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**GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL
REPORT ON THE
IAN PROPERTY**

**Liard Mining Division, British Columbia
NTS 104B/10W & 11E
Latitude: 56°-43'N
Longitude: 130°-59'W**

Prepared for
BIG M RESOURCES LTD.
Vancouver, B.C.

Prepared by
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January 10, 1991

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

21,045

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INTRODUCTION

The Ian property is located within the 'Iskut Gold Camp' which hosts the mesothermal, shear/vein Snip and Skyline deposits. The Snip deposit presently has ore reserves, cut and diluted, of 1.032 million tons grading 0.875 oz/t gold (Vancouver Stockwatch, November 7, 1989). The Ian property is situated approximately 13 km north-northeast of the Snip deposit.

During May of 1990, Keewatin Engineering Inc. was engaged by Big M Resources Ltd. for the purpose of conducting a reconnaissance exploration program on the property. The target was economic gold \pm silver \pm base metal mineralization.

1. Location, Access, Physiography and Climate

The property is located in northwestern British Columbia, approximately 110 km northwest of the town of Stewart, B.C. (Figure 1). The claims are centred at latitude $56^{\circ} - 43'$ North and longitude $130^{\circ} - 59'$ West. This is within the 104B/10W and 11E NTS map sheets.

Access is by fixed-wing aircraft from Smithers or Terrace (290 km to the southeast) to the Bronson Creek airstrip. Transprovincial Airlines Ltd. of Terrace provided daily scheduled trips into the area and would land at Bronson on request. Central Mountain Airlines of Smithers serviced the area with trips on Monday, Wednesday and Friday, as well as numerous unscheduled supply flights. Alternative fixed-wing access is from Wrangell, Alaska which is located at tidewater, 80 km to the west of the property. The Bronson Creek airstrip was lengthened to 1,600 metres during 1988 and is now capable of accommodating Hercules aircraft.

Access throughout the property is via helicopter from the airstrip to the helipads and toe-ins established in 1988 and 1990 or to the open areas above treeline, northeast and west of the property.

Future road access to the area will follow the Iskut River Valley from Bob Quinn Lake on the Stewart-Cassiar Highway to Bronson Creek. This road, whose construction was announced by the B.C. government in 1990, will pass within 2 km of the Ian property.

The claims straddle the Verrett River extending north from the Iskut River and range in elevation from less than 100 m along the Iskut River to over 1,060 m on the northern boundary of the Ian 4 claim. The topography is fairly steep, characterized by numerous cliffs and terraces. Most of

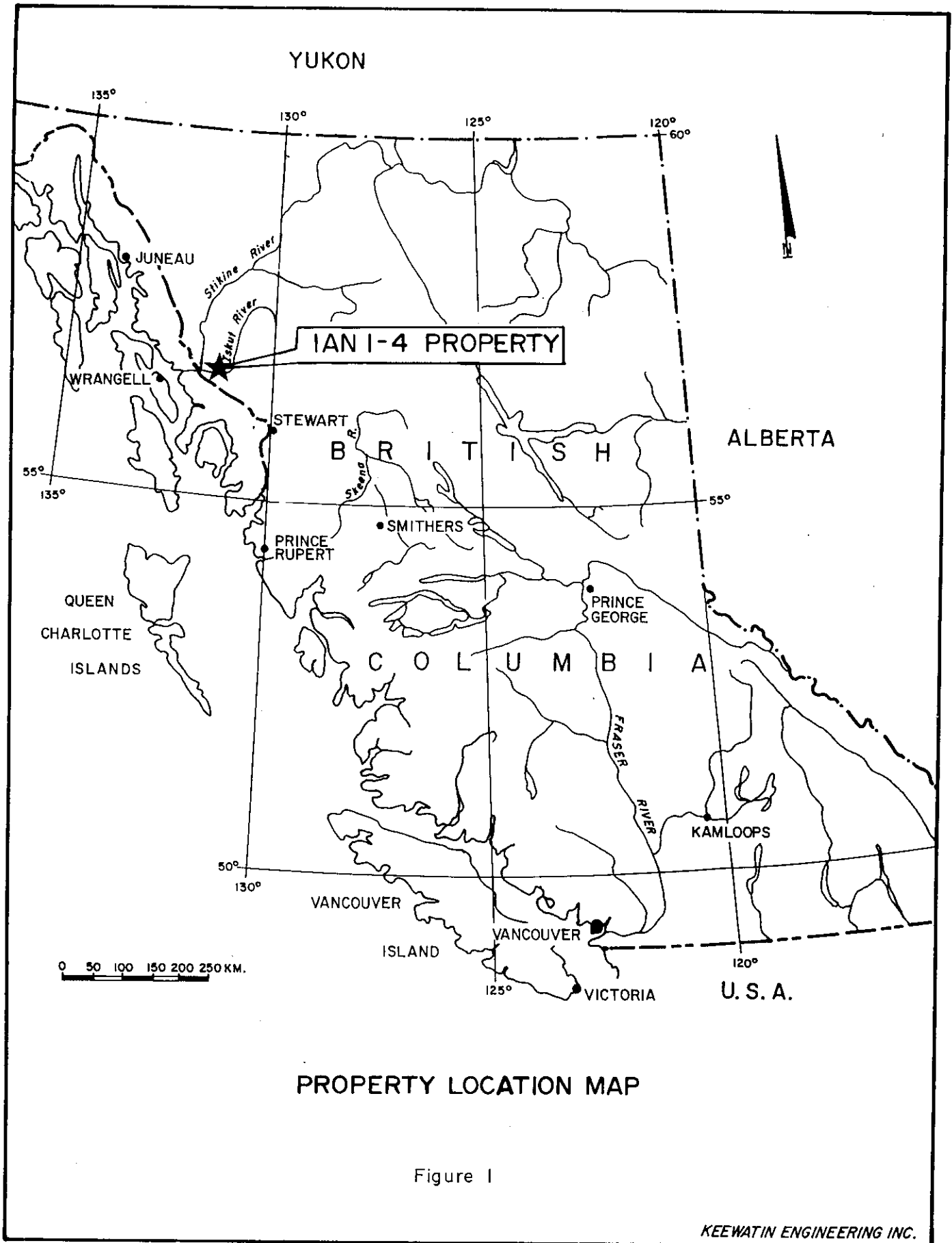


Figure 1

the major drainages have deeply incised canyons. The majority of the property is covered by mature spruce and hemlock, with devil's club, huckleberry and slide alder common in several areas.

The climate is typified by cold, snowy winters and warm, wet summers. Snow accumulations at the higher elevations normally exceed five metres.

2. Property Status and Ownership

The property consists of four contiguous mineral claims (80 units). The claims (Figure 2) are located within the Liard Mining Division and their status is summarized below:

TABLE 1: Claim Status					
Claim Name	No. of Units	Record No.	Owner	Date Recorded	Expiry Year
Ian 1	20	3730	I. Hagemoen	December 5, 1986	1996
Ian 2	20	3731	I. Hagemoen	December 5, 1986	1996
Ian 3	20	3732	I. Hagemoen	December 5, 1986	1996
Ian 4	20	3733	I. Hagemoen	December 5, 1986	1996

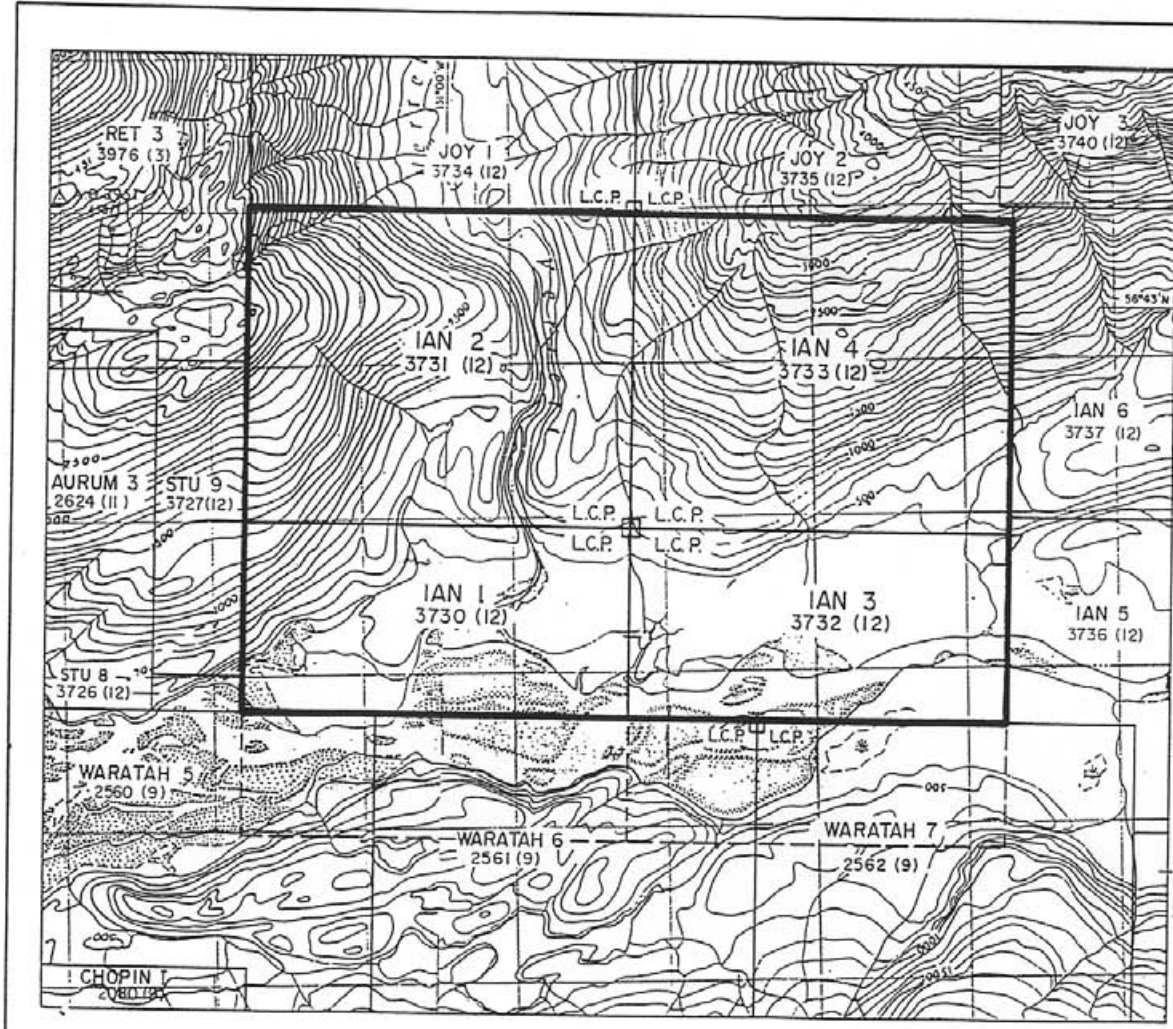
The claims are presently under option to Big M Resources Ltd.

3. History of Exploration

The earliest exploration in the region appears to have been carried out by prospectors who worked their way up to the Iskut River from the Stikine during the early 1900's. During the mid 1960's, several companies explored the area in their search for porphyry copper deposits.

In 1980, DuPont of Canada Exploration Limited staked the BAX claim which covered part of the present Ian property. The claim was to cover an anomalous gold result obtained from a small creek during their regional heavy mineral stream sediment survey. The claim was allowed to lapse in spite of only completing two days of follow-up work. This was probably the result of the dramatic drop in the price of gold and the subsequent demise of the company.

The Ian 1-4 claims were staked in December of 1986.



SCALE: 1:50,000
 0 500 1000 1500 m

BIG M PETROLEUM INC.			
IAN 1-4 CLAIMS			
CLAIM MAP			
LIARD MINING DIVISION B.C.			
1048/10W,11E			
KEEWATIN ENGINEERING INC.			
DATE	PROJECT	BY	FIGURE
FEB. 90	IAN 1-4	R.P.	2

STU 4
3721
(12)

During 1987, the property was optioned to Ashburton Oil Ltd. who carried out prospecting, geologic mapping and geochemical sampling. The geochemistry consisted of the collection of a total of 36 rock, 18 silt and 2 pan concentrate stream sediment samples.

During 1988, the property was optioned to Big M Petroleum Inc. who conducted a limited geologic mapping, geochemical sampling and prospecting survey. The geochemical survey consisted of the collection of 21 rock, 14 silt and 579 contour soil samples. All of these samples were analyzed for gold and 32 element ICP. Construction of five helipads was also completed. An Aerodat Limited airborne VLF-EM and Mag survey was flown over the property during the spring.

During 1989, Big M carried out a very limited exploration program on the property. This consisted of prospecting, geological mapping and geochemical sampling. A total of 5 rock and 43 soil samples were collected and analyzed for faa gold and a 29 element ICP package.

4. 1990 Work Program Summary

During the period of May to October, Keewatin personnel carried out geological mapping, prospecting and geochemical surveys (see Table 2) on the property. The east side of the property was designated as the focus of exploration. This work included soil, rock and silt sampling, as well as grid and helipad establishment. A number of geochemical anomalies and several previously discovered mineral occurrences were investigated. A re-interpretation of the 1988 airborne VLF-EM and Mag survey was completed prior to the field work.

TABLE 2: Summary of 1990 Field Work	
Type of Work	Description
Grid Establishment	2.93 line-km compassed, hip chained and blazed/flagged (2 base lines)
Contour Traverses	Approx. 16.685 km hip chained and flagged
Helipads Established	5
Helicopter Toe-ins Established	9
Soil Sampling	424 samples
Silt Sampling	3 samples
Grab/Chip Sampling	50 samples

TABLE 2: Summary of 1990 Field Work	
Type of Work	Description
Geochemical Anomaly Investigations	20 (19 soils and 1 silt)
Geological Mapping and Prospecting	Mostly east of the Verrett River (1:5,000)
Airborne Geophysics	Re-interpretation of 1988 VLF-EM and Mag

GEOLOGY

1. Regional Geology (see Figure 3)

The Iskut River area lies within the Intermontane tectono-stratigraphic belt - one of five, parallel, northwest/southeast trending belts which comprise the Canadian Cordillera. This belt of Permian to Middle Jurassic volcanic and sedimentary rocks defines the Stikinia/Stikine terrane. This is bounded on the west by the Coast Plutonic Complex and overlapped on the east by sediments of the Bowser Basin. The belt has been intruded by at least four episodes of plutonic rocks, from Late Triassic to Oligocene-Miocene.

Recently released geologic mapping by the BCDM and GSC indicates considerable confusion as to the age of the strata underlying the property. Mapping by Anderson (1988) and by Caulfield (1988) indicates that the eastern portion of the property is predominantly underlain by an Upper Triassic volcanosedimentary sequence. Work by Alldrick et al. (1990) to the west also revealed an Upper Triassic sequence which would trend into the property. Mapping by Read et al. (1989) and Logan et al. (1990) interpreted the eastern strata as being Paleozoic in age. The intrusive bodies in the claim area have been classified as Jurassic in age (Logan et al., 1990).

2. Property Geology

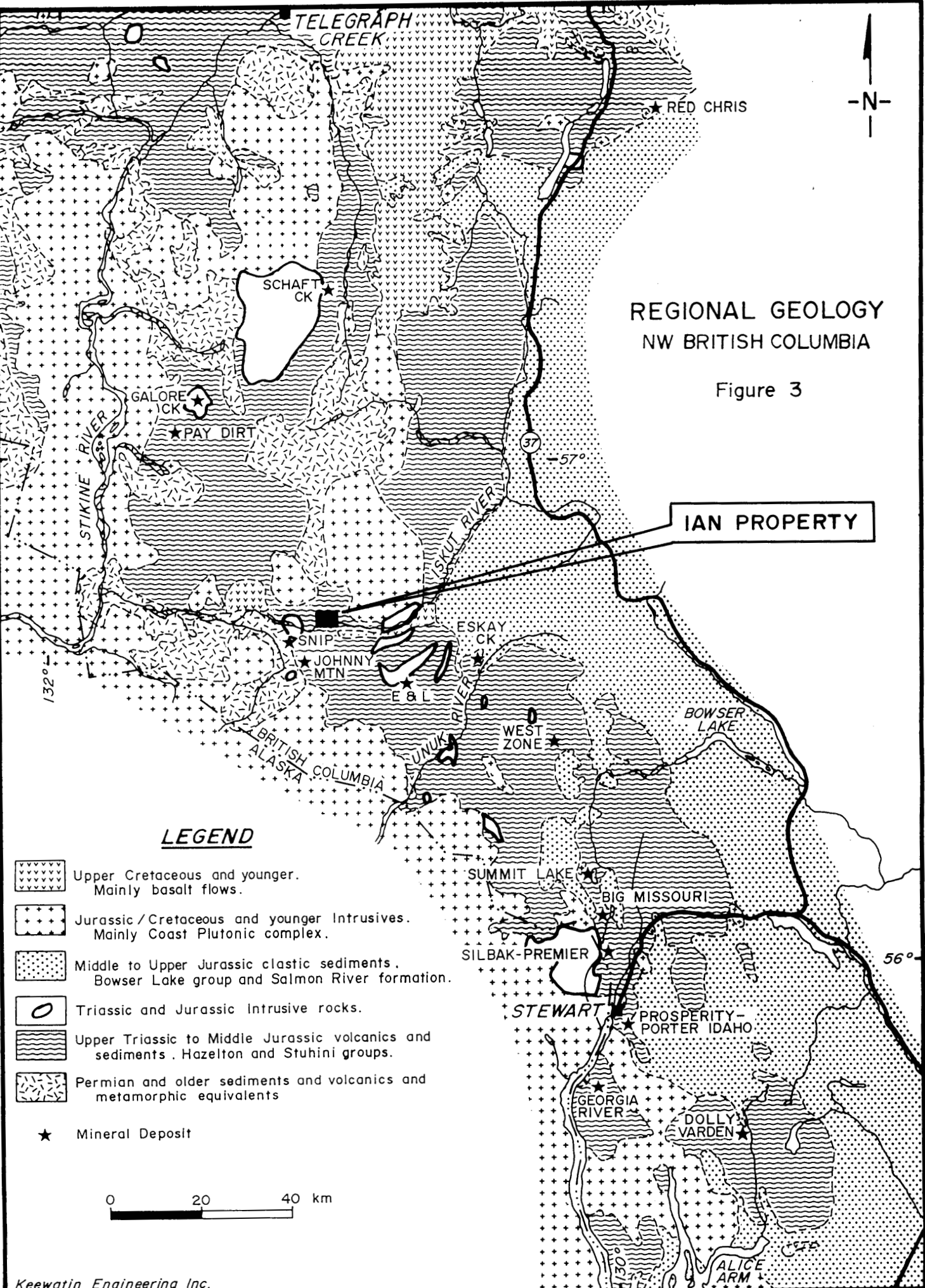
The majority of the Ian property, east of the Verrett River, is underlain by intermediate pyroclastics and flows. These consist of ash to crystal tuffs, lithic and lapilli tuffs and tuff breccias. Locally, fine grained and clastic sediments were observed interbedded with the volcanics. This volcanosedimentary package has been disrupted by a variety of intrusive bodies. The various rock types underlying this side of the Verrett River are described, briefly, as follows:



REGIONAL GEOLOGY NW BRITISH COLUMBIA

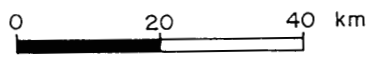
Figure 3

IAN PROPERTY



LEGEND

- Upper Cretaceous and younger. Mainly basalt flows.
- Jurassic/Cretaceous and younger Intrusives. Mainly Coast Plutonic complex.
- Middle to Upper Jurassic clastic sediments. Bowser Lake group and Salmon River formation.
- Triassic and Jurassic Intrusive rocks.
- Upper Triassic to Middle Jurassic volcanics and sediments. Hazelton and Stuhini groups.
- Permian and older sediments and volcanics and metamorphic equivalents
- Mineral Deposit



Volcanics

These rocks are characteristically a medium to dark green colour and are widespread in this area. The pyroclastics are dominantly poly lithic, with their subangular to subrounded fragments ranging from 0.5 to 10 cm in diameter. Monolithic feldspar porphyritic flow breccias were observed within the Ian 2 claim, beside the Verrett River. These porphyritic rocks exhibit 1 to 5 mm long, subhedral to euhedral feldspar phenocrysts and minor, rounded porphyry fragments in a fine grained, dark green groundmass. The ash tuffs are locally cherty and well laminated. The tuffs typically host small (<1 mm) pyroxene and hornblende phenocrysts.

South of the Iskut River, in the southeast corner of the property, large float blocks of vesicular to scoracious olivine basalt were discovered. These rocks are magnetic and host 1 to 2 mm olivine phenocrysts and plagioclase grains, up to 1 cm in length. The basalts are probably Quaternary in age.

Sediments

Limestones and grey to buff coloured argillites, cherts and lesser greywackes and sandstones were observed within the volcanic package. The limestone is white to creamy grey in colour, crystalline and locally fossiliferous. It is usually interbedded with pale to medium grey-green, limey tuffs.

Intrusions

A number of diorite, monzodiorite and feldspar porphyry stocks and dykes have cut the volcanic strata. Several of the dioritic dykes are hornblende porphyritic with crystals up to 1 cm long. A few of the feldspar porphyries exhibit orthoclase crystals up to 2.5 cm long and are locally calcareous.

The west side of the Verrett River appears to be extensively underlain by feldspar porphyritic crystal tuffs. Intermediate, siliceous ash tuffs, lapilli tuffs and agglomerates become increasingly more abundant to the east. Crystal tuffs and cherts are intermixed with the pyroclastics. A few small dioritic dykes were also observed. Dirty, clastic limestone conglomerates and crinoidal limestones with narrow, pyritic, green ash tuff interbeds were noted near the steep banks of the Verrett River.

These limestones are of probable Permian age. Field personnel also noted gossanous, hornfelsed argillites cut by a few dioritic dykes in the northwest corner of the property.

3. Mineralization

Minor amounts of sulphide mineralization, in the form of disseminations, fracture/shear fillings and local hornfels zones were observed on the Ian property.

Trace amounts of disseminated pyrite is common to most rock types. The disseminations are found in amounts up to 3% in the cherty ash tuffs, which form interbeds with the limestones. Sulphides are occasionally concentrated within the few, discontinuous shear structures noted within the volcanics. These structures are narrow (<50 cm wide) and locally, contain irregular quartz (\pm carbonate) lenses, some of which are mineralized. Pyrite disseminations and fracture fillings, up to 25%, and minor chalcopyrite and malachite have been observed locally. In the northwest corner of the property, field personnel noted a hornfelsed sediment, with up to 25% pyrite-pyrrhotite, which appears to be related to diorite dyking. It should also be noted that the copper-zinc rich rock samples collected during 1987, from the northeast corner of the property, are in fact float samples. The source of these samples appears to be a skarn zone which outcrops upslope, on the Joy property.

The only other mineralization of note are the magnetite-hematite rich, fine grained volcanics/sediments observed in the south-central and north-central portion of the Ian 4 claim. Magnetite, as pods and veinlets measuring up to 2 by 5 cm, is found within these silicified (hornfelsed?) rocks. Only very minor amounts of pyrite were noted.

4. Structure and Alteration

The numerous, northeast to northwest trending drainages and airphoto lineaments probably reflect underlying structures. One of the major structures, the "Handel Break", appears to cross Snippaker Mountain, to the south, crosses the Iskut River and follows the southwesterly flowing creek on the east side of the property. A lack of bedrock exposures hampered confirmation of this interpretation. Another major structure appears to follow the Verrett River. Much of this river valley forms a gossanous gorge but the extremely steep slopes eliminated the possibility of investigation. The major, south flowing creek in the northeast portion of the property follows a right lateral fault structure which has a displacement of 6 to 7 metres. Subsidiary splays off this structure

are found oriented at 260°-270°/48°-70° N. The measured bedding attitudes from strata throughout the property are few and extremely variable.

Much of the property's volcanic strata display a widespread, weak to moderately intense propylitic alteration. Local silicification and carbonate alteration of the tuffs and hornfelsing of the sediments was also observed.

GEOCHEMISTRY

1. Sampling

A total of 424 soil, 3 silt and 50 rock samples were collected during the 1990 field season.

The majority of the soil samples (see Appendix 3) were collected at fifty metre intervals along contour lines, spaced, approximately, 150 to 300 metres apart, horizontally. These lines were done to "infill" the existing soil sample coverage. Follow-up soil sampling of anomalous soil results included duplicate samples and surrounding soils at 12.5 metre east-west intervals on lines spaced 25 metres apart (see Appendix 5). Generally, the soils were collected from the "B" horizon with the use of a long handled shovel.

The silts were collected from the active portion of the sampled drainage on the eastern side of the property.

The rocks represent grab/chip samples of mineralized and/or altered/veined outcrops and boulders observed during the course of geological mapping and prospecting.

2. Analysis

All of the samples were shipped to Min-En Laboratories in Smithers for preparation and then to their lab in North Vancouver for analysis. This analysis consisted of faa Au and an eight element ICP package (Ag, As, Cu, Mo, Pb, Sb, Zn and Hg).

3. Discussion of Soil Horizon Development

Soil horizons on the Ian property are moderately to poorly developed. The 'B' horizon is typically dark brown in colour, found at depths of 15 to 44 cm and contains abundant rock fragments.

The terrain within the property consists mainly of steep slopes, with numerous talus fields and terraces. As a result, colluvium and groundwater seeps are fairly widespread. At one locality, a 2 cm thick, white ash layer was observed within the 'B' horizon, at a depth of 15 cm.

4. Description and Discussion of Results

Soil sampling on the east side of the Verrett River returned a number of geochemically anomalous to elevated values. Results of up to 968 ppb gold, 5.8 ppm silver, 589 ppm arsenic, 762 ppm copper, 2884 ppm lead, 6,234 ppm zinc, 7 ppm antimony, 34 ppm molybdenum and 3,205 ppb mercury were obtained. The areas which returned the higher soil values underwent further investigation. This work included prospecting, geological mapping and detailed soil sampling (Table 3 and Appendix 5). In a number of instances, the original results could not be duplicated. In nearly all cases, no source for the high soil results could be located. The few rock samples collected from these areas returned results at background levels. The combination of the property's steep slopes, numerous topographic depressions and swampy terraces appears to indicate that transported soils and groundwater may have resulted, at least in part, in local and erratic concentrations of the various elements.

