GRAVITY, MAGNETIC SURVEYS

ISAIAH CREEK CLAIMS

CUNNINGHAM TWP., ONTARIO

for

NOBLE PEAK RESOURCES LTD.

by

J. B. Boniwell

Exploration Geophysical Consultant

October 10,1991

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PREAMBLE

An established Zn-Cu-Pb-Ag mineral horizon within interbedded volcanics, where tested for grade and width in its near-surface manifestations, had been found wanting. However the base metal potential of this stratigraphic lead across the property area would at once be enhanced if it could be shown that more massive sulphides underlay it somewhere along the strike locus. Such objective calls for a geophysical search. On this basis then, since graphite is a component of the mineralization, gravity rather than deep em. surveying has been resorted to for the purpose. In addition, a magnetic coverage of the search grid was carried out contemporaneously to obtain complementary information.

DESCRIPTION OF PROPERTY

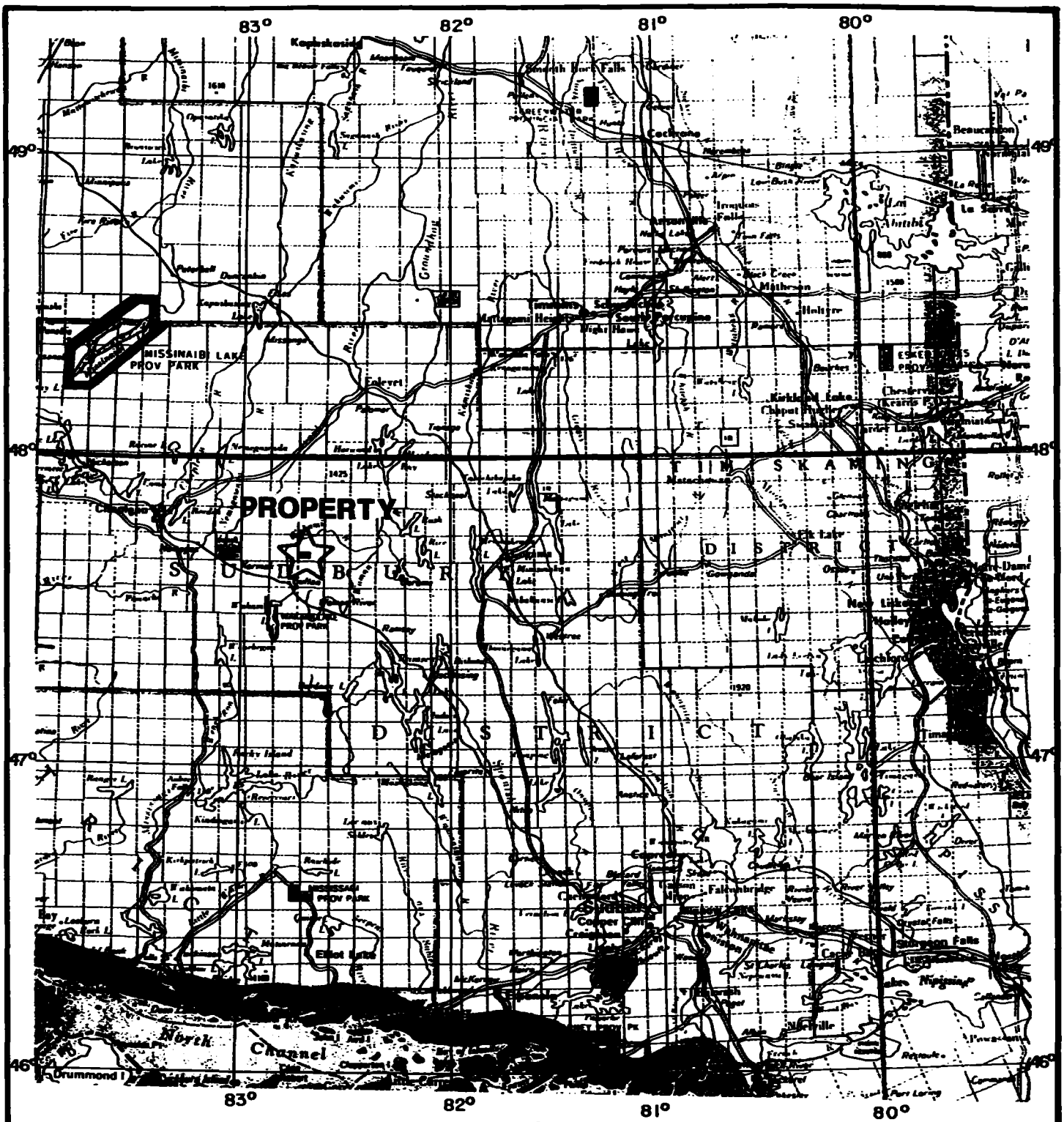
The subject Isaiah Creek property comprises 15 unpatented contiguous claims located in Cunningham Township, Porcupine Mining Division, Ontario (Fig. 1). The individual claims are identified as:

P 1158590 - 1158604 inclusive.

Together they form a block 3 claims wide oriented E-W, offset north by one claim width in the east. Isaiah Creek itself transects the northeast corner of this grouping (Fig. 2).

The recorded holders of these claims is Alcanex Ltd., 1365 Clarkson Rd. Nth., Mississauga, Ontario, L5J 2W6.

Access to the property is by logging roads to Isaiah Creek to within 800 m of the south boundary. The jumping off point for such roads is the village of Sultan situated on the trans-continental CPR line 11 miles to the south. Sultan also locates on Highway 669, the main road connecting Gogama and Chapleau, two towns lying in the region southwest of Timmins.



NOBLE PEAK RESOURCES LTD.

ISAIAH CREEK CLAIMS
Cunningham Twp., Ontario

LOCATION MAP

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY:	J. B. B.
DRAWN BY:	R.T.M.
DATE:	October 1991
SCALE:	1: 2,000,000
DWG. No. E.I.C.-	2383

