives)
(j) Dacitic volcanics

2 ***Mafic Volcanics***
(a) Massive
(b) Breccia, flow bx
(c) Coarse grained
(d) Pillowed flows
(e) Variolitic flows
(f) Feldspar phyric (andesite)
(g) Mafic volcanic bx, argillite matrix
(s) Streaky banded (sheared 2e)
(i) 'Diabasic' flows
(t) Mafic tuff

1 ***Komatiitic Volcanics***
(a) Spinifex textured flow
(b) Polysuture jointed flow
(d) Komatiitic flow breccia
(k) Komatiitic basalt

SYMBOLS AND ABBREVIATIONS

sss	sericite alteration	alt	altered
###	silicification	Au	gold concentration
:::	sulphide concentrations	f.sp.	feldspathized
***	variolites	fg	fine grained
3pp	bedrock geochem. analyses in ppb Au	cg	coarse grained
		hc	hyaloclastite (ic)
	geological contact	mg	medium grained
	shear zone, fault	pc	pyroclastic
	schistosity, foliation	pl	pillowed, pillows
	bedding	tb	thinnly bedded
	breccia	qv	quartz vein
	pillows with top direction	chl	chlorite
	pillow over-turned	Cp	chalcopyrite
	outcrop, area of outcrop	gf	graphite , graphitic
	vein stockwork	Gn	galena
	pit	hem	hematite
	shaft	Mo	molybdenite
	trench in rock	mt	magnetite
	trench in overburden	Po	pyrrhotite
	diamond drill hole	Py	pyrite
	swamp	ser	sericite
	open, grassy swamp	VG	visible gold
	embankment		
	claim post, approx. loc'n		
	claim post tied to grid		
	survey iron bar		
	all weather road		
	track		

A.W. Beecham
May, 1996

2.16774

Haddington Resources Ltd.
Sheraton-Timmins-Egan Township Claims
Timmins Area, Dist. of Cochrane and Timiskaming, NE Ontario

GEOLOGICAL MAPPING

Scale: 1:2500

Geology by: A.W. Beecham
July, 1995
Drawn: May, 1996

NTS
42-A-7

Fig. 3.