Location (Year)	Original Result (Duplicate Result)	Remarks
375E/28+75W (1988)	152 ppm Pb, 328 ppm Zn	poor soil development, no source found, area of diorite/monzodiorite
375E/24+25W (1988)	105 ppb Au	poor soil development; narrow silicified fractures in monzodiorite with up to 10% pyrite (rock ran 4 ppb Au, 27.0 ppm Ag and 2,991 ppm Zn)
575E/18+00W (1988)	230 ppb Au, 120 ppm As	poor soil development; in area of dark grey/black tuff with minor pyrite fracture filling; no source found
575E/17+25W (1988)	850 (1) ppm As, 62 (34) ppm Pb	station located on outcrop of fine-grained, grey ash tuff; no source found

TABLE 3: Soil Anomaly Investigations		
Location (Year)	Original Result (Duplicate Result)	Remarks
660M/2+00E (1990)	90 (1) ppb Au, 3.5 (4.5) ppm Ag	surrounding soils' Au results at background levels; area of lapilli tuffs with no significant mineralization
660M/3+00E (1990)	4.0 (5.8) ppm Ag	soil site located in gully; surrounding soils' silver results at background levels; area of lapilli tuffs; no source found
770E/10+25E (1987)	60 (43) ppb Au	poorly developed soils; soil results upslope and downslope are low in gold; nearby small exposures of silicified ash tuff and diorite
775E/8+50E (1988)	105 (1) ppb Au	poorly developed soil; area of fine-grained andesite with minor quartz veinlets and trace amounts of pyrite; no source found
825M/1+00W (1990)	4.0 (5.7) ppm Ag	surrounding soil results are lower in Ag; exposures of lapilli tuff with up to 4% pyrite, in the area; no source found
825M/2+50W (1990)	4.3 (5.6) ppm Ag	three nearby soils ran 4.5, 4.8 and 5.2 ppm Ag; 30 m upslope is magnetite/hematite rich, fine-grained volcanic(?) - rock sample from this unit ran 0.2 ppm Ag; depressions near anomalous soil site may reflect underlying structures; no source found
825M/10+50E (1990)	225 ppb Au	poorly developed soil with rock fragments; soils upslope are anomalous but lower (75, 102 and 185 ppb Au); results downslope are at background levels; exposures of silicified ash tuff with trace amounts of pyrite just downslope of anomaly site; green tuff talus upslope; no source found
970M/1+50W (1990)	98 (1) ppm As	soil downslope ran 75 ppm As but other surrounding soil results were 1 ppm; anomaly site near small depression which might indicate groundwater concentration; site also near possible contact of limestones with ash tuffs; soil at 970M/1+75W ran 147 ppb Au and soil at 955M/ 1+25W ran 590 ppb Au, all others at background Au levels
970M/4+50W /5+00W	57(11) ppb Au 34 (36) ppb Au	area mostly underlain by lapilli and ash tuffs, upslope of contact with monzodiorite; rock sample, upslope, of a silicified tuff with 1-3% pyrite ran 2 ppb Au; no source found

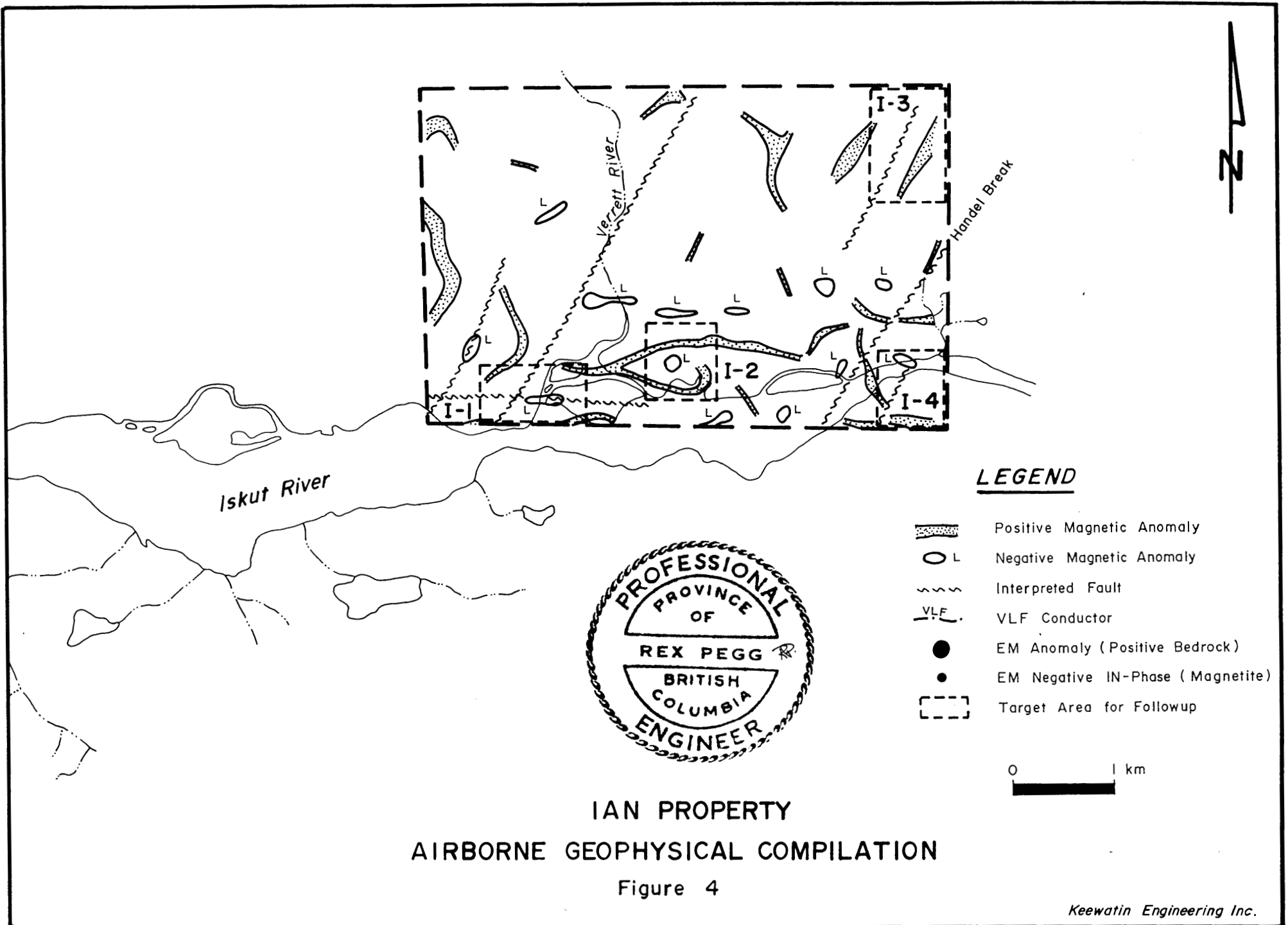
TABLE 3: Soil Anomaly Investigations		
Location (Year)	Original Result (Duplicate Result)	Remarks
970M/4+50E, /5+00E, /5+50E (1990)	5.2 (0.8) ppm Ag 40 (1) ppb Au 53 (77) ppb Au, 5.6 (4.5) ppm Ag, 589 (340) ppm As	area investigated twice; numerous detailed soils collected in this area from 950 to 1050 metre elevation; area underlain by limestone on the west, tuff on the east and separated by interbedded limestone and tuff; soil results indicated some elevated to anomalous values of Pb and Zn from the area underlain by limestone, especially at 970M/4+25E which ran 2884 ppm Pb and 6234 ppm Zn (duplicate ran 698 ppm Pb and 1472 ppm Zn); soil at 100M/5+00E ran 968 ppb Au, at 970M/4+25E ran 168 ppb Au (duplicate ran 1 ppb Au) and at 950M/4+75E ran 148 ppb Au; soils upslope returned background levels of Au and no significant mineralization was observed; skarn mineralization was observed up the creek to the north within the Joy property (possible source?)

The three silt samples were collected from the same creek in the northeast portion of the property. Their results are generally at background levels, ranging up to 8 ppb gold, 1.7 ppm silver, 21 ppm arsenic, 35 ppm copper, 32 ppm lead, 225 ppm zinc, 2 ppm antimony, 9 ppm molybdenum and 155 ppb mercury.

The rock sample results varied up to 125 ppb gold, 27.0 ppm silver, 439 ppm arsenic, 14,891 ppm copper, 1,602 ppm lead, 4,938 ppm zinc, 11 ppm antimony, 146 ppm molybdenum and 925 ppb mercury. The higher results are from the narrow (1 to 20 cm) and discontinuous fracture/shear veins hosted by tuffaceous volcanics.

GEOPHYSICS








The re-interpretation of the 1988 airborne Aerodat VLF-EM and Mag survey data by the Geotest Corp. indicated four areas of geophysical interest (Figure 4). These are summarized as follows:



Iskut River



LEGEND

-  Positive Magnetic Anomaly
-  Negative Magnetic Anomaly
-  Interpreted Fault
-  VLF Conductor
-  EM Anomaly (Positive Bedrock)
-  EM Negative IN-Phase (Magnetite)
-  Target Area for Followup

0 1 km



IAN PROPERTY
 AIRBORNE GEOPHYSICAL COMPILATION

Figure 4

I-1

This area covers a coincident, east-west trending magnetic low and an interpreted fault. There are also two similar trending, weak positive magnetic anomalies.

I-2

This target encompasses a portion of two east-west trending, weak, positive magnetic anomalies and an isolated magnetic low.

I-3

The portion of a north-northeast trending fault which displays parallel, positive magnetic anomalies is enveloped by this target. Magnetic orthoclase porphyries observed in this area appear to correspond with the positive magnetic anomaly.

I-4

This area covers a north-northeast trending, interpreted fault which offsets positive magnetic anomalies and terminated at a magnetic low. This fault parallels the Handel Break. Fieldwork has revealed large float blocks of magnetic, olivine basalt of probable Recent age in the southern portion of this target area.

ECONOMIC GEOLOGY

No mineralization of economic significance was located during the 1990 field season.

CONCLUSIONS

Geological mapping has revealed that intermediate volcanic flows and pyroclastics of probable Paleozoic age underlie most of the property, east of the Verrett River. Feldspar porphyritic flows and coarse pyroclastics of probable Triassic age, similar to those hosting the "Cooper" mineralization on the Waratah property, underlie much of the west side of the property. The significant mineralization found, to date, is restricted to minor chalcopyrite-malachite in discontinuous, narrow shears, pyrite-pyrrhotite in hornfelsed sediments and magnetite in silicified (hornfelsed?) ash tuffs. Soil sample

results and the subsequent investigation of anomalous values failed to locate any mineralized sources. The elevated to anomalous results may be due, at least in part, to colluvial and groundwater concentration of the various elements.

The reconnaissance exploration coverage of the eastern portion of the property appears to have adequately tested its' mineral potential. The cursory examination of the west side of the property does not appear to have adequately investigated this area's possible potential to host economic mineralization.

RECOMMENDATIONS

No further work is recommended, at this time, on the eastern portion of the property.

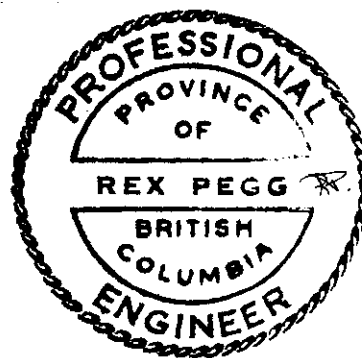
The area west of the Verrett River should be subjected to a small prospecting and mapping program. Field work during 1990 indicated that the volcanic strata in this area is similar to that which hosts the Waratah's "Cooper" mineralization and thus may be prospective. It has also been learned that quartz vein float has been found on the Stu 8 and 9 property, which adjoins the Ian to the west, and samples of this material assayed up to 0.187 oz/ton gold (S. Todoruk, personal communication).

Respectfully submitted,

KEEWATIN ENGINEERING INC.



Rex Pegg, B.A.Sc., P.Eng.



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APPENDIX 1

Statement of Qualifications

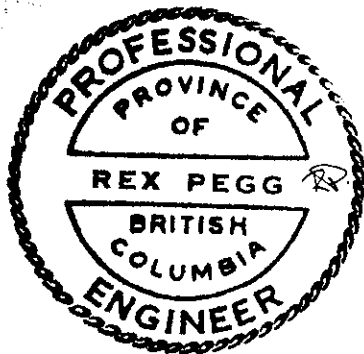
STATEMENT OF QUALIFICATIONS

I, REX STEPHEN PEGG, of #1 - 410 Mahon Avenue in the District of North Vancouver in the Province of British Columbia, do hereby certify that:

- 1) I am a graduate of the University of Toronto, B.A.Sc. (1976) in Geological Engineering (Exploration option) and have practised my profession continuously since graduation.
- 2) I have over 14 years of experience in exploration for base and precious metals in the Canadian Cordillera.
- 3) I am a member in good standing of the Association of Professional Engineers of British Columbia.
- 4) I am an independent consulting geologist with an office at #1-410 Mahon Avenue, North Vancouver, British Columbia.
- 5) I am presently under contract to Keewatin Engineering Inc. with offices at Suite 800 - 900 West Hastings Street, Vancouver, British Columbia.
- 6) I am the author of the report entitled "Geological, Geophysical and Geochemical Report on the Ian Property, Liard Mining Division, British Columbia", dated January 10, 1991.
- 7) I have personally performed or supervised the work referenced in this report and I am familiar with the regional geology and geology of nearby properties.
- 8) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in the securities of Big M Resources Ltd., in respect of services rendered in the preparation of this report.
- 9) I consent to and authorize the use of the attached report and my name in the Company's Statement of Material Facts or other public document.

Dated at Vancouver, British Columbia this 10th day of January, 1991.

Respectfully submitted,




Rex S. Pegg, B.A.Sc., P.Eng.

Keewatin Engineering Inc.

APPENDIX 2

Summary of Field Personnel

SUMMARY OF FIELD PERSONNEL

R. Pegg, Senior Geologist	May 29-31; June 1, 3, 7, 9, 11, 13; August 1, 13, 27; September 19.
R. Honsinger, Project Geologist	May 28-31; June 1-4, 9, 13; July 27, 31; September 19; October 9.
A. Travis, Project Geologist	May 28-31; June 1-4, 9-13; July 27, 31; August 10, 12.
P. Lutynski, Geologist	May 29-31; June 1-4, 9; July 27, 31; August 1; September 19.
A. Muirhead, Prospector	May 28-31; June 1-4, 10-13; July 25, 28, 29, 31.
S. Novak, Technician	August 20.
R. Geszler, Assistant	May 29-31; June 1-4.
S. Sheffield, Assistant	May 29-31; June 1-4, 9, 12, 13, 22; July 25, 27, 31; August 1, 11.
K. Burk, Assistant	May 28-31; June 1-4, 6, 13.
T. Mortison, Assistant	May 29-31; June 1, 3, 4, 13.
V. Malo, Assistant	May 28-31; June 1-4, 10-12.
J. Leonard, Assistant	May 28-31; June 1-4, 10, 12, 13.
A. Kaplan, Assistant	May 29-31; June 1-3, 9, 13; July 27, 31; August 9, 10
S. McTague, Assistant	August 3; September 15, 19.
T. Paquette, Assistant	August 3.
C. Davies, Assistant	September 19; October 9.
P. Dunlevy, Assistant	September 19.
V. Hutchings, Draftswoman	August 25; September 4, 20.
S. Patterson, Cook/1st Aid Attendant	September 19.
S. Chandler, Cook/1st Aid Attendant	May 27-31; June 1-3, 8-10, 12; July 29, 31; August 1, 10.
F. Ferguson, Technician	May 28-30.



Keewatin Engineering Inc.

APPENDIX 3

Soil and Silt Sample Descriptions

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian

Results Plotted By: _____

Area (Grid): E (east of Varet River)

Map: _____ N.T.S.: 104B/10411

Collectors: K.M.

Date: June 1/1970

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data						
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development	Parent	Material	Colour
90M111S-E	450 M	0+00W	started at 0h 1551' 1+25A'		S								B	25	X			MRB	
		0+50W			S				X					B	30	X		X	MRB
		1+00W			SW				X					B	30	X		X	ORB
		1+50W			NW				X					B	25		X		MB
		2+00W			S				X					B	30	X		X	MRB
		2+50W		at base of 15m cliff	S				X					B	20		X	X	MRB
		3+00W			S				X					B	30		X	X	MB
		3+50W			S				X					B	25	X			MRB
		4+00W		90% angular fragments	S				X					B	30		X	X	MRB
		4+50W			S				X					B	35	X			ORB
N/S		5+00W	N/S - talus slope - no soil development.																
90M111S-E	450 M	5+50W			W								B	25		X	X	MRB	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian
 Area (Grid): E (east of Verrett)
 Collectors: V.M.

Results Plotted By: _____
 Map: _____ N.T.S.: 104B/10411
 Date: June 2/1970

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent Material		Colour
																Good	Poor	Drift	Bedrock	
90 M III S-E:	TSCM	6+00W	80% angular fragments	10"	SE			X					B	35		X		X	MRB	
		6+50W	70% angular fragments	25"	S			X						B	40	X			X	MRB
		7+00W	70% angular frags./possible siltment below	30"	S			X						B	50	X			X	MRB
		7+50W		25"	S			X						B	30	X			X	MRB
		8+00W	90% angular fragments	40"	SW			X						B	30		X		X	MRB
		8+50W		15"	SW			X						B	40		X		X	MB
		9+00W	from top of outcrop/visible pyrite	20"	SW			X						B	10		X		X	MRB
		9+50W		15"	SW			X						B	30	X				MRB
		10+00W		5"	SW			X						B	30	X				MRB
		10+50W	10m N of E/W gerge	10"	SW			X						B	30	X				MRB
		11+00W	from top of outcrop	10"	S			X						B	5		X			MRB
		11+50W	gray layer above B horizon	10"	SW			X						B	10	X				MRB
		12+00W		30"	W			X						B	40	X			X	MRB
		12+50W		20"	W			X						B	30	X			X	MRB
13+00W	from under fallen tree	20"	W			X						B	10		X			MRB		
90 M III S-E:	ASCM	13+50W		20"	W			X				B	30	X			X	MRB		

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian
 Area (Grid): E (of Verrett)
 Collectors: SS

Results Plotted By: _____
 Map: _____ N.T.S.: 104B/10411
 Date: June 2 / 1940

Sample Number	Sample Location		Notes	Topography				Vegetation						Soil Data						
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sample	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
N/S	825m/	4+50W	760m talus																	
N/S		5+00W	825m talus																	
N/S		5+50W	825m																	
40 Q III SE		6+00W	820M 2m up from creek		E			X					A/B	30cm		X			X	DRB
40 Q III SE		6+50W	830M		E			X					B	30cm	X				MRB	
N/S		7+00W	830M Below outcrop / talus					X												
40 Q III SE		7+50W	830M		S			X					B	25	X				MRB	
40 Q III SE		8+00W	840M		E			X					B	25	X				MRB	
N/S		8+50W	Below outcrop / talus					X												
40 Q III SE		9+00W	835m		E			X					B	40		X			DRB	
N/S		9+50W	Below outcrop / talus																	
40 Q III SE		10+00W	825m base of slide alder		S			X					B	20		X		X	MRB	
N/S		10+50W	talus																	
40 Q III SE		11+00W	850 base of outcrop		S								B	20	X			X	MRB	
		11+50W	870		S			X					B			X			MRB	
		12+00W	860m		S			X					A/B	20		X		X	DRB	
		12+50W	870m		S			X					B	25	X				MRB	
N/S		13+00W	Base of outcrop																	
40 Q III SE		13+50W	840m		S			X					A/B	35m		X		X	DRB	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian

Results Plotted By: _____

Area (Grid): E (East of Verrett River)

Map: _____ N.T.S.: 104B/1011

Collectors: J.L.

Date: June 2, 1990

Sample Number	Sample Location		Notes	Topography							Vegetation							Soil Data				
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Develop-ment		Parent	Material	Colour		
																Good	Poor				Drift	Bedrock
90J1115-E	4	50M	0+50E		25°S								B	30cm	X		X		OB			
	11		1+00E		25°SW								B	40cm		X	X		LOB			
	11		1+50E		30°S								B	11		X	X		LB			
✓	11		2+00E	Just Below Outcrop	30°S								B	45cm	X		X		OB			
N/S	11		2+50E	NO SAMPLE - Outcrop																		
90J1115-E	11		3+00E	Cliff Base	35°S								B	40cm		X		X	B			
	11		3+50E	In Dip at Cliff Base			X	X					B	35cm	X			X	OB			
	11		4+00E	Foot of Cliff	30°S			X					B	25cm	X		X		OB			
	11		4+50E	On knob Below cliff	25°S			X					B	20cm	X		X		OB			
	11		5+00E		46°S			X					B	50cm	X		X		OB			
	11		5+50E	Rocky area	25°S			X					B	20cm	X		X		OB			
	11		6+00E	7m from station because cliff	47°S			X					B	25cm	X		X		OB			
	11		6+50E	Just Below large Outcrop	40°S			X					B	40cm	X			X	OB			
	11		7+00E		37°S			X					B	46cm	X		X		OB			
	11		7+50E		S			X					B	31cm	X		X		OB			
	11		8+00E	In Cliffy Area	S			X					B	50cm	X		X		B			
	11		8+50E		47°S			X					B	40cm	X			X	OB			
	11		9+00E		30°S			X					B	22cm	X			X	3			
	11		9+50E		37°S			X					B	30cm	X		X		OB			
	11		10+00E		36°S			X					B	30cm	X			X	B			
	11		10+50E		30°SE			X					B	40cm	X			X	OB			
	11		11+00E		25°SE			X					B	30cm	X		X		OB			
✓	11		11+50E	Just Past little Creek	S			X					B	41cm	X		X		OB			
	11		12+00E		38°S			X					B	27cm	X			X	B			
N/S	11		12+50E	No Sample - Outcrop																		
90J1115-E	11		12+35E		40°S			X					B	40cm	X	X			OB			

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: TAN.

Results Plotted By: _____

Area (Grid) (E) Verrettheast of

Map: _____ N.T.S.: 104B/10+11

Collectors: Keith Burk + Adam TRAVIS

Date June 2 / 1990

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent Material		Colour
																Good	Poor	Drift	Bedrock	
90B1115-E	825m	0+50E					✓						B		✓				P.Red	
		1+00E					✓						B		✓				P.Red	
		1+70E					✓						B		✓				Red Br.	
		2+00E					✓						B		✓				Brown	
		2+50E					✓						B		✓				Brown	
		3+00E					✓						B		✓				Brown	
90B1115-E	825m	3+50E					✓						B		✓				R.B.	
		4+00E					✓						B		✓				Brown	
		4+50E					✓						B		✓				R.B.	
		5+00E	Moved To 800 lev. Toward Bluff.				✓						B		✓				Brown	
		5+50E	Moved Back To 825 elev.				✓						B		✓				R.B.	
		6+00E					✓						B		✓				Brown	
90B1115-E	825m	6+50E					✓						B		✓				R.B.	
		7+00E					✓						B		✓				Brown	
		7+50E					✓						B		✓				O.R.	
90B1115-E	825m	8+00E					✓						B		✓				Brown	
		8+50E					✓						B		✓				R.B.	
90B1115-E	825m	9+00E					✓						B		✓				R.B.	
"		9+50E					✓						B		✓				D.Brown	
N/S		N/S																		
90B1115-E	825m	10+50E					✓						B		✓				Brown	
90T1115001			TAKEN 2M FROM PREVIOUS SAMPLE (60pp Au) 77SE 10+25E				✓						B		✓				Brown	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: IAN

Results Plotted By: _____

Area (Grid): E (East of Verret River)

Map: _____ N.T.S.: 104 B/10411

Collectors: Tyles Morrison

Date: JUNE 3 1990

Sample Number	Sample Location		Notes	Topography							Vegetation					Soil Data				
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
90MM115-E	275 M	0+50E					X						B	10cm	X		X		LRB	
	275 M	1+00E					X						B	20cm	X		X		LRB	
90MM115-E	275 M	1+50E	270 M Elevation				X						B	25cm	X			X	ORB	
N/S	275 M	2+00E	No Sample - slope, drift, roots 270 elevation				X													
90MM115-E	275 M	2+50E	280 M Elevation				X						B	20cm	X			X	RB	
	275 M	3+00E		56°			X						B	20cm		X	X		ORB	
	275 M	3+50E		70°			X						B	30cm		X		X	LRB	
	275 M	4+00E		51°				X					B	12cm		X			LRB	
	275 M	4+50E		53°			X						B	20cm		X		X	LRB	
	275 M	5+00E		47°			X						B	20cm	X			X	PRB	
90MM115-E	275 M	5+50E		25°			X						B	20cm	X			X	LR	
N/S	275 M	6+00E	No Sample - rock, roots, slope	90°			X													
90MM115-E	275 M	6+50E	270 M Elevation	45°			X						B	20cm		X		X	ORB	
	275 M	7+00E	210 M Elevation	28°			X						B	22cm		X		X	LR	
90MM115-E	275 M	7+50E	280 M Elevation	45°			X						B	20cm	X			X	Rid	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian
 Area (Grid): E (of Verrettr)
 Collectors: S.S

Results Plotted By: _____
 Map: _____ N.T.S.: 10413/10911
 Date: June 3/90

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
909 III SE No Sample	660m/	0+00W	Base line S/S N				X	X					B	40	X				MR	
		0+50W	N/S - B. Rock										B	25	X			X	MR	
		1+00W		S				X					B	30		X		X	LR	
		1+50W		S				X					B	30	X			X	MR	
		2+00W	N(635m)?	S				X					B	25		X		X	MR	
No Sample		2+50W	N/S - Red Rock										B	30	X			X	MR	
		3+00W		S				X					B	25		X		X	MR	
		3+50W	N(640m)?	S				X					B	30	X			X	MR	
		4+00W		S				X					B	15	X			X	MR	
		4+50W		S				X					B	15	X			X	MR	
		5+00W		S				X					B	15	X				MR	
		5+50W	taken inside of gully below Heli Pad	E				X					B	30cm		X		X	MR	
		6+00W		S				X					B	40		X			MR	
		6+50W		S				X					B	25	X				MR	
		7+00W		S				X					B	20	X			X	MR	
		7+50W		S				X					B	35		X		X	MR	
		8+00W		S				X					B	25	X			X	MR	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Fan

Results Plotted By: _____

Area (Grid): E (east of Varrett)

Map: _____ N.T.S.: 109 B/10 and 11

Collectors: V.M.