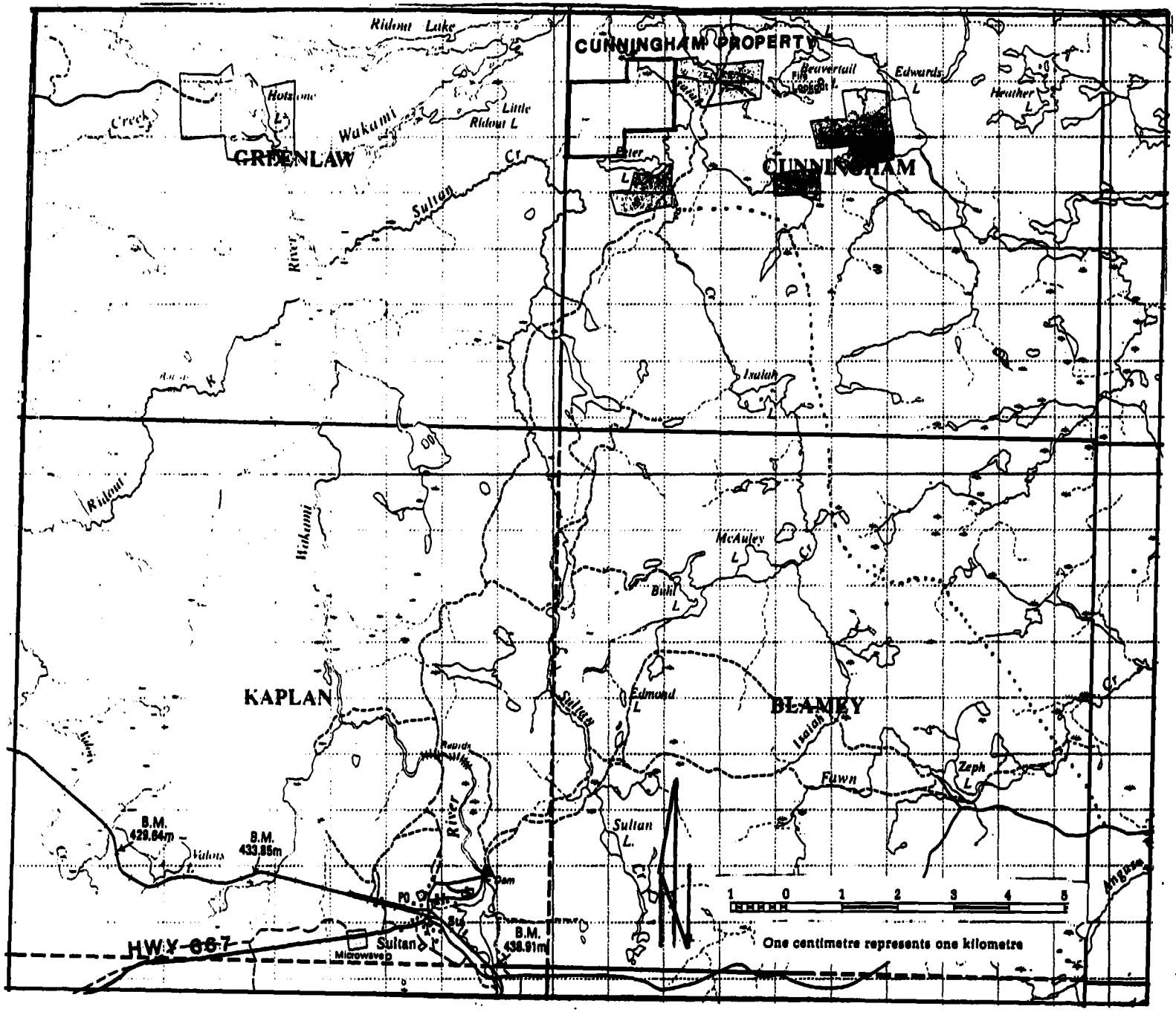
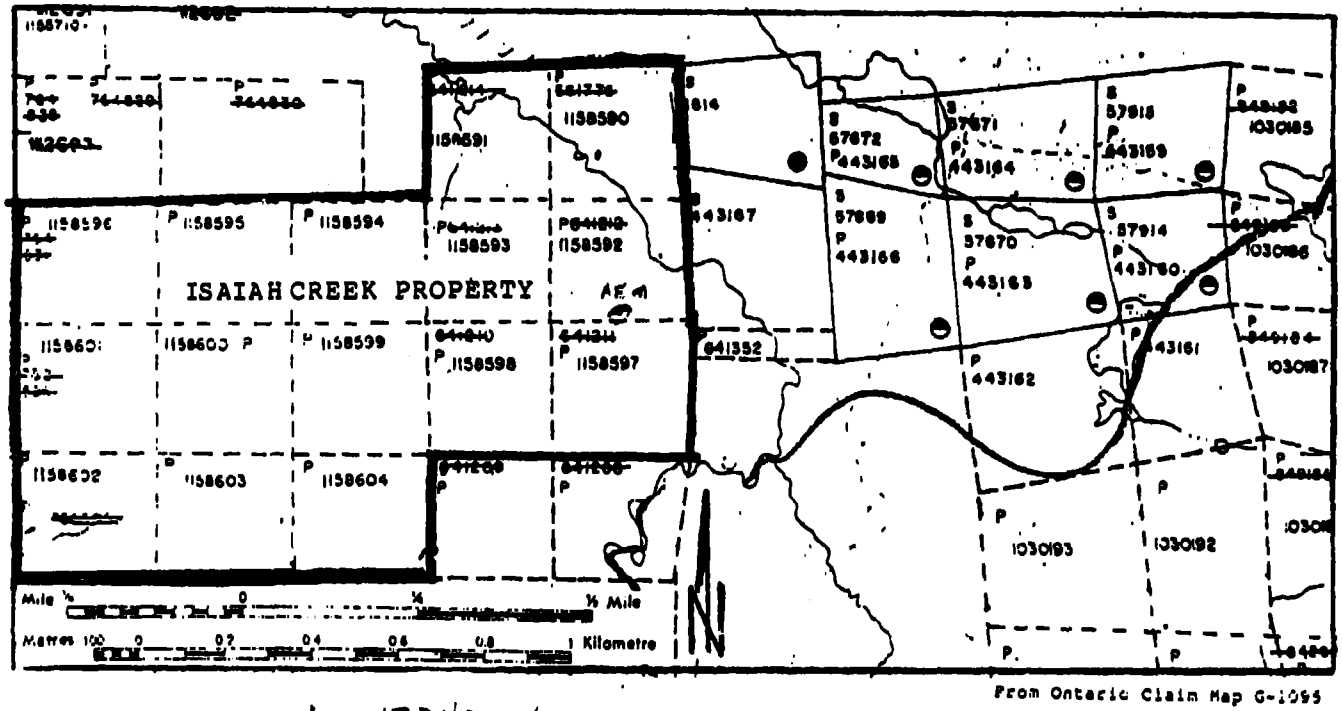


Figure 1 Property Location Map



1: 17200 ✓

CLAIM POSITION -ISAIAH CREEK PROPERTY

FIGURE -2

PREVIOUS WORK

Earlier work in the property environment has already been reported on (W. R. Troup, 1991).

The most recent activity has been the diamond drilling of two holes by Noble Peak Resources Ltd. These probings tested the mineralized stratigraphy near its outcrop at the property east limits and on its projected extension southwest into the covered ground adjacent to the creek. Results of these samplings, as well as all prior information as deemed pertinent, are drawn upon in the considerations which follow as a consequence of the present geophysics.

DETAILS OF SURVEY

A. Gravity

i) General

The requisite survey was carried out in the period 19th - 24th September 1991 under contract to Claridge La Rose Geophysics Ltd. of Bracebridge, Ontario.

Gravity measurements were obtained at 40 m intervals along six lines 100 m apart. The lines approximated 1200 m in length. The meter employed was of the Worden type, a Scintrex model CG-2 with a scale constant of 0.10275 mgal/div. Base stations were established along the tie-line 800N to facilitate the monitoring of instrument drift during the currency of the survey. All occupied gravity stations were levelled topographically to within 0.05 of a vertical foot.

ii) Instrument Drift

As it turned out, instrument drifts were more erratic and excessive than normally desired in a field operation. The changes appeared temperature-driven however, and a degrading vacuum within the instrument casing seemed likely responsible.

Field work was slowed as a result since base checks needed to be made more frequently than usual and sections of line repeated to ensure veracity. Notwithstanding, the final data are considered valid to within normal limits of error.

iii) Data Processing

The observed readings after standard corrections for diurnal were brought to a common datum and converted to the Bouguer gravity value by assuming a density of 2.67 gms/cc for the country rocks near-surface. No corrections were made for latitude nor for local terrain effects surrounding a station. Both these contributions were deemed too small or too gradual to warrant their separate computation; both could be relegated safely to background where they could be treated as part of the regional.

iv) Determination of Regional Gravity

A trend surface was fitted to the Bouguer data set by graphical means. In essence, the shape of this surface is curvilinear increasing to the north and slightly to the east. Overall, it appears simple and orderly, and in itself quite credible as a long wave length regional component. However there

are some unusual departures from it, chiefly on lines 2W and 3W, which are sustained beyond normal local anomaly. As a consequence and because they are perceived due to a major cross-structure, these changes have been largely lumped in with the regional (Dwg. No. EIC-2379) rather than being retained as residual events.

B. Magnetic

This surveying was completed by Noble Peak Resources Ltd. employing a Geometrics G-816 nuclear precession magnetometer with a reading sensitivity of 1 nT. Base station looping carried out during the survey operation monitored diurnal change and provided for accuracies in the order of ±5 nT. The principal base station was located at 100W/420N. Readings along line were taken at 20 m station intervals, closing up to 10 m in sections of higher gradient.

Once corrected for diurnal shift, observed data have been brought to a common datum, individual values posted in plan and contoured at a primary contour interval of 100 nT. The result (Dwg. No. EIC-2381) is used hereunder in conjunction with the gravity map set, together with all other information to appraise the area and its potential.

DISCUSSION OF RESULTS

A. Gravity

The plan of residual gravity (Dwg. No. EIC-2378), which embodies all the excursions of Bouguer gravity above and below the accepted trend surface, is remarkable for its relief.

The most pronounced feature to emerge is a sprawl of low which occupies the middle of the grid. In its axial dispositions, it has several arms; the main one however broadly bears NE-SW in coincidence with the sedimentary unit hosting the iron formation. This outcome immediately infers that the lower density of the host, a graphite-carrying argillite, is more dominant than the included sulphide/oxide mineralization. Notwithstanding, it is evident that within this context the latter does give rise to its own expressions, albeit modestly.

The target mineral horizon in fact appears in outrop in two separate but strike-related sectors of the grid. In both places, local gravity increases can be held to exist in correlation; however one -- at 665N/00 at the eastern limit of the grid -- is barely perceptible (<0.03 mgal), and rightly should be regarded as within noise. The other at 460N/300W, is more plain,

exhibiting a 0.34 mgal peaking (Dwg. No. EIC-2377), yet even in this case it resides within a gravity trough so deep that it does not break through into the positive levels above the regional surface. This is disappointing since it means a comparatively weak mineral system will remain the probability here. Certainly no strong indications of a more massive concentration appears within this stratigraphic realm.

The best gravity anomalies in the area relate to gabbro intrusion on outcrop evidence. These rocks indeed appear more massive than the mapped ultramafic peridotite which in itself may be partially serpentinized -- the AEM actually suggests it in one place --, and they naturally would be more dense than the neighbouring granite pluton. Gabbros in fact bracket the search area, and thus it is fitting that most of the positive residual anomaly obtained should encompass the central low of above note.

Another gravity trough to the north of the area is wholly formational in character and supposes that a second band of sediments might exist there. By general report, it is not mineralized. These would be stratigraphically higher sediments on the evidence and so belong to another cycle. Given the south dips locally prevalent in the grid area, the whole sequence would therefore be overturned.

The central low is well placed in this scheme of things, however it is a low with a very distinctive centre, circa 556N/300W. In gravity terms, this is salient: values within it plunge a further 0.5 mgal below the level of its immediate surrounds. It is in effect a sink, one that signifies a strongly local mass deficiency. Thus what it is caused by warrants consideration.

It is almost certain that several factors are in play. One is structure. Radiating from this centre are two other arms of trough. Although not colinear, they together imply a throughgoing axis bearing crudely NNW. This curved alignment can be attributed to a cross-fault, one in fact related to the Isaiah Creek Fault system whose chief axis is positioned on the grid west side 300 m away and sub-parallel. There is hint too of a second cross-structure intersecting the first bearing NE. The combination suggests that zones of shattering have been developed here which later have been gouged by glaciation and subsequently in-filled with overburden materials.