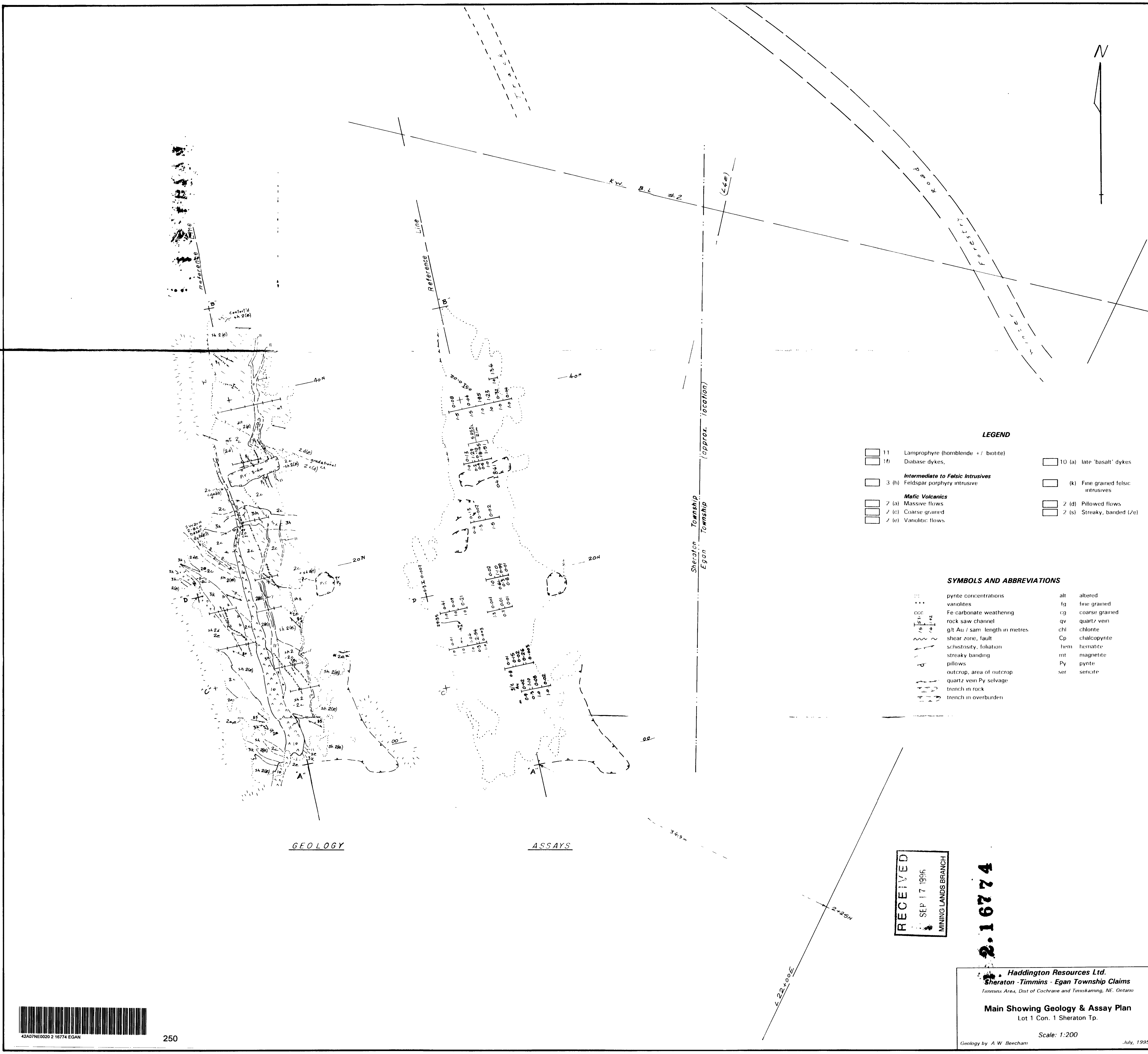

N
Track
K.W. B.L #2
(L4E)
Forestry Road
Reference Line
Reference Line
"B"
contort'd sh 2(e)
sh 2(e)
40N
mt
alt 2(e)
mt 2c
(2d)
2d(e)
gradational ct
2c -sh 2(e)
2c(d)
P.T. 3-4m
2c (gabb)
3h
Swarm 2-8cm basalt dykelets
qv 20 cm
2c
3k
2de
2e -2c
sh 2(e)
2(e)
"D"
20N
2c +sh 2(e)
PIT
qv Py
sh 2
sh 2d 2e
10
3K
sh 2 -2c
"C"
2ae
85
80
00
"A"
GEOLOGY
ASSAYS
Sheraton Township
Egan Township
(approx. location)
34.9m
2+25N
L 22+00E
LEGEND
11 Lamprophyre (hornblende +/ biotite)
10 Diabase dykes,
10 (a) late 'basalt' dykes
Intermediate to Felsic Intrusives
3 (h) Feldspar porphyry intrusive
(k) Fine grained felsic intrusives
Mafic Volcanics
2 (a) Massive flows
2 (c) Coarse grained
2 (e) Variolitic flows
2 (d) Pillowed flows
2 (s) Streaky, banded (2e)
SYMBOLS AND ABBREVIATIONS
pyrite concentrations
variolites
Fe-carbonate weathering
rock saw channel
g/t Au / sam. length in metres
shear zone, fault
schistosity, foliation
streaky banding
pillows
outcrop, area of outcrop
quartz vein Py selvage
trench in rock
trench in overburden
alt altered
fg fine grained
cg coarse grained
qv quartz vein
chl chlorite
Cp chalcopyrite
hem hematite
mt magnetite
Py pyrite
ser sericite
RECEIVED
SEP 17 1996
MINING LANDS BRANCH
2.16774
Haddington Resources Ltd.
Sheraton - Timmins - Egan Township Claims
Timmins Area, Dist of Cochrane and Timiskaming, NE. Ontario
Main Showing Geology & Assay Plan
Lot 1 Con. 1 Sheraton Tp.
Scale: 1:200
Geology by A W Beecham
July, 1995
42A07NE0020 2 16774 EGAN
250

Fig. 4

Notes

Analyses by: Bondar-Clegg, Inchcape Testing Services
Val d'Or, QC

Size fraction: -80 mesh
Analytical technique: Combined D.C.P. & Fire Assay;
Detection Limit: 1 ppb Au
Sample Collection: July 1995 by J. Nash & B.C. Beecham;

N/S = no B-2 horizon present and no sample taken;

260

Haddington Resources Ltd.
Sheraton-Timmins-Egan Township Claims
Timmins Area, Dist. of Cochrane and Timiskaming, NE Ontario