Date June 3/1990

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
90M115-E:	275M	0+00W				X		X					B	30	X			X	MKB	
		0+50W		5°	E			X					B	30	X			X	MKB	
		1+00W		5°	S			X					B	30	X			X	MKB	
		1+50W	20% angular frags.	20°	S			X					B	90		X		X	MB	
		2+00W	slight color change, possible B horizon	5°	S			X					A	60		X		X	DB	
		2+50W		5°	SE			X					B	40		X		X	MKB	
		3+00W	20% angular frags.	10°	S			X					B	60		X		X	MB	
N/S		3+50W	crack																	
90M115-E:		4+00W		15°	E			X					B	50		X		X	MKB	
		4+50W		10°	S			X					B	35	X			X	MKB	
		5+00W	20% ang frags / no A horizon	25°	W			X					B	30		X		X	MKB	
		5+50W		15°	S			X					B	25	X			X	MKB	
		6+00W		15°	S			X					B	25	X			X	MKB	
		6+50W	20% angular frags.	20°	SW			X					B	35	X			X	MKB	
		7+00W		10°	SW			X					B	30	X			X	MKB	
		7+50W		20°	S			X					B	35	X			X	MKB	
		8+00W		30°	SW			X					B	20		X		X	MKB	
		8+50W		5°	S			X					B	30	X			X	MKB	
		9+00W	from top of outcrop	10°	SW			X					B	10		X		X	MKB	
		9+50W	from top of cliff	30°	W			X					B	20		X		X	MKB	
		10+00W	taken from fallen tree	5°	S			X					B	10				X	MKB	
		10+50W		10°	W			X					B	30	X			X	MKB	
		11+00W		10°	W			X					B	35	X			X	MKB	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: IAN
 Area (Grid): E (East of Verret River)
 Collectors: Tyles Morrison

Results Plotted By: _____
 Map: _____ N.T.S.: 1:4 B/1041
 Date: JUNE 4 1990

Sample Number	Sample Location		Notes	Topography			Vegetation					Soil Data								
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent Material		Colour
																Good	Poor	Drift	Bedrock	
90malls-E:	275 M	8+00E	280 m Elevation	60°S			X						B	20cm	X		X	DRB		
	275 M	9+00E		45°S			X						B	25cm	X		X	DRB		
	275 M	9+50E	280 m Elevation	55°S			X						B	35cm	X		X	DRB		
	275 M	10+00E		55°S			X						B	30cm	X		X	DRB		
	275 M	10+50E		60°S			X						B	30cm	X		X	DRB		
	275 M	11+00E	10m west - slope, quality	70°S			X						B	40cm	X		X	DRB		
	275 M	11+60E		52°S			X						B	10cm	X		X	LF		
	275 M	12+00E	top of cliff, 300m Elevation	50°S			X						B	10cm	X		X	DRB		
	275 M	12+50E	CLIFF, 315m Elevation	65°S			X						B	32cm	X		X	LF		
	275 M	13+00E	CLIFF, 345m Elevation	20°S				X					B	15cm	X		X	LF		
	275 M	13+50E	CLIFF, 340m Elevation	10°S				X					B	12cm	X		X	DRB		
	90malls-E:	275 M	14+00E	CLIFF, 340m Elevation	55°S			X					B	45cm	X		X	DRB		
				Went down from station (office)																
				at creek, down 30m - East																
			50m at Elev. 240m																	
90malls-E:	275 M	11+00E	240 m Elevation	50°S			X						B	50cm	X		X	MRB		
↓	275 M	2+50E		40°S			X						B	22cm	X		X	DRB		

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian

Results Plotted By: _____

Area (Grid): E (east of Varrett)

Map: _____ N.T.S.: 1:10000 and 1:11

Collectors: V.M.

Date: June 4, 1990

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
90M115-E:	275M	11+50 W	upper bank of small creek	5'	NW			X					B	30	X			X	MBS	
		12+00 W		10'	SW			X					B	30	X			X	MBS	
		12+50 W	clay	5'	NW			X					B	30	X				LB	
		13+00 W		5'	SW			X					B	30	X			X	MBS	
		13+50 W		10'	S			X					B	30	X			X	MB	
		14+00 W		45'	SW			X					B	3'	X				MBS	
		14+50 W	60% small angular frags	20'	SE			X					B	40	X			X	MBS	
		15+00 W	80% angular frags	30'	S			X					B	40		X		X	MBS	
		15+50 W		30'	SW			X					B	25'	X			X	MBS	
		16+00 W	20% angular frags	30'	SW			X					B	30	X			X	MBS	
		16+50 W		45'	SW			X					B	15'		X			MBS	
		17+00 W		70'	SW			X					B	70	X			X	MBS	
		17+50 W		25'	SW			X					B	15'	X			X	MBS	
		18+00 W		15'	SW			X					B	35'	X			X	MBS	
		18+50 W	from top of outcrop	40'	W			X					B	20		X		X	MBS	
		19+00 W		10'	W			X					B	20		X		X	MBS	
		19+50 W		20'	W			X					B	35'	X			X	MBS	
		20+00 W		10'	W			X					B	20	X			X	MBS	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: IAD (III)

Results Plotted By: _____

Area (Grid): E (East of The Verret river)

Map: _____ N.T.S.: 104B/10+11

Collectors: Andrew Kaplan

Date: June 9/1970

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Good	Horizon Development Poor	Parent Drift	Material Bedrock	Colour
90K115-E:	ISOM/	0+50W	60% fragments	40	SE			X					B	50	X			X		2-6
		1+00W	60% fragments	45	SE			X					B	60	X			X		2-6
		1+50W	20% organic	45	S			X					B	40	X			X		2-6
		2+00W	20ft below top due to bluff	40	S			X					B	30	X			X		2-6
		2+50W	50% organic	40	S			X					B	40	X			X		2-6
		3+00W	25% organic	45	S			X					B	30	X			X		2-6
		3+50W	20ft down due to bluff	45	S			X					B	40	X			X		2-6
		4+00W		45	S			X					B	40	X			X		2-6
		4+50W	organic & fragmented composite	30	S			X					B	50	X			X		2-6
		5+00W		40	S			X					B	40	X			X		2-6
		5+50W	contains fragments (20%)	50	S			X					B	30	X			X		2-6
		6+00W		45	S			X					B	40	X			X		2-6
		6+50W		45	S			X					B	40	X			X		2-6
		7+00W		50	S			X					B	50	X			X		2-6
		7+50W	20ft below top (rock face)	45	S			X					B	30	X			X		2-6
		8+00W		10	S			X					B	40	X			X		2-6
		8+50W		40	S			X					B	40	X			X		2-6
		9+00W		10	S			X					B	30	X			X		2-6
		9+50W		25	S			X					B	30	X			X		2-6
		10+00W		30	S			X					B	40	X			X		2-6
		10+50W		30	S			X					B	30	X			X		2-6
		11+00W		20	S			X					B	30	X			X		2-6
		11+50W		30	S			X					B	40	X			X		2-6
		12+00W		30	S			X					B	40	X			X		2-6
		12+50W		30	S			X					B	40	X			X		2-6
		13+00W		20	S			X					B	50	X			X		2-6
		13+50W		30	S			X					B	40	X			X		2-6
		14+00W	20% fragmented	10	S			X					B	40	X			X		2-6
		14+50W		15	S			X					B	40	X			X		2-6
		15+00W		30	S			X					B	30	X			X		2-6

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: IANS III
 Area (Grid): E (cont'd)
 Collectors: Andrew Kaplan

Results Plotted By: _____
 Map: _____ N.T.S.: 104B/10411
 Date: June 9/1990 (cont'd)

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent Material		Colour
																Good	Poor	Drift	Bedrock	
90K115-E:	150 M/	15+50W		20	S								B	40	X					3 r b
		16+00W	20% organic	10	S								B	30	X					3 r b
		16+50W	3% Fragments & organic	20	S								B	30	X					3 r b
		17+00W	15ft below Tag	20	SE								B	40	X					2 r b
		17+50W		10	SE								B	40	X					2 r b
		18+00W		10	SE								B	40	X					2 r b
		18+50W		10	SE								B	50	X					2 r b
		19+00W		30	SE								B	50	X					2 r b
		19+50W	Contains some burnt wood	15	SE								B	45	X					2 r b
		20+00W	10 ft up from tag	20	S								B	40	X					3 r b
		20+50W	20% organic	40	S								B	30	X					3 r b
		21+00W	10ft below Tag, below outcrop	30	S								B	30	X					3 r b
		21+50W		40	S								B	30	X					3 r b
		22+00W	40% organic	50	S								B	40	X					3 r b
		22+50W		20	S								B	40	X					2 r b

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian

Results Plotted By: _____

Area (Grid): E (east of Varrett)

Map: _____ N.T.S.: 1:0415/10 and 11

Collectors: V.M.

Date June 9/70

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
90M113-E	150M	0100E	start at BL 3125 S / station at 160M	3°	N			X					B	30		X		X	MGB	
		0150E		25°	SE			X					B	30	X			X	MGB	
		1100E		15°	S			X					B	30	X				MGB	
N/S		1150E	outcrop (no soil development)																	
90M113-E		2100E	large A-horizon (swampy)	X				X					B	60	X				MGB	
		2150E		15°	SE			X					B	35	X		X	MGB		
		3100E	from under fallen tree			X		X					B	30			X	MGB		
		3150E	sample taken 5m SW of station	5°	S			X					B	35	X			MGB		
		4100E	on top of outcrop			X		X					B	30	X		X	MGB		
		4150E	sample taken 6m SE of station	X				X					B	30	X		X	MGB		
		5100E	on top of outcrop	5°	E			X					B	30	X			MGB		
		5150E		5°	E			X					B	30	X			MGB		
		6100E	1m S of station	3°	E			X					B	30	X		X	MGB		
		6150E	large A-horizon (swampy)	X				X					B	60	X			MB		
		7100E	10m SE from station	5°	W			X					B	30	X		X	MGB		
		7150E		5°	NW			X					B	30	X		X	MGB		
N/S		8100E	talus slope (no soil development)																	
90M113-E		8150E	large A-horizon (swampy)	3°	SE			X					B	60		X	X	DB		
		9100E	" " " "	5°	SE			X					B	120		X	X	MB		
N/S		9150E	talus slope (no soil development)																	
90M113-E		10100E	from fallen tree	15°	SE			X					B	10			X	MGB		
N/S		10150E	talus slope (no soil development)																	
90M113-E		11100E		15°	SE			X					B	35	X		X	MGB		
		11150E		2°	SE			X					B	30	X			MGB		
		12100E		1°	SE			X					B	30	X		X	MGB		
		12150E		15°	E			X					B	35	X		X	MGB		
		13100E		15°	SE			X					B	30	X			MGB		
		13150E	20% angular fragments	10°	SE			X					B	10	X		X	MGB		
N/S		14100E	old stream siltment																	
		14150E		15°	SE			X					B	30	X		X	MGB		

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian
 Area (Grid): EC of Varrett
 Collectors: S.S.

Results Plotted By: _____
 Map: _____ N.T.S.: 104 / 10 and 11
 Date: June 9/90

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent Material		Colour
																Good	Poor	Drift	Bedrock	
90Q1115-W	970M/	0+00W	clay layer at 10 cm taken 18m East of baseline (snow, talus)				X	X					B	35	X				MRB	
		0+50W		15° S				X					B	25	X				MRB	
		1+00W		25° S				X					B	30	X				MRB	
		1+50W		25° S				X					B	25	X			X	MRO	
		2+00W	Angular Fragments 3cm average	30° S				X						B	20	X			X	MRB
		2+50W		10° S				X						B	20	X				MRB
		3+00W		10° S				X						B	20	X				MRB
		3+50W	Angular Fragments 1-2cm	25° S				X						B	25	X			X	DRB
		4+00W		30° S				X						B	40		X			DRB
		4+50W	rounded rocks 3-5cm	30° S				X						B	40		X	X		Br
		5+00W		25° SW				X						B	30	X				O.R.B.
		5+50W	B horizon on surface	10° SW	X			X						B	10					MRB
6+00W	side of gully	30° SE				X						B	40		X	X		DRB		
90Q1115-E		0+50E		30° SW				X				B	30		X				Br	
		1+00E	below cliffs/subalpine				X	X					B	20	X				MRB	
		1+50E	edge of talus slide				X	X					B	20		X	X		Br	
		2+00E	limestone drift A/B mix	25° SE				X					A/B	20		X	X		Br	
		2+50E	limestone drift A/B mix	25° S				X					A/B	20		X	X		Br	
N/S	3+00E	A/B mix in drift	30° S				X					A/B	20		X	X		Br		
90Q1115-E		3+50E	N/S talus/A horizon only									B	30	X					MRB	
		4+00E					X	X					B	30	X				MRB	
		4+50E	base of limestone	25° S				X					B	30		X	X		DRB	
		5+00E	Base of Grey ash tuft bluffs	25° S				X					B	30		X	X		DRB	
	5+50E	Base of Grey ash tuft bluffs	30° S						alpine veg			B	40		X	X		DB		

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: IAN (ANOMALY FOLLOWUP)

Results Plotted By: _____

Area (Grid): E:

Map: _____ N.T.S.: 104B/10E11

Collectors: MUIRHEAD / TRAVIS

Date JULY 31 1990

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
↓	90TH15-	970M /	1+25W		S			X					AB	35	✓		✓		MRB	
	"	"	1+50W	*PREV. ANOM.	S			X					B	35	✓		✓		MRB	
	"	"	1+75W		S			X					AB	40	✓		✓		MRB	
	945M /	"	1+75W		S			X					AB	30	✓		✓		LRB	
	"	"	1+50W		S			X					B	30	✓		✓		MRB	
	"	"	1+25W	ANOMALY	S			X					AB	25	✓		✓		LRB	
	955M /	"	1+25W	IN TALUS	S			X					BC	40	✓		✓		LRB	
	"	"	1+50W	"	S			X					BC	40	✓		✓		LRB	
"	"	1+75W		S			X					AB	40	✓		✓		DRB		
↑	90AH15	945M /	3+25W		N			X					B	20	✓		✓		MRB	
			3+50W		S			X					AB	30	✓		✓		MB	
			3+75W		S			X					AB	30	✓		✓		MB	
		970M /	3+25W		S			X					B	25	✓		✓		MB	
			3+50W	*PREV. ANOM.	S			X					B	20	✓		✓		MB	
			3+75W		S			X					B	40	✓		✓		MB	
		955M /	3+25W		S			X					B	20	✓		✓		MRB	
			3+50W		S			X					B	25	✓		✓		MRB	
		3+75W		S			X					B	20	✓		✓		MRB		

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: IAN (ANOMALY FOLLOW-UP)

Results Plotted By: _____

Area (Grid): E:

Map: _____ N.T.S.: 104B/10,11

Collectors: MUIRHEAD, TRAVIS

Date JULY 31, 1990

Sample Number	Sample Location		Notes	Topography							Vegetation					Soil Data				
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent	Material	Colour
																Good	Poor			
90T115 ↓ N/S ↓ 90T115 - ↓ 95SM ↓ ✓	985M/ ↓ 970M/ ↓ 955M/ ↓	5+25W	SW				X						B	35	X			X	MRB	
		5+00W	SW				X						AB	30		X	X		DRB	
		4+75W	SW				X							AB	30		X	X		MBR
		4+50W	S				X							AB	35		Y	Y		MBR
		4+25W	S				X							BC	35		X	X		MRB
		4+25W	S				X						BC	35		X	Y		MRB	
		4+50W	SE				X						AB	25		X	Y		MRB	
		4+75W	SW				X						B	30		Y		X	MRB	
		5+00W	SW				X						B	25		X		Y	MRB	
		5+25W	SW				X						AB	30		X		X	MRB	
		4+25W	S				X						AB	35		Y	X		MBR	
		4+50W	S				X						AB	35		Y	Y		DRB	
		4+75W	SW				X						AB	35		Y	Y		LRB	
		5+00W	SW				X						AB	25		Y	X		LRB	
		5+25W	SW				X						B	30		X		X	MRB	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Tan III
 Area (Grid): E
 Collectors: S. Sheffield

Results Plotted By: _____
 Map: _____ N.T.S.: 104 B 10, 111
 Date: July 31/90

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Development		Parent Material		Colour
																Good	Poor	Drift	Bedrock	
90H115-E	970m	5+50E	Subalpine vegetation angular fragments 3cm	30°	S								B	20		X	X			Brown
"	970m	5+75E	Subalpine	30°	S								B	20		X				Brown
N/S	9750m	5+75E	N/S Talus																	
90H115-E	980m	5+25E	Subalpine	30°	S								B	25		X	X			Brown
N/S	9750m	5+50E	N/S Talus																	
90H115-E	9750m	5+00E	Subalpine limestone fragments	30°	S								B	25		X	X			Brown
	9750m	4+75E	Subalpine 1-3cm fragments	30°	S								B	25		X				Brown
	9750m	4+50E		30°	S								B	15						Brown
	9750m	4+25E	under limestone outcrop	30°	S								B	30		X				Brown
	9720m	4+25E		20°	S								B	20		X				Brown
	9720m	4+25E		20°	S								B	30		X				Brown
	9720m	5+00E	on terrace / small slope 30°S					X					B	20			X			Brown
90H115-E	10+00m	5+50E	on terrace / base of tall outcrop					X	X				B	15		X				Brown
"	10+00m	5+25E		30°	S				X				B	20	X					MRE
90H115-E	10+00m	5+25E	1-5cm frags	30°	S				X				B	25		X				Brown
	10+00m	5+00E		30°	S			X	X				B	15		X				MRE
	10+00m	4+75E						X	X				B	25	X					MRE
	10+00m	4+50E						X	X				B	25		X				MRE
	10+00m	4+25E						X	X				B	25	X					MRE
90H115-E	770m	10+00E		15°	S				X				B	25		X				Brown
	746m	10+00E		10°	S				X				B	20		X				Brown
	746m	10+50E	Angular frags 1-5cm	20°	S				X				B	25	X					MRE
	7420m	10+50E		20°	S				X				B	20		X				Brown
	7490m	10+50E		20°	S				X				B	25	X					MRE

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Ian (III)

Results Plotted By: _____

Area (Grid): E

Map: _____ N.T.S.: 10413 10+11

Collectors: S. Sheffield

Date: Aug 1/90

Sample Number	Sample Location		Notes	Topography			Vegetation						Soil Data							
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon Develop-ment		Parent	Material	Colour
																Good	Poor			
90L115-E	8+25m	0+75W	1-3cm rounded frags	15°	N		X						B	30		X	X		Brown	
	8+25m	1+00W	previous anomaly	3°	W		X						B	30	X				MRE	
	8+25m	1+25W		10°	N		X						B	30	X				MRE	
	8+20m	1+25W		15°	N		X						B	30					LB	
	8+20m	1+00W	on top of outcrop	15°	S		X						B	15	X			X	MRE	
	8+20m	0+75W		15°	S		X						B	30	X				LS	
	8+26m	0+75W		20°	S		X						B	30	X				MRE	
	8+26m	1+00W				X	X						B	30	X				MRE	
8+26m	1+25W		30°	W		X						B	30	X				MRE		
90L115-E	8+25m	2+25W	Light orange Brown	15°	W								B	20	X				LOB	
	8+25m	2+50W	previous anomaly	20°	N		X						B	30	X				MRE	
	8+25m	2+75W				X	X						B	30	X				MRE	
N/S	8+00m	2+25W	Bedrock																L	
90L115-E	8+00m	2+50W		25°	S		X						B	15	X				LS	
	8+00m	2+25W	Grey Brown 1-3cm fragments	25°	S		X						B	20		X				
	N/S	8+26m	2+25W	Bedrock																
	N/S	8+26m	2+50W	Talus																
	N/S	8+26m	2+75W	Talus																
90L115-E	660m	2+00E	previous anomaly	10°	S		X						B	35	X				MRE	
	660m	1+75E		10°	S		X						B	35	X				LS	
	6+50m	1+75E	in fault between bluffs			X	X						B	30	X				MRE	
	6+50m	2+00E		15°	S		X						B	30	X				LS	
	6+50m	2+25E		10°	S		X						B	30	X				LS	
	6+50m	2+75E		15°	S		X						B	20	X				MRE	
	6+50m	3+00E	1-5cm angular frags; prev. area	15°	S		X						B	30	X				MRE	
	N/S	6+50m	3+25E	Talus																
6+60m	3+25E		25°	S		X							B	25	X				MRE	

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Jan
 Area (Grid): Chart
 Collectors: C. Davis - K. Heringer

Results Plotted By: _____
 Map: _____ N.T.S.: 104B/10,11
 Date: September 19, 1970

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data						
	Line	Station		Valley Bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Sparsely Wooded	Burnt	Logged	Grassland	Swampy	Horizon Sampled	Depth to Horizon Sample	Horizon	Development	Parent	Material
970m	QDCN15-E	4+25E	Roots, rocky, talus slope	32SE				✓					B	10cm	✓				DB
		4+50E	No previous fall, under cliff on talus	40SE				✓					A-B	38cm		✓			DB
		4+75E	One hole-bedrock. Mature forest - bushes	40SE				✓						B	9cm	✓			DB
		5+25E	Below huge rock fall in meadow of ferns.	48SE					✓					A-B	38cm		✓		DB
950m		5+50E	Very rocky soil on talus slope, 20m above trees, ^{with} ferns.	30SE									A-B	41cm		✓		DB	
		5+100E		30SE					✓					A-B	47cm		✓		DB
			DB → Dark Brown.																

KEEWATIN ENGINEERING INC.

SOIL SAMPLES

Project: Jan.

Results Plotted By: _____

Area (Grid): NE SECTION OF PROPERTY

Map: _____ N.T.S.: 104 B/10 3/11

Collectors: C. Hauer & J. Heringer

Date: October 9, 1990

Sample Number	Sample Location		Notes	Topography				Vegetation					Soil Data					
	Line	Station		Valley bottom	Direction of slope	Hill Top	Level Ground	Heavily Wooded	Modestly Wooded	Burnt	Logged	Grassland	Swamcy	Horizon Sampled	Depth to Horizon Sample	Horizon Development	Parent	Material
90H14 SE	1025m	5+00E	Sample was taken 10 metres down slope		20°S			✓					B	30cm	✓			LB
	1025m	5+25E			0			✓						B	35cm	✓		DB
	1025m	5+50E			0			✓						B	37cm	✓		DB
	1025m	4+75E			0			✓						B	34cm	✓		DB
	1025m	4+50E			30°S			✓						B	28cm	✓		DB
	1025m	4+25E			40°S			✓						B	31cm	✓		DB
90H115 E	1050m	5+50E	Under Outcrop Under Outcrop Roots very organic		15°S			✓					B	33cm	✓		DB	
	1050m	5+25E			30°S			✓					B	31cm	X		B	
	1050m	5+00E			50°S			✓					B	43cm	✓		B	
	1050m	4+75E			20°S			✓					B	44cm	✓		DB	
	1050m	4+50E			25°S			✓					B	34cm	✓		DB	
	1050m	4+25E			40°S			✓					B	27cm	✓		DB	

LB → Light Brown
DB → Dark Brown
B → Brown

8

APPENDIX 4

Rock Sample Descriptions

KEEWATIN ENGINEERING INC.

ROCK SAMPLES

Project: III Jan 4
 Area (Grid): west side 450 m elevation
 Collectors: P. Lukash

Results Plotted By: _____
 Map: _____ NTS: 104-B/10W, 11E
 Date: 1006 90 Surface Underground

SAMPLE NUMBER	LOCATION	NOTES	REP. SAMPLE NUMBER	SAMPLE TYPE (LENGTH)					ROCK TYPE	SAMPLE DESCRIPTION	MAP SHEET
				GRAB	CHIP	CHANNEL	CORE	FLOAT			
R-001	0+25W	450m elev		✓					Porphyry	Disseminated pyrite, greenish rock with phenocrysts	
R-002	1+10W	445m elev		✓					Carbonate rock	HCl ⁺ , no mineralization. black-grey in colour	
C-003	2+73W	453m elev.			0.8m				Porphyry Tuff	HCl ⁺ , disseminated pyrite. carbonate veins - HCl ⁺	
C-004	4+40W	443m elev			0.4m				Tuff	Dissem. pyrite. Black-grey rock.	
C-005	4+32W	442m elev.			0.4m				Tuff	Dissem. pyrite. Black-grey rock.	
C-006	5+15W	465m elev.			0.7m				Silicified Tuff	Black chert with disseminated pyrite.	
R-007	5+20W	465m elev.		✓					Silicified tuff	Black rock with disseminated pyrite.	

KEEWATIN ENGINEERING INC.

ROCK SAMPLES

Project: IAN
 Area (Grid): VERRET (EAST)
 Collectors: A. TRAVIS

Results Plotted By: _____
 Map: _____ NTS: 104 B 10+11
 Date: JUNE 4/90 Surface Underground _____

SAMPLE NUMBER	LOCATION	NOTES	REP. SAMPLE NUMBER	SAMPLE TYPE (LENGTH)					ROCK TYPE	SAMPLE DESCRIPTION	MAP SHEET
				GRAB	CHIP	CHANNEL	CORE	FLOAT			
90T11R-010	825m	ELEVATION IN CREEK THAT RUNS NORTH-SOUTH ALONG EASTERN CLAIM BOUNDARY							Qtz VEINED + SHEARED INTRUSIVE	CHIPS ACROSS 10" (TRUE WIDTH?) UP TO 50% Pyrite VERY IRREGULAR, POODY, TRENDS ~60°, TRACE Cpy PREVIOUS SAMPLES: 87 APR 9, 10, 87 AKR-12	
R-011	2m	away from Sample R-010							Qtz VEINED + SHEARED INTRUSIVE	VERY SIMILAR TO R-010, IN FACT MAYBE SAME ZONE CONTACTED AND/OR FAULTED TAKEN OVER ~1' (TRUE WIDTH?)	
R-012	SAME LOCATION AS R-010, R-011								Qtz VEINED + SHEARED INTRUSIVE	CONTINUOUS CHIP ACROSS o/c for 4m. This includes both zones, individually Sampled as above.	