In addition, these same structures may have controlled local venting and later intrusion, the latter felsic necessarily. Associated with such events is a potential alteration, chloritic and sericitic in nature which reduced rock densities along the structural axes. Indeed, the granite pluton to grid south may

well have been a source of geothermal fluids which exploited the passage-ways so afforded them by the outgoing fault structures. However none of these speculations are particularly helpful from the point of view base metal mineralization but they do appear appropriate to gold. This possibility merits more research, since gold is not known to be an important component of the region's mineralogy.

B. Magnetics

There exists a fair amount of magnetic relief across the grid area, ranging from a low of 57,700 nT to a high of 65,000 nT. Most of the changes are local and shallow-seated. They pertain chiefly to the iron formation at grid centre and the noted peridotite body at the BL. Further local activity in this latter vicinity suggests that there exist satellite ultramafic intrusion(s) in proximity.

The gabbros are generally quiescent, save for spot irregularities, and the volcanics and sediments tend to be essentially non-magnetic.

The one intriguing aspect of the data set is a slow fall-off to the south from the iron formation peakings on lines 300W and 400W. At first glance, this represents a dip-slope to the iron

formation unit as it disappears south under an increasing cover of overlying strata. Attractive as this idea may be, it unfortunately does not stand up under close scrutiny, and even if it did, both the gravity and the magnetics imply that any mineralization associated with it in depth would not be any better than already seen. The real probability on the other hand is that if anything more dense and slightly magnetic is buried here, it would be a mafic to ultramafic intrusion. The gravity high at 400N/00 on geophysical strike in fact portends it; there, it is clear that gabbro is the underlying cause to local increases in gravity and magnetics.

C. Electromagnetics

The past em work which has been conducted in the area on the ground has all been effected with horizontal loop configurations (MaxMin II). Operational frequencies used were variously 444 Hz and 1777 Hz; intercoil separations were 80 m, 100 m, 200 m.

The chief findings were a pair of conductor axes detected in the setting of the mineralized outcroppings. However contrary to first perceptions, these conductors are not in direct correlation with the iron formation, rather they flank it to either side; also it is apparent that the conductor labelled 'C' (by Kidd

Creek Mines Ltd.) relates to condutor 'A' at the east side (lines 00, 100W) where incidentally no second conductor exists (unless it is at 600N/100W). These latter circumstances indeed have been corroborated by drilling (DDH 91-1-1).

The second conductor in the west, (where it is labelled 'A') is therefore effectively confined between lines 300W and 400W. It lies to the south side of the mineralized horizon, thus at a lower stratigraphic level, and locally has never been drilled. Since conductor 'A' has been shown largely due to graphitic argillites, it is likely the second will prove to be similarly derived. While this relationship has yet to be fully established, nevertheless the conductor actually occurs in near coincidence with the south sedimentary contact, and possesses, if anything, a slight gravity decrease in correlation.

In short, these em. indications do not add up to the kind of target sought by the present programme.

RECOMMENDATIONS

As a consequence of this evaluation, no further exploration effort directed to the massive sulphide potentialities of the grid environment is recommended.

In the case of gold, it is advocated that some further research be undertaken, both from the structural and intrusive standpoint and from the perspective that gold was introduced regionally as part of a late-stage mineralizing event. If any return is made to the grid for any exploration purpose whatsoever, it is specifically recommended that humus and/or basal till samples be collected over the premier gravity low at grid centre and that they be analyzed for gold and arsenic, also that a VLF survey be conducted over the current grid. Encouragement potentially could lead to a test drilling of what gravity has so unusually provided here.

JBB:sb

October 10, 1991

J. B. Boniwell

Exploration Geophysical Consultant

REFERENCES

1) W. R. Troup, 1991; Summary work report for 1991 on Isaiah Creek property, Cunningham Township; private report for Noble Peak Resources Ltd.

2) W. R. Troup, 1991; Summary drill report, Isaiah Creek property. Cunningham Twp., NTS 41-0/NE; private report for Noble Peak Resources Ltd.

3) Kidd Creek Mines Ltd. Geology, Peter Lake North Grid, Cunningham Twp., 1:2,000, by Lindsay, Mullen 1983.

4) Kidd Creek Mines Ltd. Horizontal Loop Em, Peter Lake North Grid, Cunningham Twp., 1:2,000, 1983.

5) OGS 1976 Chapleau - Foleyet geologic compilation series, Map 2221, 1" = 4 miles.

APPENDIX

ASSESSMENT INFORMATION

Dates of survey	:	9 - 23 September, 1991
Prepared lines	:	9.78 kms
Magnetic stations:		446 (7.46 kms)
Gravity stations	:	162 (6.25 kms)
Field operations	:	i) W.R. Troup, B. Otton, Mississauga, Ontario.
		ii) Claridge LaRose Geophysics Ltd., Bracebridge, Ontario.
Interpretation, reporting	:	J. B. Boniwell, Excalibur International Consultants Ltd. Mississauga, Ontario.

Ontario

Ministry of Northern Development and Mines

Geophysical-Geological-Geochemical Technical Data Statement

File _____

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Magnetic, Gravity

Township or Area Cunningham Twp.

Claim Holder(s) Alcanex Ltd., 1365Clarkson Rd.,
Mississauga, Ont. L5J 2W6

Survey Company Claridge La Rose Geophysics Ltd.

Author of Report J.B.Boniwell

Address of Author 10 Hurontario St., Mississauga, Ont.

Covering Dates of Survey 9 - 23 Sept., 1991
(linecutting to office)

Total Miles of Line Cut 9.8 kms.

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
—Electromagnetic	
—Magnetometer	40
—Radiometric	
—Other	20
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: _____ SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	1158590
	1158591
	1158592
	1158593

If space insufficient, attach list

TOTAL CLAIMS 4

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations: 381 mag., 162 gravity — Number of Readings: 446 mag., 162 gravity

Station interval: 10m, 20m mag., 40m gravity — Line spacing: 100m

Profile scale: 1cm = 0.20mgal; gravity

Contour interval: 100nT magnetics, 0.10 gravity

MAGNETIC

Instrument: Geometrics G 816

Accuracy – Scale constant: 1nT

Diurnal correction method: base station looping

Base Station check-in interval (hours): 2hrs.

Base Station location and value: 100W / 420N

ELECTROMAGNETIC

Instrument:

Coil configuration:

Coil separation:

Accuracy:

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency: (specify V.L.F. station)

Parameters measured:

GRAVITY

Instrument: Scintrex CG-2

Scale constant: 0.10725 mgal / div.

Corrections made: Bouguer at 2.67 gms / cc. near-surface density;
separation of residual and regional components by trending.

Base station value and location: 58.09 mgals, line 00/BL

Elevation accuracy: 0.05 vertical foot

INDUCED POLARIZATION RESISTIVITY

Instrument:

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time — Frequency

– Off time — Range

– Delay time

– Integration time

Power:

Electrode array:

Electrode spacing:

Type of electrode:

NOBLE PEAK RESOURCES LTD.

GEOCHEMICAL SAMPLING SURVEY

ISAIAH CREEK CLAIMS

CUNNINGHAM TOWNSHIP ONTARIO

N.T.S. 41/0/NE

OCTOBER 1991

W.R. Troup
Alcanex Ltd.
Toronto

Alcanex Ltd.
Toronto

SUMMARY

In September 1991, rock and humus geochemical sampling was completed over select portions of the Isaiah Creek Property. Outcrop was found to be very sparse in the western half of the property.

Humus sampling over known cu-zn mineralization in the NE sector of the property (ie. the area of drill hole 90-1-1) produced anomalous values in both zinc and gold, and confirm the usefulness of the technique in evaluating extensions of the mineralized chert horizon. Follow-up humus and rock sampling, along strike of the mineralized chert horizon, near the east property boundary returned encouraging values in zinc and copper.

PROPERTY LOCATION AND ACCESS

The Isaiah Creek property consists of 15 unpatented claims located in the Porcupine Mining Division of Ontario. The claims are indicated on claim map G–1095, a portion of which appears on figure 2 of this report.

Cunningham township is located approximately 125 miles north of Sudbury, and 80 miles southwest of Timmins. The main highway between Gogama and Chapleau passes 11 miles south of the claim group. A network of logging roads provide access to within 2,640 feet of the south property boundary.

PREVIOUS WORK

Numerous companies and individuals have worked and prospected throughout Cunningham Township since early in the 1900's. To date, work has been focused on lead and zinc mineralization found in several bands of iron formation, of which the most notable is the Shunsby prospect in the north central part of the township.

Cunningham Township was mapped for the Ontario Department of Mines, by V.B. Meen, in 1941, and for the Ontario Geological Survey, by G.M. Siragusa, in 1978.