GEOCHEMISTRY

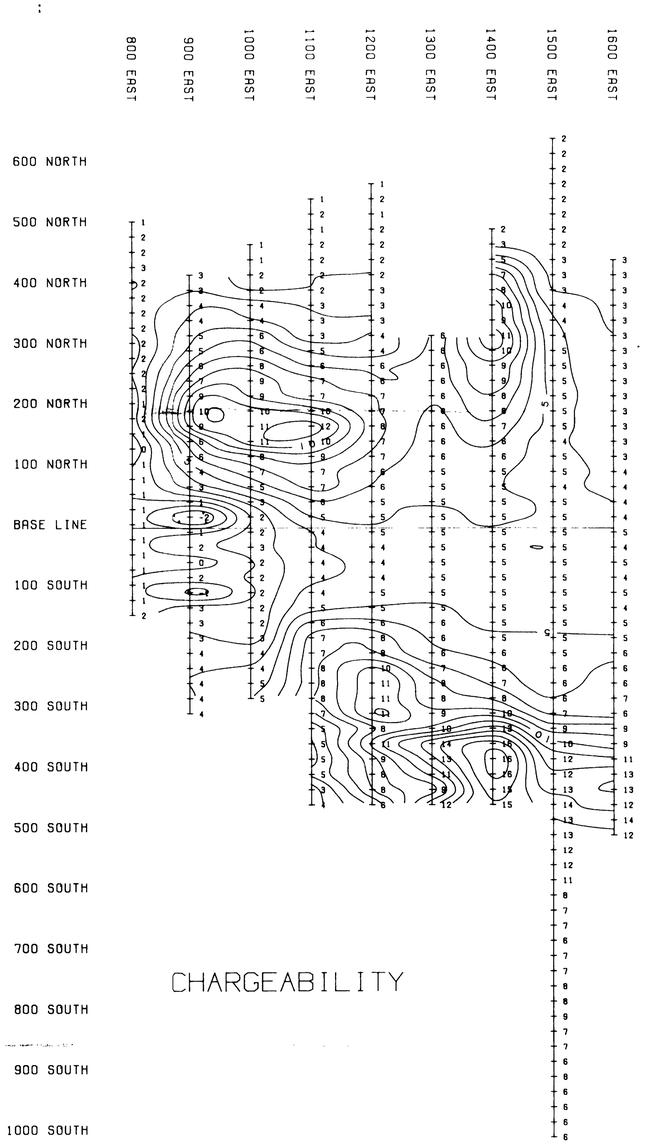
ppb Au in B-2 Horizon Soils

Scale: 1:2500

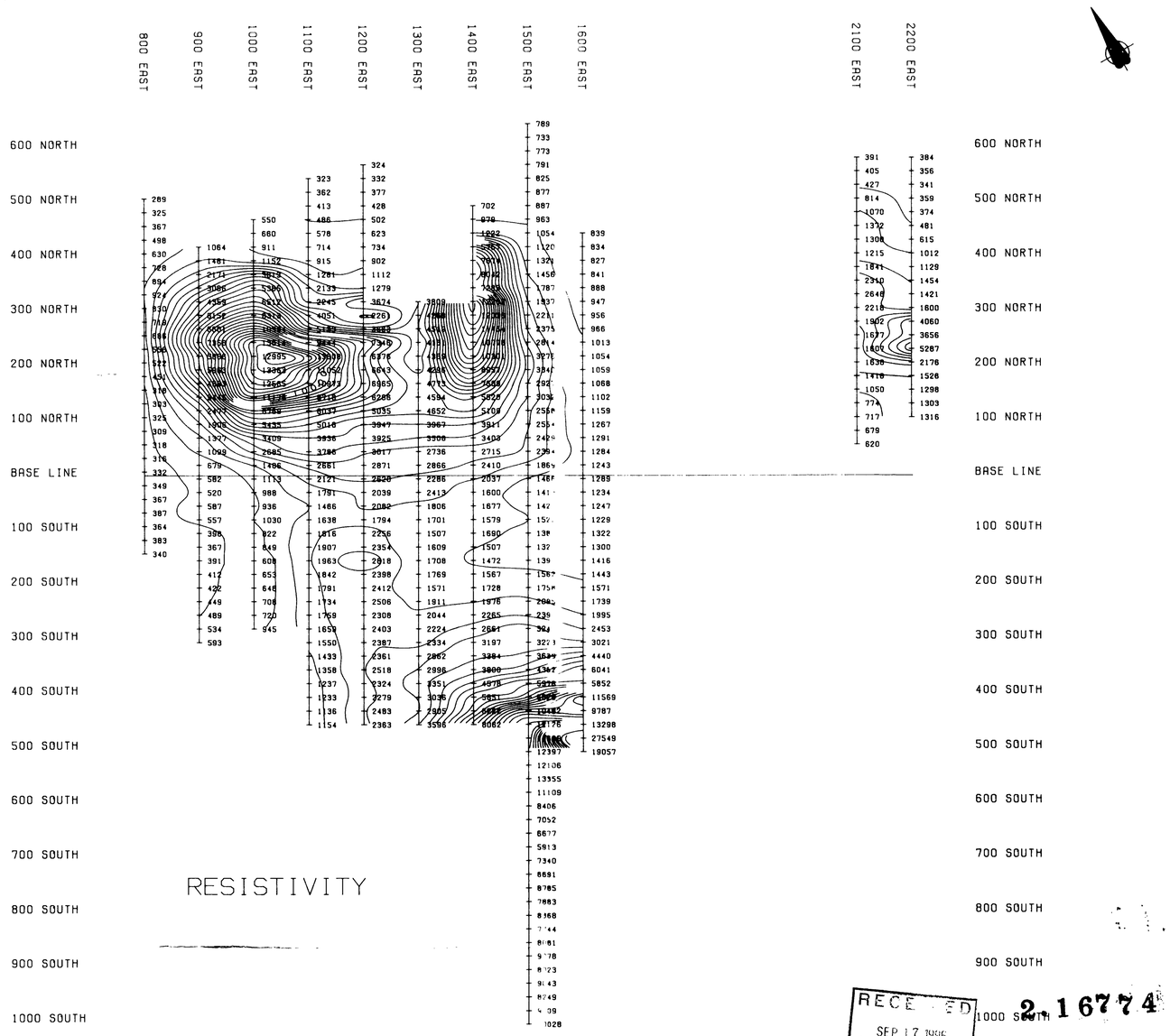
Drawn by: A.W. Beecham
Date: May, 1996

NTS
42-A-7

FIG. 6.



CHARGEABILITY



RESISTIVITY

200 100 0 50 100 200

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KW
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9
CONTOURED RESISTIVITY: 500 UNITS
CONTOURED CHARGEABILITY : 1mT

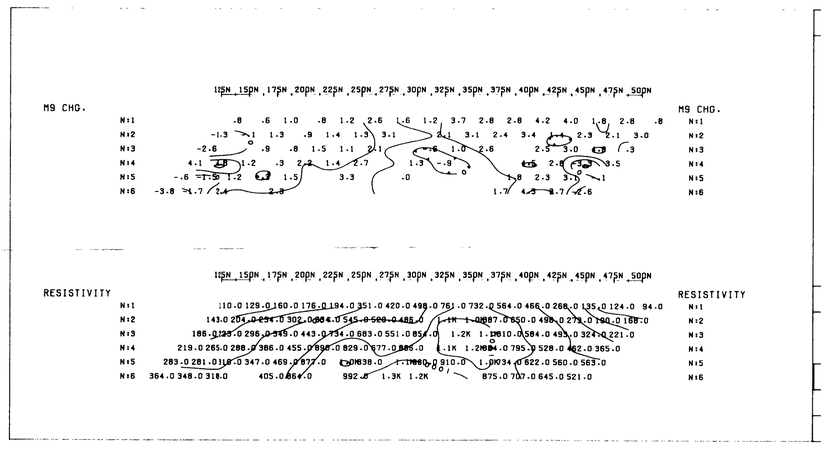
Client: HADDINGTON RESOURCES LTD.

Property: SHERATON TWP. PROPERTY

Title: IP SURVEY - FRASER FILTERED
CHARGEABILITY & RESISTIVITY
CONTOURED PLAN MAPS

Processed: RJM	Checked: RJM
Date: DEC. 1995	Township: SHERATON
Province: ONT.	N.T.S.:
Scale: 1:5,000	Drawing: RES - CHG

RAYAN
EXPLORATION LTD.
CONTRACT/CONSULTING GEOPHYSICS
TIMMINS, ONTARIO
(705)-268-4866



LINE : 800 E

INDUCED POLARIZATION SURVEY

DIPOLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.