NOTE: SAMPLES 90T11R-008, 009 NOT TAKEN

KEEWATIN ENGINEERING INC.

ROCK SAMPLES

Project: IAN WEST (2)

Results Plotted By: _____

Area (Grid): W.

Map: _____ NTS: 104E/10E 11.

Collectors: MURHEAD & LEONARD

Date: 13/06/90 Surface _____ Underground _____

SAMPLE NUMBER	LOCATION	NOTES	REP. SAMPLE NUMBER	SAMPLE TYPE (LENGTH)					ROCK TYPE	SAMPLE DESCRIPTION	MAP SHEET
				GRAB	CHIP	CHANNEL	CORE	FLOAT			
90A11R-002	N.E. CORNER IAN 2 CLAIM. ≈ 220 m. S.W. OF 7+00N ON	1989 SOIL CONTOUR 375 M. ELEV ≈ 460 m. Labelled in the field as R-007		✓					g. ✓	NARROW - 1 - 4 cm qv. (PINK & SWELL) W 5% LARGE BLEB Cpy TR MgL, TR-1% ZnS.	
90A11R-003	N.E. IAN 2 CLAIM. 150-200 m WEST OF 7+00N. 1989 375 M.	Labelled in the field as R-003		✓					ANDESITE BRECCIA	BRECCIATED TUFFACEOUS ANDESITE HEALED W EPIDOTE 8+% FINE DISS & BLEB Py (ZnS? Po?)	
										* NOTE!	
										THESE SAMPLES WERE TAGGED IN THE FIELD AS 90A11R-007 & 90A11R-008	

APPENDIX 5

Geochemical Anomaly Investigations

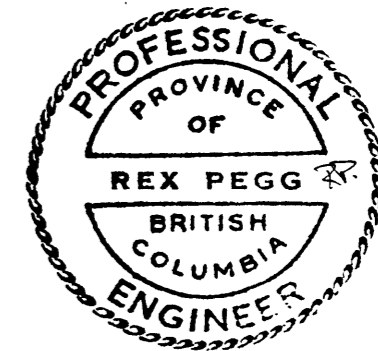
PREVIOUS SOIL ANOMALY (Au/As) - $\frac{90}{\text{Year}}$ INVESTIGATION
 Element(s)

- 1) Location: 970m/4+50E, 5+00E, 5+50E
- 2) Previous Value(s): 4+50E - 5.2 ppm Ag, 5+00E - 40 ppb Au, 1 ppm As, 5+50E - 53 ppb Au, 589 ppm As, 5.6 ppm Ag
- 3) Year Collected: 1990
- 4) Date of Investigation: July 31
- 5) Investigator(s): S. Sheffield, P. Lutyusler, R. Honsinger
- 6) Description of Previous Sample Collected:
 - 5+50E sample taken in talus. poor B horizon development, heavily fragments talus (50-60%). Brown
 - 5+00E B horizon poorly developed with talus fragments.
 - 4+50E B horizon well developed.
- 7) Description of New Sample:
 - 5+50E sample taken in previous soil location, same as above. 40 cm depth
 - 5+00E Brown soil, sampled at 20 cm in previous sample hole, poor B horizon development
 - 4+50E Brown soils, sampled at 20 cm depth in previous sample hole, poor B horizon development.
- 8) Description of Topography:

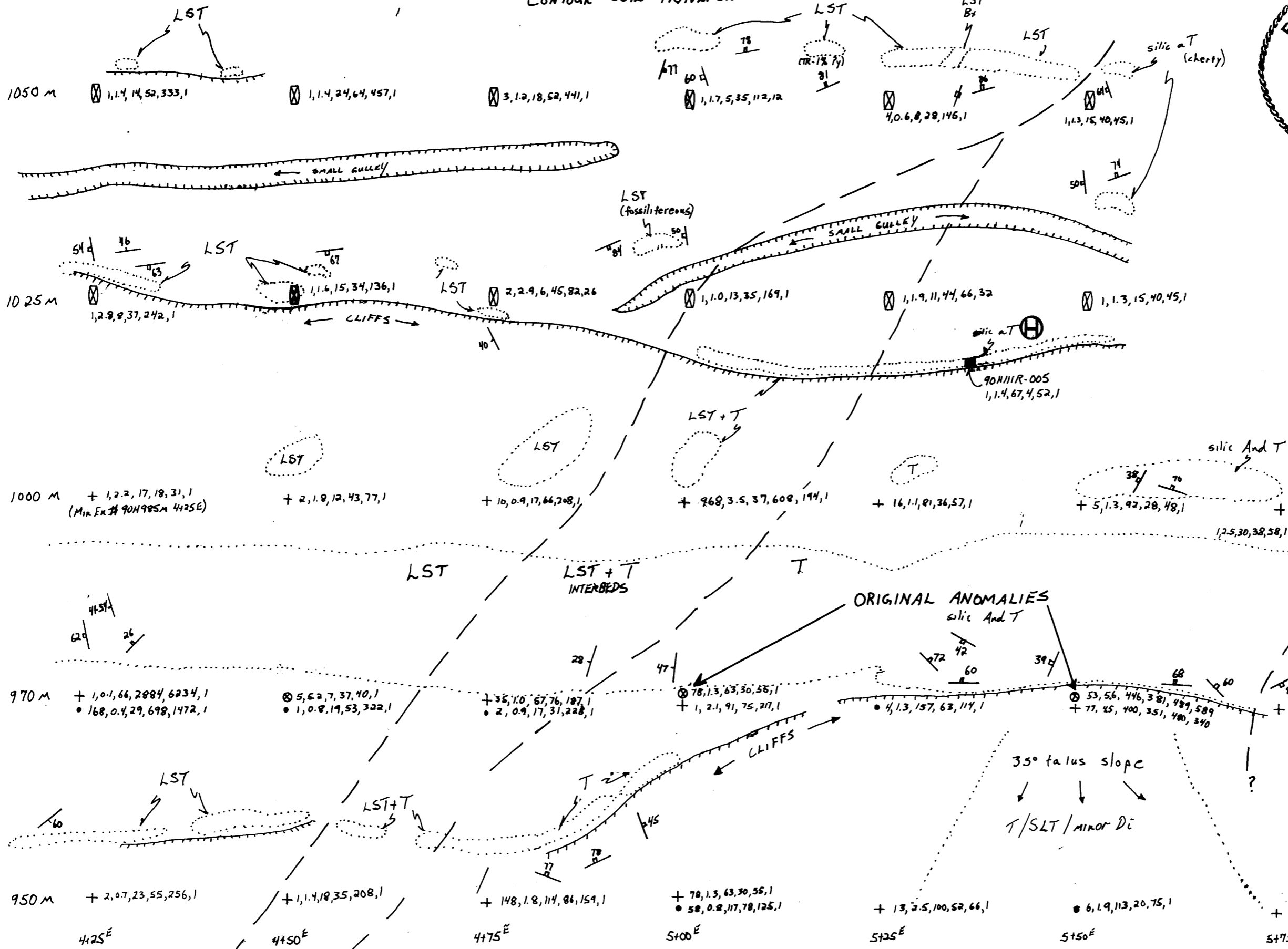
Platteau and slope is 34° Talus slope descending southward
- 9) Results of Investigation:

Western side of the investigated area consists of (crystal) limestone. The central part consists of around 25m wide transitional zone + limestone and tuffaceous rock type interbeds. Towards the east amount of tuffaceous horizons increase and limestone is reduced up to the point where limestone is no more present. Eastern side of investigated area consist ofriticified ash tuff, lapilli tuff (possibly some flows) and monadnrite on the far end. Bedding in transitional zone measured in tuffs and limestone appears to have an attitude 180-200°/28-50W
- 10) Conclusions:

No immediate source of mineralization was found. Mineralization could be related to the contact zone between monadnrite and tuffaceous or limestone rock.



- CONTOUR SOIL TRAVERSES -



LEGEND

1,0,1,66,2884,6234,1 = ppb Au, ppm Ag, ppm Cu, ppm Pb, ppm Zn, ppm As.

- (H) Helipad.
- ⊗ June 9, 1990 - soil anomalies (90Q III S-E)
- + July 31, 1990 - follow up soil stn (90H III S-E)
- Sept. 19, 1990 - follow up soil stn (90CD III S-E)
- ⊗ Oct. 9, 1990 - follow up soil stn (90H III S-E)
- Oct. 9, 1990 rock sample.

- Geologic contact.
- ⌋ Cliff.
- ▬ Gully, depression
- Outcrop.
- Lst Limestone.
- MDi Monzodiorite.
- SLT Siltstone
- T Tuff.

IAN PROPERTY
SOIL ANOMALY FOLLOW UP
GEOLOGY & GEOCHEMISTRY



IAN

PROJECT

PREVIOUS SOIL ANOMALY (Au, As) - 1990 INVESTIGATION
Element(s) Year

- 1) Location: E: 970M/1+50W
- 2) Previous Value(s): 2 ppb. Au, 98 ppm As.
- 3) Year Collected: 1990
- 4) Date of Investigation: JULY 31, 1990.
- 5) Investigator(s): MUIRHEAD/TRAVIS.
- 6) Description of Previous Sample Collected: B - HORIZON @ 25-30 cm.
FAIR HORIZ. DEVELOPMENT ON 10-15° S. SLOPE
SMALL HUMMOCK. MED. Rd/Bf.
MODERATELY WOODED.
- 7) Description of New Sample:
AS ABOVE 1m EAST OF ORIGINAL. 35 cm DEPTH.
- 8) Description of Topography:
SMALL (2m) HUMMOCK, SAMPLED ON SOUTH SLOPE 10°-15°. GENERAL SLOPE ANGLE 25-30°
- 9) Results of Investigation:
DETAILED GEOLOGIC MAPPING FOUND MAINLY ANDESITIC TUFFS & ASH TUFFS TYPICALLY WITH 1-3% Py/Fe MINERALIZATION, ALSO A SMALL LIMESTONE UNIT WAS MAPPED.
SOIL AT THE ANOMALY SITE APPEARED TO BE WELL DEVELOPED BEDROCK DERIVED, THOUGH THE DETAIL GRID SOILS APPEAR TRANSPORTED.
- 10) Conclusions:
NO IMMEDIATE SOURCE FOR THE ANOMALY WAS APPARENT THE ANOMALOUS SAMPLE WAS COLLECTED AT THE EDGE OF A SMALL DEPRESSION ON A LESS STEEP AREA. POSSIBLE GROUND WATER CONCENTRATION OF AS FROM UPSLOPE?

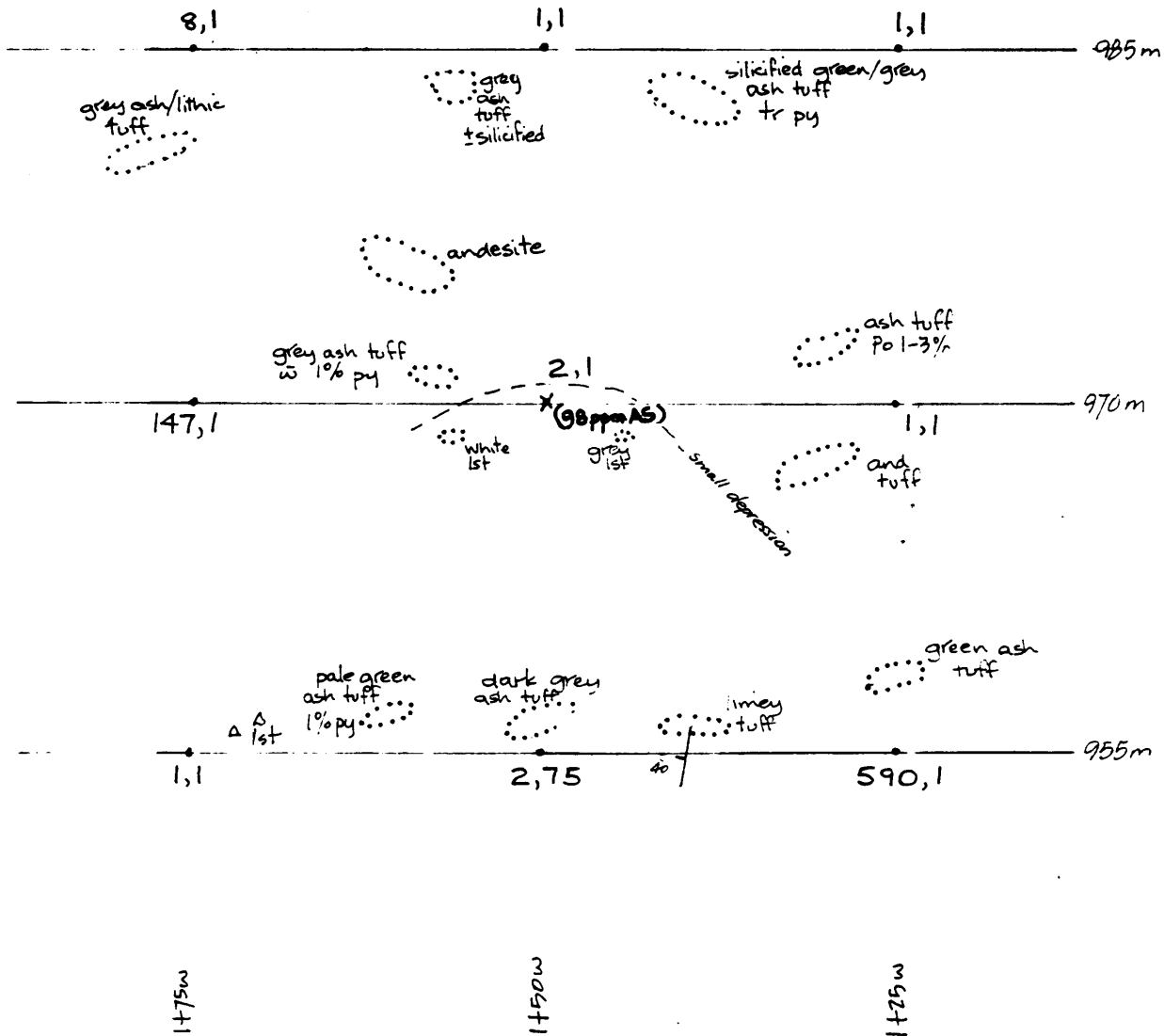
Soil Anomaly Follow-up

July 31/90

IAN

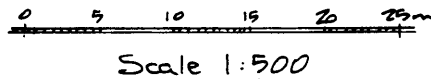
Fidan, EN27

970 m / 1750 W



LEGEND

- detailed soil site
- X duplicate soil site
- 147,1 ppbAu, ppmAs
- 1st limestone
- ∴∴∴ outcrop
- Δ float



IAN

PROJECT

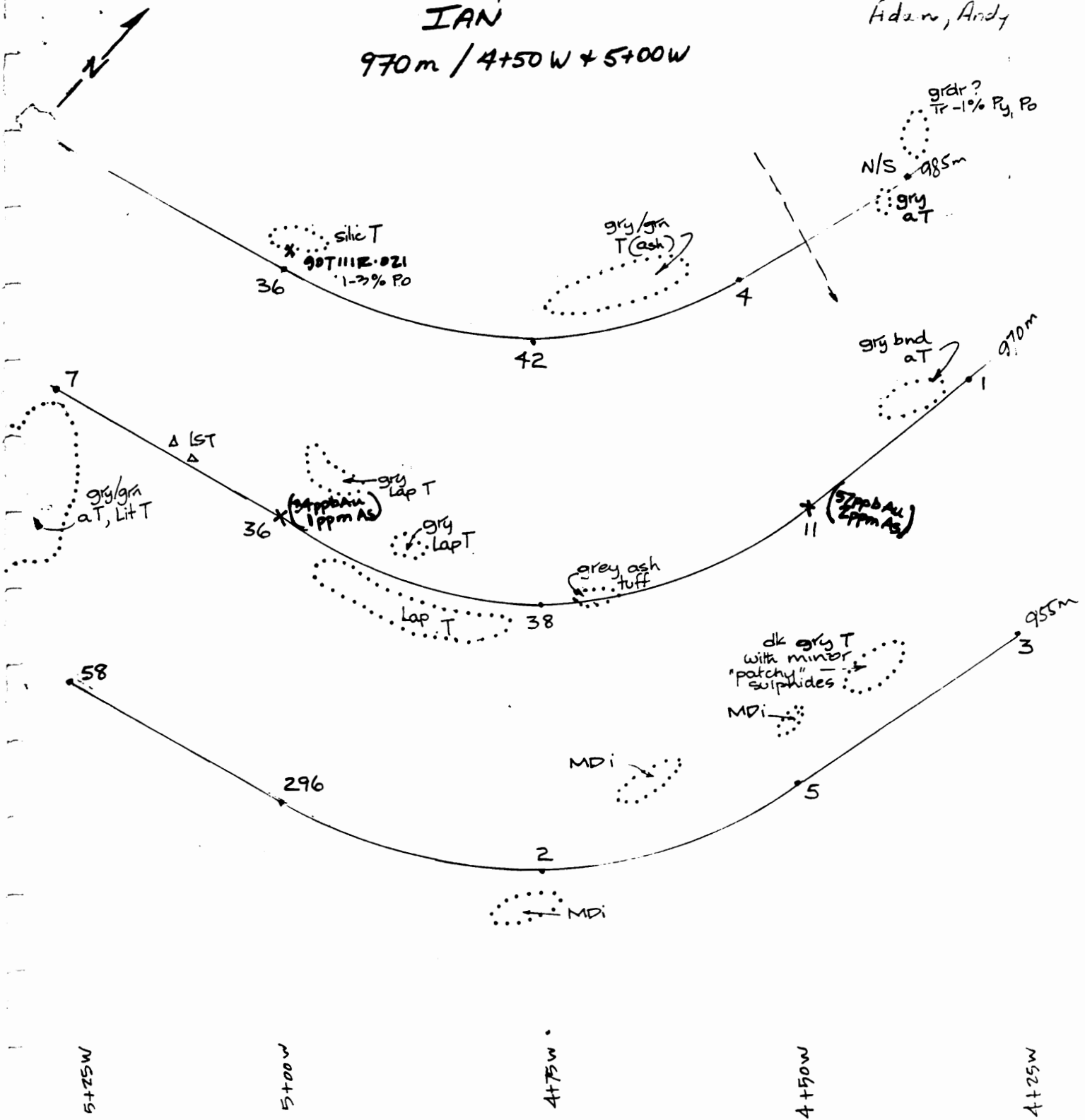
PREVIOUS SOIL ANOMALY (Au, As) - 1990 INVESTIGATION
Element(s) Year

- 1) Location: E: 970M/4+50W & 5+00W
- 2) Previous Value(s): 4+50W: 57ppb Au, 2ppm As. 5+00W: 34ppb Au, 1ppm As.
- 3) Year Collected: 1990
- 4) Date of Investigation: JULY 31, 1990
- 5) Investigator(s): TRAVIS, MUIRHEAD
- 6) Description of Previous Sample Collected:
4+50W - 30cm. BC HORIZ. DRIFT. 3-5cm SUB ANGULAR TALUS
POOR DEVELOPMENT. MED. Rd/Bt.
5+00W - 30cm. "B" HORIZ. BIR. FAIR DEVELOPMENT.
MED. Rd/Bt.
- 7) Description of New Sample:
4+50W - 35cm BC HORIZ. POOR DRIFT. MED Rd/Bt.
5+00W - 30cm. B HORIZ. FAIR. BEDROCK. MED Rd/Bt.
- 8) Description of Topography:
4+50W - 35° S.E. SLOPE. MODERATELY WOODED. TALUS
AREA W. BRUSH.
5+00W. 25° SW. SLOPE. MODERATELY WOODED
- 9) Results of Investigation:
The investigated area consists of ash to lapilli tuffs
that have been intruded by monzonite to granodiorite
intrusions.
- 10) Conclusions:
No immediate source of mineralization was found
to account for anomalous values.
Sample 90T111R-021 was taken of a silicified tuff
with 1-3% pyrrhotite

SOIL ANOMALY FOLLOW-UP IAN

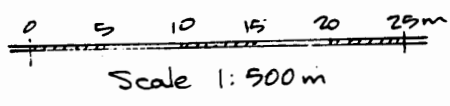
Hicks, Andy

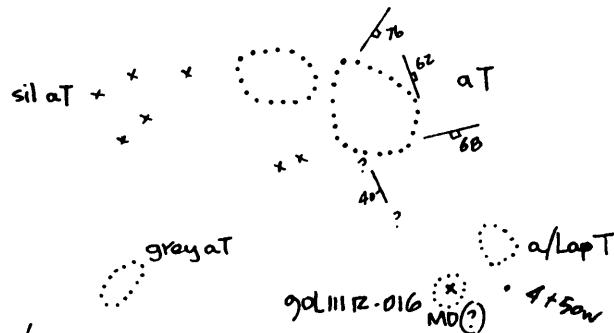
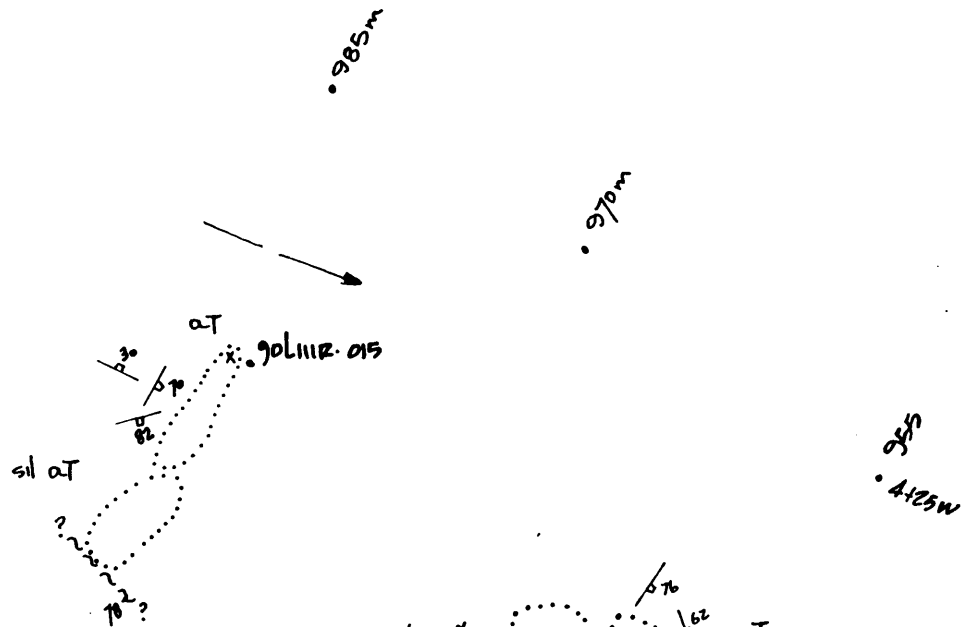
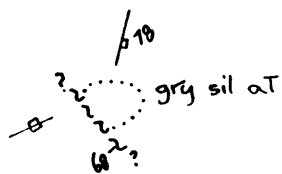
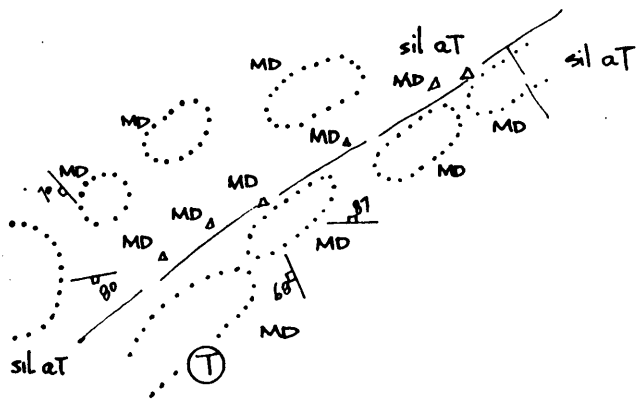
970m / 4+50W + 5+00W



LEGEND

- detailed soil site
- x duplicate soil site
- 36 ppb Au
- N/S no sample
- T tuff
- LapT lapilli tuff

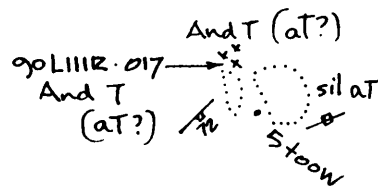
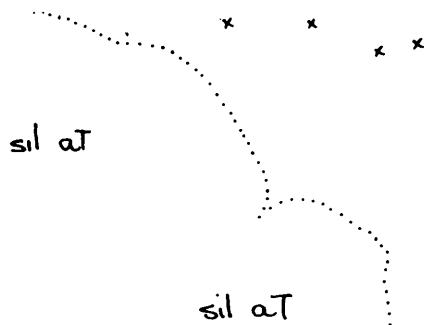
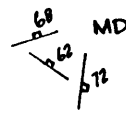
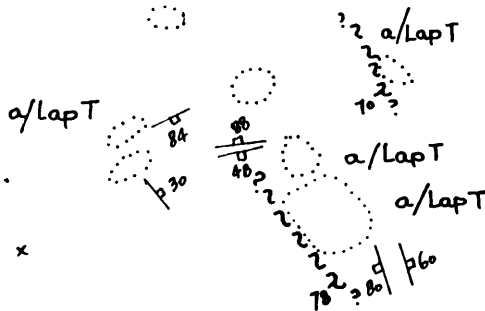




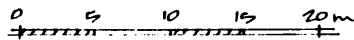
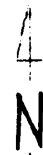
AMD

grey aT

90L111R-016 MD(?) 4+50W



sil aT



Scale 1:500

September 19 / 90

IAN PROPERTY

IAN

PROJECT

PREVIOUS SOIL ANOMALY (Au) - $\frac{90}{\text{Year}}$ INVESTIGATION
Element(s)

- 1) **Location:** NEAR NORTHERN CLAIM BOUNDARY 50m WEST OF CLAIM LINE BETWEEN IAN 2 + IAN 4
- 2) **Previous Value(s):** 375 ppb Au
- 3) **Year Collected:** 1987 HiTEC
- 4) **Date of Investigation:** June 12/90
- 5) **Investigator(s):** A. TRAVIS, V. MALO, J. LENARD, S. SHEFFIELD.
- 6) **Description of Previous Sample Collected:**
GR 7: 375 ppb Au
Sample was not located.
- 7) **Description of New Sample:**
No new sample taken, generally little outcrop which is a monzogranite.
- 8) **Description of Topography:**
Bluffy, well treed, little outcrop.
- 9) **Results of Investigation:**
Very hard to find sample as it is not near any flagged lines or definite topographic feature.
- 10) **Conclusions:**
Sample was not found.

