1025

GEOLOGICAL and GEOCHEMICAL

REPORT

on the PHIL 20 CLAIM

Omineca Mining Division
N.T.S. 93N/2

Latitude: 55°-09'N Longitude: 124°-~~55~~'W
52

Owner : BP Minerals Limited
Operator: BP Minerals Limited

R. Pegg, BASc., P. Eng.
S. J. Hoffman, PhD.

July, 1988.

For: BP Minerals Limited
700-890 West Pender Street
Vancouver, B.C.

BPVR 88-2

RESUME

The PHIL 20 property, located 90 km north-north-west of Fort St. James, B.C., covers an area of high magnetic relief coinciding with government arsenic-mercury-antimony stream sediment anomalies. The claims is primarily underlain by Takla Group (Upper Triassic) sediments and lesser volcanics. BP Minerals conducted geological and geochemical surveys over part of the property during 1988. A summary of results from this program are as follows:

- 1988 soil sampling program contained 9 samples with results ranging from over 25 ppb to 825 ppb Au;
- the soil sampling coverage was insufficient to properly delineate anomalies and thus their associations;
- minor to moderate amounts of disseminated and fracture filling pyrrhotite and pyrite were observed in the volcanics and sediments;
- preliminary rock sampling failed to locate a source(s) for the gold soil anomalies.

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INTRODUCTION

In 1988, BP Minerals Limited conducted geological and geochemical surveys over part of the Phil 20 claim.

The exploration target was economic precious metal ± base metal mineralization.

1. Location, Access, Physiography and Climate

The Phil 20 property is located on the north slope of Mt. Alexander, approximately 90 km north-north-west of Fort St. James.

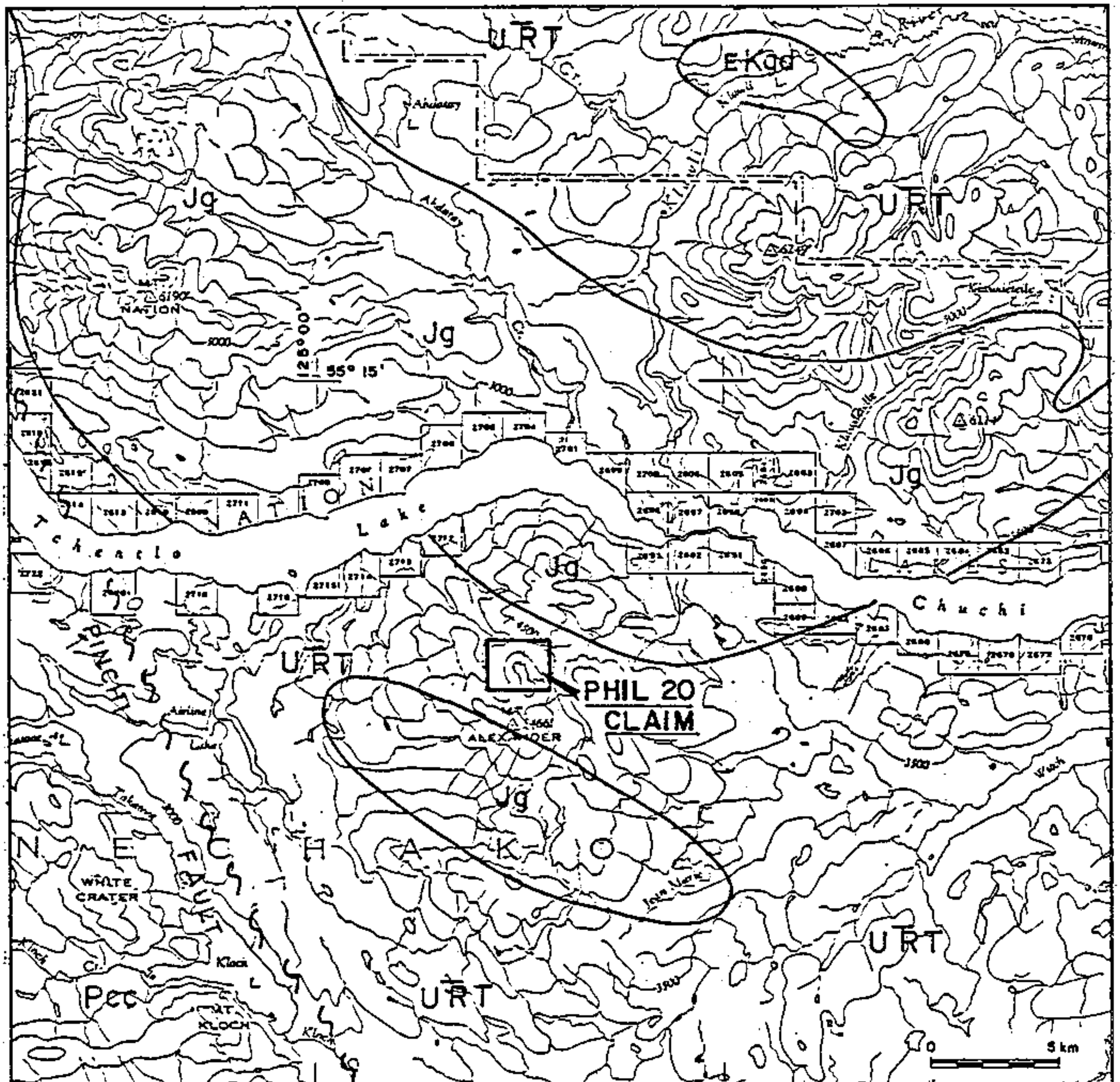
Access is by helicopter from Fort St. James.

The claim covers a north to north-west facing spur of Mt. Alexander which slopes moderately to steeply towards the confluence of two creeks. The property is covered by a mature forest of spruce, balsam fir, deciduous trees and sections of alders.

The claims receive a moderate amount of precipitation during most of the year.

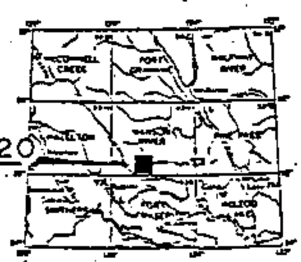
2. Property Status

The property consists of 1 claim (20 units) whose registered owner is BP Minerals Limited of Vancouver. The claim's record number is 6488 and it's recorded date is July 20, 1984.



LEGEND

EKgd	EARLY CRETACEOUS NAVER INTRUSIONS
JKgd	JURASSIC - CRETACEOUS INTRUSIVE ROCKS
Jg	JURASSIC HOGEM BATHOLITH
EJg	EARLY JURASSIC TOPLEY INTRUSIONS
TJs	UPPER TRIASSIC - LOWER JURASSIC SITLIKA ASSEMBLAGE
uRT	UPPER TRIASSIC TAKLA GROUP
PRub	UPPER PALAEOZOIC - TRIASSIC TREMBLEUR INTRUSIONS
Pcc	UPPER PALAEOZOIC CACHE CREEK GROUP



SELCO DIVISION -
BP RESOURCES CANADA LIMITED

PHIL 20 CLAIM

REGIONAL GEOLOGY & CLAIM LOCATION MAP

SCALE 1:250,000	DRAWN BY: R.P.	FIG. 1
DATE JULY 1988	DRAFTED BY:	
N.T.S. 93 N	PROJ. 10200	REPORT BPVR 88-2

3. History of Exploration

In 1974, Cominco Ltd. built a 32 km cat road from the west end of Chuchi Lake down to the JW property (Cu-Mo). This overgrown cat road crosses that west side of the Phil 20 claim.

In August of 1984, BP conducted preliminary geological mapping, prospecting and soil sampling. The claim was staked following the release of results from a government stream sediment survey and covers an area of high magnetic relief coinciding with arsenic-mercury-antimony anomalies.

4. 1988 Work Program

Re-interpretation of previous soil sample results was conducted during June of 1988. During July, geological mapping and soil/silt sampling surveys were completed.

GEOLOGY

1. Regional Geology

The Phil 20 property is located within the Intermontane Tectonic Belt near the southern edge of the Juro-Cretaceous Hogem Batholith. The batholith is a complex, polyphase pluton of predominantly granodiorite composition that has intruded the Upper Triassic Takla Group. The Takla consists of basic volcanic and sedimentary rocks.

The major strucutre in the regions is the Pinchi Fault which demarks the western boundary of the Quesnel Trough. This fault is located approximately 14 km west of Phil 20.

2. Property Geology

Most of the outcrops are restricted to the upper portions of the Mt. Alexander spur and along the steep creek banks.

The majority of the property appears to be underlain by black to green argillites, cherty argillites and volcanic sandstone and siltstone of the Takla Group. These sediments overlie a sequence of Takla volcanics, found along the west side of the property. The volcanics consist of thickly bedded, green, cherty dacitic tuff, ash tuffs and polylithic lapilli tuff. These overlie medium green augite-porphyry andesite flows and flow breccias.

Medium green augite-pophyry basalt sills/dykes and light grey augite-hornblende-plagiocalse dykes are reported to cut the section.

