SUMMARY REPORT ON GROUND GEOPHYSICS AND THE GOLD POTENTIAL OF THE ALCANEX LTD. HALCROW CREEK PROPERTY, HALCROW TOWNSHIP, PORCUPINE DISTRICT, ONTARIO

by

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October 9, 1997

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SUMMARY

The 576 hectare Alcanex property in Halcrow Township is extraordinarily located with respect to major structure. It sits on the up-rake nose of the governing synclinorium to the Abitibi belt just where its west end butts against the transgressive Kapuskasing Subprovince and its accompanying gravity high. Much attendant faulting and shearing exist at the local scale. Two gabbro plugs have intruded the mafic lava country rocks.

Gold in the region is epitomized by the old Belcher mine, currently called the Halcrow-Swayze, 1.7 kms to the south of the property, and the Lyall-Beidelman showing to the east. The latter has recently been acquired by staking and incorporated into the present claims group.

Gold in the property area has been found at several locations and spasmodically investigated over the years. A high grade angular float assaying 3.65 oz/ton Au has been located south of the property 1 km down-ice from the boundary; there is a strong chance that the source lies on the property in its southern sector. Recent geophysical surveys on a ground grid have shown that the probability for widespread sulphide mineralization is high. All

known gold locales contain sulphides, mostly pyrite but some arsenopyrite, and quartz; further, all save one, are associated with a felsic intrusive porphyry which is physically analogous to those found within the major ore settings in the Timmins camp.

The potent combination of porphyry occurrence, gold incidence, and polarization anomaly is further enhanced locally by a shared structural setting, specifically a NNW-SSE cross-fault that threads three of the four Alcanex gold zones. This fault itself appears mineralized and, notably, extends on strike through the Halcrow-Swayze mine setting to the south. Thus it particularly gives rise to the realistic chance that a substantial volume of mineralized ground exists within the transected fold nose. Should this material prove extensively auriferous, then the scope for a large deposit amenable to open pit mining becomes impelling.

Much of the east and south segments of the property remain to be explored, as also the northeast; IP/resistivity surveying in particular has yet to be fully extended to these parts.

The prize here is potentially huge. The necessary work to seek it is clearly warranted. An initial budget of $140,000 is

projected to effect a first-stage investigation which includes a set of five diamond drill holes probing the mineralization as presently defined by surface exposures, humus and lithogeochemical sampling, and by geophysics. Four of the five holes coincidentally explore the locus setting of the salient cross-fault, the fifth that of a parallel structural axis 400 m to the west.

A second stage is proposed to extend the existing grid to the full property limits along the east side, and its appropriate coverages with geophysics, mapping and geochemical sampling. This work will integrate the historic Lyall-Beidelman showing into a property-wide data set. A funding of $150,000.00 is forecast for this further instalment including test drilling.

Also a provision is made for land acquisition. This will be needed if drilling comes up with a discovery of significant proportions. Priority should be accorded the lands to the south and southeast. Some of it is currently open, some of it patented. A reserve of $200,000.00 is set aside for this eventuality.

In sum, a $500,000.00 financing is deemed required to undertake the kind of balanced and concerted exploration which this property deserves commensurate with its potential.

INTRODUCTION

Successively through 1991, 1994, 1995, W. R. Troup and B. Otton staked the claims under present review. Such action was based on regional considerations, attendant researches of government publications and records, and a personal knowledge of the sub-region.

One old gold mine exists in the neighbourhood, (Belcher Mining Corp.), also an historic showing, viz. the Lyall-Beidelman, over which claims subsequently were extended east to include it in the holding. However the main block of claims lies to the west and centres upon other old workings where clear evidence of shearing and sulphides has been exposed, and when a number of quartz vein networks appear in the vicinity. Most particularly, a gold rich boulder found 1 km down-ice from the property south boundary fuels speculation that its origin would lie somewhere close within this general mineralization locality.

DESCRIPTION OF PROPERTY

On government records and property map (G-1135), the claims involved are listed as:

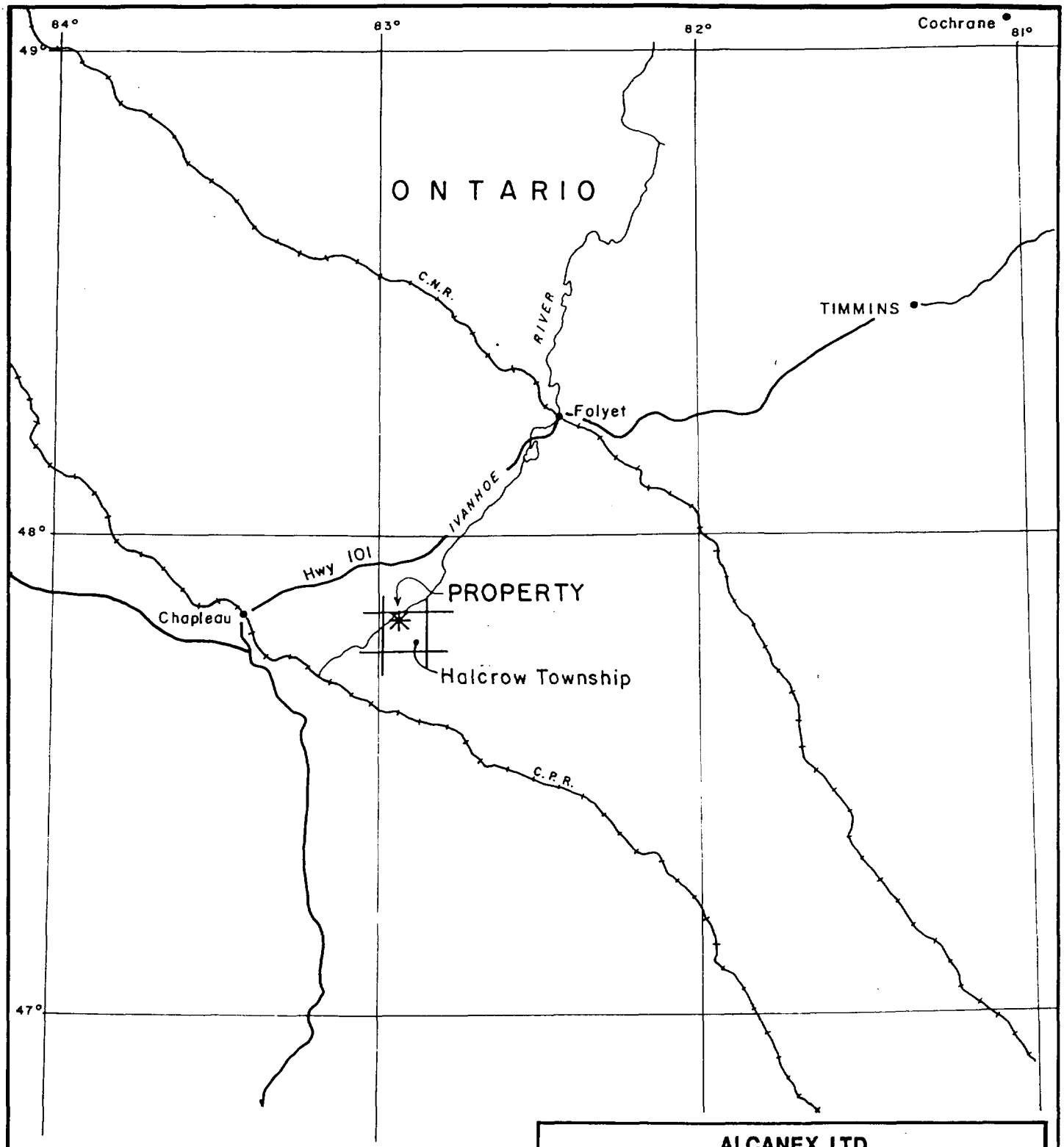
Claim License No.	Claim Units
1150962	16
1150965	2
1150966	1
1150967	1
1150968	2
1150969	1
1150973	3
1205434	8
1205435	2
9	36

These claims are contiguous and form a coherent block roughly rectangular in shape in the northwest quadrant of Halcrow Township, Porcupine Mining Division, District of Sudbury, Ontario. Together they nominally amount to 576 hectares (1440 acres) in

area. All are recorded in the name of Alcanex Ltd., 1365 Clarkson Rd. N., Mississauga, Ont., L5J 2W6, and are owned jointly by W. R. Troup (70%) and B. Otton (30%). They presently are all in good standing (see Appendix I).

The property lies some 140 kms (90 miles) southwest from Timmins. Access to it can be had overland by road per Highway 101 to a point 40 kms west of Folyet, thence southwest by a series of logging roads to the Ivanhoe River. The latter is crossed by a make-shift bridge of logs to enter claim #1150962 at its northwest corner. Air transport by fixed wing is not an immediate option, and helicopter access while feasible, would be disproportionately costly for likely early needs on the ground pre-drilling.

The terrain is lumpy with a maximum relief of 50 m. It is forested with a mix of conifer and deciduous trees interspersed with alders in the drainages. A number of small ponds are contained within, the most prominent of which line up along Halcrow Creek to the property east side. The Ivanhoe River effectively marks the property north west limits.



0 10 20 30 40 50 miles

0 10 20 30 40 50 60 70 80 kms

Scale 1 : 1, 267, 200

ALCANEX LTD.

HALCROW TWP. PROPERTY
Swayze, Ontario

LOCALITY PLAN

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY:	J.B. Boniwell
DRAWN BY:	R.T.M.
DATE:	August 1997
SCALE:	1" = 20miles
DWG. No. E.I.C.-	2641

PAST WORK

The area has been prospected spasmodically over the years.

The most significant outcome to date has been the erstwhile mine operated by Belcher Mining Corp. Ltd. situated 1.2 kms to the southeast of Bain Lake. The present claims abut the patented ground which protects this deposit and its setting. A shaft was sunk on it (to 371 feet) and some mining undertaken (between 1932-1934). A reserve of 127,000 tons at 0.11 oz/ton Au was calculated for one vein to the 354 foot level. The occurrence overall is currently known as the Halcrow-Swayze mine.

In the mid 1940's, W. Hammerstrom and W. J. Koski prospected much of the current property and identified five locales favourable to gold occurrence. Reportedly they discovered one further showing within what is the present claims area, but its actual position remains uncertain since more than one possibility for it exists. A top assay of 0.12 oz/ton Au however was returned therefrom. However potentially more important was a boulder they found carrying vein quartz in association with pyrite and arseno-pyrite on the patented claim S22186, approximately 1 km south of

the current property limits. It returned an assay value of 3.65 ozs./ton Au. The host was described as a carbonatized tuff.

An AEM anomaly (or anomalies) in the south central part of the subject property was investigated by Granges in 1977. One 61 m (201') hole was drilled in test encountering up to 30% pyrite and heavy graphite in argillaceous sediments. This was a base metal exercise, and four largish (2.1 m average) sections were cut for assay. No significant values were returned including gold and silver.

In 1980, W. Karvinen prospected the area for Gossan Resources. Nothing of additional significance seems to have derived from this work.

In 1982, the region was overflown by government (OGS) survey furnishing contemporaneous magnetic and time domain (INPUT) em coverage on (N-S) lines nominally 1/8 mile (200 m) apart. Several em responses were recorded within the property confines.