IAN PROJECT

PREVIOUS SOIL ANOMALY (Au) - 90 INVESTIGATION
Element(s) Year

- 1) **Location:** 8+25m 10+50E
- 2) **Previous Value(s):** 225ppb Au, 4ppm As
- 3) **Year Collected:** 1990
- 4) **Date of Investigation:** July 27/90
- 5) **Investigator(s):** TRAVIS, Sheffield, Lutynski, Kaplan
- 6) **Description of Previous Sample Collected:**
see below, good sample
- 7) **Description of New Sample:**
Poorly developed B horizon. Brown soil sampled at a depth of 2.5m in old sample hole. Talus fragments 1-4cm.
- 8) **Description of Topography:**
30° slope running south, talus throughout area, mature forest
- 9) **Results of Investigation:**
The sample was taken from a talus slide area. Approximately 50m above sample cliffs of pale green tuff occur. Two outcrops? (large boulders!) of silicified ash tuff occur within the grid. TALUS BLOCKS are also composed chiefly of silicified ash tuff. TRACE amounts of disseminated pyrite occur within the tuffs.
- 10) **Conclusions:**
No immediate source of mineralization was found to account for anomalous value.

IAN Soil Anomaly Follow up

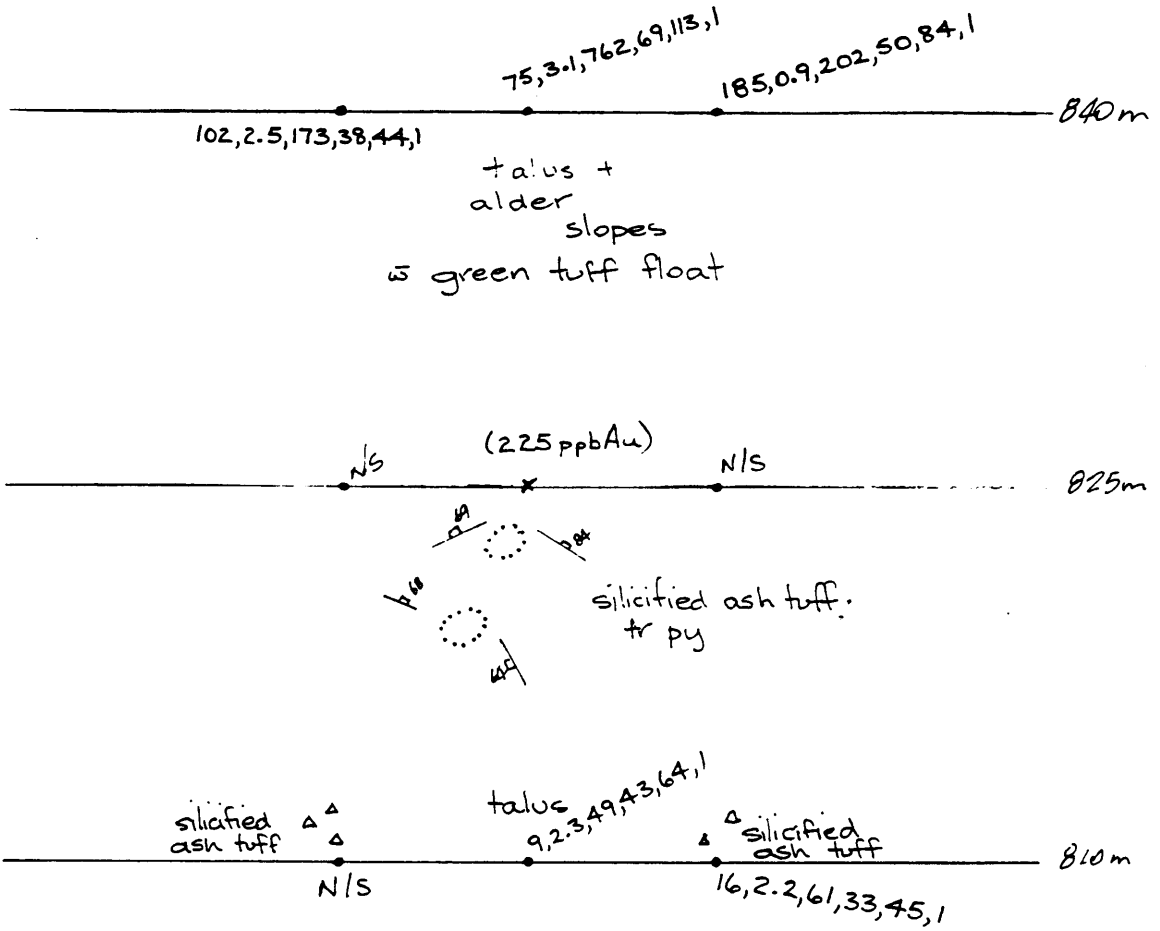
JULY 27/90

Asst. Geol. Eng. Dept.



90T1115-E:

90T1115-E: 825m/10+50E (Au 225 ppc)



Prefix with 90T1115-E:

LEGEND

- detailed soil site
- x anomaly site

185, 0.9, 202, 50, 84, 1 ppb Au, ppm Ag, Cu, Pb, Zn, As
∴ outcrop
Δ float

10+375E

10+50E

10+625E



Scale 1:500

PREVIOUS SILT ANOMALY (As) - $\frac{90}{\text{Year}}$ INVESTIGATION
Element(s)

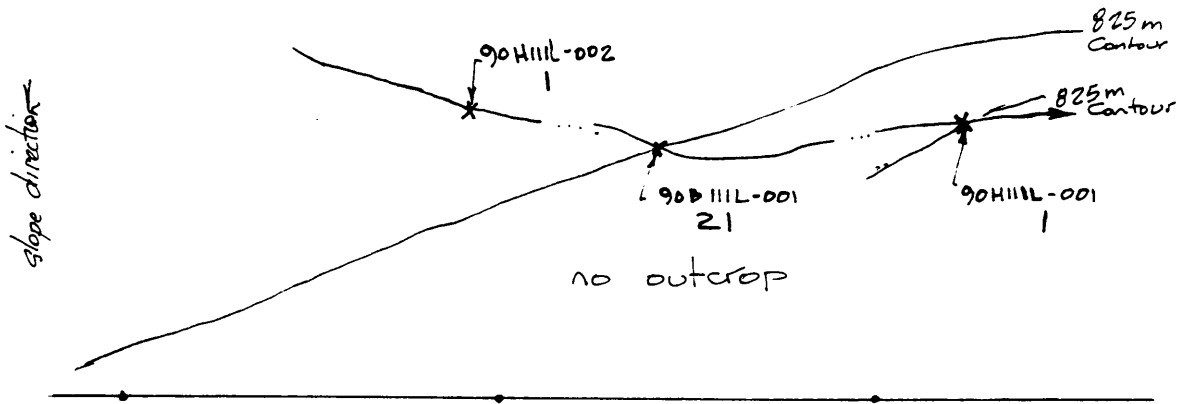
- 1) Location: 825 m / 7+75E
- 2) Previous Value(s): 21 ppm As.
- 3) Year Collected: 1990
- 4) Date of Investigation: July 31
- 5) Investigator(s): S. Sheffield, P. Lulyshar, R. Hoisinger
- 6) Description of Previous Sample Collected:
Sand and silt in active 1/2 m wide 5cm deep medium velocity stream. (refer to 1990 sample # 90B111L-001)
- 7) Description of New Sample:
Same as above with 2 samples collected, one 12.5 m upstream (90H111L-002) and one collected 25m downstream (90H111L-007).
- 8) Description of Topography:
Ternard bench below 30° alder and devil club talus slope (below = S).
- 9) Results of Investigation:
No outcrops were mapped on the investigated area. Area is overgrown with alder bushes and devil club plants. Two silt samples were taken. One 12.5m up the stream from anomalous silt sample and one 25m down the stream from anomalous silt sample.
- 10) Conclusions:
No immediate source of mineralization was found. Possibly related to soil anomaly of 589 ppm As located ~300m upstream at 970m elevation, 5+50 E. (talus drainage creek).

July 31/90

IAN
Silt anomaly follow-up
825m / 7+75E



no outcrop - devils club & slide alder



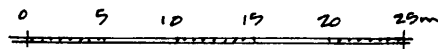
LEGEND

- x silt sample site
- 1 ppm As
- > creek

762E

775E

795E



Scale 1:500

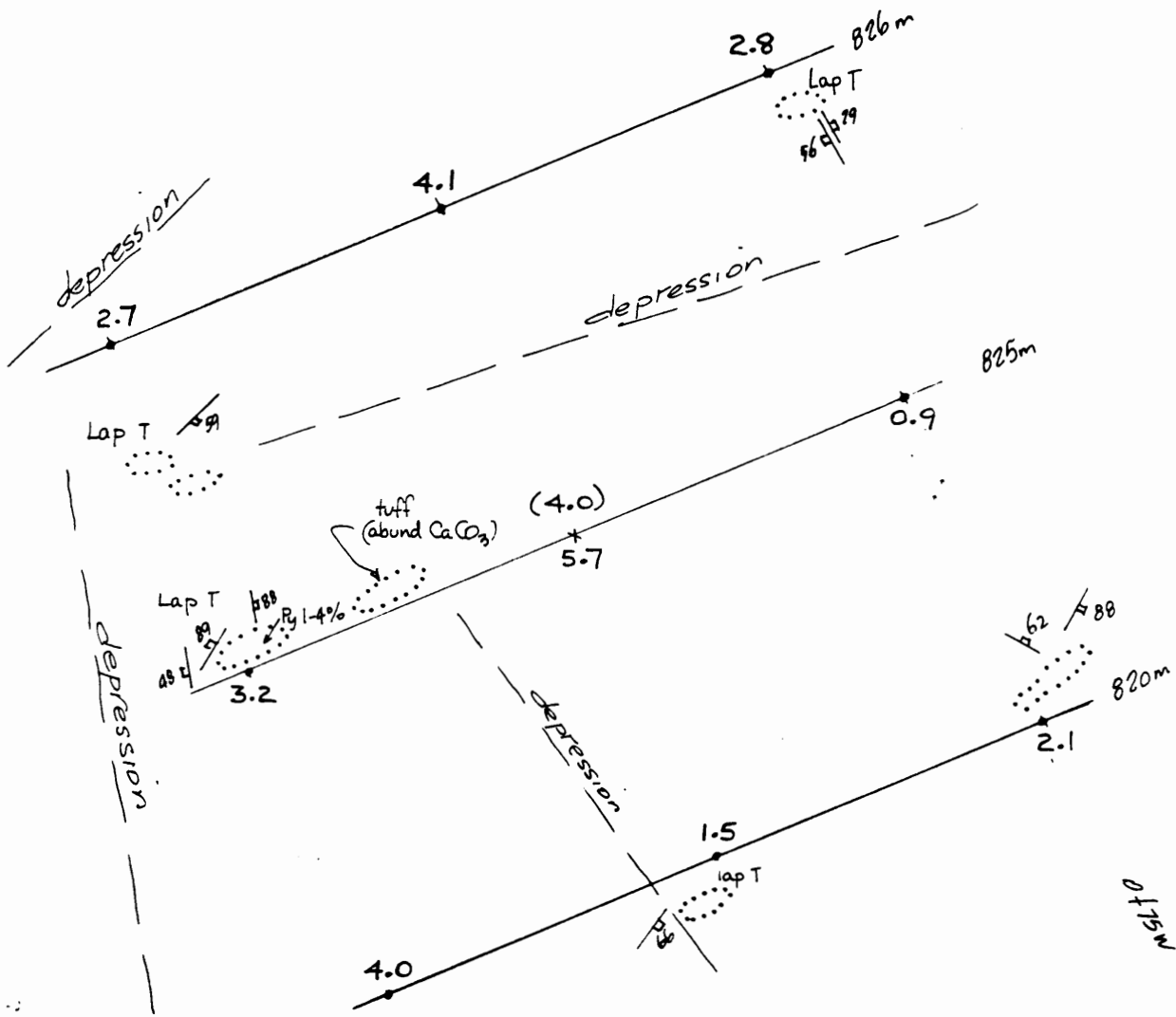
Jan - 111 PROJECT

PREVIOUS SOIL ANOMALY (A_g) - $\frac{90}{\text{Year}}$ INVESTIGATION
Element(s)

- 1) Location: 825m , 1400W
- 2) Previous Value(s): 4.0 ppm A_g
- 3) Year Collected: 1990
- 4) Date of Investigation: Aug 1/90
- 5) Investigator(s): Steve S / Piotr L.
- 6) Description of Previous Sample Collected:
see below
- 7) Description of New Sample:
Medium Red Brown soil, good B horizon development, sampled at 30cm depth in previous sample hole
- 8) Description of Topography:
Mature heavily wooded forest. soil contour taken on terrace, however overall slope 20-30° S. Small to large outcrops throughout
- 9) Results of Investigation:
no immediate source of anomalous soil sample was found
Area consists of Kapelle Tuff. type of rock.
- 10) Conclusions:
22m west from anomalous soil sample abundant carbonate mineralization and pyrite mineralization (1-4%) were found. This mineralization could be related to anomalous soil values.

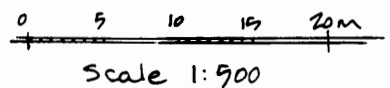
Aug 1 / 90

Ian Soil anomaly follow up 825m / 1400W



Prefix with 90L1115-E:

- LEGEND
- detailed soil site
 - x duplicate soil site
 - (4.0) original result (ppm Ag)
 - Lap T lapilli tuff
 - ⋯ outcrop



Jan III

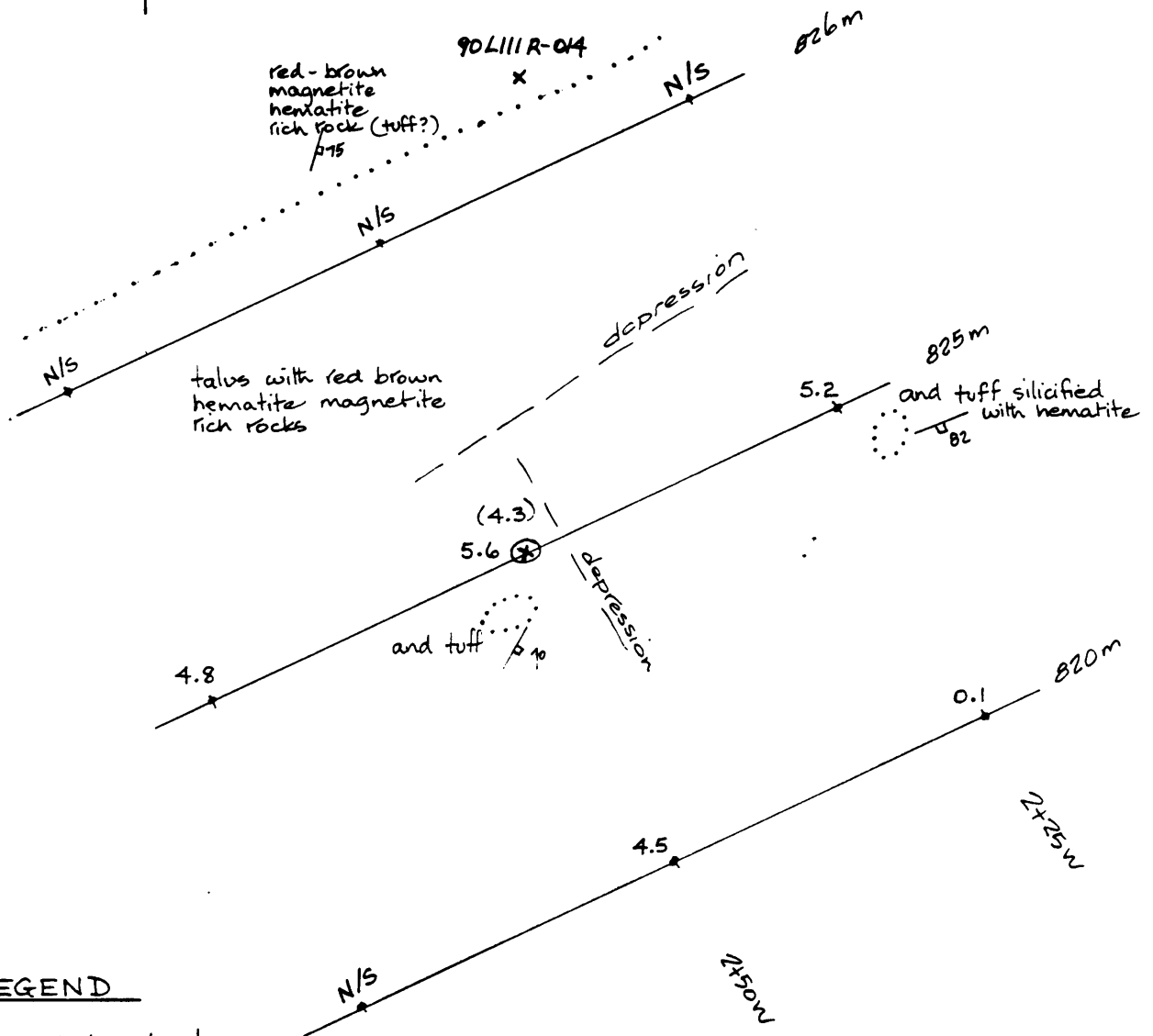
PROJECT

PREVIOUS SOIL ANOMALY (Ag) - $\frac{90}{\text{Year}}$ INVESTIGATION
Element(s)

- 1) **Location:** 825m , 2+50W
- 2) **Previous Value(s):** 4.3 ppm Ag
- 3) **Year Collected:** 1990
- 4) **Date of Investigation:** Aug 1/90
- 5) **Investigator(s):** Piotr L / Steve S
- 6) **Description of Previous Sample Collected:**
see below, good sample
- 7) **Description of New Sample:**
Medium Red Brown soil, good B horizon development, sampled at 30cm depth in previous sample hole
- 8) **Description of Topography:**
Sample taken on 20° slope running North in heavily wooded mature forest. Overall slope running South. Contour soil line ran on terrace. Small outcrops to large bluffs.
- 9) **Results of Investigation:**
Area consists of Tuffaceous type of rock. Significant deep depression with an attitude. NE-SW segregates investigated area from Magnetite-hematite rich rock
- 10) **Conclusions:**
Anomalous soil value could be related to magnetite & hematite rich zone north of investigated area. (see sample 90LIII R-C14)
Sept. 2nd. 190 results from rock sample are negative

Aug 1 / 90

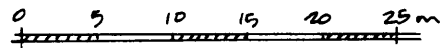
Ian
Soil anomaly follow up
825m/2+50W



LEGEND

- detailed soil site
- ⊗ duplicate soil site
- (4.3) original result (ppmAg)
- N/S no sample
- ∴ outcrop

Prefix with 90L111S-E:



Scale 1: 500

IAN-111

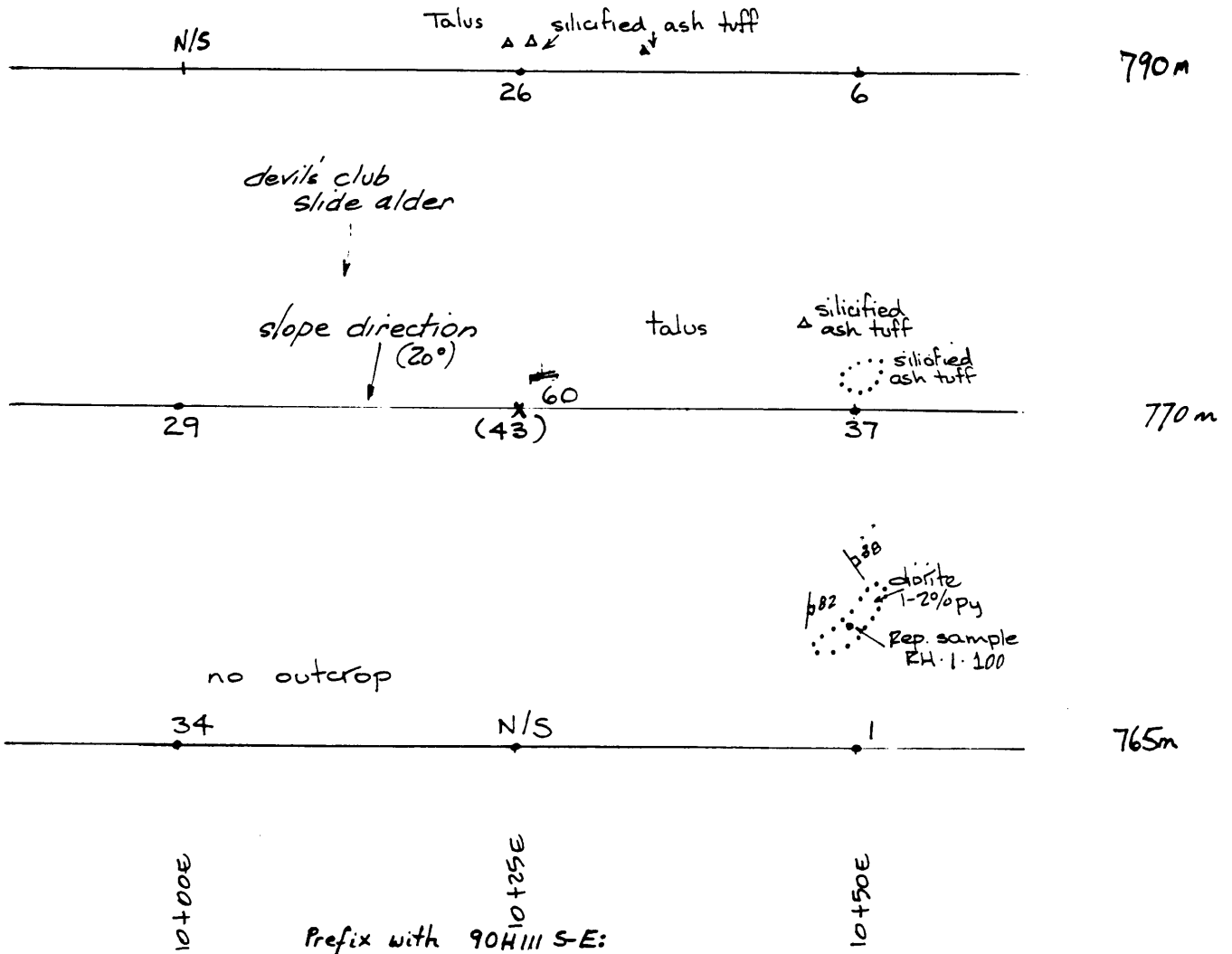
PROJECT

PREVIOUS SOIL ANOMALY (Au) - 90 INVESTIGATION
Element(s) Year

- 1) Location: 770m/10+25E
- 2) Previous Value(s): 43ppb Au, 1ppm As
- 3) Year Collected: 1990
- 4) Date of Investigation: July 31
- 5) Investigator(s): S. Sheffield, P. Kutyski, R. Honsinger
- 6) Description of Previous Sample Collected:
Poorly developed B horizon soil, same as 7).
- 7) Description of New Sample:
Sample collected @ 20-25cm depth in brown to medium red brown generally poorly developed B horizon.
- 8) Description of Topography:
15-20° South direction, dense scrub and shade alder.
Little exposed rock.
- 9) Results of Investigation:
Anomalous soil sample was taken from the talous slope (blocks of solidified a. Tuff). One outcrop of solidified ash Tuff. was mapped.
Around 20m south from the anomalous soil sample outcrop of monodromite occurs.
- 10) Conclusions:
No immediate source of mineralization was found for anomalous soil sample. Above anomalous soil sample 770m/10+25E, soil sample from the elevation 825m @ 10+50E also contain anomalous "Au" value. Anomalous mineralization in both soil samples could be related to the same (not known) source. Mineralogy (<1%) altered as <1mm blebs in diorite located down slope 25m from soil anomaly.

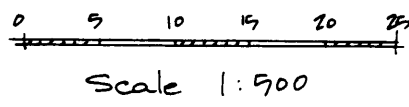
IAN
Soil anomaly follow up
770m/10+25E

July 31/90



LEGEND

- detailed soil site
- x duplicate soil site
- (43) original result (ppb Au)
- N/S no sample



IAN PROJECT

PREVIOUS SOIL ANOMALY (Au) - 90 INVESTIGATION
Element(s) Year

- 1) Location: L 770 E 10+25 E
- 2) Previous Value(s): 60 PPB AU
- 3) Year Collected: 1987
- 4) Date of Investigation: JUNE 2/90
- 5) Investigator(s): A. TRAVIS, K. BURKE
- 6) Description of Previous Sample Collected:
POORLY DEVELOPED "B" HORIZEN SOIL IN
ROCKY GROUND, SAMPLE APPEARS TO BE
TAKEN WITH A MADDOCK
- 7) Description of New Sample:
2 m away, get a fair rocky sample
of brown soil (B HORIZEN), 35 cm DEEP.
SAMPLE 90 T115-001
- 8) Description of Topography:
ANDLITIC VOLCANICS ~ 100m above, then talus
slide with wooded area below in which the
sample was taken.
- 9) Results of Investigation:
PYRITE, CHALCOPYRITE AND LEAD + ZINC WERE FOUND
ANOMALOUS IN ROCK SAMPLES ABOVE IN CREEK
AREA IMMEDIATELY ABOVE IS IN A SLIDE.
WILL SEE IF NEW SAMPLE WILL DUPLICATE
RESULTS AND IF IT DOES PERHAPS A MORE
DETAILED SURVEY CAN BE UNDERTAKEN.
- 10) Conclusions: SEE ABOVE

IAN PROJECT

PREVIOUS SOIL ANOMALY (Au) - 98 INVESTIGATION
Element(s) Year

- 1) Location: 775 E CONTOUR ETSDE
- 2) Previous Value(s): 105 ppb Au
- 3) Year Collected: 1988
- 4) Date of Investigation: JUNE 10 /90
- 5) Investigator(s): A. TRAVIS VAUGHN MALO
- 6) Description of Previous Sample Collected:
VERY ROCKY, POOR "B" HORIZON SOIL, QUESTIONABLE
- 7) Description of New Sample:
SAMPLE IS QUESTIONABLE! LOOKS LIKE ALOT OF ORGANICS.
c/c immediately above dark green fine grained andesite
- 8) Description of Topography:
SMALL BLUFFS, MUSS COVERED, SLOPE TO THE SOUTH
- 9) Results of Investigation:
SAMPLE QUESTIONABLE.
DARK GREEN ANDESITE WITH MINOR QUARTZ VEINING
AND EPIDOTE, TRACE PYRITE
SMALL ASH LAYER.
POSSIBLE REPEATED SOIL HORIZON SEQUENCE
↳ A, POOR B, ASH, Good B
- 10) Conclusions:
TOOK SAMPLE 90M1115-001 TO ANALYZE
A "PROPER" SAMPLE. IF THIS SAMPLE
TURNS OUT TO BE ANOMALOUS FURTHER FOLLOW-UP
IS WARRANTED.