The Ontario government flew a Questor A.E.M. Survey over Cunningham Township in 1980. A series of anomalies were outlined along trend of the mineralized chert iron

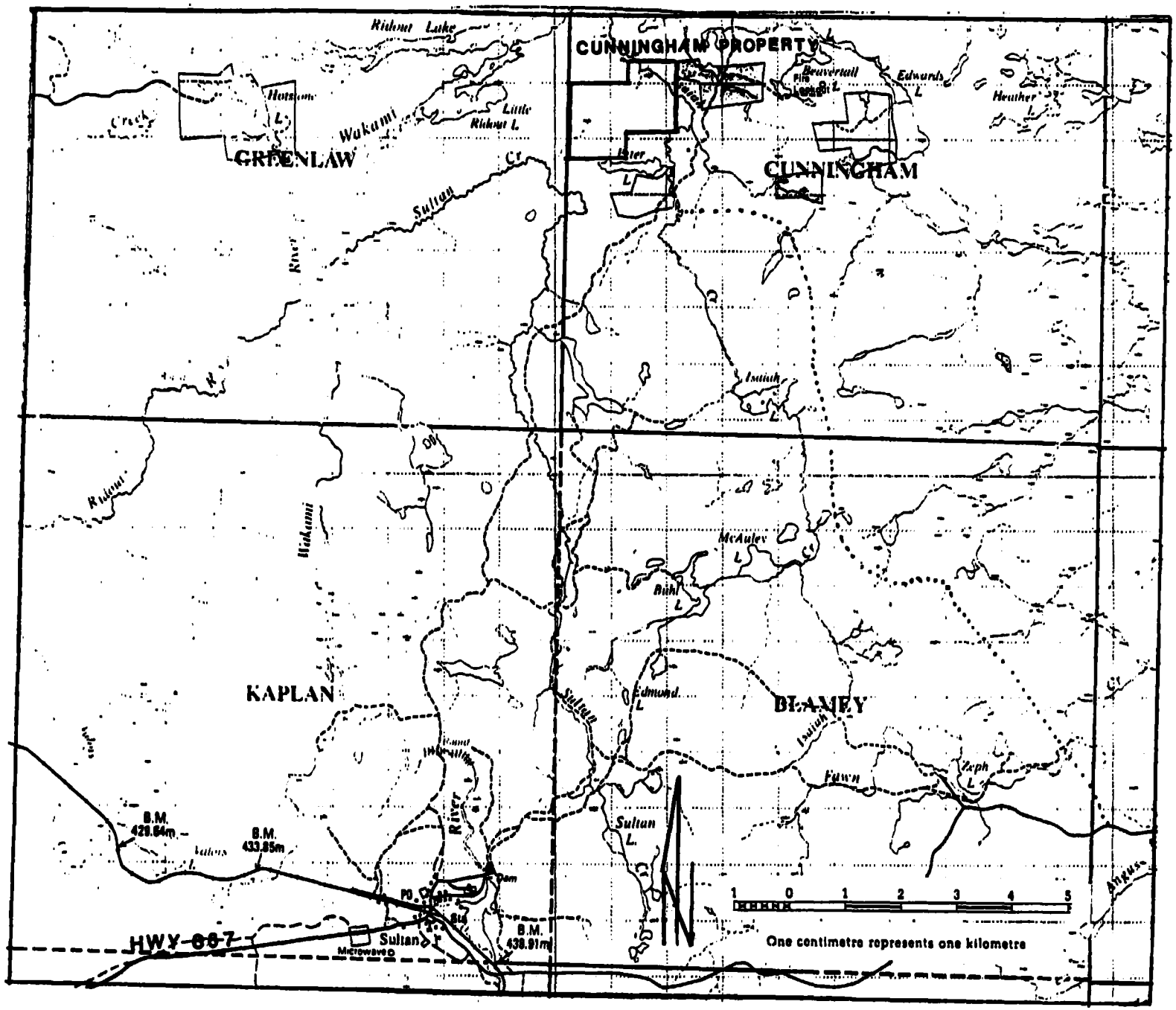
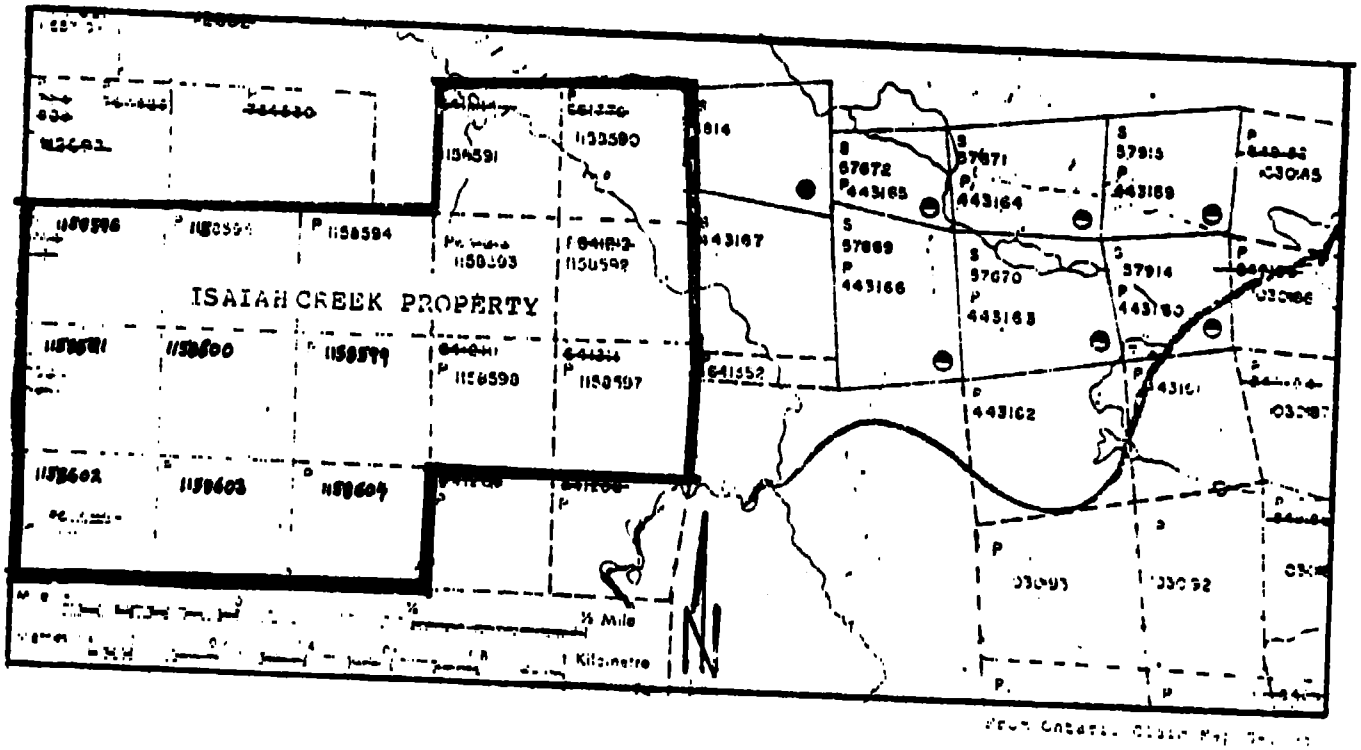


Figure 1 Property Location Map



CLAIM POSITION -ISAIAH CREEK PROPERTY

FIGURE -2

In 1983, Kidd Creek Mines completed geological mapping and ground geophysics over the eastern portion of the property and confirmed a bedrock origin to A.E.M. anomalies present in the area.

W. Troup and B. Otton completed surface sampling and ground geophysics (H.E.M. Survey) over the east portion of the claim group in June and July 1991. Copper – Zinc mineralization was encountered in the area of the main mineralized chert horizon in the northeast corner of the property.

In August, Noble Peak Resources completed 343.6 metres of drilling in two holes to test the mineralization chert horizon and its strike extension. Stringer sphalerite–chalcopyrite mineralization was encountered in both holes.

In conjunction with the current surface sampling, Noble Peak completed a combined gravity and ground magnetic survey over the main mineralized horizon. The gravity survey, which is described in a separate report by J. Boniwell, did not locate any significant gravity anomalies in the area of the chert horizons.

GEOCHEMICAL SURVEY

(1) Humus Geochemistry

Humus samples were collected over the area of the known copper–zinc showing on line 63W and submitted to X–ray Assay Laboratories, in Toronto, for analyses by Neutron Activation. The test line confirmed the effectiveness of the technique under existing overburden conditions. Zinc values of up to 2100 ppm were obtained from the area of the showing while background values are in the range of 90–100 ppm. Gold values of up to 8ppb occur against a background of 1–2 ppb.

A second humus line collected near the eastern claim boundary returned values of up to 3600 ppm zinc and 6 ppb Au, suggesting that the zinc mineralization may increase in content along strike to the east.

ROCK GEOCHEMICAL SAMPLING

Several rock samples were collected from the chert–argillite horizon near the eastern property boundary. Analyses of select sulphide rich samples from this area returned up to 9.7% zinc, 3.7% lead and 0.1 % cu. the purpose of this sampling was

to determine if the precious metal content of the sulphide rich zone might increase along strike. The gold and silver values were found to be consistent with those reported from the sulphide rich section of drill hole 91.1.1 to the west.

Analyses of select samples of chalcopyrite veining from an area to the south of the main showing (in 0+90m N, 0+30m east) returned no significant gold or silver values.

Traversing of the west portion of the claim block resulted in the discovery of minimal outcrop in the area of known E.M. anomalies. and the cause of these weak anomalies remains unresolved. Select sampling of sheared and sulphide enriched volcanics to the north and south returned no significant values in gold or base metals.

CONCULUSIONS AND RECOMMENDATIONS

Rock and Humus sampling indicates the Cu-Zn bearing chert horizon continues eastward beyond the eastern limits of the Isaiah Creek Property.