Regal Petroleum in 1984 explored the region including the present claims area. A combined airborne magnetic, em, and VLF survey was mounted as part of the programme. This involved a low

level helicopter operation (Aerodat) which produced a set of weak poor quality em responses largely following the drainages. Geologic mapping was systematic and undertaken by David Bell and associates. Soil sampling of the 'B' horizon yielded several anomalous zones which were recommended for more detailed follow-up. There is no record that such was ever carried out.

The main claims block was optioned by Alcanex in 1992 to Lorac Properties who completed a geologic reconnaissance mapping over about half the property area. At this stage, four distinct zones carrying gold had been located by Troup and Otton, and three of these were stripped and sampled by Lorac. The presence of anomalous gold was confirmed at each site, and further work was planned. However it seems additional funding could not be obtained at this point, and consequently the property was returned to Alcanex Ltd.

In the extra claims to the northeast is the showing called the Lyall-Beidelman, discovered in the 1930's. Gold was reportedly panned from two shear zones in a red syenite porphyry (H.C. Rickaby, ODM, 1934). Quartz veining and sulphides co-exist within. This showing has attracted quite a bit of attention over the years. G. Bastarache and L. Hobbs (1966), Sulpetro (1982), and

most recently in 1993, Filo and Jones, have all sampled and tested it. The best assay registered was 4.35 gms/t (0.126 oz/t) by Sulpetro. This could not be duplicated by Filo and Jones who in the end recommended stripping. There is no indication that this work was implemented.

Distinct from the others, Sulpetro surveyed the larger environment. While Bastarache and Hobbs contented themselves with drilling a set of 6 short holes on the showing, and Filo and Jones prospected the setting intensively, Sulpetro put in a grid of lines and applied a geophysical mapping programme to the full claim as part of a wider exploration in the area. Their results are the most useful thereby, and to the extent it is possible have been incorporated into the Alcanex data set.

GENERAL GEOLOGY

The domain in which the claims sit is widely known as the Swayze greenstone belt, it in turn a westernmost and an integral part of the much larger Abitibi belt. The essential rocks are differentiated metavolcanics of Archean age interbedded with interflow sediments and intruded variously by gabbros, diorites, diabases, and granite. Government mapping (OGS map 2120, compiled by J. F. Donovan, 1964) shows that a scatter of outcrops exists within the encompass of the claims, enough to distinguish volcanic units and to propound therefrom a synclinal axis passing through the property on a general WNW heading. This whole sub-region is dominated by a granite mass lying to the west and northwest. Quartz veining was broadly noted in the country rocks along the granite margins.

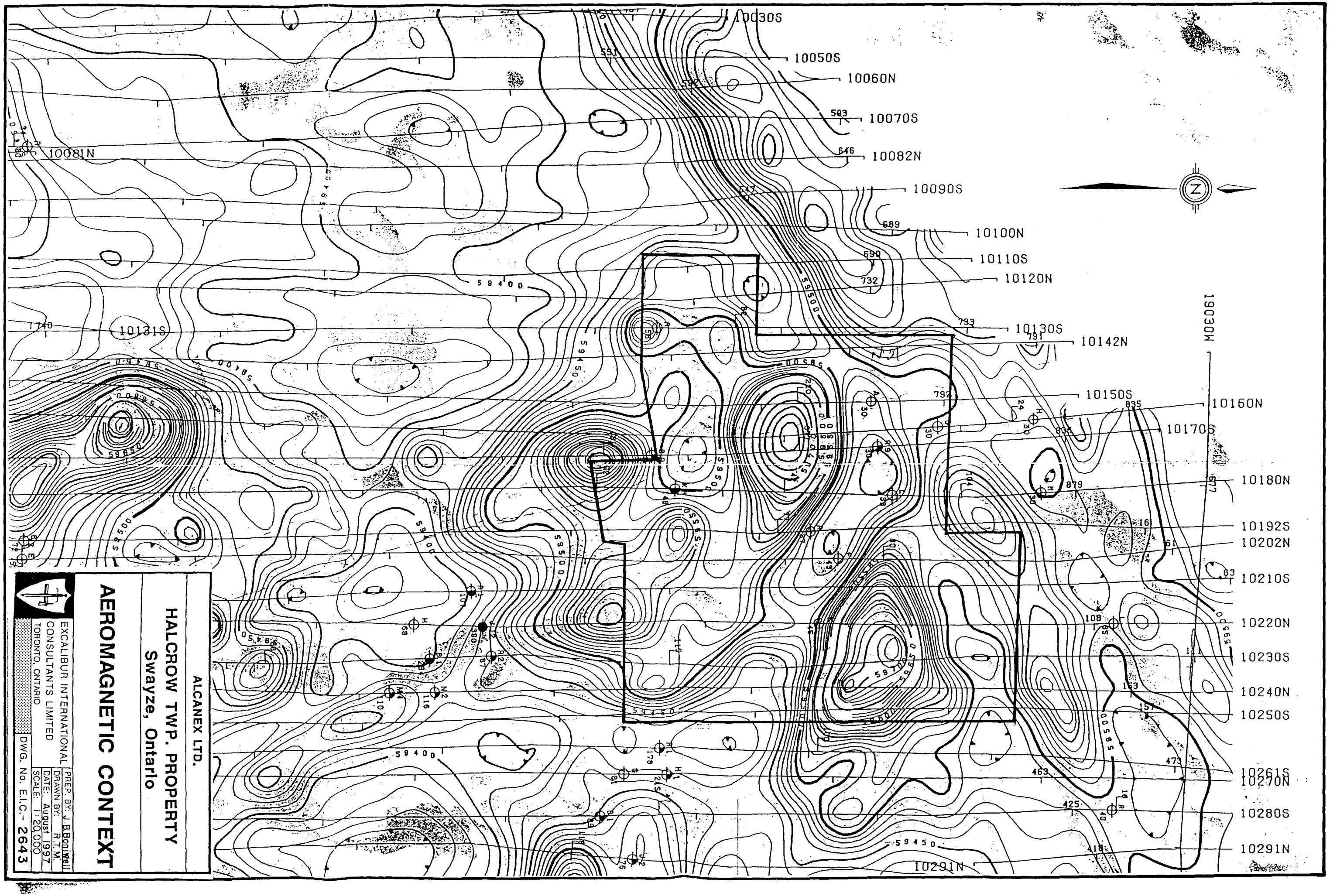
On the larger regional scale, the property locates on the up-rake nose of the synclinorium which governs the stratigraphy of the Abitibi-belt in its 700 km extension eastwards. This nose butts against the major transgressive feature known as the Kapuskasing Subprovince below which is an accompanying gravity high. At surface it is a transgressive belt of Archean volcanics and intrusion controlled by an unusual corridor of faults bearing

NNE. It is however particularly distinguished by a string of carbonatite irruptives and internally by a strong metamorphism grading (northwards) into a hornblende-pyroxene granulite. Its centre axis lies a mere 6 kms west of the property; thus the Ivanhoe River here can be taken as its easterly margin here. This belt is over 500 kms long, and is considered to have been an active zone tectonically through both the Hudsonian and Grenvillian orogenies, and perhaps in between. It manifestly represents a major line of crustal weakness reaching down to the mantle.

AEROMAGNETIC CONTEXT

The 1982 OGS air survey provides an aeromagnetic perspective to the claims which is rather evocative: it suggests the property is largely underlain by a mafic pluton roughly 1.5 kms by 2 kms in size, and buried some 200 m from surface. There is no evidence of its presence in the government regional mapping however, and in detail this magnetic feature breaks down into disparate parts, not all of which are necessarily intrusive. It is likely indeed that some formational units are present which relate to like geologic units elsewhere. Most particularly it is noted that the southern half of this magnetic expression could fit the northern half of a long aeromagnetic feature to the south striking NW-SE if intervening faulting were assumed. This is to say one is the faulted off-set of the other. The kind of faulting envisaged would be substantial, multiple in number and considerably bearing NE-SW parallel to the Kapuskasing trend. The disruption of such faults is projected as shown (Dwg. No. EIC-2644).

Notably the off-setting gap separating the two main magnetic bodies is 1.5 kms wide. The Halcrow-Swayze deposit sits midway in it. If the relative lack of magnetic relief in the gap is due to hydrothermal alteration -- as well it might given the



ALCANEX LTD.

HALCROW TWP. PROPERTY
Swayze, Ontario

AEROMAGNETIC CONTEXT

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.Bonnell
DRAWN BY: R.T.M.
DATE: August 1997
SCALE: 1:20,000

DWG. No. E.I.C.- 2643

CROCKETT TWP.

HALCROW TWP.

V

III

TREND

RIVER

If

If

10160G

KAPUSKASING

10150A

10170A

10180L

Im

Halcrow Ck

Sc

Roof pendant

10202F

10192A

Im

IVANHOE

PROPERTY OUTLINE

Vi,m + Sc

10180K

10130A

10170B

Granite

Batholith

If

HEWSON LAKE

SHUNSBY LAKE

BAIN LAKE

HALCROW - SWAYZE MINE

HALCROW LAKE

Vi,m + Sc

LEGEND

- Granite contact
- Lithologic contact
- Interpreted fault
- 10180K AEM anomaly with identification
- Mafic dyke
- Iron-rich horizon

SYMBOLS USED

If,m - Intrusive; felsic, mafic

Vi,m - Volcanic; intermediate, mafic

Sc - Sediment, interflow

ALCANEX LTD.

HALCROW TWP. PROPERTY
Swayze, Ontario

ELEMENTS OF INTERPRETATION

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.Boniwell
DRAWN BY: R.T.M.
DATE: August 1997
SCALE: 1 : 20,000
DWG. No. E.I.C.- 2644

proximity of the granite -- then a good case can be made for these faults acting as a mineral control through the claims area.

Notwithstanding this conclusion, a mafic intrusion is still perceived underlying part of the property. The circular closure to the north side of the prime aeromagnetic anomaly is almost certainly due to one. Moreover it does not stand alone. A satellite appears approximately 1.5 kms to the northeast, and while it is weaker and somewhat less compact in appearance, there seems little doubt it is part of the same intrusive event. Importantly the Lyall-Beidelman showing is peripheral to it.

The Kapuskasing trend aforenoted is marked here by the fault along the Ivanhoe River. It is enhanced locally by a modest ridge of magnetic high which in itself reflects a later diabase intruded along a closely flanking structure.

AIRBORNE EM

Concurrent with the OGS aeromagnetic survey, em measurements were taken in the time domain with INPUT Mk VI equipment (Barringer-Questor) mounted in and around the aircraft. A number of relatively discrete anomalies were recorded within the property area in the resulting coverage. These reponses have been individually examined in the OGS (microfiche) files in Timmins, and from this research several of the anomalies are considered real to bedrock. They plot as shown (Dwg. No. EIC-2644).

The most promising em event is the response 10180K whose earlier airborne equivalent almost certainly was the target of the Granges ground investigation in 1977. Thus the neighbouring INPUT anomaly 10170B, not quite as strong but still quite fair a response and equally real, could have been missed in that prior survey for which no data are presently available. If so, it remains a feature of potential value.