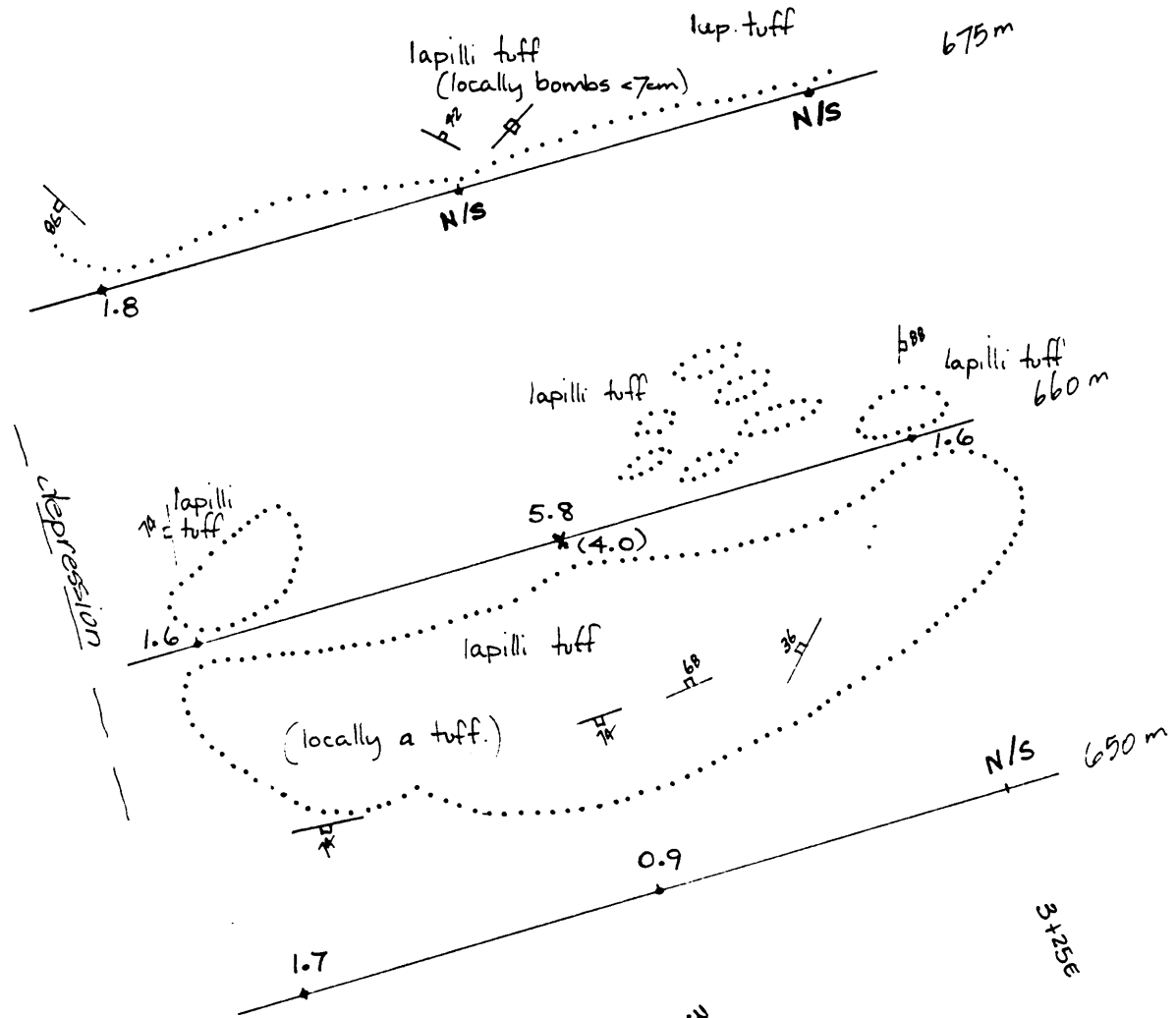
IAN PROJECT

PREVIOUS SOIL ANOMALY (Ag) - 90 INVESTIGATION
Element(s) Year

- 1) **Location:** 660m, 3+00E
- 2) **Previous Value(s):** 4.0 ppm Ag
- 3) **Year Collected:** 1990
- 4) **Date of Investigation:** Aug 1/1990
- 5) **Investigator(s):** Steve S. / Piotr L
- 6) **Description of Previous Sample Collected:**
see below, good sample.
- 7) **Description of New Sample:**
Medium Red Brown soil, good B horizon development, sampled at depth of 30cm in previous sample hole
- 8) **Description of Topography:**
Heavily wooded mature forest. soil contour rim on terrace. overall slope angle 30°s, numerous bluffs
- 9) **Results of Investigation:**
Area consists of Lapilli tuff type of rock locally with bombs upto 7cm diameter. Anomalous soil sample was taken from the gully striking NEE-SWW
- 10) **Conclusions:**
No immediate source of mineralization was found

Aug 1 /90

Ian Property
Soil anomaly follow up
660m/3+00E



LEGEND

- detailed soil site
- x duplicate soil site
- (4.0) original result (ppmAg)
- N/S no sample
- ∴ outcrop

2170E



Scale 1:500

IAN-111

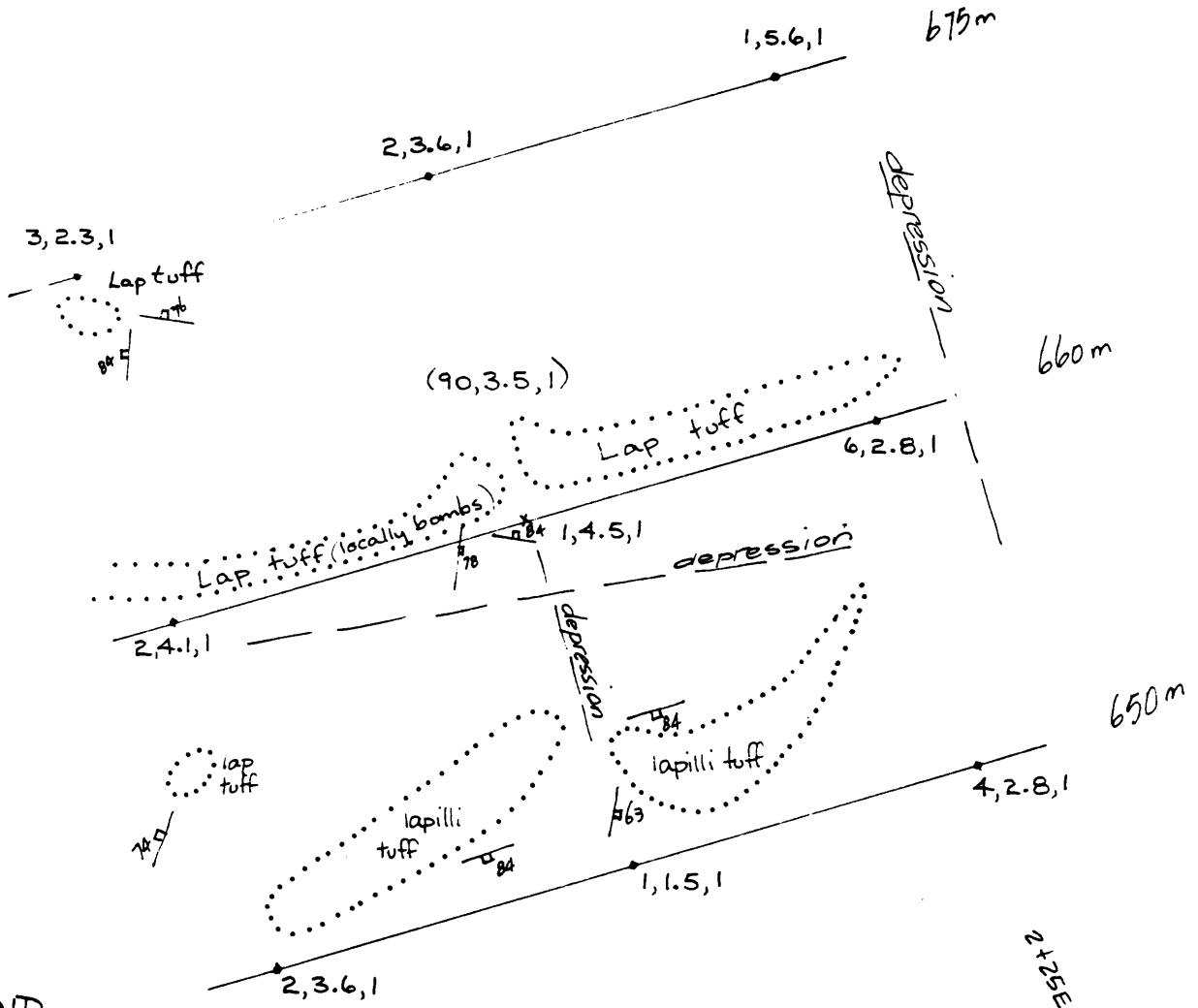
PROJECT

PREVIOUS SOIL ANOMALY (A_g) - $\frac{90}{\text{Year}}$ INVESTIGATION
Element(s)

- 1) **Location:** 660m, 2+00E
- 2) **Previous Value(s):** 3.5 ppm Ag, 90ppb Au, 1ppm As
- 3) **Year Collected:** 1990
- 4) **Date of Investigation:** Aug 1/1990
- 5) **Investigator(s):** Steve S. / Piotr L.
- 6) **Description of Previous Sample Collected:**
see below, good sample
- 7) **Description of New Sample:**
Light Brown soil, good B horizon development, sampled at depth of 30m in previous sample hole
- 8) **Description of Topography:**
Heavily wooded mature forest. soil contour on terrace. overall slope angle 30° S, numerous bluffs
- 9) **Results of Investigation:**
Area consists of Sapling type of rock locally with boulders up to 7cm diameter. Anomalous soil sample was taken from the gully looking NEE-SW.
- 10) **Conclusions:**
No immediate source of mineralization was found.

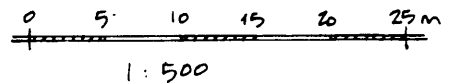
Aug. 1/90

Ian Property
Soil anomaly follow up
660m/2100E



LEGEND

- detailed soil site
- x duplicate soil site
- (90,3.5,1) original result
(ppb Au, ppm Ag, As)
- ∴ outcrop



IAN PROJECT

PREVIOUS SOIL ANOMALY (AU) - 88 INVESTIGATION
Element(s) Year

- 1) **Location:** 575 E CONTOUR 1175 E
- 2) **Previous Value(s):** 180 ppb AU
- 3) **Year Collected:** 1988
- 4) **Date of Investigation:** JUNE 10/90
- 5) **Investigator(s):** A. TRAVIS V. MALO
- 6) **Description of Previous Sample Collected:**
LOOKS TO BE ORGANICS THAT ARE
UNDERLAIN BY TALL'S BLOCKS
- 7) **Description of New Sample:**
Good 'B' horizon soil ~4m away from original
sample, ~30 cm deep, near tree root.
- 8) **Description of Topography:**
CLIFFS ABOVE, THEN TALL'S SLOPE, WITH SAMPLE TAKEN
IN CONIFEROUS TREES NEAR BASE OF SLIDE, SLOPE
TO THE SOUTH.
- 9) **Results of Investigation:**
Questionable sample!
Andesitic Volcanics above, no appreciable mineralization
- 10) **Conclusions:**
IF "PROPER" SAMPLE TAKEN (90 M 1115-002) RETURNS
ANOMALOUS VALUES FURTHER FOLLOW-UP IS WARRANTED.

IAN PROJECT

PREVIOUS SOIL ANOMALY (As, Pb) - $\frac{90}{\text{Year}}$ INVESTIGATION
Element(s)

- 1) **Location:** 575E CONTOUR 17+05W (NEW IAN 4)
- 2) **Previous Value(s):** 850 ppm As, 62 ppm Pb
- 3) **Year Collected:** 1988
- 4) **Date of Investigation:** June 12/90
- 5) **Investigator(s):** A. TRAVIS S. Sheffield
- 6) **Description of Previous Sample Collected:**
ORIGINAL HOLE NOT LOCATED.
STATION LOCATED ON AN CUTDIP
- 7) **Description of New Sample:**
located 4 m EAST OF STATION LOCATION ABOVE
BLUFF. Medium Red-Brown "B" Horizon
SAMPLE 90T 115-005
- 8) **Description of Topography:**
Bluffy terrain ~15° SLOPE TO THE WEST.
- 9) **Results of Investigation:**
 - cutdip is fine-grained grey ash tuff
 - couldn't find location of original hole
- 10) **Conclusions:**
If anomalous results are returned from
new sample (90T 115-005) follow-up may be
warranted.

Ian

PROJECT

PREVIOUS SOIL ANOMALY (Au, As) - 90 INVESTIGATION
Element(s) Year

- 1) **Location:** NW Ian 4 575E CENTRE 18+00W
- 2) **Previous Value(s):** 230 ppb Au, 120ppm As
- 3) **Year Collected:** 1988
- 4) **Date of Investigation:** June 12/90
- 5) **Investigator(s):** A. TRAVIS V Malo
- 6) **Description of Previous Sample Collected:**
ORIGINAL HOLE NOT FOUND, VERY POOR
SOIL DEVELOPMENT.
- 7) **Description of New Sample:**
TAKEN FROM ROOTS OF FALLEN TREE
Medium Red Brown.
(90 T1115-C04)
- 8) **Description of Topography:**
Bluffy Terrain, 15° SLOPE WEST.
- 9) **Results of Investigation:**
Dark grey/black tuff? with fracture pyrite.
Very poor soil development.
- 10) **Conclusions:**
IF FOLLOWUP SAMPLE 90 T 1115-C04 IS
ANOMALOUS FURTHER FOLLOW-UP MAY BE WARRANTED.

IAN

PROJECT

PREVIOUS SOIL ANOMALY (AU) - 90 INVESTIGATION
Element(s) Year

- 1) **Location:** 37SE 24125W
- 2) **Previous Value(s):** 105 ppb Au
- 3) **Year Collected:** 1988
- 4) **Date of Investigation:** June 12/90
- 5) **Investigator(s):** A. TRAVIS S. Sheffield
- 6) **Description of Previous Sample Collected:**
CHECK BOTH STATIONS 24125W, 24125W both are taken on or near moss covered bluffs VERY POOR "B" HORIZON IF ANY AT ALL.
- 7) **Description of New Sample:**
TAKEN BETWEEN 24125W, 24125W. A poor "B" horizon with abundant rock fragments, 15cm deep. generally B horizon sits on outcrop.
- 8) **Description of Topography:**
Bluffy terrain, near base of 5m bluff. SLOPING OFF TO THE WEST.
- 9) **Results of Investigation:**
 - WELL JOINTED INTERMEDIATE INTRUSIVE (MONZONICITE) WITH PYRITE ALONG FRACTURES. JOINTS 40-80°/60° SE
 - Small (<15cm) silicified fracture with pyrite (up to 10%) near old sample location
 - Possible blocks of tuff in intrusive
 - VERY POOR SOIL HORIZON DEVELOPMENT
- 10) **Conclusions:**
A ROCK SAMPLE (90T111R-018) AND SOIL SAMPLE (90T111S-001) WERE TAKEN NEAR ANOMALOUS SAMPLE. Mineralization appears to be narrow and controlled by fractures. If significant values arise from follow-up samples more work is warranted.

IAN

PROJECT

PREVIOUS ^{SILT} ~~SILT~~ ANOMALY (Au) - 90 INVESTIGATION
Element(s) Year

- 1) **Location:** 375 E 26th W CONTOUR LINE
- 2) **Previous Value(s):** 75 ppb Au
- 3) **Year Collected:** 1988
- 4) **Date of Investigation:** June 12/90
- 5) **Investigator(s):** A. TRAVIS S. Sheffield.
- 6) **Description of Previous Sample Collected:**
A moderately moving stream ~1 m wide, 5 cm deep that has cut banks up to 2 m (above sample), generally little outcrop, float is monzodiorite. Small outcrop of monzodiorite also noted above sample location.
- 7) **Description of New Sample:**
No sample was taken.
- 8) **Description of Topography:**
Generally flat area (bench) where sample was taken. Blotchy terrain above + below sample.
- 9) **Results of Investigation:**
Little outcrop, outcrop noted was monzodiorite.
- 10) **Conclusions:**
Preliminary follow-up noted that there was a relatively flat area above sample and three creeks enter above the sample.

IAN PROJECT

PREVIOUS SOIL ANOMALY (Pb,Zn) - 90 INVESTIGATION
Element(s) Year

- 1) **Location:** 375 E 28+75 W CONTOUR LINE
- 2) **Previous Value(s):** 152 ppm Pb, 338 ppm Zn
- 3) **Year Collected:** 1988
- 4) **Date of Investigation:** June 12/90
- 5) **Investigator(s):** A. TRAVIS S. Sheffield
- 6) **Description of Previous Sample Collected:**
Bluffy terrain generally with poor soil development. Rock sample taken above. (#24501)
- 7) **Description of New Sample:**
NONE TAKEN
- 8) **Description of Topography:**
Bluffs usually less than 10m in elevation.
- 9) **Results of Investigation:**
VERY SMALL, NARROW QUARTZ VEIN (<1") that is along fracture planes which trend 260/65N in fine-grained diorite to monzodiorite.
- 10) **Conclusions:**
SAMPLE WAS OF EXTREMELY SMALL, NARROW VEINLET.

APPENDIX 6

Geochemical Results

COMP: KEEWATIN ENGINEERING
 PROJ: 111
 ATTN: R.PEGG/R.NICHOLS

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: OS-0078-SJ1+SJ2
 DATE: 90/06/22
 • SOIL • (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	AU PPB	HG PPB
90Q 970M 0+00W	1.4	1	12	5	26	1	63	1	150
90Q 970M 0+50W	1.0	1	18	7	25	1	35	1	180
90Q 970M 1+00W	2.9	1	36	8	31	3	46	1	185
90Q 970M 1+50W	2.1	98	27	4	80	1	57	2	360
90Q 970M 2+00W	1.0	1	17	4	39	1	137	2	175
90Q 970M 2+50W	3.3	1	21	5	38	5	68	1	420
90Q 970M 3+00W	1.9	1	23	6	38	3	57	1	210
90Q 970M 3+50W	.7	1	57	3	26	1	62	2	150
90Q 970M 4+00W	.1	1	73	2	41	1	59	3	110
90Q 970M 4+50W	1.8	2	82	3	22	1	48	57	165
90Q 970M 5+00W	2.7	1	55	4	32	1	66	34	110
90Q 970M 5+50W	2.0	1	93	4	28	1	53	14	180
90Q 970M 6+00W	1.4	1	82	4	24	1	47	45	80
90Q 970M 0+50E	1.2	1	39	4	48	1	73	13	195
90Q 970M 1+00E	2.2	1	27	10	31	4	52	2	170
90Q 970M 1+50E	1.5	1	30	5	60	1	250	1	180
90Q 970M 2+00E	1.5	16	31	3	66	3	245	1	215
90Q 970M 2+50E	2.7	1	20	2	26	3	159	2	210
90Q 970M 3+00E	1.6	12	33	6	89	2	472	6	230
90Q 970M 4+00E	1.2	8	12	3	59	1	472	1	125
90Q 970M 4+50E	5.2	1	7	6	37	2	40	5	260
90Q 970M 5+00E	1.2	1	60	3	28	1	39	40	195
90Q 970M 5+50E	5.6	589	446	4	381	3	489	53	190
90K 150M 0+50W	.8	5	74	1	27	1	77	4	145
90K 150M 1+00W	1.1	8	89	3	54	1	133	2	210
90K 150M 1+50W	1.2	1	35	2	26	1	155	2	130
90K 150M 2+00W	2.5	2	22	6	35	1	252	1	140
90K 150M 2+50W	1.0	1	6	1	12	1	18	3	115
90K 150M 3+00W	1.1	1	39	3	24	1	112	1	215
90K 150M 3+50W	2.9	1	23	6	29	1	211	2	120
90K 150M 4+00W	.3	1	27	7	34	1	158	2	25
90K 150M 4+50W	.7	1	27	1	17	1	99	1	70
90K 150M 5+00W	1.2	2	39	2	37	1	299	6	140
90K 150M 5+50W	.7	24	35	2	29	1	197	2	240
90K 150M 6+00W	1.3	1	31	2	21	1	147	1	125
90K 150M 6+50W	1.5	1	25	1	18	1	166	2	100
90K 150M 7+00W	1.4	10	65	2	37	1	269	2	105
90K 150M 7+50W	2.7	28	62	6	20	1	447	5	255
90K 150M 8+00W	1.4	1	22	1	28	1	115	3	245
90K 150M 8+50W	.4	11	33	10	27	1	63	1	145
90K 150M 9+00W	3.1	1	26	5	33	1	166	1	175
90K 150M 9+50W	1.7	1	28	4	30	1	180	2	275
90K 151M 10+00W	1.3	1	22	3	22	1	80	1	365
90K 151M 10+50W	1.5	1	10	2	21	1	101	12	170
90K 151M 11+00W	2.3	1	18	6	31	1	272	1	160
90K 151M 11+50W	.2	58	16	10	57	1	127	8	205
90K 151M 12+00W	1.8	11	31	3	36	1	238	1	105
90K 151M 12+50W	.9	1	12	2	17	1	44	1	125
90K 151M 13+00W	1.0	1	38	1	24	1	102	3	195
90K 151M 13+50W	3.6	1	31	4	30	1	171	1	225
90K 151M 14+00W	1.5	1	24	3	18	1	105	1	250
90K 151M 14+50W	2.6	1	26	11	29	1	250	2	245
90K 151M 15+00W	3.1	1	32	4	34	1	177	3	235
90K 151M 15+50W	1.6	1	13	4	32	2	89	6	245
90K 151M 16+00W	2.8	1	31	3	30	1	217	2	215
90K 151M 16+50W	1.8	1	57	2	28	1	246	1	195
90K 151M 17+00W	3.4	9	39	4	35	1	427	1	185
90K 151M 17+50W	3.2	1	18	6	33	1	209	2	285
90K 151M 18+00W	1.6	1	16	4	23	1	115	1	205
90K 151M 18+50W	3.8	60	79	3	40	1	503	2	165

COMP: KEEWATIN ENGINEERING
 PROJ: IAN 111
 ATTN: R.PEGG

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: 05-0070-SJ1+2
 DATE: 90/06/20
 • SOIL • (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	AU PPB	HG PPB
90Q 660M 0+00W	.1	1	15	5	26	1	80	1	100
90Q 660M 1+00W	1.3	1	28	2	20	1	94	20	185
90Q 660M 1+50W	2.1	1	28	3	25	1	88	2	250
90Q 660M 2+00W	1.8	1	43	3	27	2	81	1	345
90Q 660M 3+00W	1.5	1	17	4	33	2	63	3	90
90Q 660M 3+50W	2.9	1	47	4	33	1	121	3	240
90Q 660M 4+00W	3.6	1	18	5	32	1	61	1	190
90Q 660M 4+50W	.9	5	41	2	26	1	227	1	90
90Q 660M 5+00W	2.7	1	21	5	30	1	134	2	215
90Q 660M 5+50W	.9	1	18	2	18	1	118	1	165
90Q 660M 6+00W	1.2	1	14	4	24	1	97	1	230
90Q 660M 6+50W	2.5	1	32	7	39	3	79	4	340
90Q 660M 7+00W	3.1	1	17	4	28	1	69	1	140
90Q 660M 7+50W	.3	3	19	8	39	6	77	2	95
90Q 660M 8+00W	1.9	1	39	5	28	1	77	2	125
90Q 660M 9+00W	1.0	1	45	4	30	1	99	8	130
90Q 660M 11+00W	1.0	1	42	5	36	1	99	1	135
90Q 660M 11+50W	1.8	1	40	3	21	1	65	4	250
90Q 660M 12+00W	.8	1	23	2	18	1	45	3	170
90Q 660M 12+50W	2.2	1	32	6	28	2	85	1	180
90Q 660M 13+00W	3.0	1	26	5	30	1	91	1	335
90Q 660M 13+50W	1.2	1	52	4	23	1	65	1	175
90Q 660M 14+00W	.5	1	65	3	24	1	87	1	155
90Q 660M 14+50W	.8	1	60	2	22	1	106	1	90
90Q 660M 15+00W	3.6	1	23	5	29	1	66	2	325
90Q 660M 15+50W	1.4	1	49	3	24	1	159	9	145
90Q 825M 0+00W	3.1	1	15	4	24	1	72	1	265
90Q 825M 0+50W	3.0	1	13	4	24	1	84	7	160
90Q 825M 1+00W	4.0	1	17	6	30	1	64	1	285
90Q 825M 1+50W	2.8	1	31	5	27	1	71	2	335
90Q 825M 2+00W	.7	1	20	4	20	1	51	1	180
90Q 825M 2+50W	4.3	1	25	11	27	1	61	1	260
90Q 825M 3+00W	2.9	1	14	3	29	1	45	1	335
90Q 825M 3+50W	3.4	1	20	5	27	1	89	3	230
90Q 825M 4+00W	2.3	1	28	3	21	1	61	2	245
90Q 825M 6+00W	.8	1	35	2	24	1	73	2	230
90Q 825M 6+50W	1.3	1	17	3	28	1	81	1	210
90Q 825M 7+50W	.6	1	22	3	25	1	124	2	205
90Q 825M 8+00W	1.3	1	29	5	34	3	58	2	230
90Q 825M 9+00W	1.9	1	24	5	31	3	110	1	205
90Q 825M 10+00W	1.2	20	51	6	42	6	85	8	55
90Q 825M 11+00W	.6	1	27	3	21	1	181	7	175
90Q 825M 11+50W	1.1	1	43	3	35	1	80	2	135
90Q 825M 12+00W	1.4	7	44	2	26	1	65	1	95
90Q 825M 12+50W	.4	53	13	1	38	1	158	1	125
90Q 825M 13+50W	.3	1	35	9	26	1	61	2	220
90M 275M 0+00W	1.2	1	114	3	12	1	84	1	100
90M 275M 0+50W	4.1	1	30	5	30	1	151	1	320
90M 275M 1+00W	2.8	1	23	5	27	1	187	2	205
90M 275M 1+50W	1.4	31	56	11	39	1	452	1	160
90M 275M 2+00W	1.3	8	101	10	46	4	234	1	195
90M 275M 2+50W	2.0	1	38	4	29	1	103	1	200
90M 275M 3+00W	.9	1	21	2	23	1	79	1	85
90M 275M 4+00W	1.0	1	15	2	18	1	49	6	85
90M 275M 4+50W	2.2	1	30	1	16	1	214	2	3205
90M 275M 5+00W	1.4	8	75	2	23	1	142	4	215
90M 275M 5+50W	1.5	5	21	1	21	1	103	1	145
90M 275M 6+00W	2.0	3	29	2	28	1	136	1	175
90M 275M 6+50W	1.0	19	70	2	31	1	80	2	190
90M 275M 7+00W	1.2	4	19	1	17	1	67	1	165