3. Mineralization and Alteration

Trace amounts of 2% pyrrhotite disseminations and fracture fillings and minor pyrite fracture fillings were observed in the sediments. Minor carbonate and local, very narrow and discontinuous silica fracture fillings are also present.

Up to 1% pyrite and/or pyrrhotite disseminations/fracture fillings were observed in the volcanics. Ankeritic tuffs occur north of claim along the old road that cuts the west side of the property.

Moderately strong hornfelsing of both the sediments and the volcanics has been reported north of the claim.

GEOCHEMISTRY

1. Rock Sampling

During the course of geological mapping, five grab samples were collected for geochemical analysis. This was completed to test for significant gold concentrations and/or possible indicator elements.

2. Soil Sampling

a. Topography, Landscape, Overburden and Soils

Maximum relief within the grid area is about 300m, the landscape sloping northward from the summit of Mount Alexander. Slopes flatten appreciatively beside Alex Creek which flows to the west. Overburden along Alex Creek comprises alluvium within the flood plain and glacial till and colluvium along seepage zones (bogs) in base of slope regions. At higher elevations, overburden consists of residual or talus materials, and is locally derived from outcrops which are poorly to intermittantly exposed.

Soils are generally well drained, and soil formation has proceeded to the stage of podzols over most of the landscape. A podzolic profile on the property is characterized by:

1. A thin LH-horizon 0-5 cm thick comprising partly decomposed leaves and humus;
2. A poorly developed, light to medium brown AE horizon 0-20 cm thick representing a zone of leaching;
3. A medium red-brown zone of accumulation of Fe oxides, at depths of 20 to 30 cm, representing the horizon of choice (BF) on the claim group. (The BF horizon is found at only a 5 to 15 cm depth in the southwest portion of the property where outcrop is abundant); and,

4. A medium olive brown BM horizon typically underlying the BF, but also present independant of the BF in more poorly drained portions of the property. The BM horizon was sampled if the BF zone was too thin or absent.

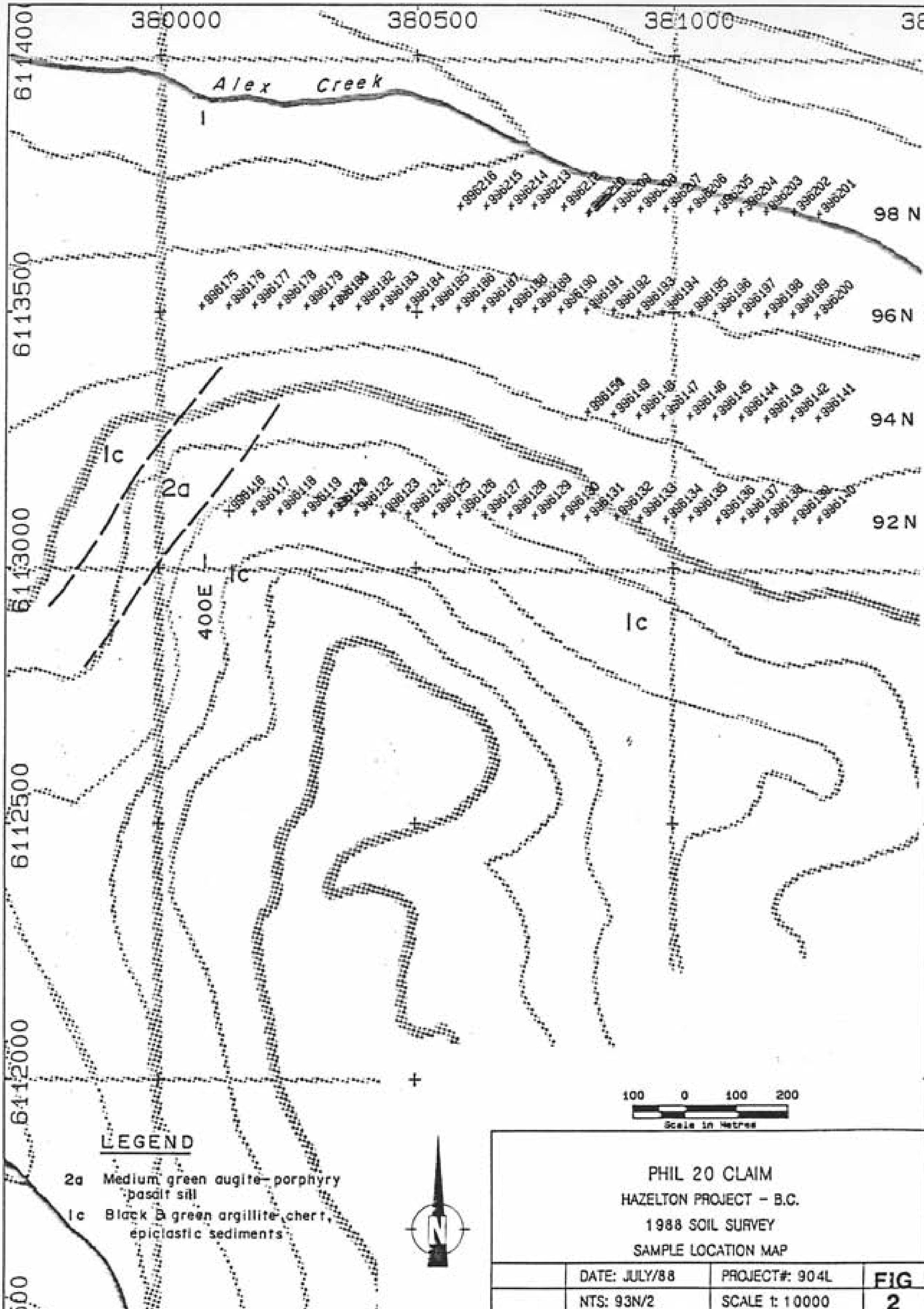
Organic accumulation in bogs are prominent along Alex Creek, These were penetrated when encountered at sample sites. If they could not be penetrated, the sample site was shifted and noted where appropriate.

b. Soil Sampling Program

To followup Cu, As and Au anomalies along the south bank of Alex Creek, an 800 m baseline was established from a recognizable bend along Alex Creek to run due south. Crosslines were established at 200 m intervals, and samples were taken at 50 m spacings. Station locations along the baseline and along crosslines were marked on an aluminum tag and affixed at each station. Sample numbers were also written onto the aluminum tags. Eighty soil samples were collected (Fig. 2).

c. Sample Preparation, Analysis, and Interpretation - Soils

Samples were placed in wet strength Kraft paper envelopes onto which was written the sample and an archive number, on site. Samples were air-freighted to Vancouver and submitted to Acme Analytical for ICP and Au geochemical analysis on splits of the minus 80-mesh fraction. Analytical procedures are found in Appendix VI and a list of geochemical data are included in Appendix V. The significance of the geochemical numbers returned from the laboratory was established with reference to procedures of Appendix VII applied to histograms of Plan 2.



PHIL 20 CLAIM

HAZELTON PROJECT - B.C.

1988 SOIL SURVEY

SAMPLE LOCATION MAP

DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	2

BPVR 88-2

3. Discussion of Results - Rocks

Sample results from the five collected grab samples revealed only a few slightly elevated values in copper and zinc. Gold and silver results are all at background levels.

4. Description of Results - Soils

1. Au (Fig. 3A)

An Au anomaly threshold was established at 18 ppb. Two multisample anomalies are defined along the western (No. 1) and eastern (No. 2) margins of the survey. Samples within anomalous zones appear related by topographic control. Anomaly 2 represents confirmation of the zone defined by Humphreys (1984). An isolated value of 825 ppb Au lies along the southernmost line, within 100 m of Au zone 1.

2. Ag (Fig. 3B)

Three Ag anomalies are defined to exceed a 0.7 ppm threshold, reaching a maximum of 1.9 ppm. All lie within 200 m west of the zone 2. Both Au anomalies are associated with only background Ag values.

3. As (Fig. 3C)

The historical As anomalies of Humphreys (1984) have been repeated by the present study. All lie in the east and are periferal to Au zone 2. Anomaly threshold is 150 ppm and maximum values are about 500 pm. Most of the high values are found along the northernmost line in an area of extensive seepage and bog, developed on top of river alluvium or colluvium derived from upslope. As backgrounds are lower in the west. Noting this background change enables recognition of a weak As association with the highest Au value of the survey.

4. Sb (Fig. 3D)

All Sb values are at background or twice background levels. All twice background levels lie in the east.

5. Mo (Fig. 3E)

All Mo values are at or close to background, except for a 13 ppm value in the north.

6. Cu (Fig. 3F)

Cu threshold is 105 ppm. Four multisample anomalies are defined, all lying to the east of the grid. Cu anomaly 3 corresponds with Au zone 2, whereas Ag enhancement and As accumulation in the north characterize Cu zone 2. Cu anomalies 1 and 4 are accompanied by elevated As values. Cu backgrounds on average are higher in the west, but all anomalies lie in the east, indicating that they are high contrast features.