Two aspects pertain here. All the evidence suggests that, while occurring on adjacent lines, these two INPUT anomalies are not directly connected, that is they occur as independent events. Second, Granges only drilled one hole in the locale and

it was directed to the SW, presumably to cut a ground conductor running NW or WNW more or less at right angles. Since such disposition constitutes the country trend, obviously there is more to be defined in this locale. While it is possible that structural elements are a contributing factor here as they are elsewhere, the quality of the response intimates an electronically conducting source, graphite and/or sulphides, not an ionic one as with clays and salts in solution.

PROPERTY GEOLOGY

A grid of lines bearing 35°T and set 125 m apart was prepared over most of the primary claims block to further the geologic and geophysical mapping of the area. Only two (N-S) lines were extended to what may be described as the eastern annex, and these were short (550 m maximum) and 500 m apart. They served as quasi-reconnaissance lines to either side of the Lyall-Beidelman gold occurrence.

Mapping and prospecting on this grid have been carried out by Troup and Otton (1995). A suite of andesite flows and tuffs has been established as the main rock units extant. Lesser intercalations of sediments, principally argillites, were also recognized within this regime, the whole intruded by local dykes, felsic mainly, and by the bordering granite batholith to the west and northwest.

A pervasive foliation was observed. This in places intensified into schistosity and beyond that into shearing. The shear zones that were encountered on the ground commonly carried sulphides, pyrite usually, and some quartz veining. If wide, they were extensively carbonatized. No faults as such were recognized

CROCKETT TWP.

HALCROW TWP.

V

III

GRANITE BATHOLITH

RIVER

IVANHOE

Roof pendant

HALCROW CK.

PROPERTY OUTLINE

HEWSON LAKE

SHUNSBY LAKE

BAIN LAKE

HALCROW-SWAYZE MINE

Au, S

HALCROW LAKE

N

LEGEND

5a / 1a — Outcrop with identification

1a,d,h – massive rhyolite, sericite qtz feldspar schist, feldspar porphyry

2b,c – conglomerate, greywacke

3 – iron formation

4a,c,e,g – massive basalt, chlorite schist, andesite, amphibolite

5a,b,c – massive granite, gneissic qtz monzonite, qtz diorite

6a – gabbro

7 – diabase

#q Quartz stockwork

Granite contact

Lithologic contact

Outline of buried magnetic anomaly

Interpreted fault

Projected synclinal axis

Adapted from OGS map 2120, Donovan, J. F., 1966.

ALCANEX LTD.

HALCROW TWP. PROPERTY
Swayze, Ontario

GENERAL GEOLOGY

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.Boniwell
DRAWN BY: R.T.M.
DATE: August 1997
SCALE: 1:20,000
DWG. No. E.I.C.- 2642

in this phase of the work.

Lithologically, the granite of Donovan in two places has been mapped locally as porphyry, the latter being seen to contain variable amounts of quartz and to a lesser degree feldspar, and of course to possess a porphyritic texture. The batholithic granite is distinguished as a granodiorite. It is massive and is younger than the above porphyries which it intrudes as part of the pre-existing environment.

Not confirmed is an outcrop of gabbro mapped by Bell (1984) rather close to grid centre.

Ground Geophysics

To amplify geology, instalments of ground geophysics were carried out over the 1995-1996 period.

Magnetic and VLF surveys were directed to the main grid, and to the extent this had been taken, was covered in full. The resulting geophysical plans have enlarged geologic knowledge significantly, as described below:

a) Magnetics

These data are dominated by a sizable anomaly rising 1700 nT above background in grid centre. It clearly relates to the aeromagnetic closure of prior mention but areally is not as large. It correlates with the peak of the air response, and coincidentally with the gabbro outcrop of Bell aforementioned, and clearly indicates a rake to the south to confirm the airborne hint of same, but the other broader aspects of the air anomaly are not seen at the ground scale. Instead what is detailed are mafic sills and/or iron-rich components of the volcanic sequence running with the country. Evident also are transgressive mafic dykes, at least one striking E-W, another NE-SW. The granite contact for its part is reasonably described in the west and northwest.

As in the air, there are hints of interceding structure, but little authoritative definition, aside from the noted dykes.

b) VLF

A revealing amount of anomaly has been obtained, all of it appropriate to a thin non-clay cover and a generally resistive bedrock. The underlying formational trends to the northwest are

well reiterated, in this case across most of the grid except in the far north where the proximity of the main granite imparts an ENE orientation to anomaly axes.

However the most startling result is the compelling evidence of a N-S fault transecting the centre of the grid. So located, it cuts across the heart of the prime magnetic anomaly and the mafic (gabbro) plug underlying it. Most tellingly, it links the Alcanex gold zones and their attendant porphyry intrusions together to a common structure. There are indications that other like structures exist in the area, and indeed from these same VLF data, three other faults in this family can be postulated (Dwg. No. EIC-2649). This is remarkable since the VLF field utilized (NAA, Cutler, Maine, broadcasting at 24.0 kHz) does not favour this orientation at all well. Such fact serves to underscore the strength of the faults involved.

The shears on the other hand are fairly defined. Not surprisingly, they tie in with the mapped zones rather tidily, although where wide, one side or the other of the shear is likely to have been preferred by VLF currents.

c) IP/Resistivity

The preceding two surveys were in due course augmented by IP/resistivity. However due to financial constraints and on-site equipment problems, the programme of coverage that was initiated did not advance as far as planned, likewise a second instalment in the late summer of '97.

Notwithstanding, the six completed lines on the main grid returned an encouraging amount of polarization anomaly. In multispacing cross-sectioning using pulse transient equipment and a standard dipole-dipole electrode array with an 'a' spacing equalling 25 m and 'na' varied successively through the equivalent of n=1 to 4), at least 7 zones of chargeability response exceeding 2 times background were obtained. Peak responses attained levels of 5 times background and more. The accompanying resistivities varied widely over a range of 100 - 30,000 ohm-metres, much of it typical to a crystalline bedrock in a physiography which alternates rapidly between outcrop (or sub-crop) and swamp. The average resistivity characterizing a background without such constraints fell between 3000 -8000 ohm-metres.

Compiling the n=1 values into contour plans proved

Ivanhoe River

Granite contact

BASE LINE 00

T.L. 800N

T.L. 1300S

125W

00

125E

250E

375E

500E

Halcrow Pond

Values in millisecs

ALCANEX LTD.

HALCROW TWP. PROPERTY
Swayze, Ontario
CHARGEABILITY CONTOURS
n = 1

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.Boniwell
DRAWN BY: R.T.M.
DATE: August 1997
SCALE: 1 : 5000
DWG. No. E.I.C.- 2647

Ivanhoe River

BASE LINE 00

T.L. 800N

T.L. 1300S

125W

00

125E

250E

375E

500E

Halcrow Pond

Values in Ohm/m

ALCANEX LTD.

HALCROW TWP. PROPERTY
Swayze, Ontario

RESISTIVITY CONTOURS
n = 1

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.Boniwell
DRAWN BY: R.T.M.
DATE: August 1997
SCALE: 1 : 5000
DWG. No. E.I.C.- 2648

rewarding; several interesting facets emerge. The north-south axial control to mineralization is fortified, especially the fault line passing through Halcrow Pond. This is the premier cross-structure brought out by VLF, and is now seen to thread some of the best anomaly obtained in survey, both in chargeabilities (Dwg. No. EIC-2647) and in resistivities (Dwg. No. EIC-2648), the latter naturally distinguished by lows. At the same time, the data demonstrate the strong influence the formational setting has on anomaly distribution and character through the area. Finally, these same results show that the E-W mafic dyke projected from the magnetics, again through Halcrow Pond, has apparently carried with it a weak mineralization of its own along its locus.

The neighbouring granite where it was sampled (on the north end of Line 00) yielded background levels of response only for both measured parameters. On this basis, the tongue of granite striking SE into the grid area as depicted by Donovan (Dwg. No. EIC-2642) stands up rather well; it appears as a zone of polarization quiet. However the actuality is not yet proven since the porphyries with which the granite has been confused in this sector can be equally unresponsive in places (e.g. at 300N/125E, 200S/250E). In short, these felsic intrusives are not consistent in IP and resistivity terms here, and should be treated as

unpredictable thereby until more is known of them predicated on structure.

GEOCHEMICAL SAMPLING

1) Humus (Organic Soil)

Some selective humus sampling has been undertaken in the grid areas in follow-up of geophysical results. Such samples were analysed for gold only (by neutron activation). A total of 138 were collected in four rather vaguely separate locations.

Since there is an inevitable variance of material available for collection in any regimen of sampling, spot highs appearing in the results are regarded not as statistically significant as a grouping, especially where the sampling interval on line is 10 m or less, as is often the case. It is important therefore that not only did the method return anomaly on this basis, it did so where a particular discrimination was being sought, that is to say where some IP zone, VLF axis or pyritized lithology needed to be determined as auriferous, or not. The outcome obviously enhanced some prospective situations, down-graded others.

The threshold for anomaly in this work was set at >2 ppb Au. Background existed below 1 ppb where it was indeterminate. The highest value obtained in the humus medium was 1.9 ppb Au, and it was registered in two widely separate places, viz. Alcanex Zone 1 and in the Lyall-Beidelman sector.

2) Rock

In a lithogeochemical check of the area, rock specimens were collected from both the main grid and the Lyall-Beidelman setting. A total of 29 samples were submitted for analysis, 18 from the main grid, 11 from the NE showing setting. All samples were assayed for gold by the fire assay plus atomic absorption method; they were also screened for 32 other elements by ICP.

Notably, all the samples of trench material taken from the Lyall-Beidelman locale ran anomalous in gold, from a low of 20 ppb to a high of 8340 ppb. Excepting the latter as a spot high, a 7-sample grouping averaged 500 ppb here. Beyond this immediate vicinity however, values quickly dropped to below detection limits.

On the main grid, samples were very scattered and relatively few. Anomalous amounts of gold were measured in just

3 samples, all of low order, average 50 ppb. These separately fall north of the BL in sheared rocks, porphyry and mafic volcanics both. Weak as it is, and inconclusive as it might be, this outcome nevertheless gives an extra lift to this quarter of the grid in terms of mineral probabilities.

MINERAL CONSIDERATIONS

The primary metal sought is gold. The geology of the region favours it, and there are widespread indications of its presence in showings, trenches and humus samplings through the area. What needs to be determined is its relative proclivity for concentration in ore-grade amounts within the property confines.

There are several factors in play and all warrant attention. First, a typical gold deposit in the Abitibi belt is hydrothermal in nature. Auriferous solutions are introduced at a relatively late stage, and precipitation and concentration of gold take place under the aegis of a geothermal gradient operative at the time and in local circumstances which are conducive to it. For these things to happen, a gold source is required and a heat engine to drive the solutions into the environmental rocks. Commonly a felsic intrusion fulfills this dual role.