COMP: KEEWATIN ENGINEERING

PROJ: IAN 111

ATTN: R.PEGG

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: OS-0070-SJ3+4

DATE: 90/06/20

• SOIL • (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	AU PPB	HG PPB
90M 275M 7+50W	1.0	1	101	1	28	1	200	2	95
90M 275M 8+00W	1.6	1	47	2	44	1	260	3	130
90M 275M 8+50W	.9	32	35	2	46	1	722	2	165
90M 275M 9+00W	1.7	2	40	2	27	1	224	1	105
90M 275M 9+50W	.7	1	31	2	25	1	131	1	110
90M 275M 10+00W	1.6	10	42	2	21	1	239	1	180
90M 275M 10+50W	1.5	1	17	3	24	1	77	1	170
90M 275M 11+00W	1.9	1	26	2	22	1	259	2	60
90M 275M 11+50W	2.3	1	14	6	29	4	105	1	110
90M 275M 12+00W	2.5	1	20	5	38	2	219	1	125
90M 275M 12+50W	.7	1	19	4	8	1	43	2	65
90M 275M 13+00W	1.5	29	64	5	29	1	190	1	65
90M 275M 13+50W	1.6	1	27	3	20	1	148	1	70
90M 275M 14+00W	1.3	1	27	4	25	1	186	1	60
90M 275M 14+50W	1.1	79	151	3	55	2	325	3	80
90M 275M 15+00W	.6	12	30	1	23	1	110	2	50
90M 275M 15+50W	1.2	1	11	1	17	1	67	1	90
90M 275M 16+00W	1.4	1	15	1	16	1	154	2	10
90M 275M 16+50W	1.2	1	32	3	30	1	197	4	65
90M 275M 17+00W	.4	26	234	1	33	1	164	1	100
90M 275M 17+50W	2.6	1	28	3	26	2	377	1	170
90M 275M 18+00W	.7	1	14	1	22	1	103	2	10
90M 275M 18+50W	1.1	1	61	1	24	1	168	20	95
90M 275M 19+00W	1.7	18	22	3	29	1	277	1	85
90M 275M 19+50W	2.3	14	30	3	39	2	182	2	55
90M 275M 20+00W	1.6	1	27	4	24	2	112	1	80
90M 450M 0+00W	3.1	1	24	4	28	1	158	3	260
90M 450M 0+50W	2.8	1	29	4	24	1	175	6	675
90M 450M 1+00W	2.8	1	25	6	30	1	139	1	120
90M 450M 1+50W	1.4	2	33	5	24	1	103	1	95
90M 450M 2+00W	.3	4	21	2	26	1	164	1	85
90M 450M 2+50W	.9	1	54	4	33	1	127	2	140
90M 450M 3+00W	1.0	15	63	3	28	1	88	3	120
90M 450M 3+50W	1.0	1	16	3	23	2	125	2	165
90M 450M 4+00W	1.1	5	37	1	32	1	69	2	110
90M 450M 4+50W	2.0	1	22	2	24	1	128	1	180
90M 450M 5+50W	1.2	1	40	2	30	1	189	2	70
90M 450M 6+00W	1.2	223	29	1	11	1	55	152	140
90M 450M 6+50W	1.2	1	29	1	22	1	128	3	120
90M 450M 7+00W	1.7	2	33	4	28	1	237	1	110
90M 450M 7+50W	1.3	6	29	3	22	1	204	5	265
90M 450M 8+00W	.6	22	145	5	62	3	180	3	120
90M 450M 8+50W	.5	40	17	3	38	1	367	2	65
90M 450M 9+00W	.6	18	10	2	21	1	104	1	70
90M 450M 9+50W	.9	4	44	2	19	1	118	2	50
90M 450M 10+00W	.8	18	10	2	38	1	202	1	80
90M 450M 10+50W	2.5	4	15	6	32	1	240	2	140
90M 450M 11+00W	.7	40	15	6	25	1	297	14	160
90M 450M 11+50W	1.1	6	21	4	30	3	119	2	115
90M 450M 12+00W	1.3	29	18	3	20	1	239	2	80
90M 450M 12+50W	2.2	8	34	4	28	2	216	2	85
90M 450M 13+00W	1.6	1	37	4	23	2	182	2	80
90M 450M 13+50W	1.3	1	54	1	22	1	143	5	115
90J 660M 0+50E	.7	1	20	3	26	2	72	2	220
90J 660M 1+00E	1.3	1	34	3	25	1	112	1	130
90J 660M 1+50E	2.4	1	22	5	26	1	55	1	350
90J 660M 2+00E	3.5	1	34	4	27	1	71	90	275
90J 660M 2+50E	2.0	1	31	5	14	1	71	1	395
90J 660M 3+00E	4.0	1	21	3	25	1	60	2	360
90J 660M 3+50E	.5	1	13	3	18	1	58	1	60

COMP: KEEWATIN ENGINEERING
 PROJ: IAN 111
 ATTN: R.PEGG

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: 05-0070-SJ5+6
 DATE: 90/06/20
 * SOIL * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	CU PPM	MO PPM	PB PPM	SB PPM	ZN PPM	AU PPB	HG PPB
90J 660M 4+00E	2.5	1	17	4	27	1	65	1	150
90J 660M 4+50E	.6	3	65	2	28	1	87	3	160
90J 660M 5+00E	.8	1	29	3	30	2	90	16	175
90J 660M 5+50E	2.5	1	30	4	28	1	76	1	210
90J 660M 6+00E	2.3	1	21	4	25	1	86	1	200
90J 660M 6+50E	2.4	1	21	5	22	1	77	3	175
90J 660M 7+00E	1.6	1	27	6	28	2	79	3	185
90J 660M 7+50E	1.6	1	22	4	22	1	62	2	32
90J 660M 8+50E	1.8	1	24	5	29	1	86	1	280
90J 660M 9+00E	.6	1	27	3	28	1	62	2	130
90J 660M 9+50E	2.9	1	23	6	29	1	53	1	240
90J 660M 10+00E	1.6	1	23	6	28	3	61	2	270
90J 660M 11+00E	.9	1	24	7	29	1	46	2	220
90J 660M 12+00E	2.6	1	23	5	26	1	83	1	255
90J 660M 12+50E	1.4	1	38	7	35	2	65	1	170
90J 660M 13+00E	.4	1	26	3	22	1	52	1	150
90J 660M 13+50E	.4	5	26	4	29	4	51	5	95
90J 660M 14+00E	.4	1	32	3	22	1	47	2	145
90J 450M 0+50E	1.4	1	21	6	26	1	68	1	295
90J 450M 1+00E	1.3	1	9	1	23	1	29	1	105
90J 450M 1+50E	.4	2	9	4	21	3	50	1	90
90J 450M 2+00E	1.7	1	28	1	22	1	50	2	140
90J 450M 3+00E	.7	1	11	2	20	1	48	2	130
90J 450M 3+50E	2.2	1	12	3	20	2	48	1	105
90J 450M 4+00E	.7	1	17	1	19	1	46	4	75
90J 450M 4+50E	3.8	1	26	5	30	1	107	1	220
90J 450M 5+00E	3.4	1	21	5	25	1	89	1	240
90J 450M 5+50E	2.1	1	26	5	30	1	182	1	420
90J 450M 6+00E	2.3	1	20	5	29	1	142	2	250
90J 450M 6+50E	3.7	1	27	5	33	1	142	1	240
90J 450M 7+00E	.7	1	12	4	21	1	46	1	55
90J 450M 7+50E	1.8	1	21	3	24	1	102	3	180
90J 450M 8+00E	.8	1	11	2	24	1	54	5	65
90J 450M 8+50E	1.2	1	44	2	27	1	87	1	110
90J 450M 9+00E	.5	1	15	1	30	1	41	1	90
90J 450M 9+50E	2.8	1	16	4	29	3	125	1	150
90J 450M 10+00E	.7	1	11	2	22	2	76	1	85
90J 450M 10+50E	.7	11	14	2	24	2	88	2	95
90J 450M 11+00E	.4	1	19	3	26	1	94	1	120
90J 450M 11+50E	1.2	1	20	4	28	2	124	3	105
90J 450M 12+00E	.6	1	8	1	18	1	48	1	70
90J 450M 12+85E	.7	3	10	6	31	2	73	2	110
90B 825M 0+50E	1.6	1	22	8	35	7	85	1	210
90B 825M 1+00E	1.3	1	33	6	26	2	57	1	175
90B 825M 1+70E	1.0	1	37	4	29	2	58	2	205
90B 825M 2+00E	.3	8	46	4	39	3	41	1	175
90B 825M 2+50E	1.1	1	42	1	19	1	44	1	140
90B 825M 3+00E	1.9	1	16	5	21	1	45	2	210
90B 825M 3+50E	3.4	1	17	4	30	2	33	2	300
90B 825M 4+00E	1.6	1	15	3	35	3	55	1	120
90B 825M 4+50E	2.0	1	23	4	33	1	51	2	290
90B 825M 5+00E	1.5	5	23	7	26	2	47	2	145
90B 825M 5+50E	.8	1	19	4	25	2	38	1	150
90B 825M 6+00E	.5	2	22	4	26	2	36	3	185
90B 825M 6+50E	1.0	1	14	2	31	2	32	2	110
90B 825M 7+00E	1.1	4	20	10	22	3	85	2	115
90B 825M 7+50E	2.9	1	14	5	36	3	50	1	165
90B 825M 8+00E	.8	9	21	14	41	7	52	1	90
90B 825M 8+50E	.5	17	42	6	27	4	34	1	120
90B 825M 9+00E	.6	7	53	2	26	2	46	1	145

COMP: KEEWATIN ENGINEERING
 PROJ: 111 S-E
 ATTN: R.NICHOLS/R.PEGG

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 DR (604)988-4524

FILE NO: OV-1184-SJ1+2
 DATE: 90/08/24
 * SOIL * (ACT:F31)

SAMPLE NUMBER	AU PPB	AG PPM	CU PPM	PB PPM	ZN PPM	AS PPM	SB PPM	MO PPM	HG PPB
90T 810M 10+50E	9	2.3	49	43	64	1	4	4	255
90T 810M 10+62.5E	16	2.2	61	33	45	1	3	2	210
90T 840M 10+37.5E	102	2.5	173	38	44	1	2	1	315
90T 840M 10+50E	75	3.1	762	69	113	1	1	1	225
90T 840M 10+62.5E	185	.9	202	50	84	1	1	1	220
90T 955M 1+25W	590	1.3	67	66	87	1	1	1	230
90T 955M 1+50W	2	.9	67	265	274	75	1	1	205
90T 955M 1+75W	1	1.9	40	44	79	1	1	2	315
90T 955M 4+25W	3	2.1	166	44	47	1	1	2	245
90T 955M 4+50W	5	1.4	103	33	87	1	1	1	270
90T 955M 4+75W	2	2.2	97	43	60	1	1	1	280
90T 955M 5+00W	296	1.9	367	61	64	1	1	1	210
90T 955M 5+25W	58	1.5	131	46	84	1	1	1	255
90T 970M 1+25W	1	3.6	45	37	46	1	1	5	265
90T 970M 1+50W	2	5.7	21	61	62	1	1	2	345
90T 970M 1+75W	147	.9	24	64	70	1	1	2	225
90T 970M 4+25W	1	1.1	101	57	87	1	1	2	235
90T 970M 4+50W	11	2.1	103	22	59	1	1	1	310
90T 970M 4+75W	38	1.8	56	31	46	1	1	1	210
90T 970M 5+00W	36	1.8	48	32	62	1	1	2	235
90T 970M 5+25W	7	3.0	65	45	71	1	1	1	305
90T 985M 1+25W	1	2.6	34	40	51	1	1	2	260
90T 985M 1+50W	1	4.5	21	49	59	1	1	1	340
90T 985M 1+75W	8	2.6	27	35	46	1	1	1	355
90T 985M 4+50W	4	1.9	47	32	45	1	1	1	245
90T 985M 4+75W	42	2.1	45	27	41	1	1	2	215
90T 985M 5+00W	7	1.3	74	37	47	1	1	3	130
90T 985M 5+25W	36	4.9	35	56	65	1	2	2	210
90L 6+50M 1+75E	2	3.6	18	43	42	1	1	2	565
90L 6+50M 2+00E	1	1.5	15	18	40	1	1	1	205
90L 6+50M 2+25E	4	2.8	13	35	62	1	1	3	245
90L 6+50M 2+75E	1	1.7	26	27	60	1	1	1	310
90L 6+50M 3+00E	1	.9	15	32	56	1	1	1	285
90L 6+75M 1+75E	3	2.3	25	35	88	1	1	1	335
90L 6+75M 2+00E	2	3.6	24	34	64	1	1	1	545
90L 6+75M 2+25E	1	5.6	11	43	43	1	1	1	540
90L 6+75M 2+75E	1	1.8	21	21	34	1	1	1	185
90L 660M 1+75E	2	4.1	10	41	59	1	1	3	255
90L 660M 2+00E	1	4.5	31	31	62	1	1	1	490
90L 660M 2+25E	6	2.8	15	17	25	1	1	1	185
90L 660M 2+75E	3	1.6	12	32	56	1	1	1	225
90L 660M 3+00E	4	5.8	23	39	78	1	1	1	455
90L 660M 3+25E	1	1.6	11	28	52	1	1	1	210
90L 8+20M 0+75W	1	2.1	23	31	66	1	1	1	420
90L 8+20M 1+00W	1	1.5	23	32	55	1	1	1	225
90L 8+20M 1+25W	2	4.0	15	44	64	1	2	3	300
90L 8+20M 2+25W	2	.1	11	49	129	1	1	1	215
90L 8+20M 2+50W	1	4.5	22	46	62	1	1	2	345
90L 8+25M 2+50W	13	5.6	23	39	50	1	1	9	330
90L 8+25M 2+75W	2	4.8	13	38	45	1	1	1	395
90L 8+26M 0+75W	4	2.8	18	28	42	1	1	1	360
90L 8+26M 1+00W	1	4.1	12	44	40	1	1	1	435
90L 8+26M 1+25W	3	2.1	15	35	39	1	1	1	460
90 HL 001	3	1.7	31	32	219	1	1	4	145
90 HL 002	8	.9	29	32	178	1	1	9	155
90H 765M 10+00E	34	.8	48	29	69	1	1	2	270

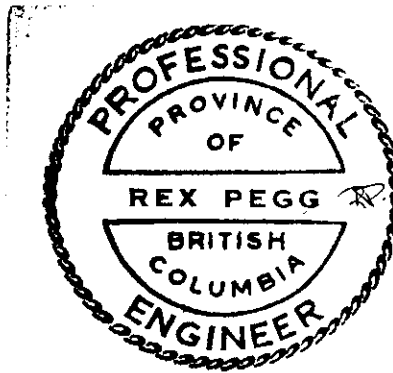
APPENDIX 7

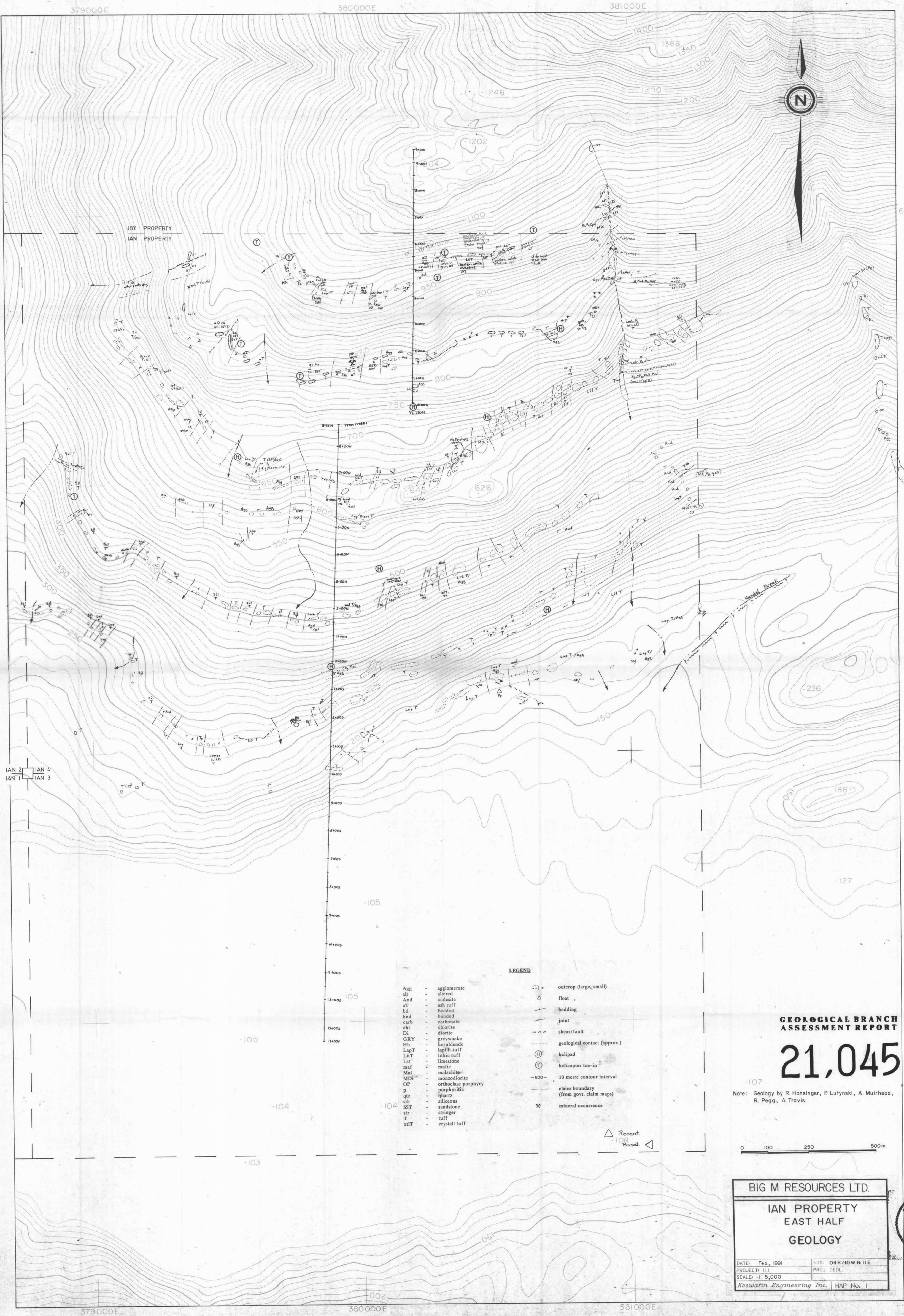
1990 Statement of Expenditures

STATEMENT OF EXPENDITURES

i)	Pre-Field		\$ 1,368.16
ii)	Labour		
	R. Nichols	2.25 days @ \$425/day	\$ 956.25
	R. Pegg	10.00 days @ \$400/day	4,000.00
	R. Honsinger	9.50 days @ \$335/day	3,182.50
	A. Travis	12.00 days @ \$325/day	3,900.00
	P. Lutynski	8.50 days @ \$325/day	2,762.50
	A. Muirhead	10.00 days @ \$300/day	3,000.00
	S. Novak	0.50 days @ \$225/day	112.50
	R. Geszler	4.00 days @ \$250/day	1,000.00
	S. Sheffield	12.50 days @ \$200/day	2,500.00
	K. Burk	5.50 days @ \$190/day	1,045.00
	T. Mortison	4.00 days @ \$190/day	760.00
	V. Malo	7.00 days @ \$185/day	1,295.00
	J. Leonard	6.00 days @ \$165/day	990.00
	A. Kaplan	8.50 days @ \$160/day	1,360.00
	S. McTague	3.00 days @ \$(160/175)/day	510.00
	T. Paquette	1.00 days @ \$175/day	175.00
	C. Davies	2.00 days @ \$200/day	400.00
	P. Dunlevy	1.00 days @ \$175/day	175.00
	V. Hutchings	3.00 days @ \$225/day	675.00
	S. Chandler	11.00 days @ \$260/day	2,860.00
	S. Patterson	1.00 days @ \$260/day	<u>260.00</u>
			31,918.75
iii)	Geochemical Analysis (faa Au + 8 element ICP)		
	Soils	424 samples @ \$11.30 each	\$ 4,791.20
	Silts	3 samples @ \$11.30 each	33.90
	Rocks	50 samples @ \$13.75 each	<u>687.50</u>
			5,512.60
iv)	Helicopter (Hughes 500D)		
		12.0 hours @ \$705/hour	8,460.00
v)	Room & Board	128.0 man days @ \$60/day (includes pilot)	7,680.00
vi)	Rentals (binocular microscope, radios, rock saw, generator, field equipment, truck, ATV, copier, etc. - split)		3,256.14
vii)	Consumables (sample bags, tags, copies, paint, flagging, etc.)		1,396.62
viii)	Fixed Wing Support (split)		2,836.21
ix)	Expediting (split)		677.12
x)	Travel (split)		487.62
xi)	Camp Costs (fuel, etc. - split)		853.57

xii) Courier Charges (split)	98.78
xiii) Mobilization/Demobilization	3,643.94
xiv) Geophysics	246.63
xv) Telephone	71.51
xvi) Report (writing, drafting, processing, copying)	<u>4,500.00</u>
TOTAL EXPENDITURES:	<u>\$73,007.65</u>





JOY PROPERTY
IAN PROPERTY

IAN 2 IAN 4
IAN 1 IAN 3

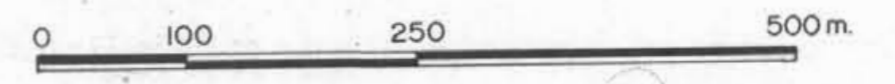
LEGEND

- | | |
|--------------------------|--|
| Agg - agglomerate | ○ - outcrop (large, small) |
| alk - altered | △ - float |
| And - andesite | — - bedding |
| aT - ash tuff | — - joint |
| bd - bedded | — - shear/fault |
| bnd - banded | — - geological contact (approx.) |
| carb - carbonate | ○ - helipad |
| chl - chlorite | ⊙ - helicopter toe-in |
| Di - diorite | -800 - 10 metre contour interval |
| GRY - greysack | --- - claim boundary (from govt. claim maps) |
| Hb - hornblende | ⊗ - mineral occurrence |
| LapT - lapilli tuff | |
| LitT - lithic tuff | |
| Lst - limestone | |
| maf - mafic | |
| Mal - malachite | |
| MDj - monodiorite | |
| OP - orthoclase porphyry | |
| p - porphyritic | |
| qtz - quartz | |
| sil - siliceous | |
| SST - sandstone | |
| str - stringer | |
| T - tuff | |
| tuT - crystall tuff | |

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

21,045

Note: Geology by R. Honsinger, P. Lutynski, A. Muirhead, R. Pegg, A. Travis.