7. Pb (Fig. 3G)

Pb levels are not believed to be anomalous. A zone of Pb enriched soils following the regional geologic grain falls about 100 to 200 m east of the porphyry basalt sill (unit 2a).

8. <u>Zn</u> (Fig. 3H)

Zn contents also are not anomalous. Zn follows Pb in zone 1 east of the sill. Zn backgrounds are also higher in the southeast and the northwest.

9. <u>Fe</u> (3I)

The Fe distribution essentially divides the property in two with higher backgrounds in the west. Samples containing the highest Fe contents in the west have not affected distributions of other elements. In the east, an 11.5% isolated value has apparently accumulated As, but this fact does not change the As distribution significantly.

10. <u>Mn</u> (Fig. 3J)

Almost all the high Mn values are found in the northeast, predominently in areas of groundwater seepage associated with overburden materials comprising till, alluvium, and colluvium. Au zone 2 is partially within a Mn-rich zone.

11. <u>Co</u> (Fig. 3W)

Five Co anomalies defined by this survey appear indepenant of the Mn distribution, with the exception of two samples which have been discounted and indicated as such on Fig. 3W. Co backgrounds are highest along the northernmost three lines. Anomalies tend to be 2 or 3 point features and exhibit a 2X background contrast.

12. Ni (Fig. 3K)

Ni backgrounds relate similarly to Co. Anomalies, however, are restricted to the northeast where zones 1 and 2 are along the northernmost two lines. The Ni distribution is homogeneous.

13. Cr (Fig. 3L)

Cr follows Ni, but the distribution pattern suggests anomalous conditions extend further upslope to the south. Patterns are homogeneous.

14. V (Fig. 3M)

V follows Fe.

15. Ba (Fig. 3N)

Ba concentrations are lowest at the highest elevations on the property. Two large Ba anomalies lie in the east, crossing the entire grid along a north-south trend. Maximum values are in the 125 to 250 ppm range.

16. Sr (Fig. Ø)

Backgrounds of Sr are enhanced in the northeast, particularly within 50 m in elevation from the creek. Two Sr anomalies are located in the southwest, along the southernmost line where values exceed 50 ppm to 180 ppm. Most Sr values are less than 25 ppm.

17. Ca (Fig. 3P)

The northern line and eastern margin of the survey are Ca-rich as two large anomalies are defined where values range from 0.55% to just over 1%. These numbers are unusually high, but their homogeneous character suggests underlying overburden controls. Sr anomaly 2 is complimented by Ca (No. 1).

18. Mg (Fig. 3Q)

The Mg pattern resembles that of Ca in the north and east. The eastern margin of the grid is also Mg enriched. The Mg distribution is homogeneous.

19. Al (Fig. 3R)

Distribution of Al appears geologically controlled. Maximum values of 4 to 5.5% trend northward, approximately parallel to the basalt sill for the full extent of the grid, over a lateral distance of 300 m. Values in the east and northeast are typically less than 2.5%.

20. K (Fig. 3S)

The K distribution resembles Mn. Highest values in three zones lie in the northeast.

21. Ti (Fig. 3T)

All the highest Ti values lie along the southernmost line.

22. P (Fig. 3U)

The P distribution is homogeneous and the element appears to be mapping geology trending parallel to the basalt sill. By contrast, the eastern side of the grid is P-poor. Superimposed on this latter area is P anomaly 4. The P distribution is homogeneous.

23. La (Fig. 3V)

Homogeneously enhanced values are noted in the northeast, parallelling patterns seen for Mn and K, amongst other elements.

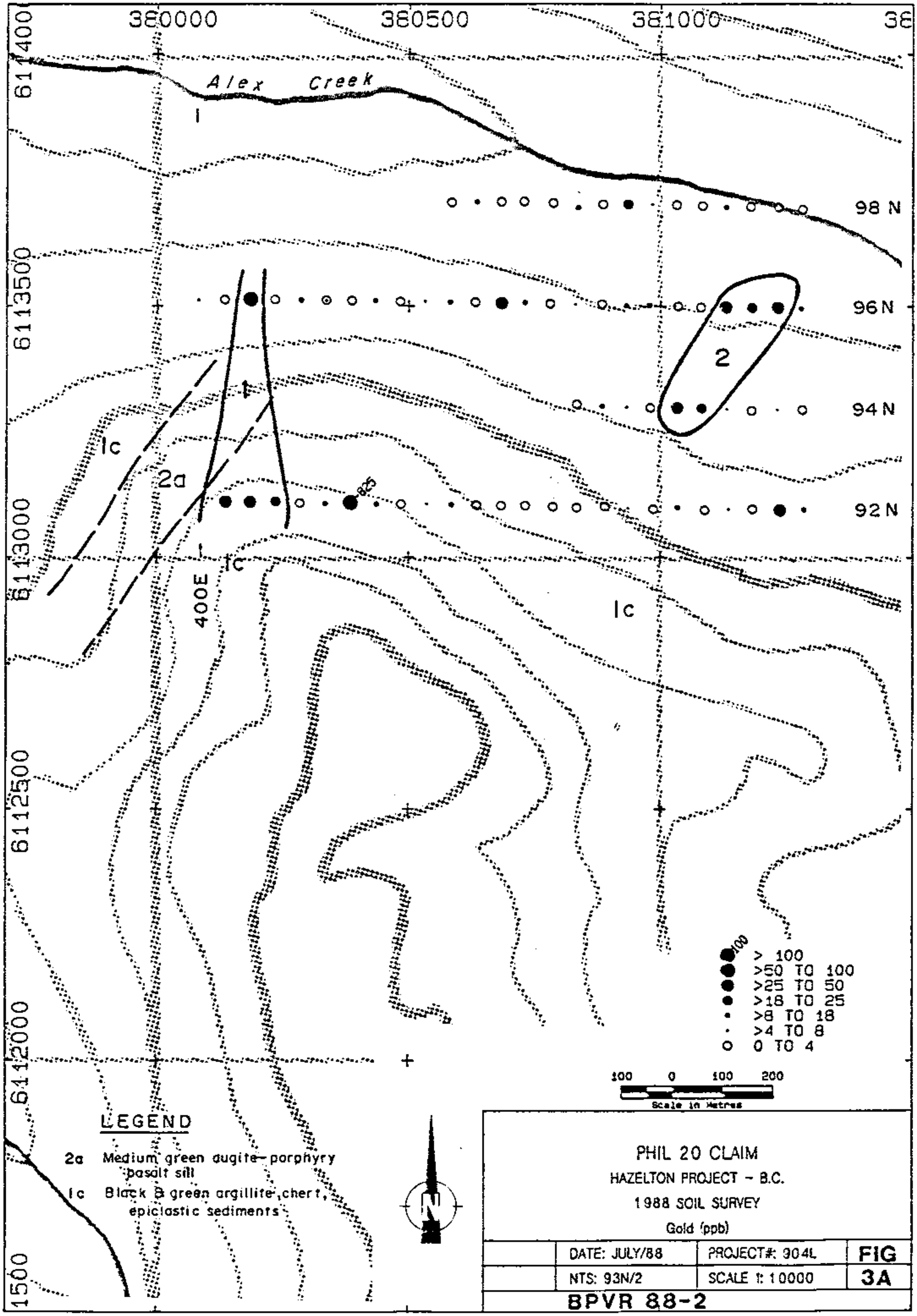
5. Discussion of Results - Soils

The preliminary nature of the soil survey (i.e., 2 complete lines, 2 half lines) precludes the possibility of this report being definitive for the claim group. What the study has done, however, is define a reproducible Au anomaly in the east accompanied by Cu and periferally zoned by As. Ag anomalies lie to one side but it is uncertain whether or not they are related or are independant features.