Surface Sampling and E.M. surveying indicates the sulphide content may in fact increase eastward.

The Gravity Survey located no significant anomolies that would indicate the presence of a massive suphide deposit at shallow depth.

Future base metal exploration should focus on evaluating the strike extention of the mineralized chert horizon beyond the limits of the present survey. Further consideration might also be given to a deep geophysical evaluation of favourable portions of the property.

REFERENCES

1) J.B. Boniwell 1991, Gravity, Magnetic Surveys Isaiah Creek Claims Cunningham TWP, Ontario, private report for Noble Peak Resources Ltd.

2) W.R. Troup, 1991 Summary work report for 1991 on Isaiah Creek property, Cunningham TWP., NTS 41-0/NE: private report for Noble Peak Resources Ltd.

3) W.R. Troup, 1991 Summary drill report, Isaiah Creek property, Cunningham TWP., private report for Noble Peak Resources Ltd.

4) Kidd Creek Mines Ltd. Geology, Peter Lake North Grid, Cunningham TWP., 1:2,000, by Lindsay, Mullen 1983.

5) Kidd Creek Mines Ltd. Horizontal Loop Em, Peter Lake NorthGrid, Cunningham TWP., 1;2,000, 1983.

6) OGS 1976 Chapleau – Foleyet geologic compilation series, Map 2221, 1" = 4 miles.

APPENDIX I

LIST OF GEOCHEMICAL SAMPLES

LIST OF SAMPLES

Rock Sample	Location	Type	Description
1501	8+50W/1+00S	-grab	-sheard mafic volcanic's +carbonate alteration
1502	1+00N/0+30E	-grab	-sheared mafic volcanic's cut by 2cm. wide cpy veinlet.
1503	~6+40N/near east property boundary	-grab	-argillite with graphite & pyrite.
1504	as per 1503	-grab	-argillite with trace to 5% diss. py.
1505	as per 1503	-grab	-cherty argillite with py, po & cpy.
1506	as per 1503	-grab	-cherty argillite with trace py.
1507	~0+00,~14N	-grab	-py rich margin of 8.v. - angular boulder
1524	as per 1503	-grab	-5-10% py, -10-15% (galena + sphalerite)
1525	as per 1503	-grab	-cherty argillite + 3% py

SAMPLE	LOCATION	TYPE	DESCRIPTION
1526	-as per 1503	-grab	-pyrite rich mafic volcanic's
1601	-50mW of claim post 1158603 -#2	-grab	-mafic volcanic's - sheared & carbonated (ankerite)
1602	-20m.W of 1601	-grab	-sheard, carb alt'd m.v - tr-1/2% py
1603	-12+00W, near north property bdry.	-grab	-mafic volcanic tr-1% py & minor minor carb.
1604	-0+15E, 0+48N	-grab	-matic volcanics - 1% fine diss py -carbonate + trace cpy.
1605	~6+40N, near east property boundry	-grab	-sheared cherty iron formation-py + po present
1606B	~0+00,13+00N	-grab	-1% py on margin of q.v. trending 48 deg. & verticle - host pillowed m.v.

HUMUS SAMPLES

Sample #	Location
Line 0+63W	
L 0+63W – 6+00N	Grid locations same as sample #'s
L 0+63W – 6+20N	
L 0+63W – 6+30N	
L 0+63W – 6+40N	
L 0+63W – 6+50N	
L 0+63W – 6+70N	
L 0+63W – 6+80N	
L 0+63W – 6+90N	

Sample #	Location
Line Lx	near east property boundry,
LX +0+50S	~approximate location 5+90N on Isaiah Grid
LX +0+40S	~ 6+00N
LX +0+30S	~ 6+10N
LX +0+20S	~ 6+20N
LX +0+10S	~ 6+30N
LX +0+00N	~ 6+40N
LX +0+10N	~ 6+50N
LX +0+20N	~ 6+60N

LX Series	Location
LX +0+30N	~ 6+70N
LX +0+40N	~ 6+80N
LX +0+50N	~ 6+90N
LX +0+60N	~ 7+00N
LX +0+70N	~ 7+10N
LX +0+80N	~ 7+20N

APPENDIX II

ASSAY LISTING

XRAL

A DIVISION OF SGS SUPERVISION SERVICES INC.
1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA
TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 17116

TO: NOBLE PEAK RESOURCES
ATTN: W.R. TROUP
2338 HURONTARIO STREET, 4TH FLOOR
MISSISSAUGA, ONTARIO
L5B 1N1

CUSTOMER No. 620

DATE SUBMITTED
4-Oct-91

REF. FILE 11006-N1

Total Pages 1

16 ROCKS Proj. ISAIAH CREEK

	METHOD	DETECTION LIMIT
AU PPB	FADCP	1.
CO PPM	DCP	1.
NI PPM	DCP	1.
CU PPM	DCP	.5
ZN PPM	DCP	.5
MO PPM	DCP	1.
AG PPM	DCP	.5
CD PPM	DCP	1.
PB PPM	DCP	2.

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS 90 DAYS ***
AND REJECTS 30 DAYS FROM DATE OF THIS REPORT

DATE 23-OCT-91

CERTIFIED BY .....

Philip Boctor, Laboratory Manager

XRAL

NOTE: As per our list of upper limits in our current schedule of services, some of the results are outside the applicable analytical range. Please contact us should you require assays.

X-RAY ASSAY LABORATORIES 1885 Leslie Street Don Mills Ontario M3B 3J4 (416)445-5755 Fax (416)445-4152 Tlx 06-986947
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KRAL

23-OCT-91 REPORT 17116 REF.FILE 11006-M1

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	MO PPM	AG PPM	CD PPM	PB PPM
1501	3	27	45	89.6	56.8	8	1.1	<1	<2
1502	4	53	107	3780.	168.	8	1.8	1	<2
1503	4	36	45	134.	58.3	10	.7	1	6
1504	3	8	10	47.6	75.4	9	<.5	1	<2
1505	3	6	7	102.	34.5	3	<.5	<1	<2
1506	2	4	7	17.0	11.1	3	<.5	<1	<2
1507	13	39	16	104.	12.5	11	<.5	<1	<2
1524	49	55	151	1040.	97200.	14	16.8	420	39700
1525	12	19	24	195.	8180.	3	3.8	37	7300
1526	48	58	176	8790.	10100.	9	21.3	44	1690
1601	2	16	37	74.6	121.	4	.7	<1	21
1602	5	27	57	142.	73.4	5	1.0	1	4
1603	<1	59	95	134.	93.1	6	1.4	1	<2
1604	4	22	40	75.7	37.9	3	.8	1	3
1605	<1	2	5	5.3	21.6	2	<.5	<1	6
1606-B	2	4	9	7.4	8.6	2	<.5	<1	5

X-RAY ASSAY LABORATORIES 1885 Leslie Street Don Mills Ontario M3B 3J4 (416)445-5755 Fax (416)445-4152 Tlx 06-986947
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XRAL
A DIVISION OF SGS SUPERVISION SERVICES INC.
1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA
TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

RECEIVED NOV 0 1 '91

CERTIFICATE OF ANALYSIS

REPORT 17151

TO: NOBLE PEAK RESOURCES
ATTN: W.R. TROUP
2338 HURONTARIO STREET, 4TH FLOOR
MISSISSAUGA, ONTARIO
L5B 1N1

CUSTOMER No. 620

DATE SUBMITTED
4-Oct-91

REF. FILE 11007-

Total Pages 3

23 HYUMUS Proj. ISAIAH CREEK

	METHOD	DETECTION LIMIT
AU PPB	NA	1.
NA PPM	NA	100.
CA %	NA	.5
SC PPM	NA	.2
CR PPM	NA	1.
FE %	NA	.05
CO PPM	NA	1.
NI PPM	NA	20.
ZN PPM	NA	20.
AS PPM	NA	1.
SE PPM	NA	2.
BR PPM	NA	1.
RB PPM	NA	20.
MO PPM	NA	.5

	METHOD	DETECTION LIMIT
AG PPM	NA	2.
CD PPM	NA	2.
SB PPM	NA	.1
BA PPM	NA	100.
LA PPM	NA	1.
CE PPM	NA	1.
SM PPM	NA	.1
TA PPM	NA	.5
W PPM	NA	1.
IR PPB	NA	10.
HG PPM	NA	.5
TH PPM	NA	.5
U PPM	NA	.1

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS 90 DAYS ***
AND REJECTS 30 DAYS FROM DATE OF THIS REPORT

DATE 24-OCT-91

CERTIFIED BY .....