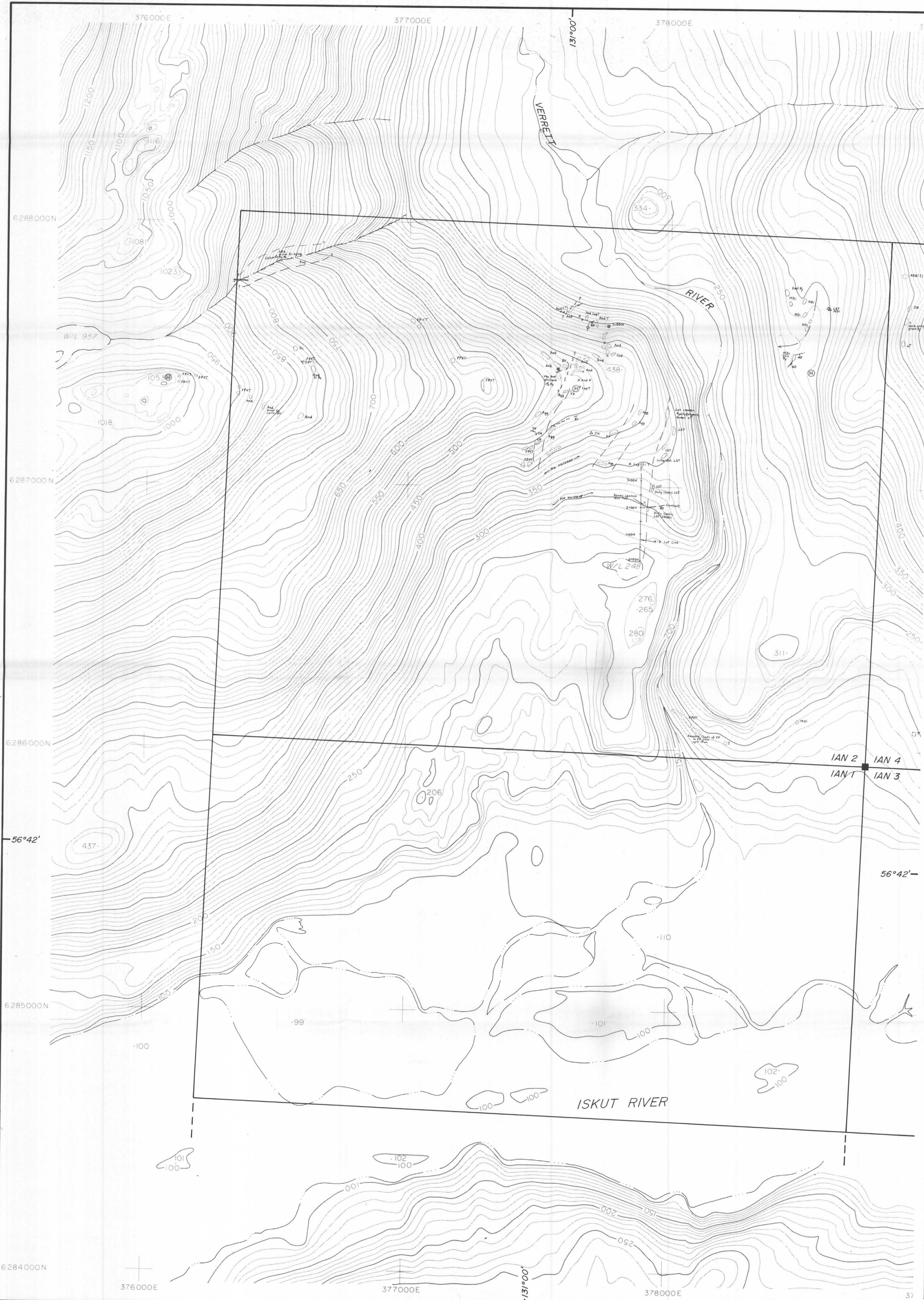


BIG M RESOURCES LTD.

**IAN PROPERTY
EAST HALF
GEOLOGY**

DATE: Feb., 1991	NTS: 104B/10WB IIE
PROJECT: III	PROJ. GEOL.
SCALE: 1:5,000	
KeeWatIn Engineering Inc. MAP No. 1	

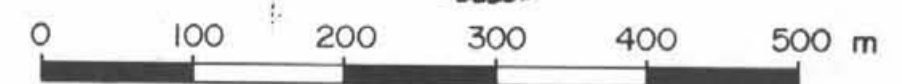




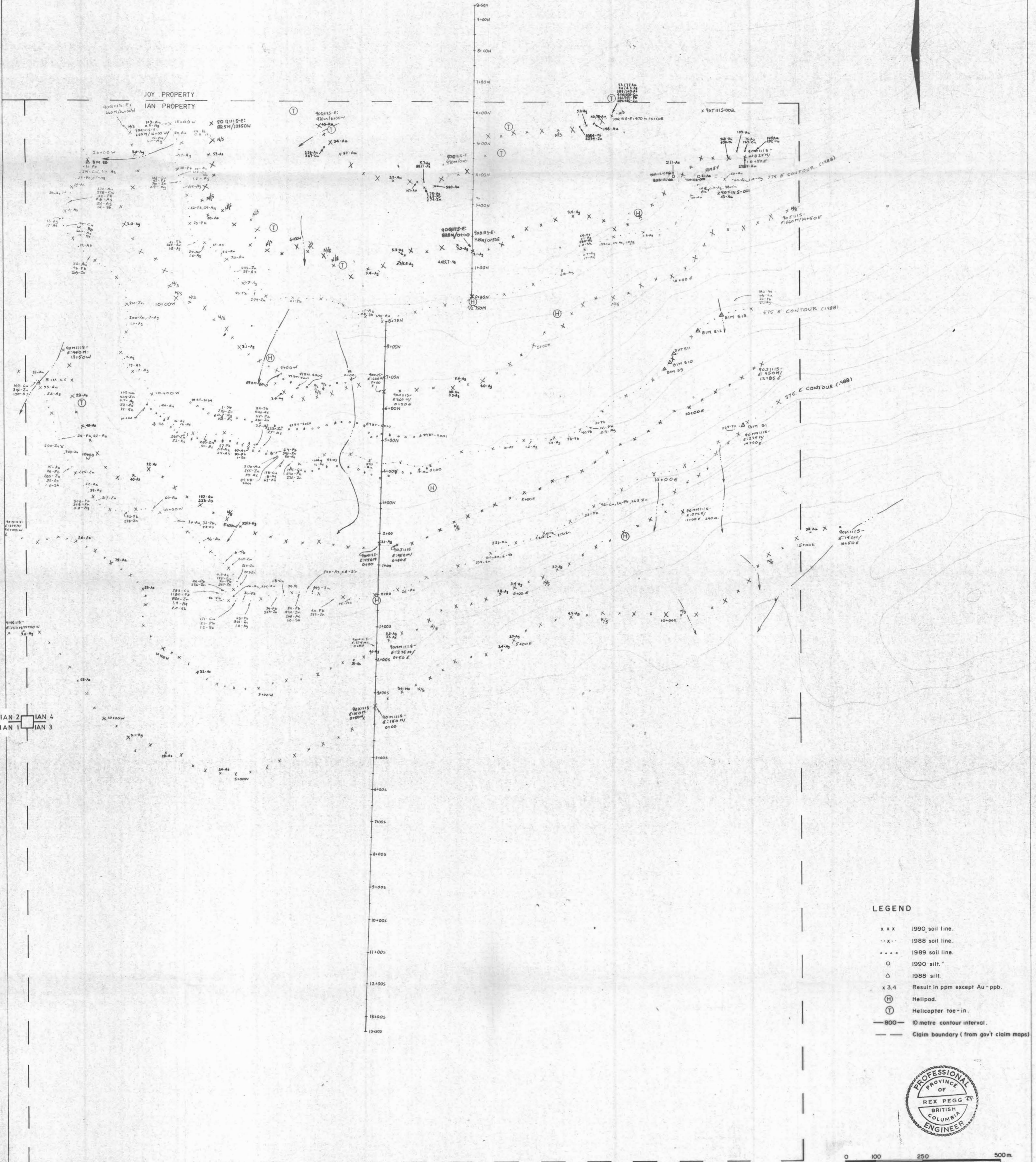
LEGEND

Agg	- agglomerate	○, x	outcrop (large, small)
And	- andesite	△	flint
Asp	- asphaltite	—	geological contact (approx.)
AT	- ash tuff	—	bedding
carb	- carbonate	—	joint
CH	- chert	⊗	bulldoz
CONGL	- conglomerate	—	10 metre contour interval
Di	- diorite		
ep	- epidote		
FPXT	- feldspar porphyritic crystal tuff		
Lgt	- lignite		
Lst	- limestone		
MD	- monzonite		
qtz	- quartz		
silc	- silicified		
str	- strata		
tuff	- tuff		
Vol	- volcanic		

Note: Geology by R Honsinger, P Lutynski, A Muirhead, A Travis.



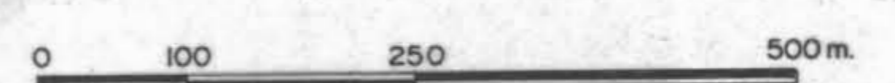
BIG M RESOURCES LTD.	
IAN PROPERTY WEST HALF	
GEOLOGY	
DATE: Feb., 1991	NTS: 104B / 10W, 11E
PROJECT: 111	BY:
SCALE: 1:5,000	
Keewatin Engineering Inc.	MAP No. 2



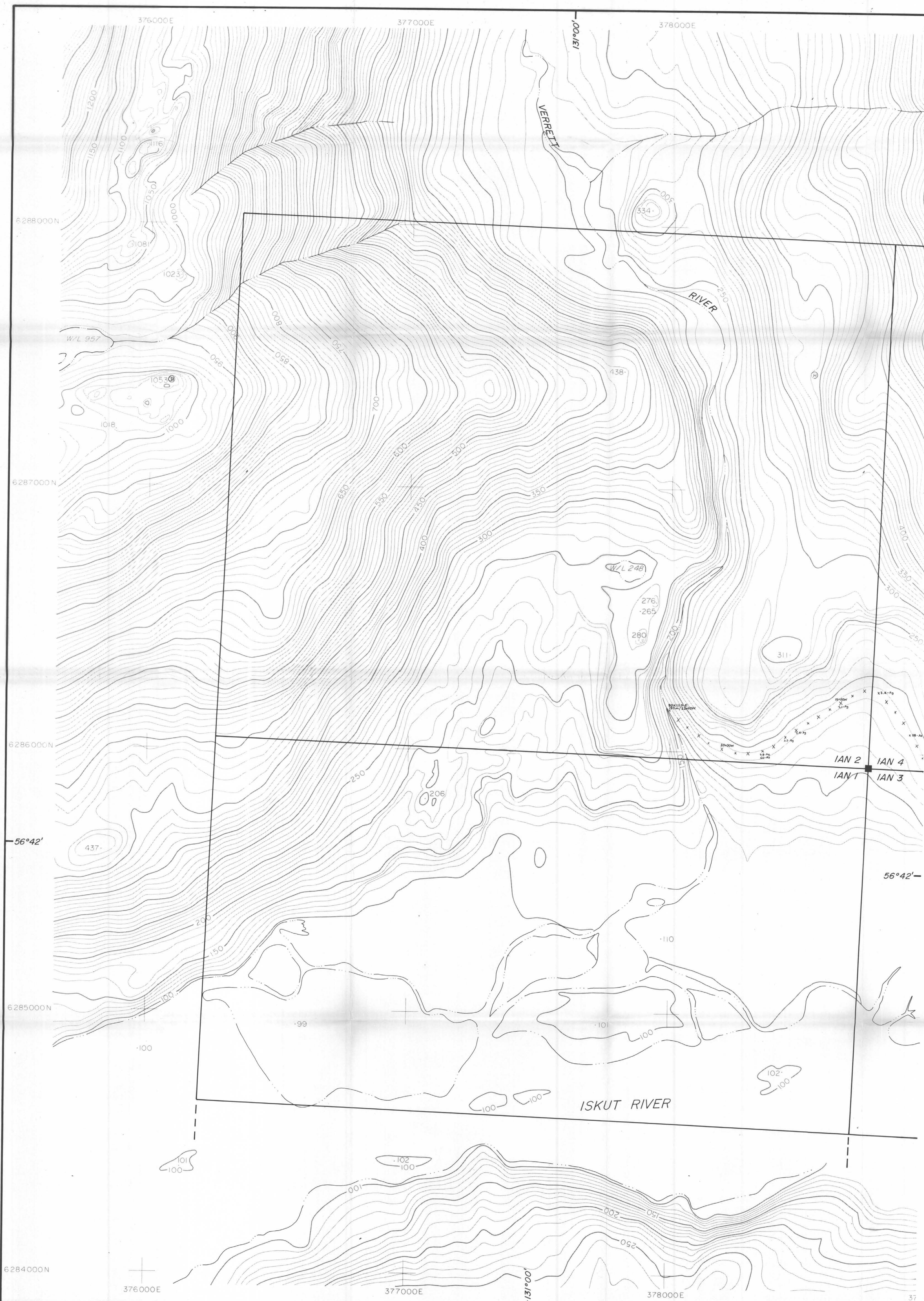
IAN 2 IAN 4
IAN 1 IAN 3

LEGEND

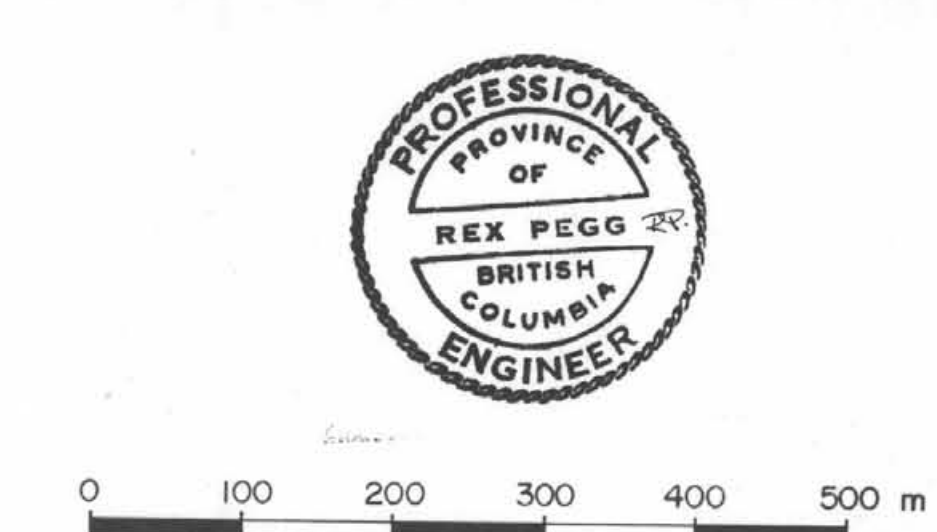
- x x x 1990 soil line.
- - - 1988 soil line.
- ... 1989 soil line.
- o 1990 silt.
- Δ 1988 silt.
- x 3.4 Result in ppm except Au - ppb.
- (H) Helipad.
- (T) Helicopter toe-in.
- B00- 10 metre contour interval.
- - - Claim boundary (from gov't claim maps)



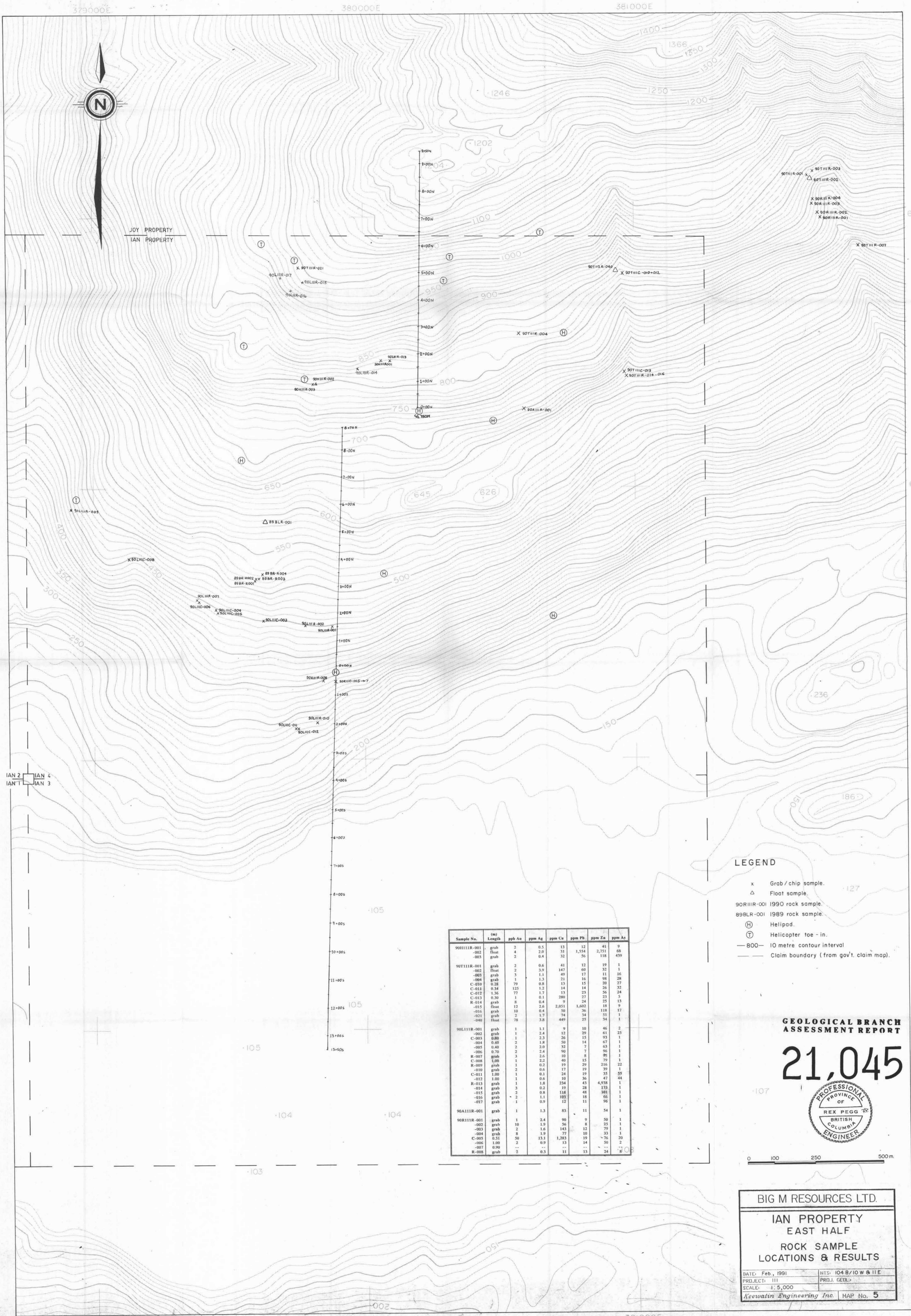
BIG M RESOURCES LTD.	
IAN PROPERTY EAST HALF	
SOIL & SILT SAMPLE RESULTS COMPILATION	
DATE: Feb., 1991	HTS: 104 B/10WB11E
PROJECT: III	PROJ. GEDL
SCALE: 1:5,000	
Kewatin Engineering Inc. MAP No. 3	



- LEGEND**
- X Soil sample.
 - O Silt sample.
 - X 3.2 Anomalous result (all in ppm except for Au - ppb).
 - H Helipad.
 - 250- 10 metre contour interval.



BIG M RESOURCES LTD.	
IAN PROPERTY WEST HALF	
SOIL & SILT SAMPLE RESULTS COMPILATION	
DATE: Feb., 1991	NTS: 104B / 10W, 11E
PROJECT: III	BY:
SCALE: 1:5,000	
Keewatin Engineering Inc.	MAP No. 4



IAN 2 IAN 4
IAN 1 IAN 3

Sample No.	(m)	Length	ppb As	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
90111R-001	grab	2	0.5	13	12	41	9	
-002	float	4	2.0	31	1,554	2,751	88	
-003	grab	2	0.4	32	56	118	439	
90111R-001	grab	2	0.6	41	12	19	1	
-002	float	2	3.9	147	60	32	1	
-003	grab	3	1.3	49	17	11	16	
-004	grab	1	1.3	21	16	98	28	
C-010	0.28	79	0.8	13	15	20	27	
C-011	0.36	125	1.2	14	14	26	32	
C-012	1.36	77	1.7	13	23	56	24	
C-013	0.30	1	0.1	280	27	23	5	
R-014	grab	8	0.4	9	24	25	13	
-015	float	12	2.6	2,051	1,602	18	9	
-016	grab	10	0.4	30	36	118	17	
-021	grab	2	1.7	74	34	51	1	
-040	float	78	3.8	449	25	34	1	
90111R-001	grab	1	1.1	9	10	46	2	
-002	grab	1	2.4	12	29	61	25	
C-003	0.80	1	2.3	26	15	93	1	
-004	0.40	2	1.4	59	14	67	1	
-005	0.40	2	2.0	32	7	63	1	
C-006	0.70	2	2.4	90	7	96	1	
R-007	grab	3	2.6	10	15	79	1	
C-008	1.00	1	2.2	40	15	79	1	
R-009	grab	1	0.2	19	29	216	22	
-010	grab	2	0.6	17	19	39	1	
C-011	1.00	1	0.1	24	19	35	55	
-012	1.00	1	0.6	10	36	47	44	
R-013	grab	1	1.8	334	43	4,978	1	
-014	grab	3	0.2	19	28	173	1	
-015	grab	2	0.8	116	48	101	1	
-016	grab	2	1.1	105	18	66	1	
-017	grab	1	0.9	12	11	96	1	
90A11R-001	grab	1	1.3	83	11	54	1	
90R11R-001	grab	1	2.4	90	9	50	1	
-002	grab	10	1.9	26	8	25	1	
-003	grab	2	1.6	143	12	79	1	
-004	grab	8	1.9	77	10	33	1	
C-005	0.31	50	13.1	1,283	19	76	20	
-006	1.00	2	0.9	13	14	50	2	
-007	0.30	1	0.3	11	13	24	8	
R-008	grab	2	0.3	11	13	24	8	

LEGEND

- x Grab / chip sample.
- △ Float sample.
- 90R11R-001 1990 rock sample.
- 89BLR-001 1989 rock sample.
- ⊙ Helipad.
- ⊕ Helicopter toe-in.
- 800— 10 metre contour interval
- Claim boundary (from gov't. claim map).

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

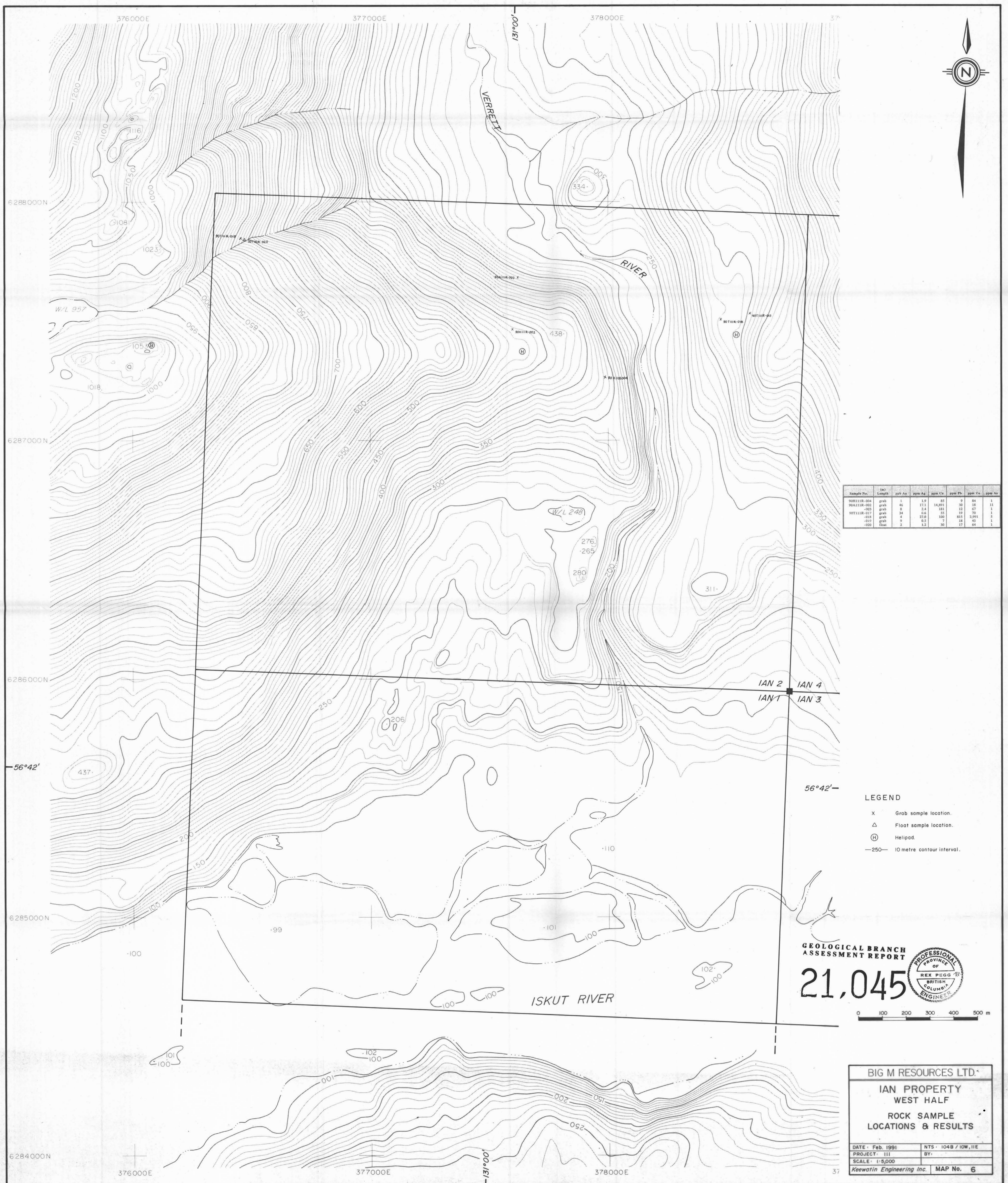
21,045



BIG M RESOURCES LTD.

**IAN PROPERTY
EAST HALF
ROCK SAMPLE
LOCATIONS & RESULTS**

DATE: Feb, 1991 H/S: 104 B/10 W & 11 E
PROJECT: 111 PROJ. GEBL
SCALE: 1:5,000
Keewatin Engineering Inc. MAP No. 5

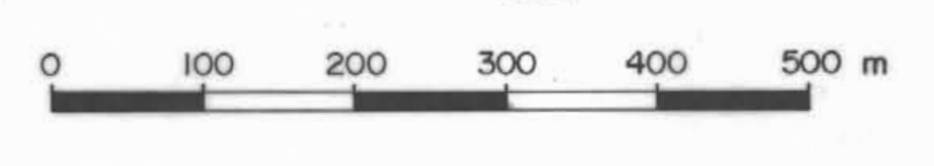


Sample No.	Unit	Length	ppb As	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm Au
90THIR-004	grab	1	1.9	85	9	84	1	1
90THIR-002	grab	46	17.1	14,801	30	18	11	1
90THIR-017	grab	8	2.4	181	22	67	1	1
90THIR-018	grab	34	0.6	55	19	70	1	1
90THIR-019	grab	4	77.0	100	835	2,901	1	1
90THIR-020	grab	9	0.5	7	18	45	1	1
90THIR-021	grab	2	1.2	30	17	64	1	1

- LEGEND**
- X Grab sample location.
 - △ Float sample location.
 - Ⓜ Helipad.
 - 250- 10 metre contour interval.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

21,045



BIG M RESOURCES LTD.

**IAN PROPERTY
WEST HALF**

**ROCK SAMPLE
LOCATIONS & RESULTS**

DATE: Feb. 1991	NTS: 104B / 10W, 11E
PROJECT: III	BY:
SCALE: 1:5,000	
Keewatin Engineering Inc. MAP No. 6	