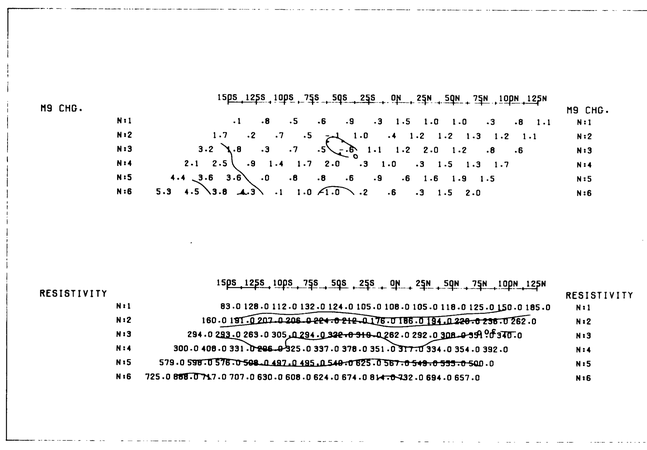
SHERATON TWP. PROPERTY

SHERATON TOWNSHIP

DATE : JULY 1995 | REF : R277

SCALE = 1: 2500

RAYAN EXPLORATION LTD.



LINE : 800 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.

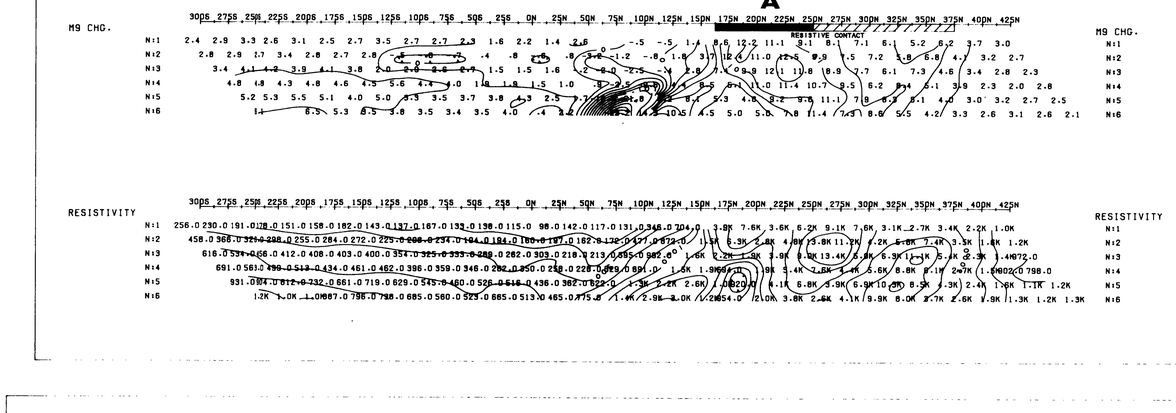
SHERATON TWP. PROPERTY

SHERATON TOWNSHIP

DATE : JULY 1995 | REF : R277

SCALE = 1: 2500

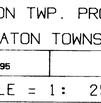
RAYAN EXPLORATION LTD.



LINE : 900 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY



N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.

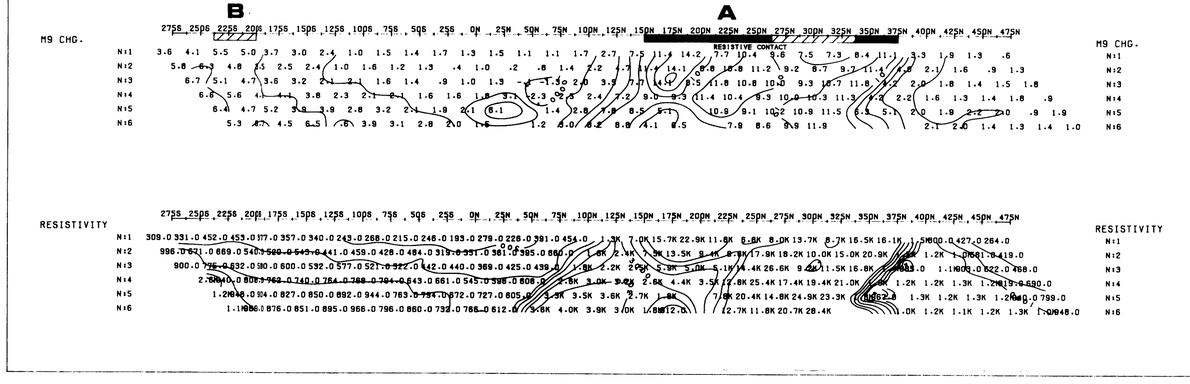
SHERATON TWP. PROPERTY

SHERATON TOWNSHIP

DATE : JULY 1995 | REF : R277

SCALE = 1: 2500

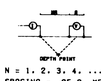
RAYAN EXPLORATION LTD.