Within the subject property, there are two kinds of felsic intrusion, a bordering batholithic granite and a local quartz porphyry, the latter ostensibly older than the former. There is also a major gabbro plug. Of these, the granite, on the face of it, appears most qualified as the requisite primary metal

source and heat origin, yet the porphyry may well be a manifestation of an earlier sub-volcanic intrusion which brought in gold. Alternatively, and this is regarded the reigning probability, the porphyry has formed a good host rock for gold emplacement by virtue of its relative competence and its improved ability thereby to shatter under tectonic forces. Whicheyer is true, the setting would find analogy with the Timmins camp where the porphyries (Pearl Lake, Dome, etc) are intimately associated with gold occurrence. Here at Halcrow, it is evident that the two intrusions interact, the granite impacting on the porphyry. Certainly in local outcrop and in hand specimen, a porphyry locally can appear both granitized and pyritized. Not surprisingly then, as a medium grained pinkish rock, it has been described variously as a quartz monzonite (Donovan), a quartz porphyry (Troup), at the Lyall-Beidelman, a syenite porphyry (Rickaby) and where sheared, a granite gneiss (Donovan). It is a rock-type therefore that is prone to perceptible variance within the grid area but which nonetheless can be held to be essentially the same. Importantly, it itself can carry gold when it is sulphidized and sheared (as demonstrated at Lyall-Beidelman).

In the second place, it is clear that for gold in solution to have reached the point where precipitation might have

begun, there has had to have been access from the source. This most evidently has been supplied by structure, shearing in particular but by faulting as well. There, too, is an indication that fluid passage has also taken place along bedding planes where these have been opened up under dilationary forces. Again structure is implicated.

This latter concept indeed leads to an interesting possibility, that the act of intrusion by the granite mass to the west brought compressional forces to bear along the stratigraphy and that beds in consequence would have either slipped in a rough E-W direction or been buckled and faulted in the N-S. As it turns out, all these components appear to be present in the claims area, and it would follow that the best chances for gold lie in localities where dilation has potentially happened and shearing and faulting have intereacted within its zone of influence.

However there is a third consideration, and that is the requirements for precipitation. The aforementioned geothermal gradient is one aspect, and empirically it would seem that for here the gold-bearing silica-rich fluids emanating from a parent granite would need to have travelled at least 200 - 300 m from the main contact before cooled enough to settle out its dissolved minerals.

Furthermore, higher concentrations can be expected where there is some catalyst extant in the country rocks that gold has an affinity for. Iron is one, carbon another. In the present area both exist, the first as constituent magnetite in mafic lavas and intrusions, and otherwise as sulphide impregnations and occurrence, the second as graphite (revealed in Granges drilling).

Finally, any significant gold mineralization in the prescribed conditions can be expected to give rise to environmental rock alteration. Primarily in outcrop this would show up as silica flooding, quartz veining, carbonatization and pyritization; in present geophysical terms, it would express itself as a magnetic abatement (magnetite depletion), anomalous polarization (presence of sulphides) and perhaps a marginally increased resistivity (silicification in and about a mineralized host).

On this basis, a number of highly prospective situations can be proposed. One of the key ingredients to the mix is the N-S fault which knits together the Alcanex gold zones 4,3,2 as labelled (Dwg. No. EIC-2649). It appears more than coincidence that porphyry incursions exist at all three locations and that they distribute themselves about this particular fault. Because of such structural link, it is regarded possible that the three gold zones

are fundamentally one, a system of stacked occurrences in effect with open pit potential if mineralization extends between them and in width along the fault alignment. Dimensions of 400 m by 200 m of mineralized ground would not be out of order then (excluding Zone 2).

The above concept is perceived the prime prospect of the area. It is thus of more than passing interest that this same sector (more or less) was selected by David Bell & Associates for follow-up, (fortuitously labelled perhaps as A-1). That recommendation was not carried out. It is of course a sector with fair outcrop exposure, a fact which is seen to bias the screening process. However there are other prospects present and these merit even-handed treatment in a future exploration here.

The noted gabbro intrusion intervenes between the Alcanex Zones 3 and 2 and renders uncertain the southern extent of the system. Beyond Zone 2, the fault disappears into Halcrow Pond and continues under cover further south. It becomes vital therefore to future potential that the IP/resistivity traversing of the past be pursued into this (southeast) sector of the property area. More needs to be known here as a matter of priority.

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Further weight can be ascribed this very same fault -- which actually approximates a NNW heading overall -- once it is recognized that if continued on strike to the SSE it would pass through the Halcrow-Swayze mine site. Such a lineament is accommodated by the aeromagnetics, even to some fair extent by the physiography of the region.

The two lines of IP added to the main grid coverage in Aug. '97 do much to underline the promise of the property southeast quarter. In the first instance it is shown that the western contact to the gabbro intrusion appears broadly mineralized, polarization anomaly extending from 40 m north of the BL to about 200 S, or that is for virtually 250 m in the traverse direction. Responses are strong (5x background on average) with a mix of resistivities in the 2000 - 40000 ohm-metres range which bodes well for a silicic disseminated sulphide emplacement all through the wallrocks down this side of the intrusion. That such mineralization is unique to this particular setting is given weight by the fact that no comparable range of anomaly exists on the next adjacent line east (500E).

A second eminent event to emerge from the extra lines is that the Alcanex Zone 2 is now clearly shown to be anomalous. A

substantial IP response (over 5x background) set in an extreme, sharply defined resistivity low (<100 ohm-metres) implies shearing in much the same order as Alcanex Zone 4 to the north, -- which incidentally is extended 200 m eastwards largely unabated by this additional coverage. However on the evidence, Alcanex Zone 2 is more confined since it does not extend in strength to 500E, the next line; at the same time there is indication thereon that the IP peaking is shifting southwards, and if that really proves to be the case, then this will constitute a major corroboration of the thesis that the Halcrow-Swayze lineament is indeed an important control to mineral distribution through the area.

It is seen that both the two supplemental lines are curtailed in the south by Halcrow Pond; moreover both lines are still yielding above background values in IP as the pond is approached. Thus the signs are beginning to mount that this water storage covers an area of vital structural interaction where mineralization has occurred and is potentially focussed. In fact this is the locale most suspected by Hammerstrom as source for the high grade float he found 1 km to the south in 1980. Plainly, a winter programme of IP surveying ought to be concentrated here.

The Alcanex Zone 1 in the south of the main grid and

close to the property boundary appears separate from these considerations and is, perhaps different in origin. It is a gold setting which has strong formational overtones including a sulphide iron formation. However, because of its position, its full structural context is incompletely defined, yet it is probable there is shearing present and cross-structural disturbances of some sort. A N-S break has been projected locally. Whether porphyry intrudes this locale however is not known. Gold in humus gives some emphasis to the west side; an old pit in the centre (at 1230S/125E) on the other hand, with strong supportive geochemistry, dominates the data. Cover is fairly widespread locally, which circumstance inhibits any more expansive geologic evaluation at surface. Geophysics for its part still has more to contribute here and this ought to be done pre-drilling. West of Halcrow Pond, humus anomaly again brings attention to a locale with favouring criteria: N-S faulting, porphyry intrusion, polarization anomaly, sheared rocks in outcrop. While not yet fitted in to any all-encompassing scheme, these outflung bets still represent additions to potential.

The Lyall-Beidelman showing does not fare as well. As a prospect, it has been stripped, trenched, drilled, and sampled more than sufficiently to conclude there is not much room for

undiscovered mineralization in the near-surface, a point brought home by the extended IP surveying of line 400E there in the latest ('97) instalment of work. No new anomaly was obtained thereby, although the makings of a weak response exists in the extreme south of the section (at 360S). This incipient event, if proven up, would associate with the diabase dyke projected to pass nearby, and as such, it would relate to the weak anomaly registered at 75S on line 800E. Neither have immediate pertinence to the Lyall-Beidelman showing. Thus to direct more work to it specifically would be a mistake at this stage. Yet it remains evidence of gold occurring in the sub-region, and it is to be noted, no exploration to date has been conducted in depth here, nor has the IP/ resistivity screening of the setting been completed fully. Obviously this prospect is still a factor in the area, and one which future considerations will have to acknowledge and make provision for, but it lies outside the first priority settings and the features they share.

Much of this same attitude extends to the high-grade-in-gold mineralized boulder found to the south of the property. The odds are very strong that its source lies within the present claims (considered most likely in the vicinity of Halcrow Pond, as just noted). Like the Lyall-Beidelman, it too is an item that can not

be ignored, but for the moment must await developments and the collection of much more data in the southeastern and eastern quarters of the property.

All this underlies a need for a data base much more comprehensive than currently exists.

CONCLUSIONS

Major regional structures are seen to impinge on the Alcanex property. It lies adjacent to the Kapuskasing (gravity) high, a large cross-cutting tectonically controlled geologic zone which transects the Superior Province of the Shield on a NNE-SSW bearing, it also seemingly lies on the up-rake nose of the synclinorium defining the Abitibi Belt which extends eastwards herefrom for over 700 kms. Cutting across the local environment is a NNW-SSE fault which not only links three of the four Alcanex gold zones together but also in extension the old Halcrow-Swayze mine 1.7 kms to the south of the property.

Gold occurrence in the area is intimately associated with felsic intrusion, specifically a pre-granite porphyry, and this in its local emplacements has been substantially controlled by the above-noted NNW fault. The geophysics of the area, to the extent coverages have been taken, display a marked empathy with this trend and particularly for this one structure. As a result, it is concluded that the Alcanex gold zones #4, 3 and 2 are not really separate but are essentially part of the one large system, some 700 m long and up to 100 m wide, perhaps more. This one conclusion raises the gold potential of the property immensely. If it can

just be proven that gold is fairly cogent in its distribution over these dimensions, then clearly a huge resource will have been defined. However it is in the nature of gold occurrence in the Shield to be erratic and it is improbable that it will be different here. Predictably, therefore, much drilling and sampling will be required to detail the deposit(s) extant.

This means too that attention must be given to the wider possibilities in the sub-region. It is concluded likely that there will be parallel systems. Both the Lyall-Beidelman and the Alcanex Zone 1 could fall into this category. In both places there are the makings of similar controls but which can not altogether be pinned down at this time because of a comparative dearth of information in their surrounds.

RECOMMENDATIONS

It is recommended as a matter of priority that the IP/resistivity survey of the main grid be completed. The lines for it are already in place. Once these additional data are incorporated with the presently existing set, and reconciled to the pertaining magnetics and VLF, then a wider, truer perspective can be brought to bear on all prospective localities.

Test drilling is recommended. Several of these localities are ready for such as they stand, others are not. While it is perhaps desirable that the whole picture for mineralization be understood as much as possible before drilling is embarked upon, there is a converse urgency to direct drilling to acquire vital knowledge. Thus it is strongly recommended that the first group of prospective situations be drilled forthwith. To this end, the following holes have been laid out:

i) DDH #TO-1: Collar at 325N/125W
to be drilled grid S at -50° for 150 m

ii) DDH #TO-2: Collar at 185N/00
to be drilled grid S at -50° for 200 m

iii) DDH #TO-3: Collar at 75N/00
to be drilled grid S at -50° for 125 m

iv) DDH #TO-4: Collar at 75N/160E
to be drilled grid S at -50° for 250 m

v) DDH #TO-5: Collar at 562S/00
to be drilled grid S at -50° for 150 m

These five initial holes total 875 m, enough to mount a reasonable minimum contract programme.

The first four holes test the primary Alcanex system, from the batholith edge to the central gabbro, the fifth hole explores the reality of a parallel system 400 m to the west of the first and its propensity for carrying gold. Thus for budgeting purposes, some provision needs be made for follow-through drilling, even for the odd maverick hole put in to test incipient ideas.