Philip Boctor, Laboratory Manager

SAMPLE	AU PPB	NA PPM	CA %	SC PPM	CR PPM	FE %	CO PPM	NI PPM	ZN PPM
L063W-6+90N	1	500	3.7	.5	5	.19	2	<20	100
L063W-6+80N	<1	400	.9	.4	7	.17	1	<20	170
L063W-6+70N	2	4100	3.3	3.7	46	1.40	44	40	2100
L063W-6+60N	3	1400	.9	2.2	37	.61	7	<20	260
L063W-6+50N	1	2600	1.0	5.8	130	2.13	11	20	490
L063W-6+40N	8	1100	<.5	1.5	25	2.66	5	<20	390
L063W-6+30N	6	3000	<.5	2.3	79	4.32	5	<20	160
L063W-6+20N	2	400	<.5	.4	6	.15	<1	<20	90
L063W-6+10N	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
L063W-6+00N	3	600	1.1	.6	6	.22	1	<20	160
LX-0+50S	1	500	<.5	.3	6	.15	1	<20	100
LX-0+40S	2	300	1.5	.2	3	.11	1	<20	240
LX-0+30S	3	300	1.7	.4	4	.19	5	<20	130
LX-0+20S	1	300	<.5	.2	4	.12	1	<20	80
LX-0+10S	1	400	<.5	.3	4	.15	3	<20	70
LX-0+00	1	1400	<.5	.7	10	.25	2	<20	90
LX-0+10N	1	1300	.5	.9	16	.75	3	<20	120
LX-0+20N	6	400	.5	.4	8	.37	5	<20	170
LX-0+30N	4	1200	<.5	.8	25	2.63	3	<20	260
LX-0+40N	5	300	2.8	.3	3	.13	1	<20	3600
LX-0+50N	3	300	3.0	.2	3	.13	1	<20	1100
LX-0+60N	5	500	2.7	1.0	14	.73	3	<20	2000
LX-0+70N	1	400	.5	.3	4	.12	2	<20	70
LX-0+80N	2	1700	.6	.6	21	.24	3	<20	120

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	AS PPM	SE PPM	BR PPM	RB PPM	MO PPM	AG PPM	CD PPM	SB PPM	BA PPM
L063W-6+90N	2	<2	17	<20	.8	<2	<2	.8	<100
L063W-6+80N	2	<2	18	<20	.6	<2	<2	.5	100
L063W-6+70N	10	<2	20	20	1.4	<2	27	1.2	200
L063W-6+60N	5	<2	13	20	2.2	<2	3	1.1	200
L063W-6+50N	7	<2	10	20	.6	<2	3	1.0	200
L063W-6+40N	9	2	18	<20	2.4	<2	<2	1.3	100
L063W-6+30N	7	<2	10	<20	2.2	2	<2	.6	100
L063W-6+20N	4	<2	7	<20	<.5	<2	<2	.8	100
L063W-6+10N	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
L063W-6+00N	5	<2	12	<20	.6	<2	2	1.2	<100
LX-0+50S	2	<2	8	<20	.9	<2	2	.6	<100
LX-0+40S	2	<2	12	<20	.8	<2	<2	.5	<100
LX-0+30S	2	<2	14	<20	1.1	<2	<2	.6	<100
LX-0+20S	2	<2	10	<20	<.5	<2	<2	.4	<100
LX-0+10S	2	<2	12	<20	.7	<2	<2	.4	<100
LX-0+00	1	<2	16	<20	<.5	<2	<2	.3	100
LX-0+10N	3	<2	8	<20	.7	<2	<2	.8	100
LX-0+20N	2	<2	8	<20	.8	<2	2	.5	100
LX-0+30N	3	<2	6	<20	1.0	4	2	.9	100
LX-0+40N	2	<2	22	<20	.6	<2	8	.5	<100
LX-0+50N	3	<2	18	<20	.6	<2	2	.5	<100
LX-0+60N	3	<2	16	<20	2.3	<2	6	.5	100
LX-0+70N	4	<2	7	<20	.5	<2	<2	.6	<100
LX-0+80N	4	<2	10	<20	<.5	<2	<2	.7	100

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

SAMPLE	LA PPM	CE PPM	SN PPM	TA PPM	W PPM	IR PPB	HG PPM	TH PPM	U PPM
L063W-6+90N	4	6	.4	<.5	<1	<10	<1	<.5	.1
L063W-6+80N	2	4	.3	<.5	<1	<10	<1	<.5	.2
L063W-6+70N	21	39	2.9	<.5	<1	<10	<1	2.0	.6
L063W-6+60N	6	12	.7	<.5	1	<10	<1	1.0	.3
L063W-6+50N	8	16	1.2	<.5	1	<10	<1	1.3	.4
L063W-6+40N	7	13	.9	<.5	1	<10	<1	1.0	.4
L063W-6+30N	7	15	1.0	<.5	1	<10	<1	.9	.2
L063W-6+20N	2	4	.3	<.5	<1	<10	<1	<.5	.1
L063W-6+10N	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
L063W-6+00N	3	6	.4	<.5	<1	<10	<1	.7	.1
LX-0+50S	2	4	.2	<.5	<1	<10	<1	<.5	.1
LX-0+40S	1	2	.2	<.5	<1	<10	<1	<.5	.1
LX-0+30S	3	5	.3	<.5	<1	<10	<1	<.5	.1
LX-0+20S	2	3	.2	<.5	<1	<10	<1	<.5	.1
LX-0+10S	2	4	.2	<.5	<1	<10	<1	<.5	.1
LX-0+00	6	9	.6	<.5	<1	<10	<1	.6	.1
LX-0+10N	6	10	.6	<.5	<1	<10	<1	.9	.3
LX-0+20N	3	5	.3	<.5	<1	<10	<1	<.5	.2
LX-0+30N	4	8	.5	<.5	<1	<10	<1	.7	.2
LX-0+40N	1	3	.2	<.5	<1	<10	<1	<.5	.1
LX-0+50N	2	3	.2	<.5	<1	<10	<1	<.5	.1
LX-0+60N	9	17	1.2	<.5	1	<10	<1	.9	.2
LX-0+70N	2	3	.2	<.5	<1	<10	<1	<.5	.1
LX-0+80N	3	5	.3	<.5	<1	<10	<1	.5	.2

SMP.MISS. - SAMPLE WAS NOT RECEIVED AT XRAL

APPENDIX III

SAMPLE LOCATION MAP

CERTIFICATE OF QUALIFICATIONS

I, William R. Troup, of Mississauga, Ontario, hereby certify and declare the following:

1. I am a Consulting Geologist and President of Alcanex Ltd., a service company providing geological services and project management to the mineral exploration industry.

2. I graduated from the University of Waterloo with an MSc. degree in Geology in 1975.

3. I have been practising my profession for the past 16 years.

4. I am a fellow in the Geological Association of Canada.

5. I participated in the field program on the Isaiah Creek property during the summer of 1991.

6. The opinions expresses in this report are based on own observations and on a review of government geological reports and assessment files.

William R. Troup, MSc., BSC.,
F.G.A.C.

Mississauga, Ontario
November, 1991

9 Peridotite

8 Felsic Intrusive
8Gr granite, 8Gd granodiorite, 8Md monzodiorite
8lDi leucodiorite, 8Fs felsite, 8Qd quartz diorite

7 Mafic Intrusive
7Ga gabrro, 7Di diorite, 7Qg quartz gabbro

6 QFP quartz feldspar porphyry, QP quartz porphyry
FP feldspar porphyry

5 Metasediments
5b carbonate metasediments, 5cht chert
5arg argillite, 5IF iron formation, 5q quartzite
5wke wacke/sandstone, 5cgl conglomerate

4 Volcaniclastics (general)

3 Felsic metavolcanic
3fl flow, 3flF porphyritic flow, 3t tuff
3lt lapilli tuff, 3tbx tuff breccia

2 Intermediate metavolcanic
2fl flow, 2flF porphyritic flow, 2t tuff
2lt lapilli tuff, 2tbx tuff breccia

1 Mafic metavolcanic
1fl flow, 1flF porphyritic flow, 1p pillowed flow
1t tuff, 1lt lapilli tuff, 1tbx tuff breccia

qv quartz veined
si siliceous
cb carbonaceous
cl chloritic
bi biotitic
gf graphitic
se sericitic
mu muscovite
ep epidote
c calcite
do dolomite
serp serpentine
gt garnet

h,ic hematite, iron carbonate
mt,j magnetite, jasper
py,po pyrite, pyrrhotite
cp,sp chalcopyrite, sphalerite
gl,mo galena, molybdenite

GREENLAW TWP.
CUNNINGHAM TWP.

L18W L17W L16W L15W L14W L13W L12W L11W L10W L9W L8W

L7W L6W L5W L4W L3W L2W L1W L0

T.L. 8N

B.L.