LINE : 1000 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY



N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

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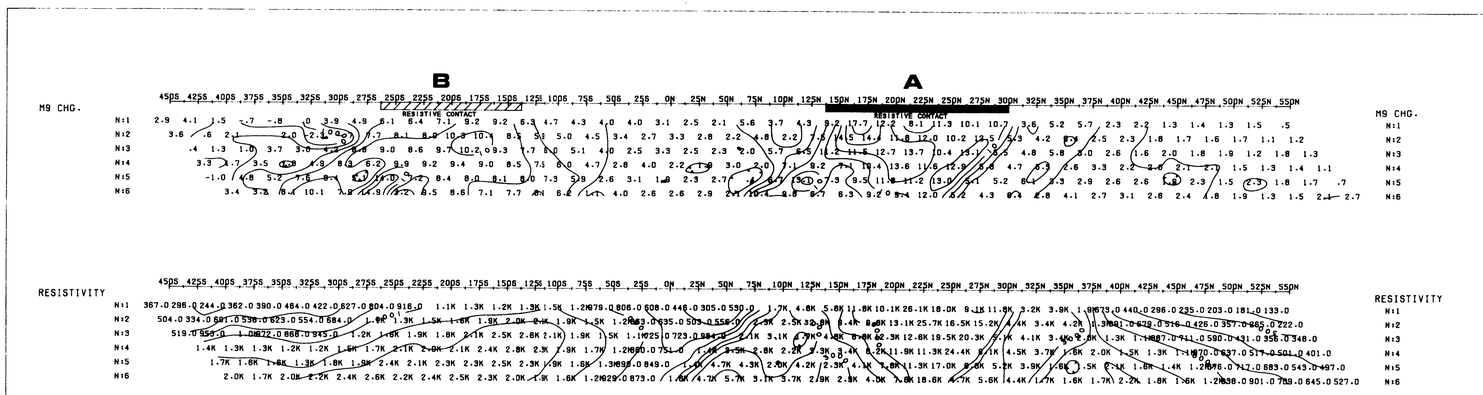
SHERATON TWP. PROPERTY

SHERATON TOWNSHIP

DATE : JULY 1995 | REF : R277

SCALE = 1: 2500

RAYAN EXPLORATION LTD.



LINE : 1100 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.

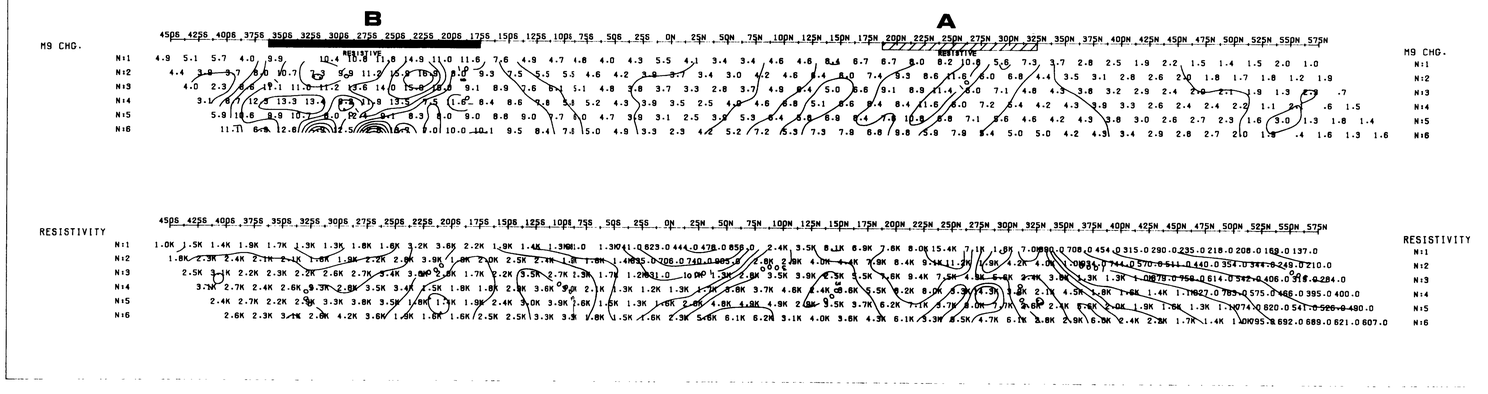
SHERATON TWP. PROPERTY

SHERATON TOWNSHIP

DATE : AUG/95 | REF : R277

SCALE = 1: 2500

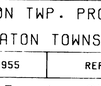
RAYAN EXPLORATION LTD.