Future drilling of other targets is also envisaged. As results and new data are gathered and absorbed, and especially presuming encouragement from the above holes, other recommendations ensue. At this juncture, it is specifically recommended that:

a) a thorough geologic mapping of the property be completed. This has to some considerable degree already been effected, but it deserves to be upgraded and with particular regard to what the fresh drilling results signify;

b) the grid be extended to the limits of the property. Here the point is made that it should be the main grid that is extended, not the N-S lines put in over the Lyall-Beidelmann showing sector. The geophysical methods already applied should be extended to all these new lines and their data melded with the old;

c) further land acquisition be considered. The first priority would be to the property southeast, the present east boundary being extended due south to tie in with the patented claims at the south end of Shunsby Lake. Enquiries might also be made about the status of the patented ground itself at such time.

BUDGET

The immediate budget requirements amount to an estimated $140,000.00. Such monies would fund the completion of the IP/resistivity survey within present grid limits, the reconciliation of the extra data to what is to hand, the refinement of targets, and the test drilling of same, all as given in the preceding recommendations.

The details are:

i)	IP/resistivity multi-spacing cross-sectional traversing, est. 15 kms:		
	allow 12 crew days @ $1500.00 p.d.		$18,000.00
	mobilization costs		5,500.00
ii)	data handling, interpretation, extra drill lay-outs, drafting	flat fee	4,500.00
iii)	diamond drilling proposed 5 holes, total 900 m @ $95/m all-inclusive:		85,500.00

iv)	contingencies 15%	17,025.00
		$130,525.00
	GST 7%	9,136.75
		$139,661.75

The above expenditures constitute the first stage only of an exploration programme that should entail foreseeably at least one further instalment of work as large again. Thus the amount of funding realistically demanded to complete a full property coverage and assessment would approach $300,000.00, exclusive of any major drilling in follow-up of discovery. This last would command its own separate financing predictably.

To allow further land acquisition in the light of drill findings, extra working capital of $200,000.00 ought also be available. This brings up a total of $500,000.00 to be sought for the future exploration of this property. This sum is deemed

commensurate with its beckoning potential.

JBB:sb

July 14, 1997

J. B. Boniwell

Exploration Geophysical Consultant

REFERENCES

1) Donovan, J. F., 1968; Geology of Halcrow-Ridout Lakes Area, ODM Report 63, with coloured map 2120, Halcrow and Denyes Townships at scale of 1:31,680;

2) Ontario Geological Survey, 1982; Airborne Electromagnetic and Total Intensity Magnetic Survey, Swayze Area, Vice Lake Sheet, District of Sudbury, map 80540, scale 1:20,000;

3) Troup, William R., 1991; Halcrow Creek Gold Property, Alcanex Ltd., with sample map at scale of 1:24,000;

4) Troup, William R., 1995; Magnetometer Survey on the Halcrow Creek Property, Halcrow Township, Porcupine Mining District, Ontario, with contour plan at 1:5000.

5) Troup, William R., 1996; Summary Report on the Halcrow Creek Property, 1995 Work Program, Halcrow Township, Porcupine Mining District, Ontario, with compiliation plan at 1:5000.

CERTIFICATE

I, JOHN B. BONIWELL, of 1522 Clearwater Dr., in the City of Mississauga, County of Peel, in the Province of Ontario do hereby certify:

1. That I am an exploration geophysical consultant holding office at 10 Hurontario St., Mississauga, Ontario.

2. That I am a graduate of the University of Tasmania in physics, maths and geology, and that I have been practising my profession of exploration geophysics for the past 40 years.

3. That I am a Fellow of the Geologic Association of Canada and a member in good standing on the Society of Exploration Geophysicists, KEGS, and the Prospector's Developer's Association.

4. That I have no interest, direct or indirect in the property discussed herein, nor do I expect to receive any such interest.

5. That this report is based on data supplied by W. R. Troup of Alcanex Ltd. including published maps and reports, by research into the government assessment files located in the OGS offices, Timmins, Ontario, and from a personal visit to the property in May '97.

October 9,1997
MISSISSAUGA, Ontario

J. B. Boniwell
Exploration Geophysical Consultant

Ontario Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

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

Transaction Number (office use): W9860.00759

Assessment Files Research Imaging

FINAL.

41O15SW2007 2.18794 HALCROW 900

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

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

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

Name	Client Number
ALCANEX LTD.	
Address	**Telephone Number**
1365 CLARKSON RD. NORTH	(905) 823-2881
MISSISSAUGA ONTARIO, L5J-2W6	Fax Number (905) 823-0720
Name	Client Number
Address	Telephone Number
	Fax Number

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

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

Work Type	Office Use
GROUND GEOPHYSICS I.P. SURVEY (CONTRACT)	Commodity GOLD
	Total $ Value of Work Claimed $15,675.17
Dates Work Performed From 01 (Day) 4 (Month) 1997 (Year) To 9 (Day) 10 (Month) 1997 (Year)	NTS Reference 41O/NE
Global Positioning System Data (if available)	Township/Area HALCROW TWP - NW CORNER
	M or G-Plan Number G-1135
	Mining Division PORCUPINE
	Resident Geologist District TIMMINS

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

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

Name	Telephone Number
J.B. BOWIWELL - EXCALIBUR INTERNATIONAL CONSULTANTS Ltd.	(905) 271-1043
Address	Fax Number
10 HURONTARIO STREET, MISSISSAUGA, ONTARIO, CANADA	(905) 271-7254
Name	Telephone Number
W.R. TROUP - ALCANEX LTD.	(905) 823-2881
Address	Fax Number
1365 CLARKSON RD. N. MISSISSAUGA ONT	(905) 823-0720
Name	Telephone Number
Address	Fax Number

RECEIVED
SEP 5 11:50
GEOSCIENCE ASSESSMENT

4. Certification by Recorded Holder or Agent

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

Signature of Recorded Holder or Agent		Date
William R Troup		AUG 26/98
Agent's Address	**Telephone Number**	**Fax Number**
1365 CLARKSON RD. N., MISSISSAUGA ONTARIO, L5J-2W6	(905) 823-2881	(905) 823-0720

Received Toronto. 12 98

0241 (02/96)

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

W9860.00759.

	Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	**Number of Claim Units.** For other mining land, list hectares.	**Value of work performed** on this claim or other mining land.	**Value of work applied** to this claim.	**Value of work assigned** to other mining claims.	**Bank.** Value of work to be distributed at a future date.
eg	TB 7827	16 ha	$26, 825	N/A	$24,000	$2,825
eg	1234567	12	0	$24,000	0	0
eg	1234568	2	$ 8, 892	$ 4,000	0	$4,892
1	✓ 1150962 ✓	16	$10,450.11	$6,400.00	—	$4,050.11
2	1150968	2	0	$800.00 ✓	0	
3	✓ 1150965	2	0	$800.00 ✓	0	
4	✓ 1150967	1	0	$400.00 ✓	0	
5	1150966	1	0	$400.00 ✓	0	
6	1150969	1	0	$400.00 ✓	0	
7	1205435	2	$2,612.53	$800.00 ✓	$1,812.53	0
8	1205434	8	$2,612.53	0	$2,612.53	$1,625.06 ✓
9						
10						
11						
12						
13						
14						
15						
		Column Totals	$15,675.12	$10,000.00	4,425.06	5,675.17

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

Signature of Recorded Holder or Agent Authorized in Writing	Date
William R Traup	SEPT 2/98.

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

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

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

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

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

0241 (02/96)

Ontario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use): W9860.00759

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
CONTRACT I.P SURVEY (FIELD PROGRAM)	3.0 LINE Km (1997) 8 DAYS (FIELD)	$1,566.45/Km $ 587.42/DAY	4,699.34
CONTRACT GEOPHYSICAL CONSULTING - FIELD PROGRAM	81 hrs. (1997)	$82.23/hr.	6,666.01
CONTRACT GEOPHYSICAL CONSULTING - REPORT	49.5 hrs. (1997)	$87.07/hr.	4,309.82
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
Food and Lodging Costs			
		Total Value of Assessment Work	15,675.17

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK × 0.50 = Total $ value of worked claimed.

Note:
- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs, within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

RECEIVED
SEP - 8 1998
11:50
GEOSCIENCE ASSESSMENT OFFICE

Certification verifying costs:

I, WILLIAM R. TROUP (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as AGENT, PRESIDENT OF ALCANEX (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

Signature: William R Troup Date: SEPT 2 / 98

0212 (02/96)

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

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

February 15, 1999

William R. Troup
ALCANEX LTD.
1365 CLARKSON ROAD NORTH
MISSISSAUGA, ONTARIO
L5J-2W6

Dear Sir or Madam:

Submission Number: 2.18794

Subject: Transaction Number(s):		**Status**
	W9860.00759	Approval After Notice

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

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

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

If you have any questions regarding this correspondence, please contact Lucille Jerome by e-mail at lucille.jerome@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

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

Correspondence ID: 13387

Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.18794

Date Correspondence Sent: February 15, 1999 **Assessor:** Lucille Jerome

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9860.00759	1150962	HALCROW	Approval After Notice	January 19, 1999

Section:
14 Geophysical IP

Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

Correspondence to:
Resident Geologist
South Porcupine, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):
William R. Troup
ALCANEX LTD.
MISSISSAUGA, ONTARIO

Correspondence ID: 13387

Distribution of Assessment Work Credit

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

Date: February 15, 1999

Submission Number: 2.18794

Transaction Number: W9860.00759

Claim Number	Value Of Work Performed
1150962	6,680.00
1150965	1,665.00
1150967	1,665.00
Total: $	10,010.00

Correspondence ID: 13387

Crockett Twp.

Lackner Twp.

Denyes Twp.

Tooms Twp.

2.18794
1P

1150973
3 UNITS

1150962
(10 UNITS)

1205435

1205434
8 UNITS

1150965
(2 UNITS)

1150967

1150968
(2 UNITS)

1206608
(12 UNITS)

1198220
(12 UNITS)

1218604
(12 UNITS)

1218365
(14 UNITS)

1198221
(12 UNITS)

1076881
(4 UNITS)

1198222
(12 UNITS)

1189290
16 UNITS

1189289
16 UNITS

1189287
12 UNITS

Ivanhoe River
Hewson Lake
Bain Lake
Shunsby Lake
Halcrow Creek
Vice Lake
Sylvanite
Kinogama Lake
Bain Creek

5M. 4M. 3M. 2M. 1M.

R-1-C SEC.35 W-P-6/98 NER 26/01/98 M+S 19515O

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O
MINING RIGHTS ONLY	M.R.O
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 2000
(1 KM) (2 KM)

DATE OF ISSUE
APR 20 1999
PROVINCIAL RECORDING OFFICE - SUDBURY

TOWNSHIP

HALCROW

M N R ADM NISTRATIVE DISTRICT

CHAPLEAU

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

SUDBURY

Ontario
Ministry of Natural Resources
Ministry of Northern Development and Mines

Date MAY, 1992

Number G-1135

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

b.k.