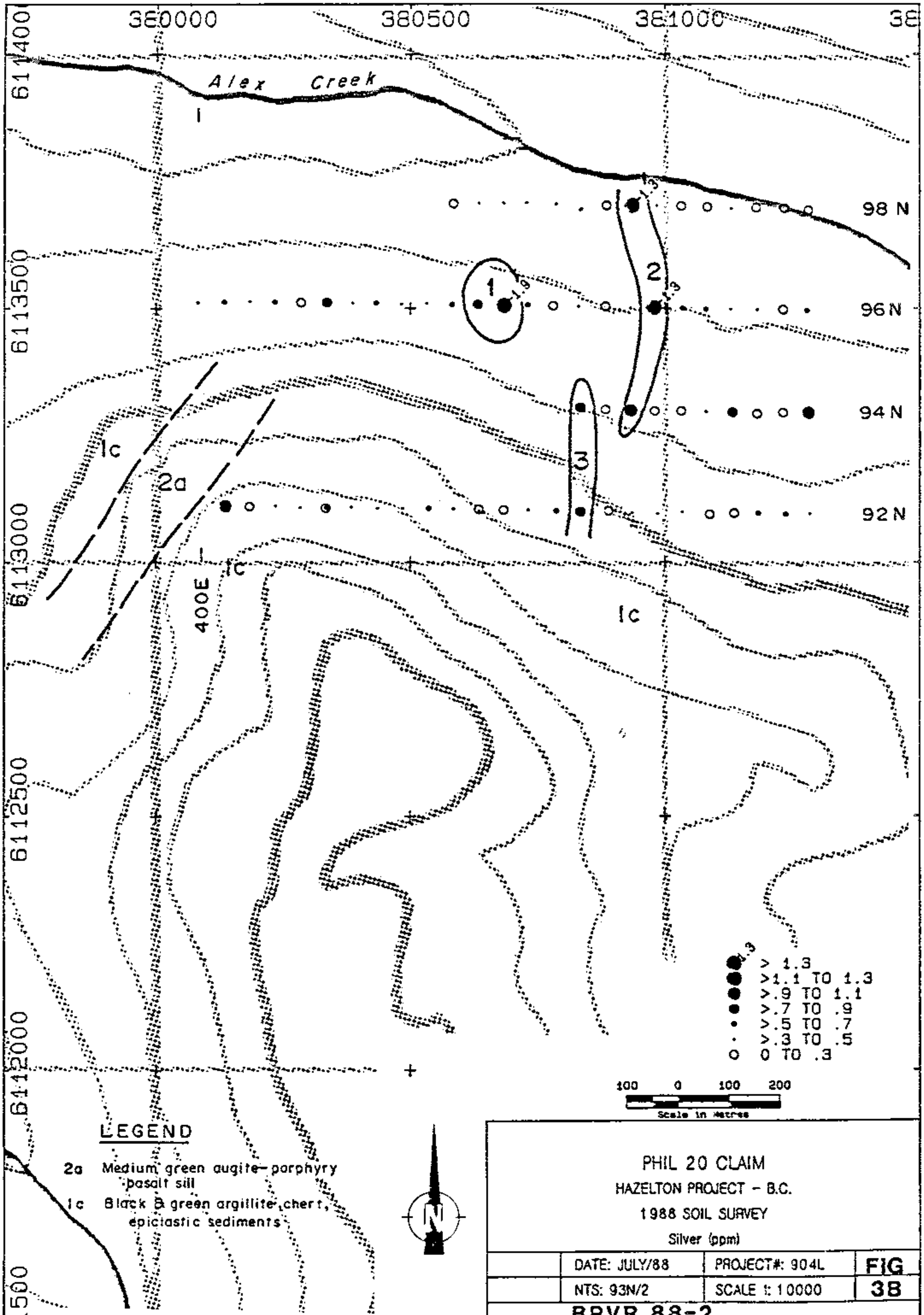
A second Au anomaly, with the highest value of the survey of almost 1 gm nearby, lies in the west. Only weakly enhanced As values appear related to the Au. The western Au zone lies in a geologic and/or surficial deposit environment which contrasts markedly with the eastern Au anomaly in being associated with enhanced Cu, Pb, Zn, Fe, V, Al, and P and depleted As, Sb, Bi, Mn, Ni, Cr, Ba, Mg, K and La values. Ca and Sr are anomalously enriched in both zones.

The western anomaly lies within a residual soil environment, and followup comprising physical work and rock chip sampling would likely define a bedrock source(s) for the Au. However, before this is accomplished, more complete soil sampling coverage, (i.e., intermediate lines, extension of the grid to the south) and perhaps detailed sampling (25 m interval) is needed to fully outline anomalous zones.

The eastern anomaly also requires a more complete survey coverage, and extension of the grid to the east. Interpretation should consider the possibility that glacial dispersion along the valley of the Alex Creek is affecting geochemical dispersion, and air photographs should be inspected for evidence of the type and extent of glacial overburden.



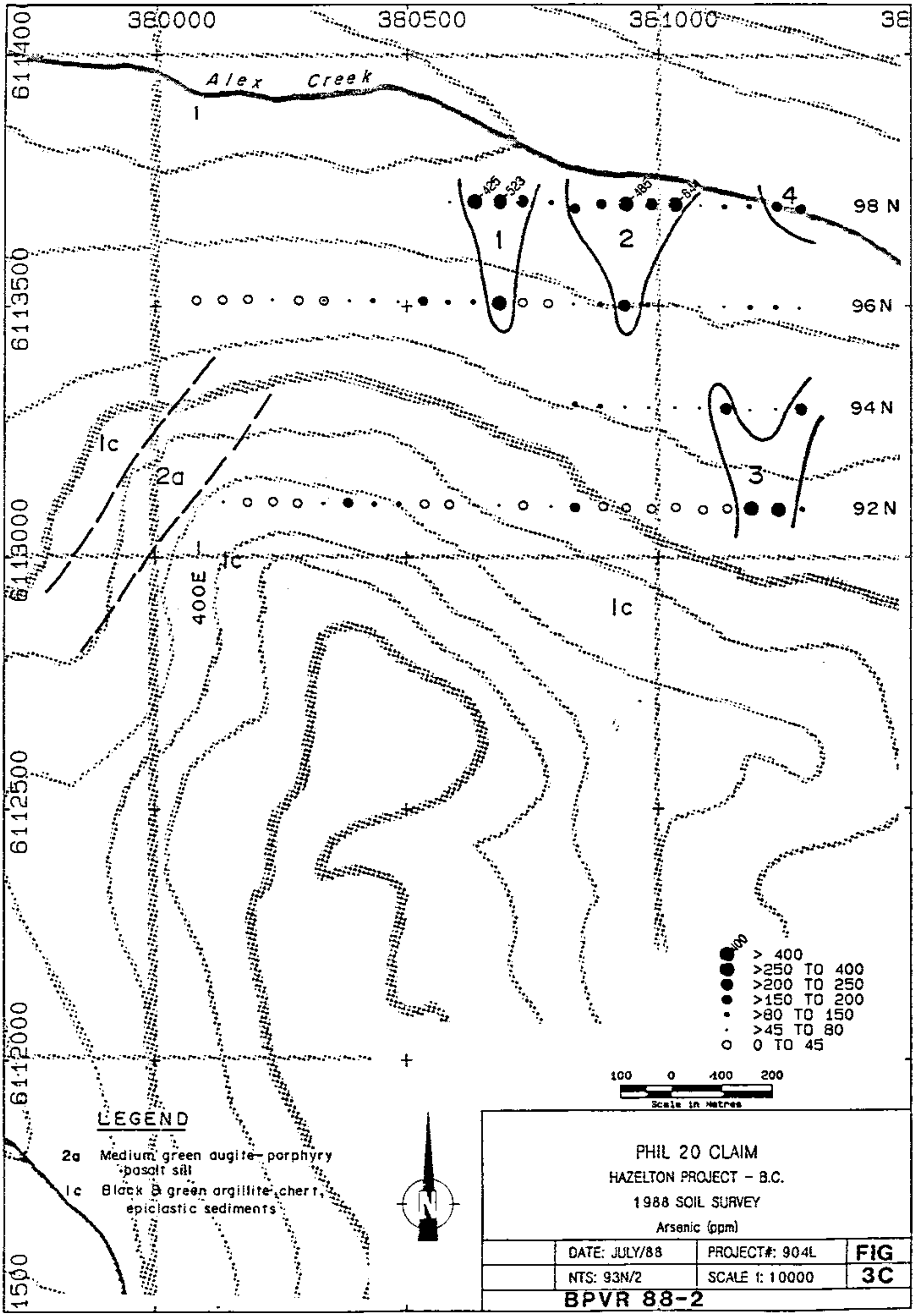
380000
380500
381000
6113500
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
2
2a
1c
400E
825
> 100
>50 TO 100
>25 TO 50
>18 TO 25
>8 TO 18
>4 TO 8
0 TO 4
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite, chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Gold (ppb)
DATE: JULY/88
PROJECT#: 904L
FIG 3A
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Silver (ppm)

DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	3B

BPVR 88-2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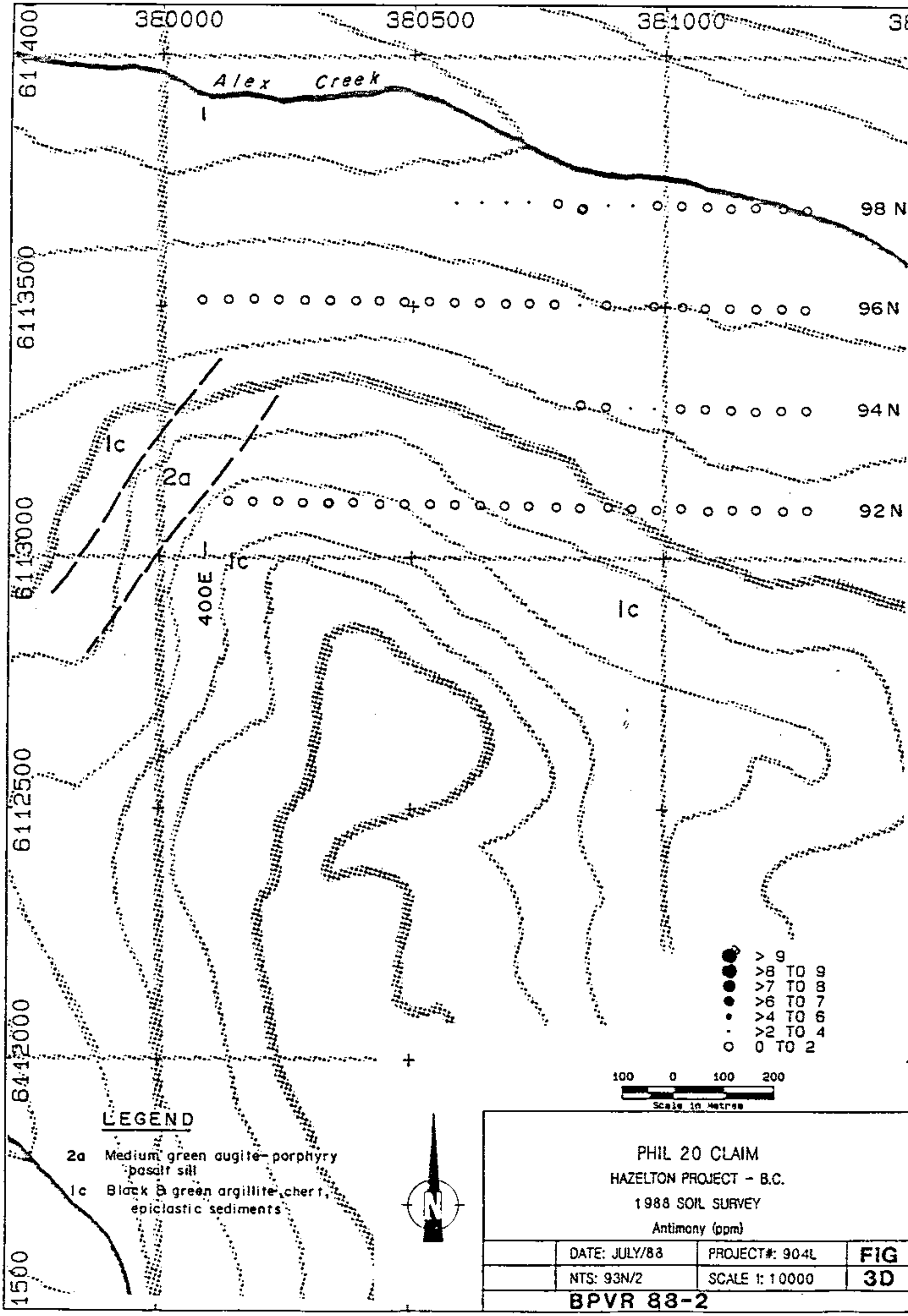
6113500
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
400E
1c
2a
> 400
>250 TO 400
>200 TO 250
>150 TO 200
>80 TO 150
>45 TO 80
0 TO 45
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Arsenic (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG 3C
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2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381000
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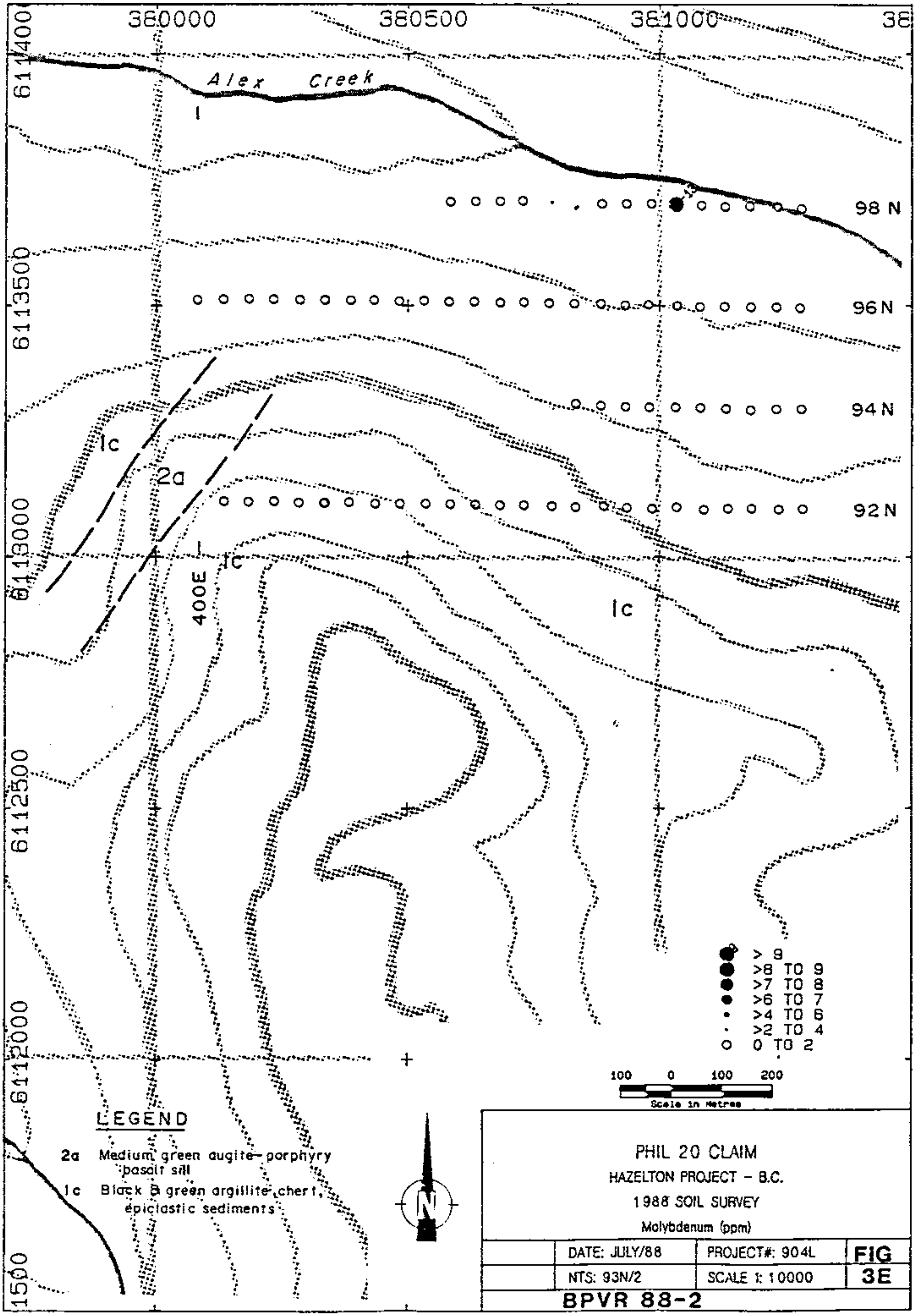
6113500
6113000
6112500
6112000
61500
Alex Creek
1
98 N
96 N
94 N
92 N
1c
2a
1c
400E
1c
> 9
>8 TO 9
>7 TO 8
>6 TO 7
>4 TO 6
>2 TO 4
0 TO 2
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Antimony (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG 3D