LINE : 1200 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY



N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

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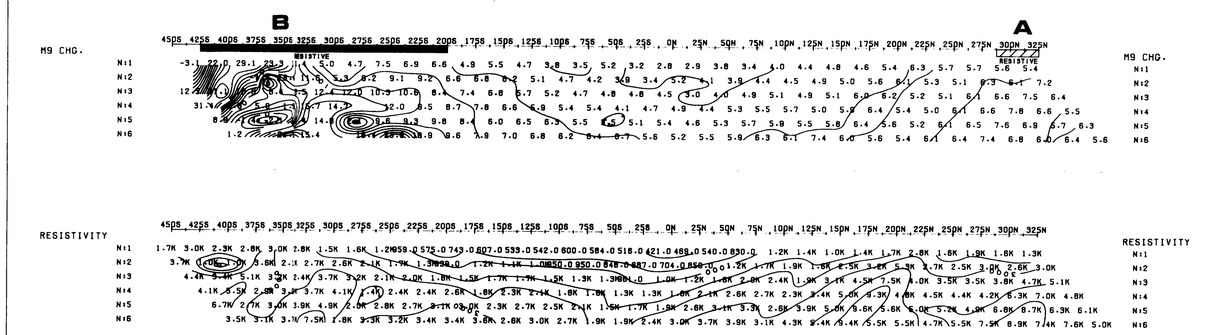
SHERATON TWP. PROPERTY

SHERATON TOWNSHIP

DATE : AUG.1955 | REF : R277

SCALE = 1: 2500

RAYAN EXPLORATION LTD.



LINE : 1300 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TSQ-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

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SCALE = 1: 2500

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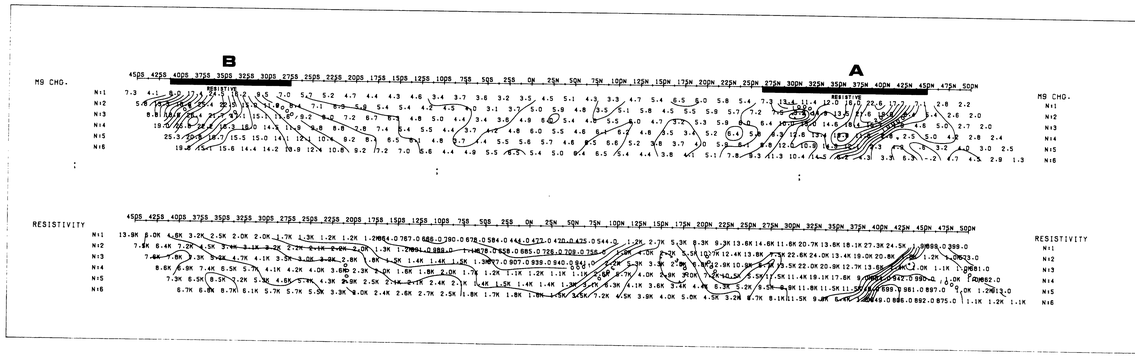
SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
.. PLATE 1 of 2



LINE : 1400 E

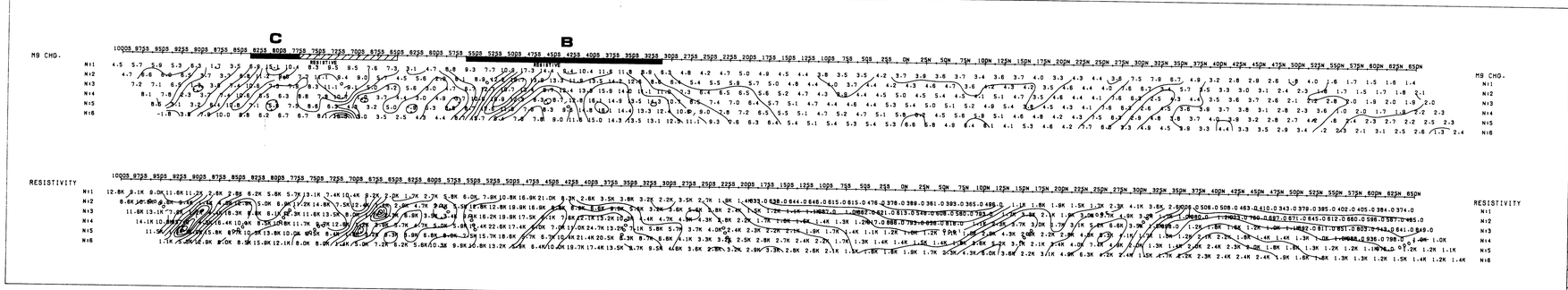
INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TBG-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.
SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
DATE : AUG.1995 | REF : R277
SCALE = 1: 2500
RAYAN EXPLORATION LTD.