41015SW2007 2.18794 HALCROW 200

TRIM LINE

L 125 W
L 0
L 125 E
L 250 E
L 375 E
L 500 E
L 625 E
L 750 E
L 875 E
L 1000 E
L 375 W
L 250 W
L 500 W
TL 800 N
TL 275 N
TL 800 S
TL 1300 S
BASELINE
Ivanhoe River
Lake
Pond
Pond
Lake
Pond
Zone 4
Zone 3
Zone 2
Zone 1
1150962
1150968
1150966
1150967
1150965

LEGEND

Total Field Magnetic Contours

Pen 1; 50 nT Interval, 58050-64250 nT's
Pen 2; 200 nT Interval, 58600-64200 nT's
Pen 3; 1000 nT Interval, 59000-64000 nT's
Base Station; BL0/ 0+00, 58370nT Ref. Fld.
1125 Survey Points. Mean 58433nT's
58046nT to 64292nT Range.

INSTRUMENTS

OMNI IV PPM - 350, portable unit
OMNI IV PPM - 400, base station unit

Claim line showing assumed post

1150968 Claim number

Zone 1 Gold zone and number

Approximate location of Aerodat's VLF anomaly

PLAN 2

Scale 1:5000

100 0 100 200 300 (meters)

ALCANEX Ltd.
Magnetic Survey Ivanhoe Grid
Halcrow Twp. NTS: 41-O / NE Porcupine Mining Division
M. C. Exploration Services Inc. Nov. 1994.

Ref. No. E.I.C.- 2645

210
41015NW2007 2.18794 HALCROW

1150974

Lake

400E

375W 250W 125W 00 125E 250E 375E 500E 625E 750E 900E

500W

1150962

1205435

B.L.

Lake

IVANHOE RIVER

Au Zone 4

Au Zone 3

Au Zone 2

Au Zone 1

Holcrow Pond

T.L. 800N

Lake

1150965

T.L. 275N

Holcrow Creek

BASE LINE 00

1150966

1150967

875E

1000E

T.L. 800S

1150968

Lake

1205434

T.L. 1300S

Shunsby Lake

LEGEND

Instrument ..... Geonics EM-16

Transmitter: NAA, Cutler, Maine, 24.0kHz

Contours of Fraser filtered In-phase data

Contour Interval ..... +5%

+5% contour .....

+25% contour .....

N

0 100 200 300 400 500m

Scale 1cm = 50metres

410155W2007 2.18794 HALCROW 220

W. TROUP / B. OTTON

IVANHOE GRID
Halcrow Township, Ontario

VLF EM Survey
FILTERED IN-PHASE CONTOURS

Prep. by W. Troup	Drawn by R.T.M.	Dwg. No.
July 1995	Scale 1 : 5000	N.T.S. 41 O/NE	7

Ref. No. FIC-2646

KAPUSKASING TREND

IVANHOE RIVER

Lumber road (Hwy 101 access)

3068 granite gneiss

Granite

Batholithic

Sediments

Porphyry

Mafic Volcanics

Volcanics

Lake

Lake

Lake

Lake

Lake

Lake

Shunsby Lake

Holcrow Pond

Holcrow Creek

1150974

1150962

1150965

1150966

1150967

1150968

1205435

1205434

BASE LINE 00

TL 275N

TL 300S

TL 800S

TL 1300S

500W 375W 250W 125W 00 125E 250E 375E 500E 625E 750E 875E 1000E 800E

LYALL–BEIDELMAN SHOWING

3076 Au
3078,81,83
3075,79,80,82
silt. sheared porphyry in trench

3077 q.v. in syenite

3084 q.v., carb

3085 boulder/ π sheared

3064 sed carb

3063 Vm, sheared Au 3065,66 π sheared

3056 sheared π

3054,55 Vm, carb boulder

3057 Au Vm sheared

3053 Vm sheared carb

3058,59 Vm, sheared carb.

3067 q.v. carb Vm

3060 Vm sheared, carb

3061 If

3062 If

3051,52 q.v., Vm

TO-1 TO-2 TO-3 TO-4 TO-5

ALCANEX ZONE 4

ALCANEX ZONE 3

ALCANEX ZONE 2

ALCANEX ZONE 1

gabbro o/c (D. Bell & assoc. mapping approx. position)

DDH Granges 1977 approx. position

Im (gabbro)

Im (buried)

Buried intrusive outline

REGIONAL GLACIAL DIRECTION

LEGEND

- Interpreted fault showing relative movement and basis for projection
  - M – magnetics
  - V – VLF (NAA)
  - R – resistivity
  - G – geology
- Outcrop; large, small
- Inferred lithologic contact
- IP anomaly showing extent, peak position (X) and value at recorded 'n' spacing in () and associated resistivity (ρ_a) behaviour;
  - ▲ increase
  - ▼ decrease,
  - ▼̲ marked decrease
  - ind indeterminate
  - neutral neutral
- Grid line showing limits of IP coverage
- ALCANEX ZONE 3 — Gold showing with identification
- 3060 Vm Au — Lithogeochemical sample site with identifying number, type of material taken, and showing if anomalous in gold
- (A) — AEM anomaly (approx. location)
- TO-3 — Proposed drill hole with identification

SYMBOLS USED

Vf,m – Volcanics; felsic, mafic
S – Sediments; interflow
If,m – Intrusive; felsic, mafic
π – Porphyry
q.v. – quartz vein
carb – carbonatized

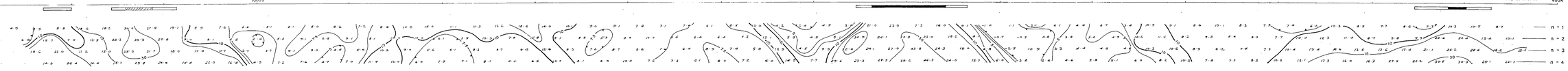
Tx NAA

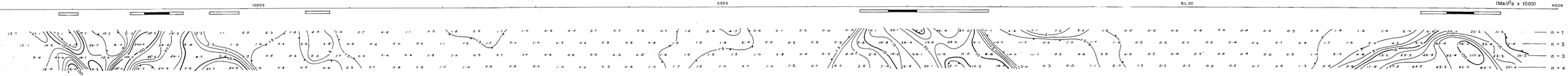
0 100 200 300 400 500m

Scale 1cm = 50metres

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

ALCANEX LTD.			
IVANHOE GRID Halcrow Township, Ontario			
INTERPRETATION			
Prep. by J. B. Boniwell	Drawn by R.T.M.		Dwg. No.
Aug. 1997	Scale 1 : 5000	N.T.S. 41 O/NE	E.I.C.–2649A





ELECTRODE CONFIGURATION

Dipole-Dipole Array

a = 25m

n = 1, 2, 3 & 4

Receiver: Huntec Mk IV

Delay time: 240ms

Integration time: 160ms

INTERPRETED ANOMALIES

- Very strong
- Strong
- Medium
- Weak

All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.

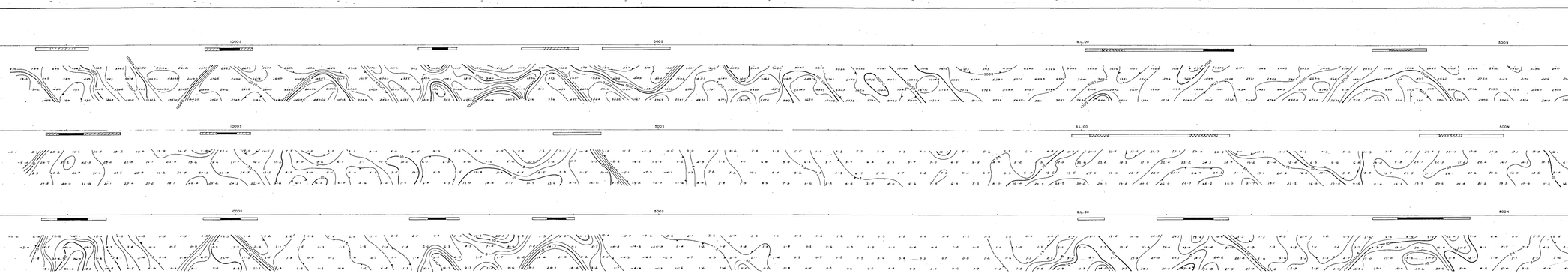
W. TROUP / B. OTTON

IVANHOE GRID

Halcrow Township, Ontario

TIME DOMAIN IP SURVEY LINE 1+25W

Drawn by: R.T.M.	N.T.S. 41O/NE
Survey by: H. Claridge	Dwg. No. 1
July 1995	Scale 1:1250



ELECTRODE CONFIGURATION

Dipole-Dipole Array

C1 C2 P1 P2

a - 25m

n - 1, 2, 3 & 4

Plotting Point

Receiver: Huntec Mk IV

Delay time: 240ms

Integration time: 160ms

INTERPRETED ANOMALIES

- Very strong
- Strong
- Medium
- Weak

All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.

W. TROUP / R. OTTON

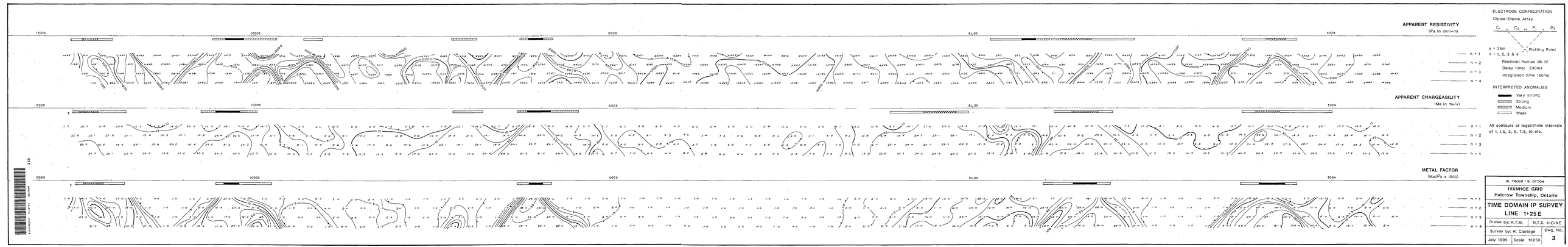
IVANHOE GRID

Halcrow Township, Ontario

TIME DOMAIN IP SURVEY

LINE 0+00

Drawn by: R.T.M.	N.T.S. 410/N.E.	
Survey by: H. Claridge		Dwg. No.
July 1995	Scale 1:1250	2


APPARENT RESISTIVITY
(Pa in ohm-m)
APPARENT CHARGEABILITY
(Ma in mv/v)
METAL FACTOR
(Ma/Pa x 1000)
13000S
10000S
5000S
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5000
10000
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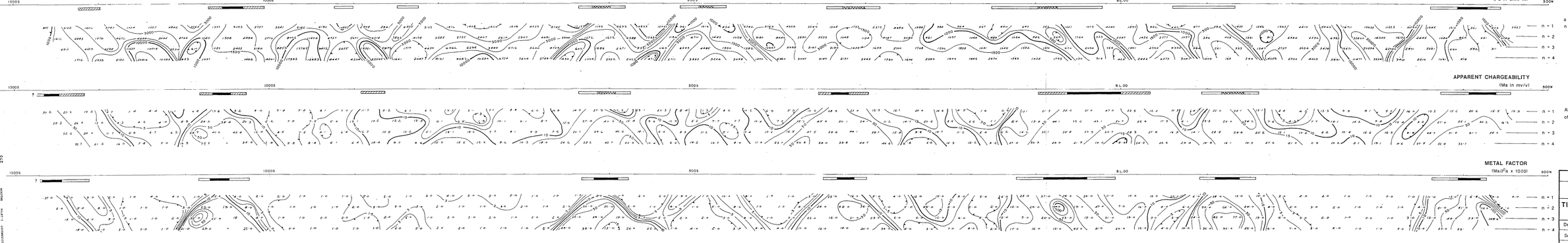
ELECTRODE CONFIGURATION
Dipole-Dipole Array
C1
C2
P1
P2
a - 25m
n - 1, 2, 3 & 4
Receiver: Huntec Mk IV
Delay Time: 240ms
Integration time: 160ms
INTERPRETED ANOMALIES
Very strong
Strong
Medium
Weak
All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.
W. TROUP / B. OTTON
IVANHOE GRID
Halcrow Township, Ontario
TIME DOMAIN IP SURVEY
LINE 1+25E
Drawn by: R.T.M.
N.T.S. 41O/NE
Survey by: H. Claridge
Dwg. No. 3
July 1995
Scale 1:1250



ELECTRODE CONFIGURATION

Dipole-Dipole Array

C_1 a C_2 na P_1 a P_2

Plotting Point

a = 25m

n = 1, 2, 3 & 4

Receiver: Huntec Mk IV

Delay time: 240ms

Integration time: 160ms

INTERPRETED ANOMALIES

- Very strong
- Strong
- Medium
- Weak

All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.