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2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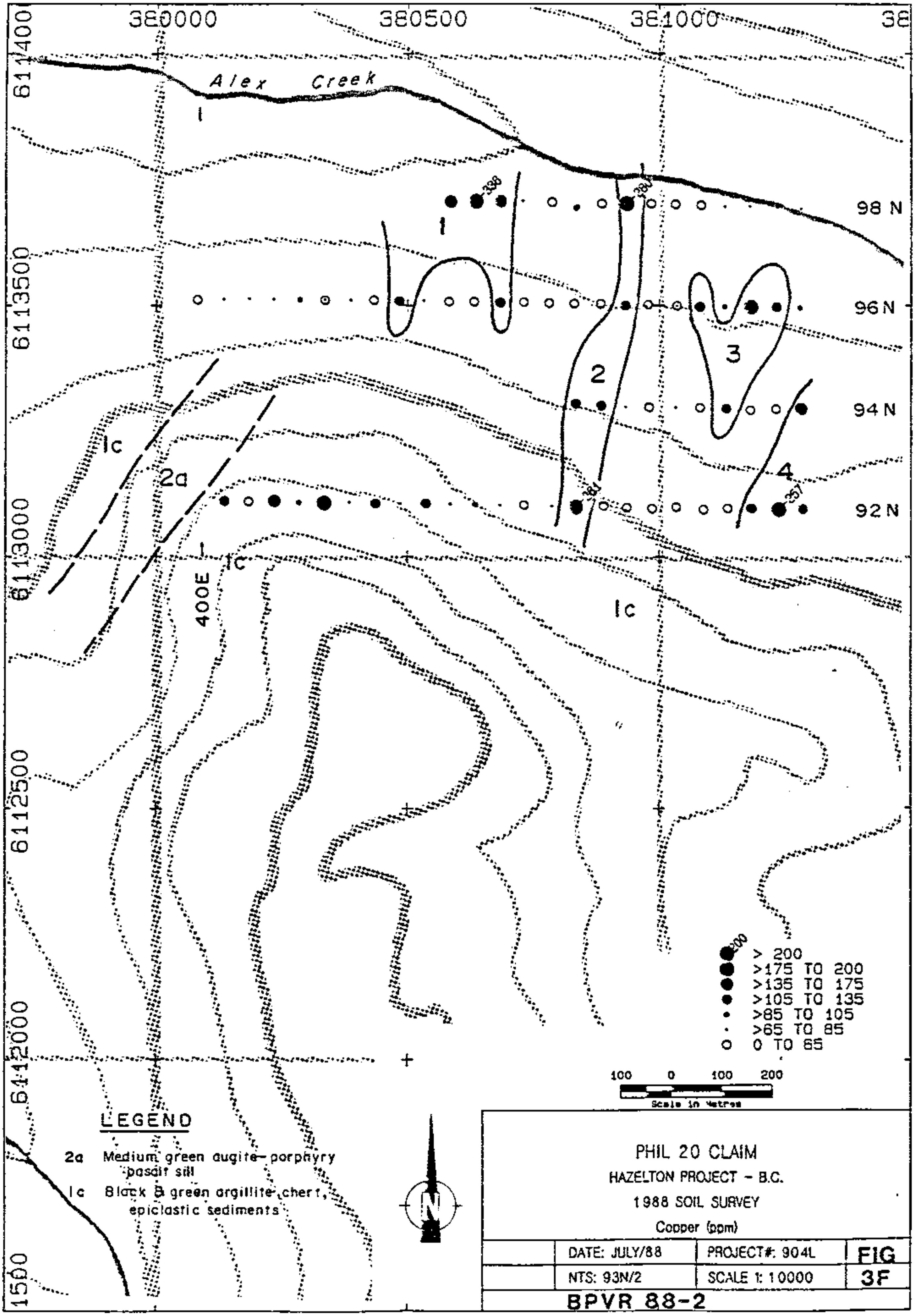
6113500
6113000
6112500
6112000
1500
Alex Creek
98 N
96 N
94 N
92 N
1c
2a
400E
> 9
>8 TO 9
>7 TO 8
>6 TO 7
>4 TO 6
>2 TO 4
0 TO 2
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Molybdenum (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG 3E
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2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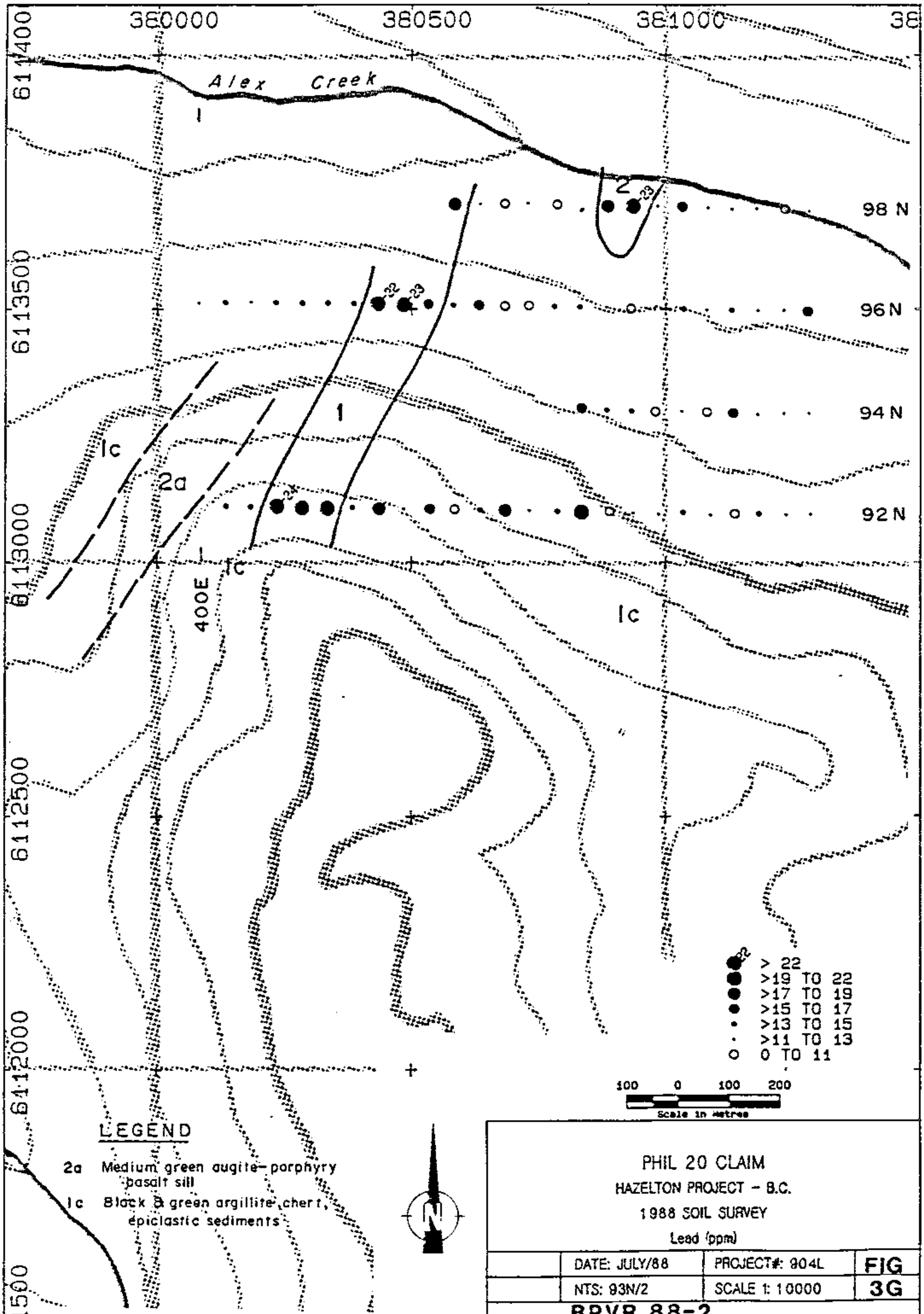
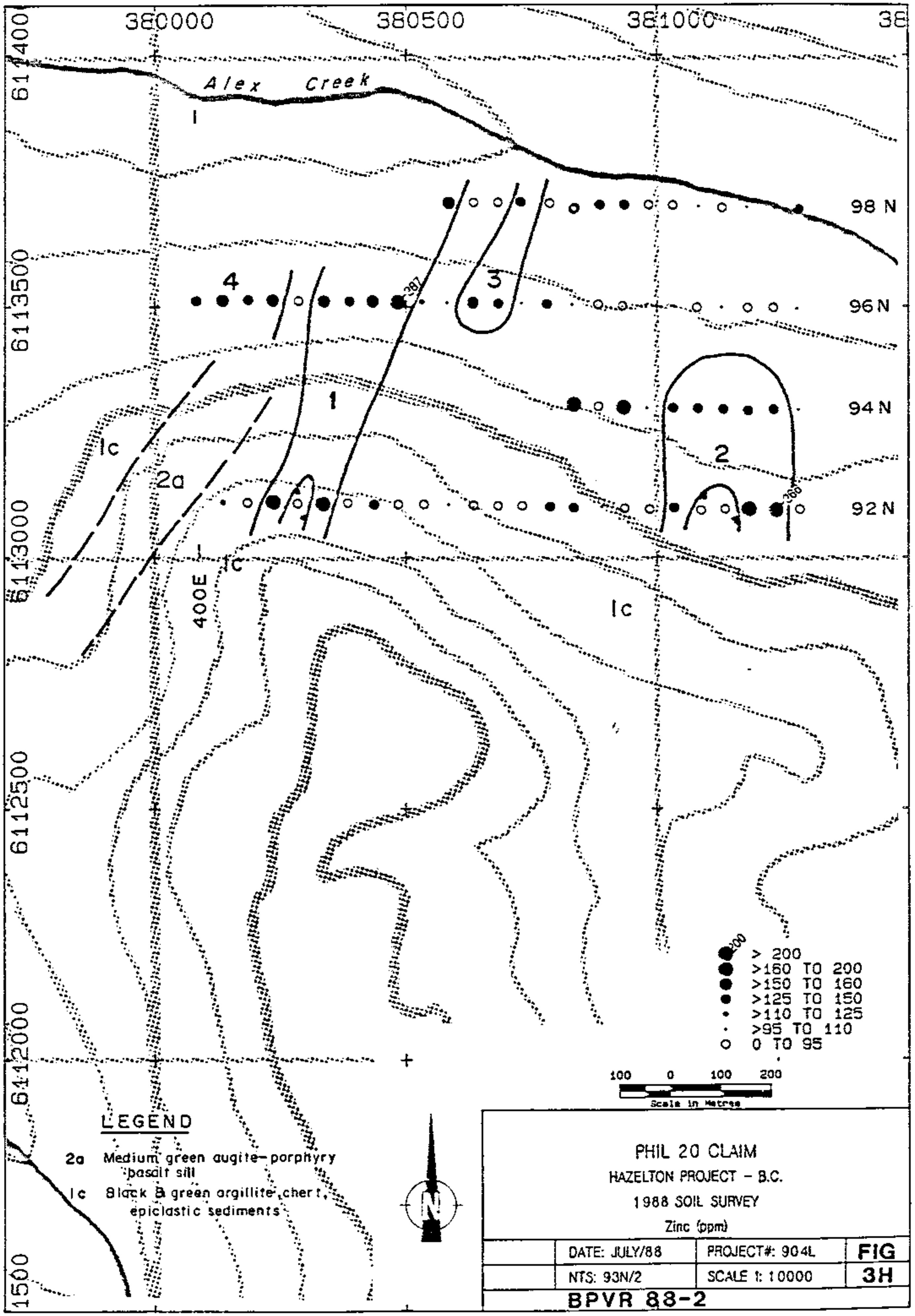
380500
381000
6111400
6113500
6113000
6112500
6112000
1500
Alex Creek
98 N
96 N
94 N
92 N
400E
1c
2a
1
2
3
4
338
280
381
357
> 200
>175 TO 200
>135 TO 175
>105 TO 135
>85 TO 105
>65 TO 85
0 TO 65
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite-chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Copper (ppm)
DATE: JULY/88
PROJECT#: 904L
NTS: 93N/2
SCALE 1: 10000
FIG 3F
BPVR 88-2