P1158596 P1158595 P1158594

P1158601 P1158600 P1158599 P1158598 P1158597

P1158602 P1158603 P1158604

P1158591 P1158590 P1158593 P1158592

×1803 MV + Carbonate + ~1%py

high ground

Transverse

×1601

×1807

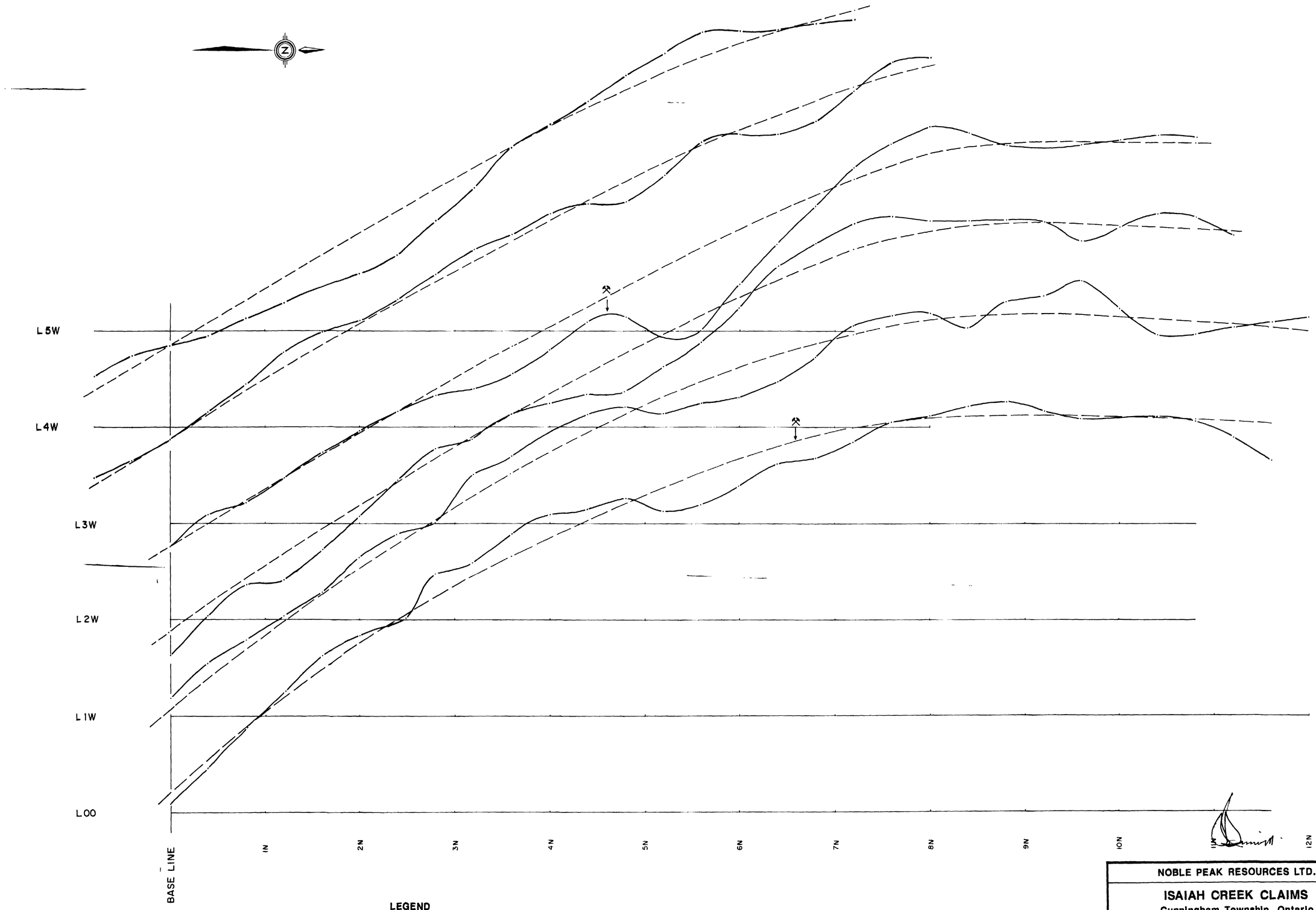
×1808 B qv

1503-08, 1524-26 1606,08 & HUMUS LINE Lx

Moose Spotting Pattern

0 50 100 150 METRES

ISAIAH CREEK PROPERTY
COMPILATION MAP



LEGEND

Bouguer gravity profile
plotted at 1cm = 0.20mgals
(grid line represents base level of 58.00mgals)

Assumed regional surface

Main gossan position

0 100 200 m

Scale 1cm = 20metres

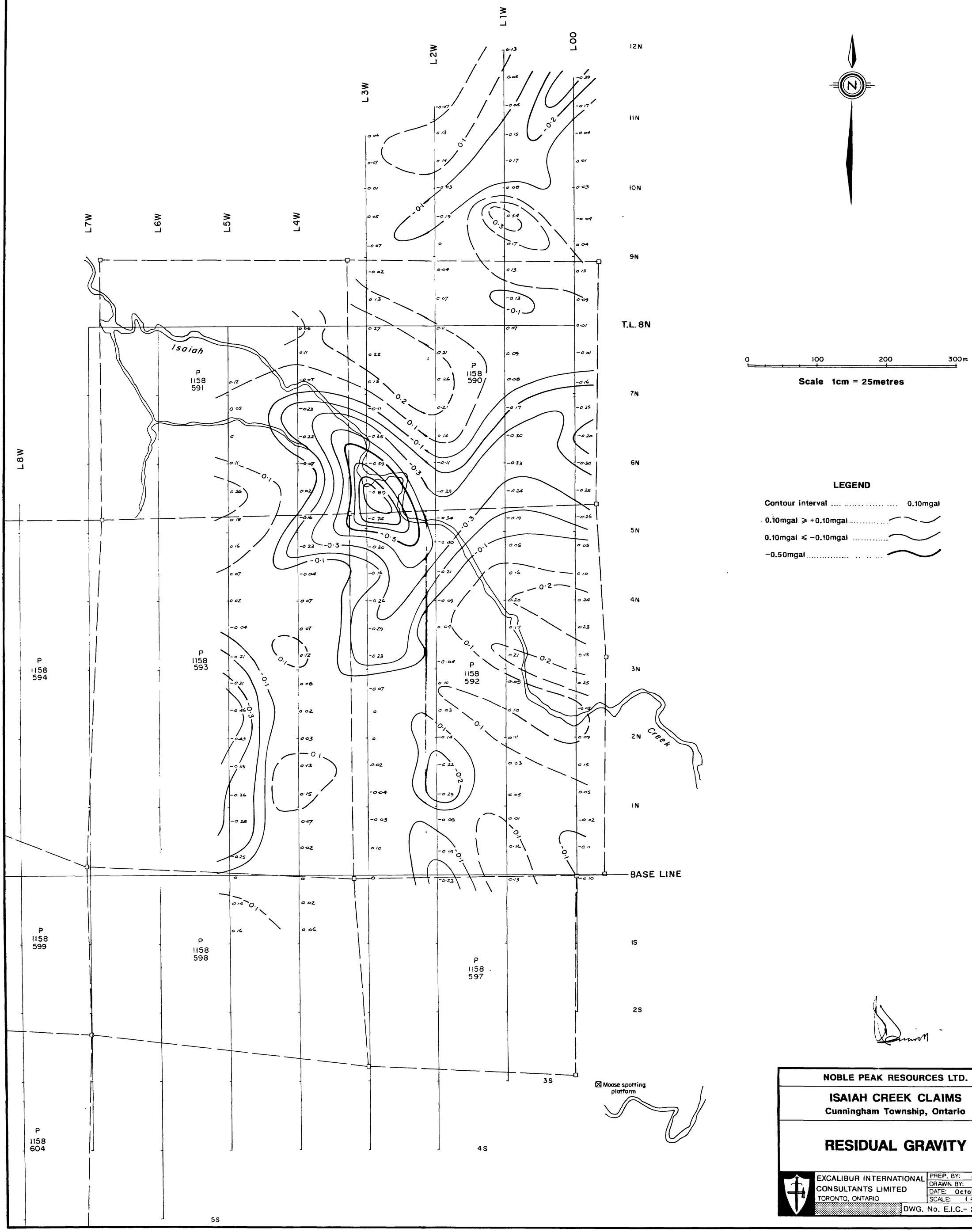
NOBLE PEAK RESOURCES LTD.

ISAIAH CREEK CLAIMS
Cunningham Township, Ontario

STACKED BOUGUER PROFILES

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.B
DRAWN BY: R.T.M
DATE: October 1991
SCALE: 1 : 2000
DWG. No. E.I.C.- 2377



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ISAIAH CREEK CLAIMS
Cunningham Township, Ontario

RESIDUAL GRAVITY

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY:	J.B B.
DRAWN BY:	R.T.M.
DATE:	October 1991
SCALE:	1 : 2500
DWG. No.	E.I.C.- 2378

L7W L6W L5W L4W L3W L2W L1W L00

12N 11N 10N 9N T.L. 8N 7N 6N 5N 4N 3N 2N 1N 1S 2S 3S 4S 5S

L8W

BASE LINE

Isaiah Creek

P 1158 591
P 1158 590
P 1158 592
P 1158 593
P 1158 594
P 1158 597
P 1158 598
P 1158 599
P 1158 604

5.00
4.00
3.00
2.00
1.00

0 100 200 300m

Scale 1cm = 25metres

LEGEND

Contour interval 0.20mgal
above base level of 57.00mgals

0.20mgal contour .....

1.00mgal contour .....

☒ Moose spotting platform

N

NOBLE PEAK RESOURCES LTD.

ISAIAH CREEK CLAIMS
Cunningham Township, Ontario

REGIONAL GRAVITY

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY:	J.B.B
DRAWN BY	R.T.M.
DATE.	October 1991
SCALE:	1 : 2500
DWG. No.	E.I.C.- 2379

L7W L6W L5W L4W L3W L2W L1W L00 L8W

12N 11N 10N 9N T.L. 8N 7N 6N 5N 4N 3N 2N 1N BASE LINE 1S 2S 3S 4S 5S

Isaiah Creek

P 1158 591
P 1158 590
P 1158 592
P 1158 593
P 1158 594
P 1158 597
P 1158 598
P 1158 599
P 1158 604

N

0 100 200 300m

Scale 1cm = 25metres

LEGEND

Contour interval 5.0feet

5.0ft contour .....

25.0ft contour .....