W. TROUP / R. OTTON

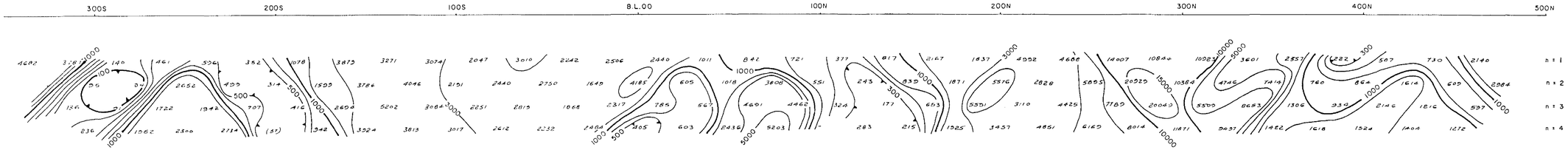
IVANHOE GRID

Halcrow Township, Ontario

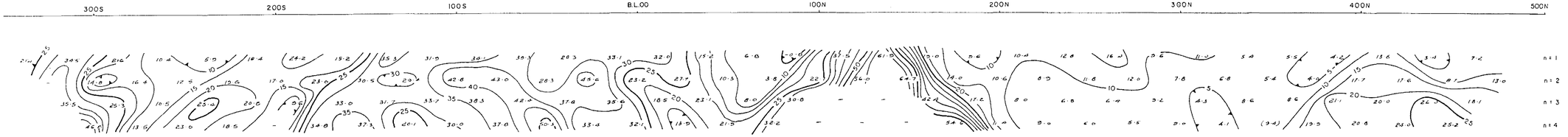
TIME DOMAIN IP SURVEY LINE 2+50E

Drawn by: R.T.M.	N.T.S. 410/NI
Survey by: H. Claridge	Dwg. No. 4
July 1995	Scale 1:1250

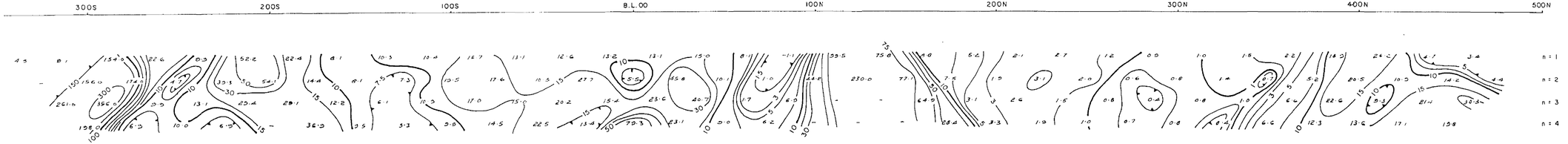
APPARENT RESISTIVITY
(ρa in Ohm-m)



APPARENT CHARGEABILITY
(Ma in mv/v)

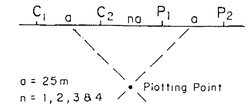


METAL FACTOR
(Ma / ρa x 1000)



ELECTRODE CONFIGURATION

Dipole - Dipole Array



Receiver: Huntec Mk IV

Delay time: 240 ms

Integration time: 160 ms

Resistivity and Metal Factor contours at logarithmic intervals of 1, 1·5, 3, 5, 7·5 & 10 etc., Chargeability at every 5

Survey by: H. Claridge

ALCANEX LTD.

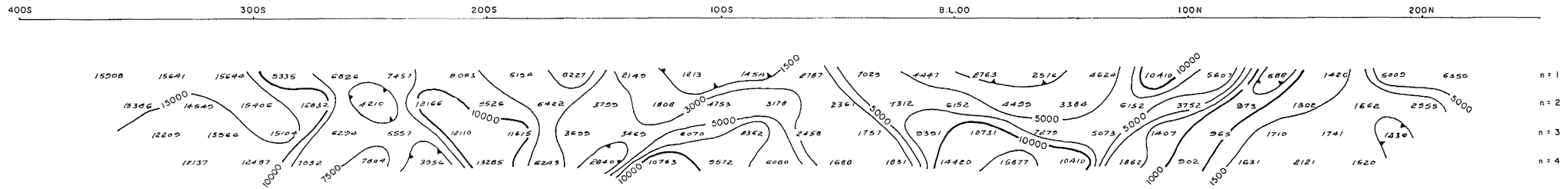
IVANHOE GRID
Halcrow Township, Ontario

TIME DOMAIN IP SURVEY
LINE 3+75E

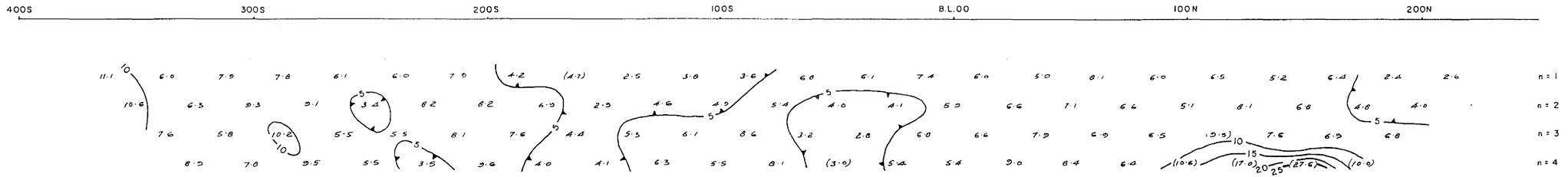
EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PHD. P. Hu J.B. Bonnell
INTERPRETED R.T.M.
DATE Oct. 1997
SCALE 1:1250
DWG. No. E.I.C. - 2662A

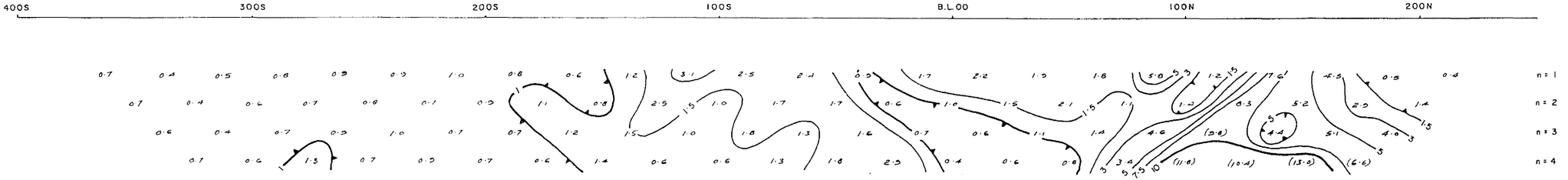
APPARENT RESISTIVITY
(ρa in Ohm-m)



APPARENT CHARGEABILITY
(Ma in mv/v)

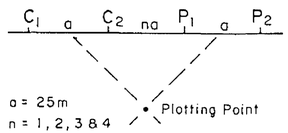


METAL FACTOR
(Ma/ρa x 1000)



ELECTRODE CONFIGURATION

Dipole - Dipole Array



Receiver : Huntec Mk IV

Delay time: 240 ms

Integration time: 160 ms

Resistivity and Metal Factor contours at logarithmic intervals of 1, 1·5, 3, 5, 7·5 & 10 etc. Chargeability at every 5

Survey by: H. Claridge

ALCANEX LTD.

LYALL-BEIDELMAN GRID

Halcrow Township, Ontario

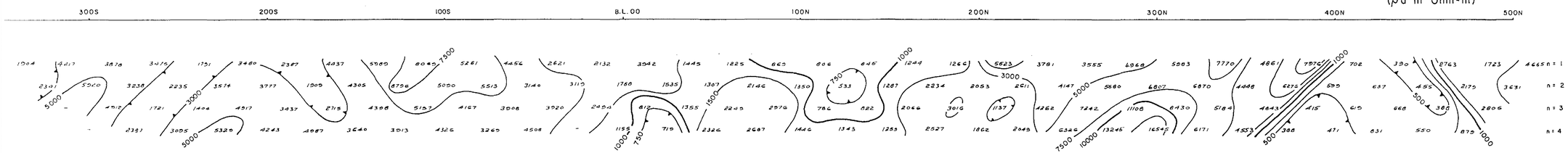
TIME DOMAIN IP SURVEY
LINE 4+00E

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

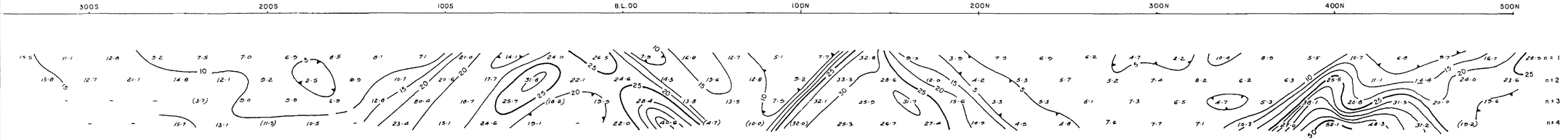
PREP. BY:	J.B.Boniwell
DRAWN BY:	R.T.M.
DATE:	Oct. 1997
SCALE:	1:1250
DWG. No. E.I.C.-	2662C

41015SW2007 2.18794 HALCROW 300

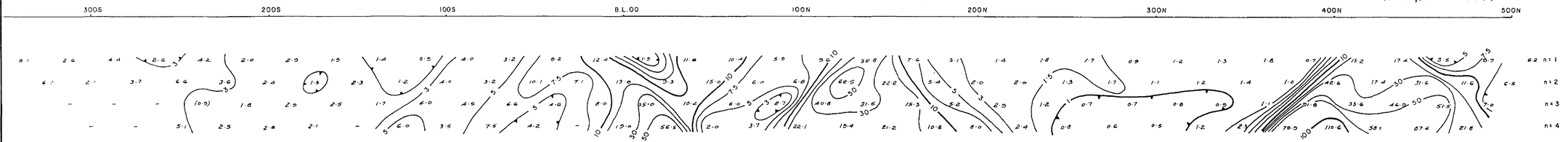
APPARENT RESISTIVITY
(ρa in Ohm-m)



APPARENT CHARGEABILITY
(Ma in mv/v)



METAL FACTOR
(Ma / ρa x 1000)



ELECTRODE CONFIGURATION

Dipole - Dipole Array

C_1 a C_2 na P_1 a P_2

a = 25m
n = 1, 2, 3 & 4

Plotting Point

Receiver: Huntec Mk IV

Delay time: 240ms

Integration time: 160 ms

Resistivity and Metal Factor contours at logarithmic intervals of 1, 1·5, 3, 5, 7·5 & 10 etc. Chargeability at every 5

Survey by: H. Claridge

ALCANEX LTD.