LINE : 1500 E

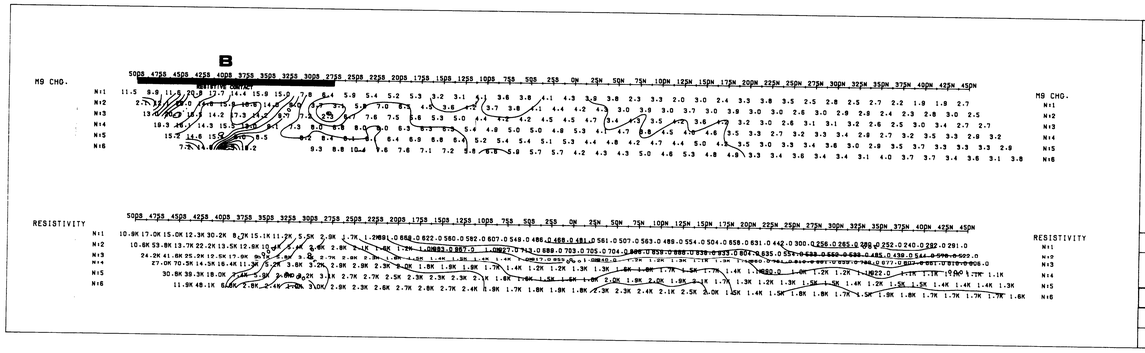
INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TBG-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.
SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
DATE : AUG.1995 | REF : R277
SCALE = 1: 2500
RAYAN EXPLORATION LTD.



LINE : 1600 E

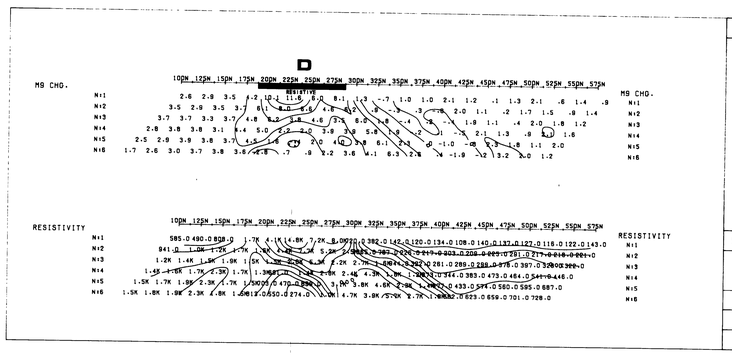
INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TBG-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.
SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
DATE : JULY 1995 | REF : R277
SCALE = 1: 2500
RAYAN EXPLORATION LTD.



LINE : 2200 E

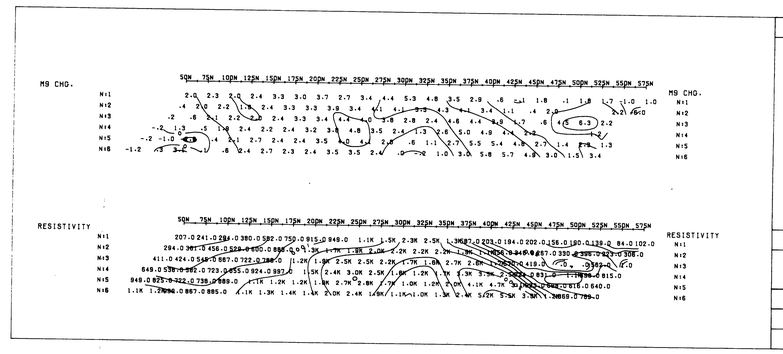
INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TBG-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.
SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
DATE : JULY 1995 | REF : R277
SCALE = 1: 2500
RAYAN EXPLORATION LTD.



LINE : 2100 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON 2 sec OFF
TRANSMITTER: SCINTREX TBG-3 3KVA
SLICE TIMING: 310-405 ms
PLOTTED WINDOW: SLICE #9

SILVERSTONE RESOURCES LTD.
SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
DATE : JULY 1995 | REF : R277
SCALE = 1: 2500
RAYAN EXPLORATION LTD.

2.16774

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SHERATON TWP. PROPERTY
SHERATON TOWNSHIP
PLATE 2 of 2