☒ Moose spotting platform

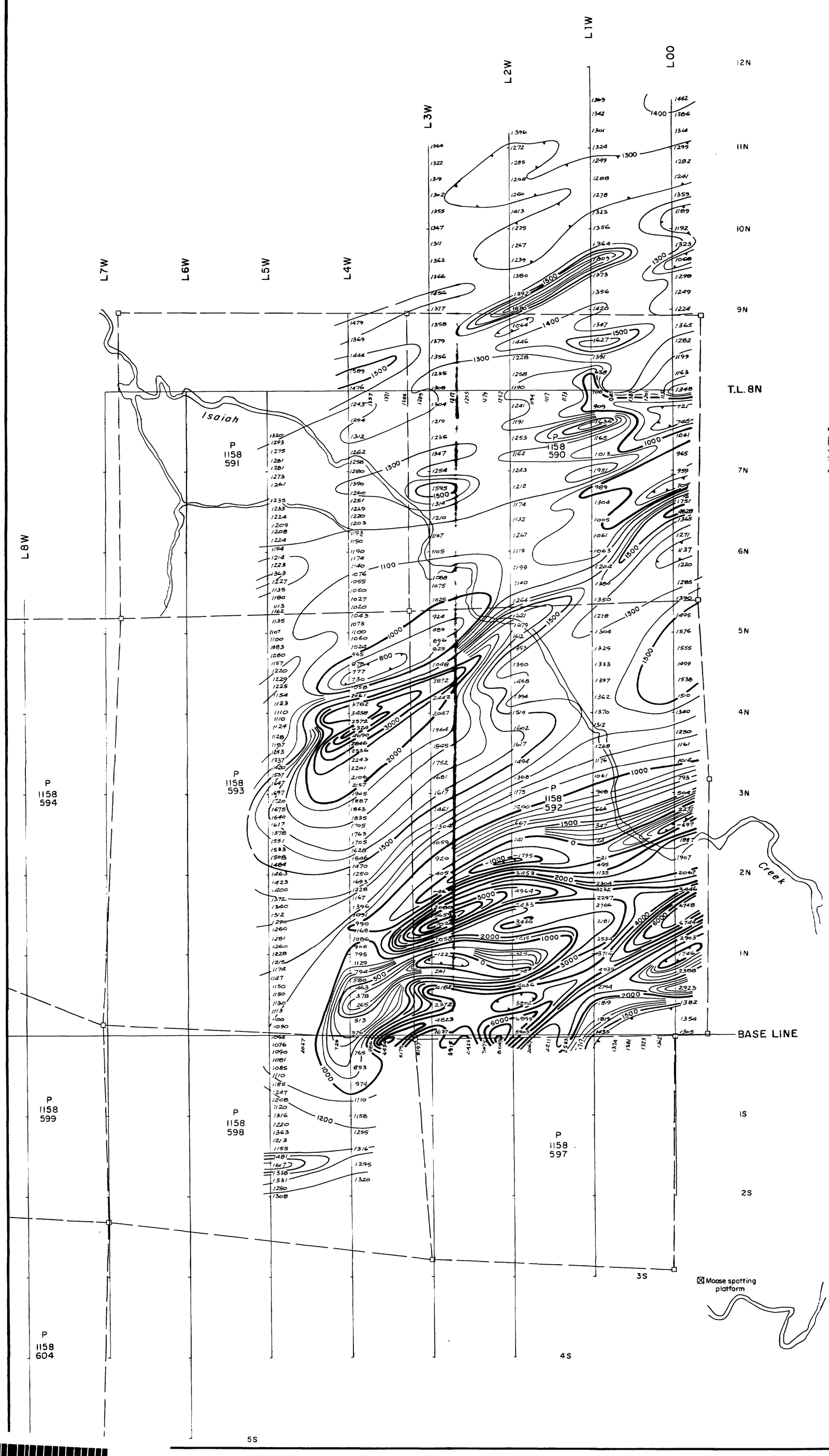
NOBLE PEAK RESOURCES LTD.

ISAIAH CREEK CLAIMS
Cunningham Township, Ontario

TOPOGRAPHY

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J.B.B.
DRAWN BY: R.T.M.
DATE: October 1991
SCALE: 1 : 2500
DWG. No. E.I.C.- 2380



0 100 200 300m

Scale 1cm = 25metres

LEGEND

Contour interval 100nT
± base level of 57,000nT

100nT contour .....

500nT contour .....

1000nT contour .....

Depression .....

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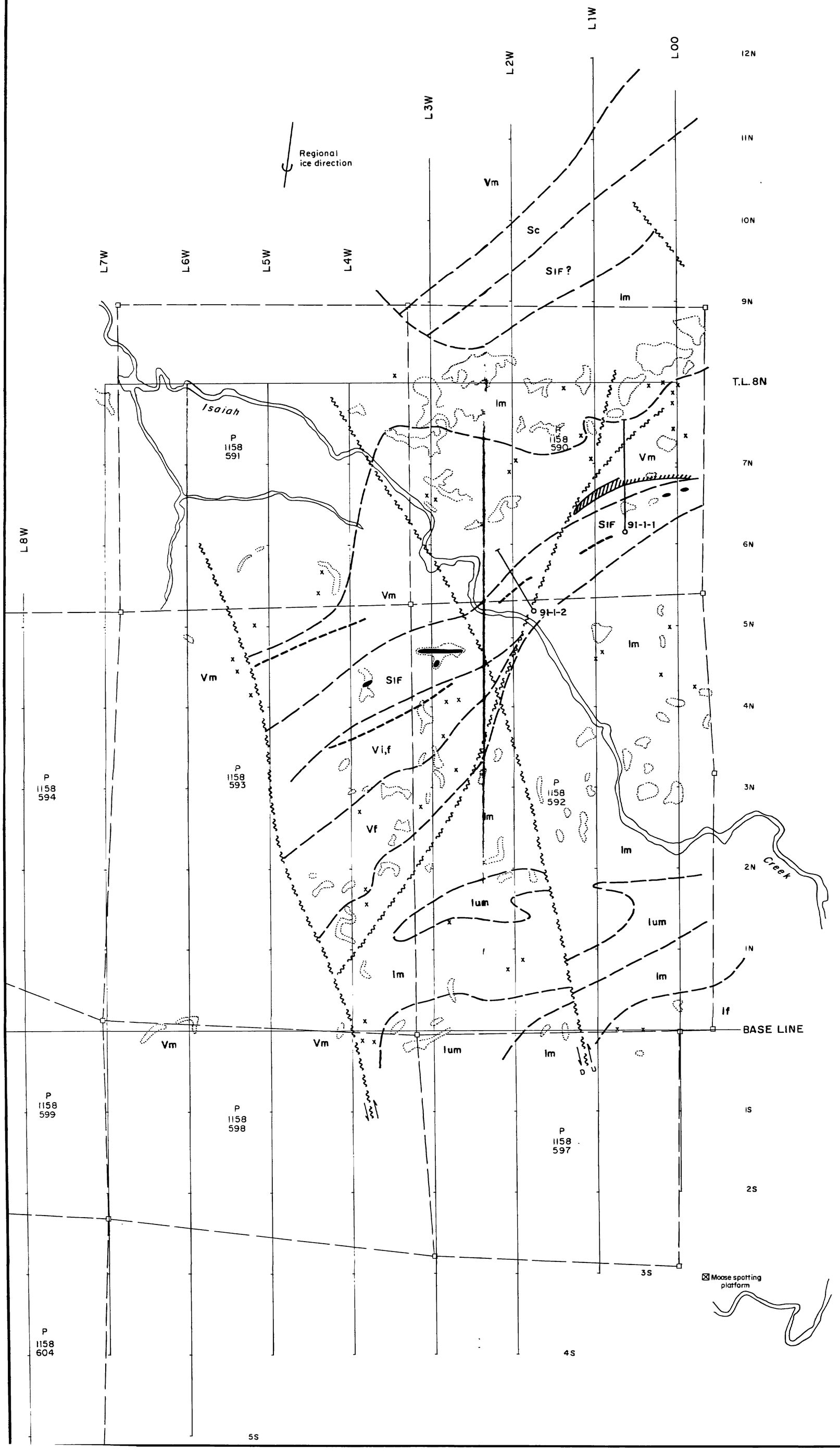
ISAIAH CREEK CLAIMS
Cunningham Township, Ontario

MAGNETIC CONTOURS

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY J.B.B.
DRAWN BY R.T.M.
DATE October 1991
SCALE: 1 : 2500
DWG. No. E.I.C.- 2381



0 100 200 300m

Scale 1cm = 25metres

LEGEND

- Interpreted fault showing relative movement
- Geologic contact
- Outcropping; large, small
- EM conductor, showing width
- Gossan
- Existing DDH showing horizontal extent — 91-1-1

SYMBOLS USED

Vf,i,m – Volcanics; felsic, intermediate, mafic
Sc,IF – Sediments, clastic, iron formation
If,m,um – Intrusive; felsic, mafic, ultramafic

NOBLE PEAK RESOURCES LTD.

ISAIAH CREEK CLAIMS
Cunningham Township, Ontario

INTERPRETATION

EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO

PREP. BY: J B B.
DRAWN BY: R.T.M.
DATE: October 1991
SCALE: 1 : 2500
DWG. No. E.I.C.- 2382