IVANHOE GRID
Halcrow Township, Ontario

TIME DOMAIN IP SURVEY
LINE 5+00E

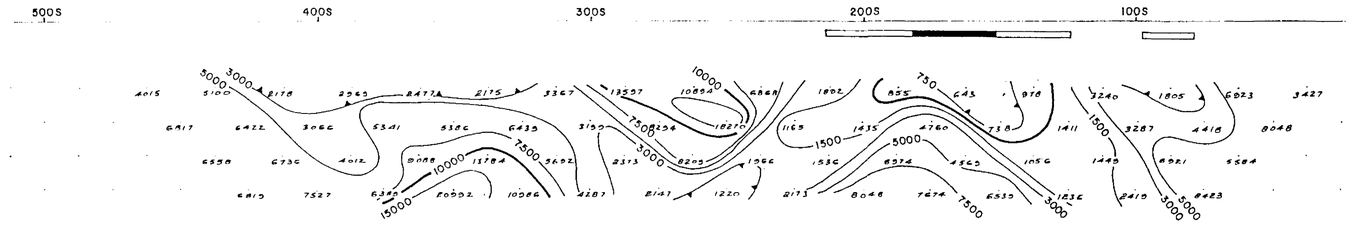
EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B. Bonwell
DRAWN BY: R.T.M.
DATE: Oct. 1997
SCALE: 1:1250

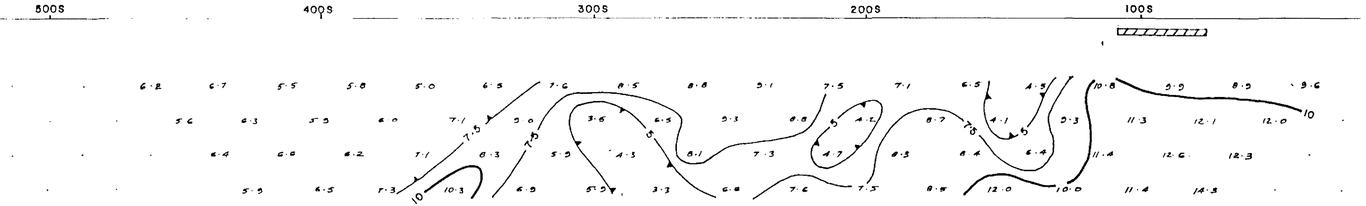
DWG. No. E.I.C. - 2662B

41015SW2007 2.18794 HALCROW 310

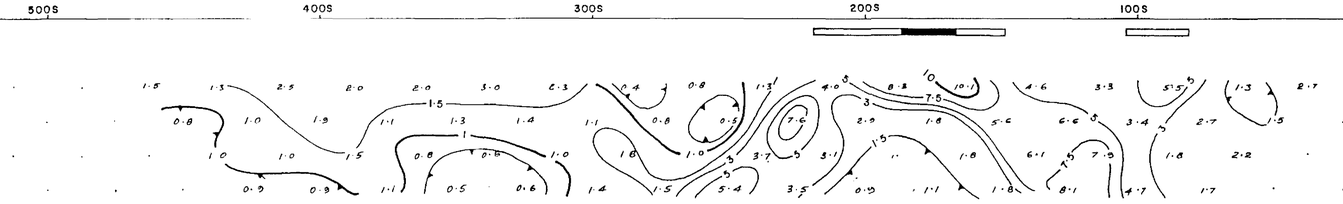
APPARENT RESISTIVITY
(ρa in ohm-m)



APPARENT CHARGEABILITY
(Ma in mv/v)

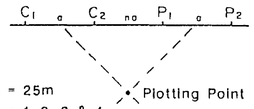


METAL FACTOR
(Ma/ρa x 1000)



ELECTRODE CONFIGURATION

Dipole-Dipole Array



a = 25m

n = 1, 2, 3 & 4

Receiver: Huntec Mk IV

Delay time: 240ms

Integration time: 160ms

INTERPRETED ANOMALIES

- Very strong
- Strong
- Medium
- Weak

All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.

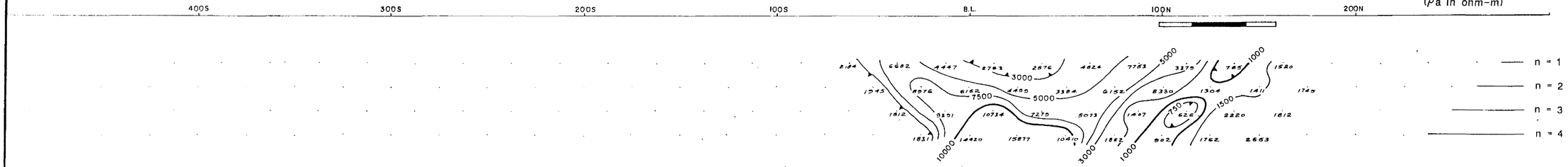
W. TROUP / B. OTTON

LYALL-BEIDELMAN GRID
Halcrow Township, Ontario

TIME DOMAIN IP SURVEY
LINE 9+00E

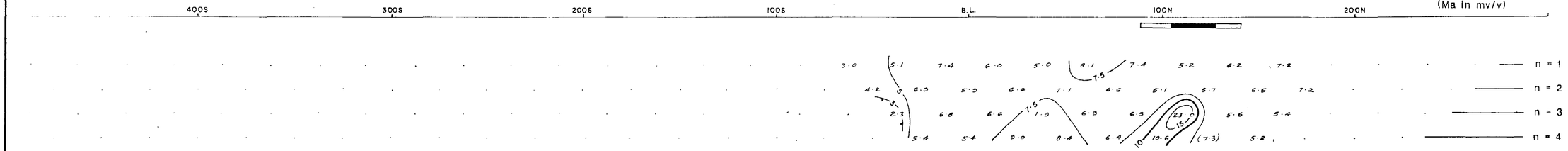
Drawn by: R.T.M.		N.T.S. 41O/NE
Survey by: H. Claridge		Dwg. No. 9
Nov. 1995	Scale 1:1250	

APPARENT RESISTIVITY
(ρa in ohm-m)



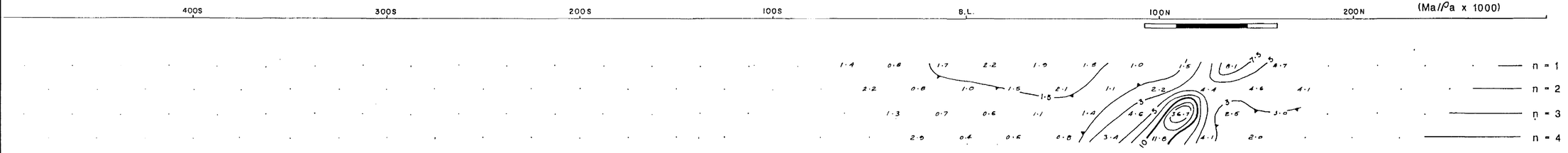
n = 1
n = 2
n = 3
n = 4

APPARENT CHARGEABILITY
(Ma in mv/v)



n = 1
n = 2
n = 3
n = 4

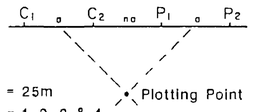
METAL FACTOR
(Ma/ρa x 1000)



n = 1
n = 2
n = 3
n = 4

ELECTRODE CONFIGURATION

Dipole-Dipole Array



a = 25m
n = 1, 2, 3 & 4

Receiver: Huntec Mk IV
Delay time: 240ms
Integration time: 160ms

INTERPRETED ANOMALIES

- Very strong
- Strong
- Medium
- Weak

All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.

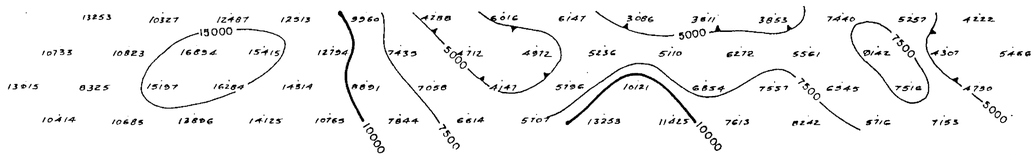
W. TROUP / B. OTTON

LYALL-BEIDELMAN GRID
Halcrow Township, Ontario

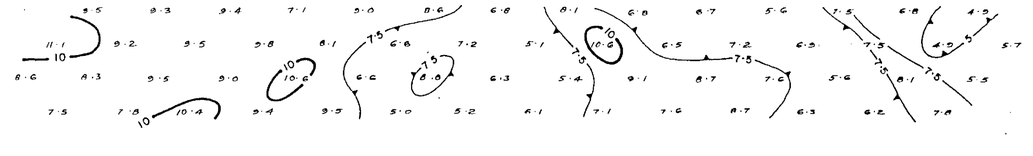
TIME DOMAIN IP SURVEY
LINE 4+00E

Drawn by: R.T.M.	N.T.S. 41O/NE
Survey by: H. Claridge	Dwg. No. 10
Nov. 1995	Scale 1:1250

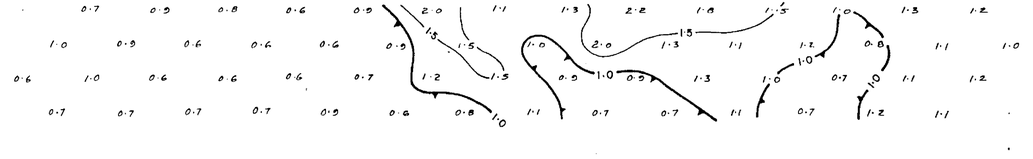
APPARENT RESISTIVITY
(ρa in ohm-m)



APPARENT CHARGEABILITY
(Ma in mv/v)

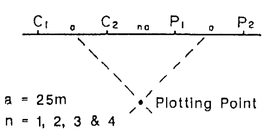


METAL FACTOR
(Ma/ρa x 1000)



ELECTRODE CONFIGURATION

Dipole-Dipole Array



a = 25m

n = 1, 2, 3 & 4

Receiver: Huntec Mk IV

Delay time: 240ms

Integration time: 160ms

INTERPRETED ANOMALIES

- Very strong
- Strong
- Medium
- Weak

All contours at logarithmic intervals of 1, 1.5, 3, 5, 7.5, 10 etc.

W. TROUP / B. OTTON

LYALL-BEIDELMAN GRID
Halcrow Township, Ontario

TIME DOMAIN IP SURVEY
LINE B.L. 00

Drawn by: R.T.M.	N.T.S. 41O/NE
Survey by: H. Claridge	Dwg. No. 11
Nov. 1995	Scale 1:1250