PHIL 20 CLAIM HAZELTON PROJECT - B.C. 1988 SOIL SURVEY Lead (ppm)		
DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	3G
BPVR 88-2		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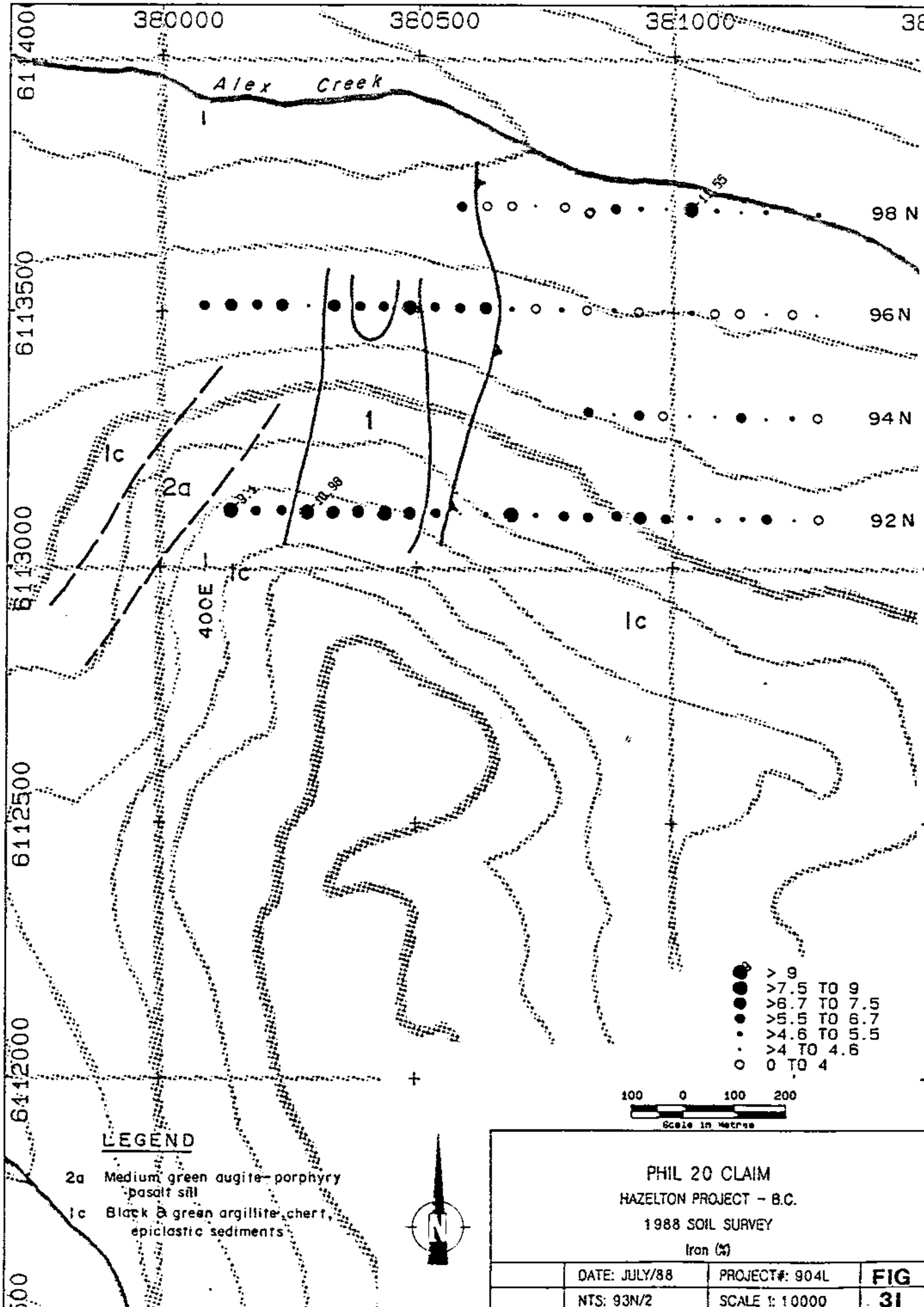
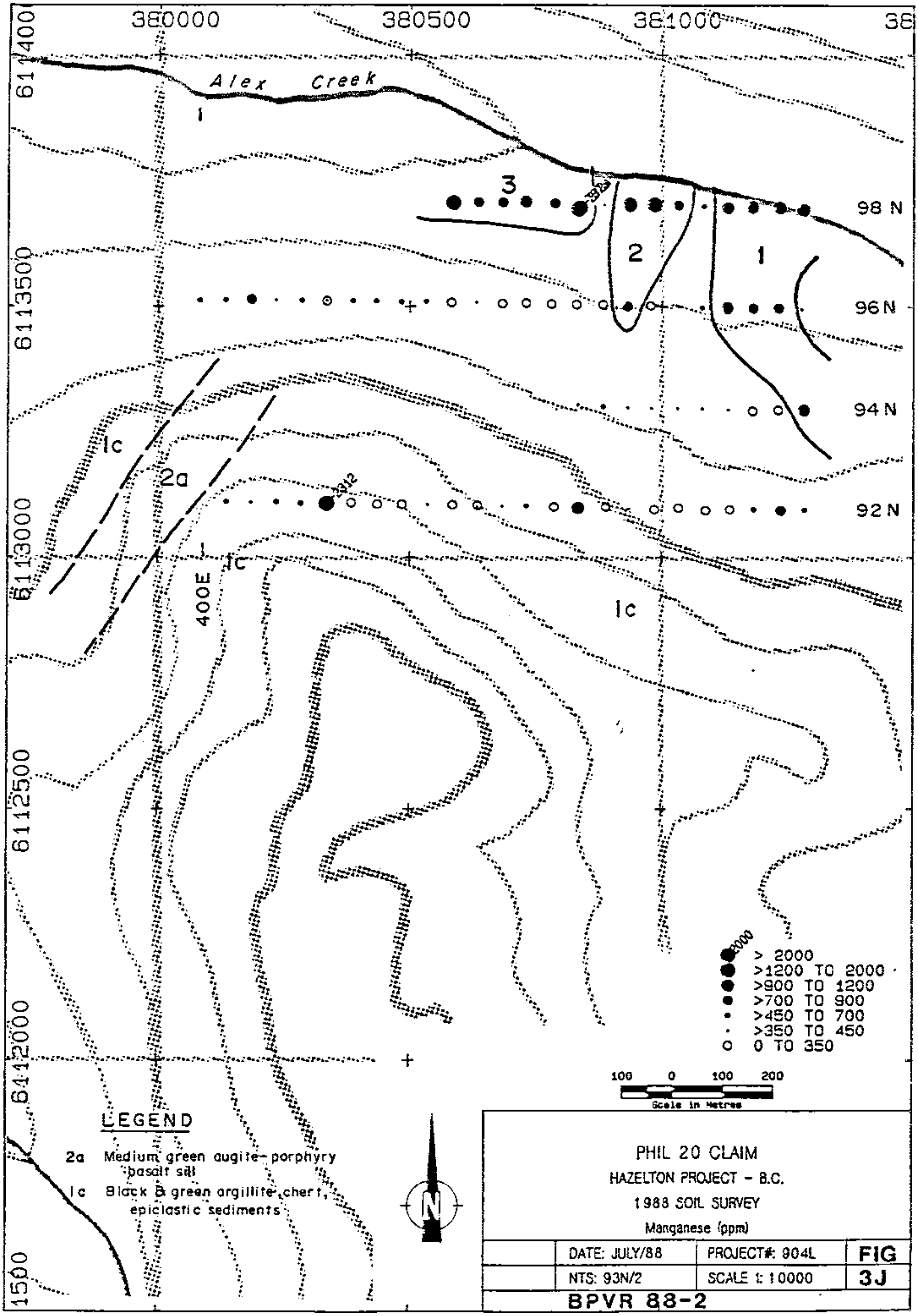
6113000
6112500
Alex Creek
98 N
96 N
94 N
92 N
387
388
1
2
3
4
1c
2a
400E
> 200
>160 TO 200
>150 TO 160
>125 TO 150
>110 TO 125
>95 TO 110
0 TO 95
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite, chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Zinc (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG
3H
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Iron (%)

DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	31

BPVR 88-2



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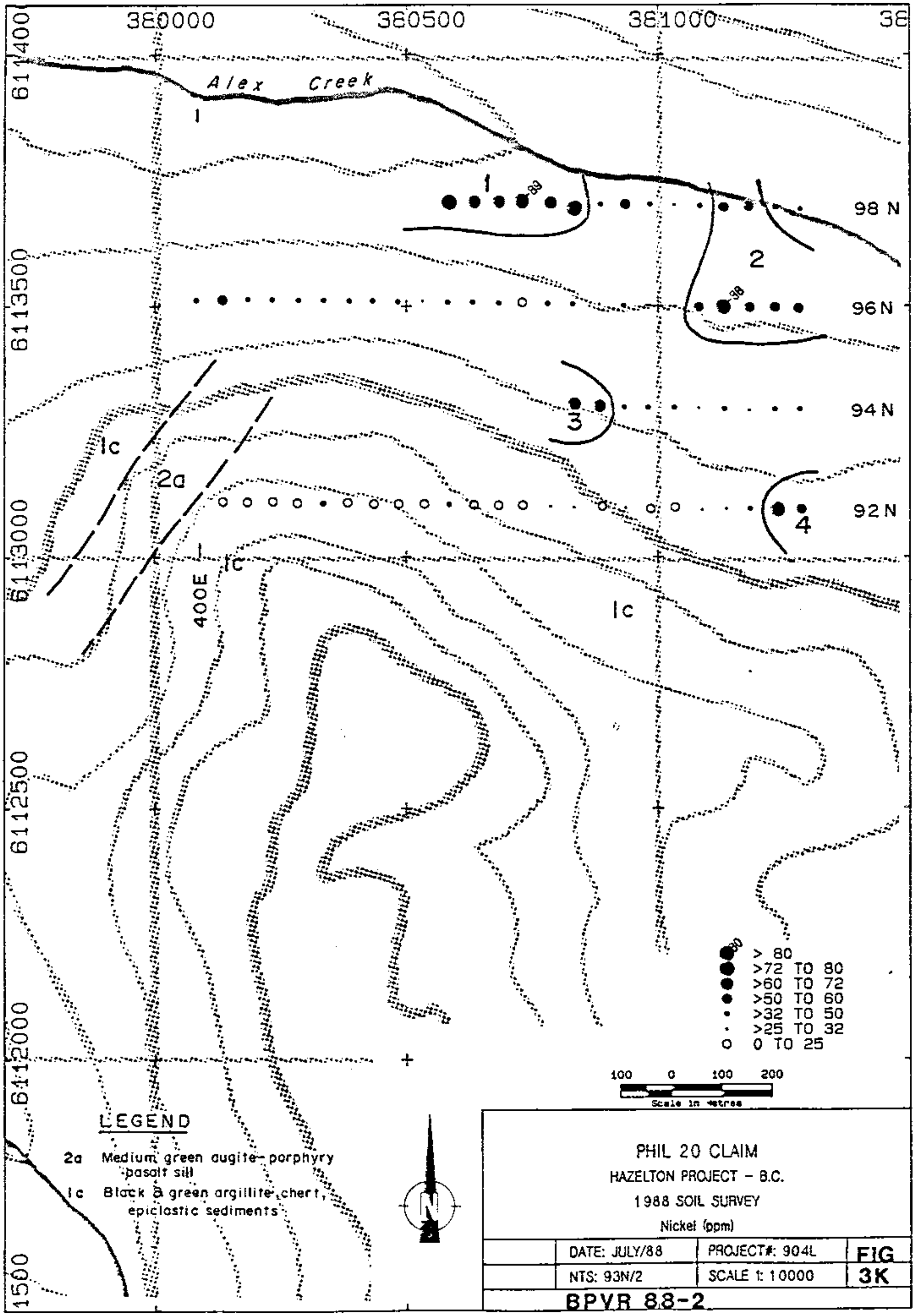
380500
381000
6113500
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
400E
1c
2a
> 2000
>1200 TO 2000
>900 TO 1200
>700 TO 900
>450 TO 700
>350 TO 450
0 TO 350
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Manganese (ppm)
DATE: JULY/88
PROJECT#: 904L
NTS: 93N/2
SCALE 1: 10000
FIG 3J
BPVR 88-2



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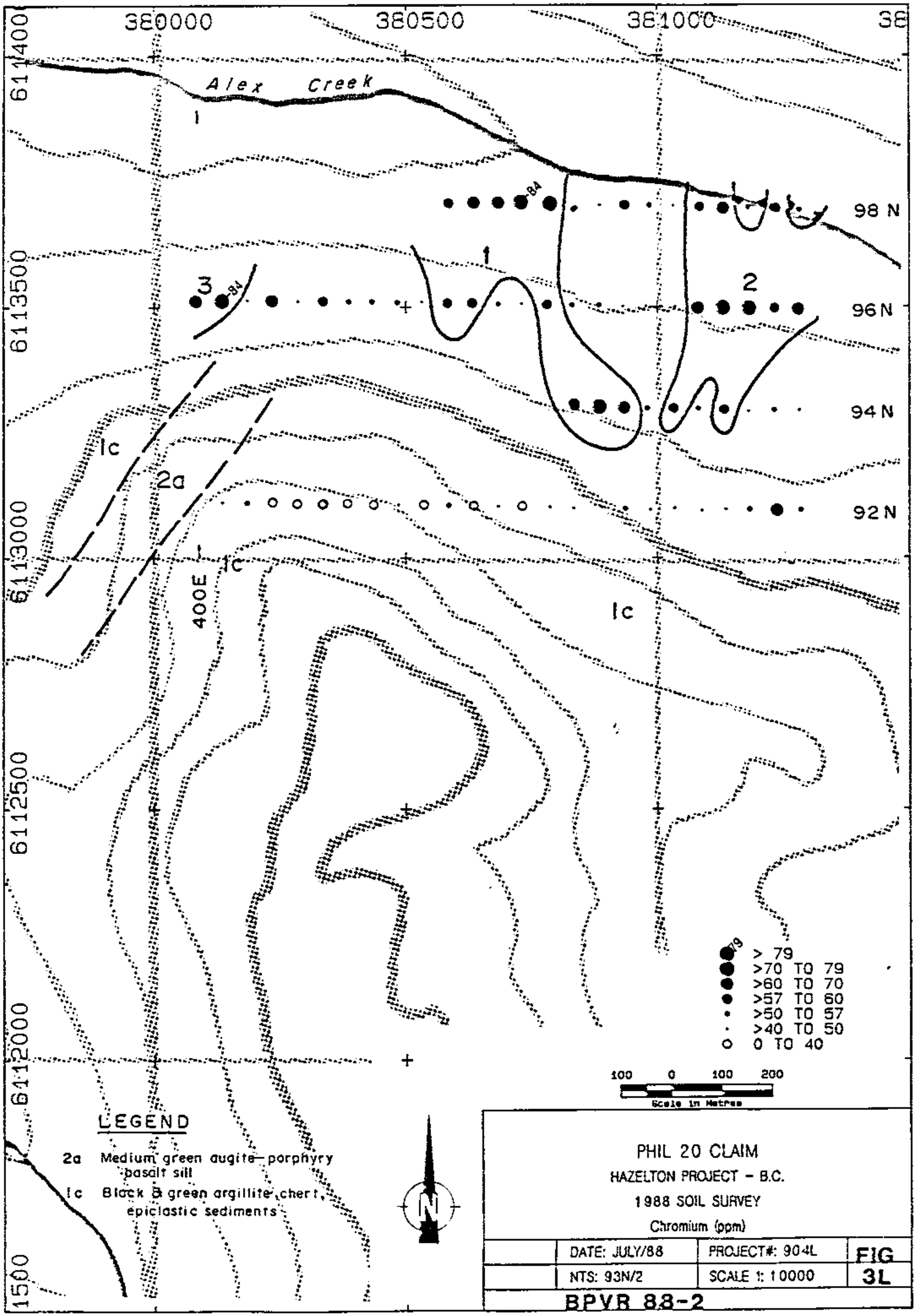
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
1
2
3
4
1c
2a
400E
> 80
>72 TO 80
>60 TO 72
>50 TO 60
>32 TO 50
>25 TO 32
0 TO 25
100 0 100 200
Scale in metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Nickel (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG 3K
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



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381000
6111400
6113500
6113000
6112500
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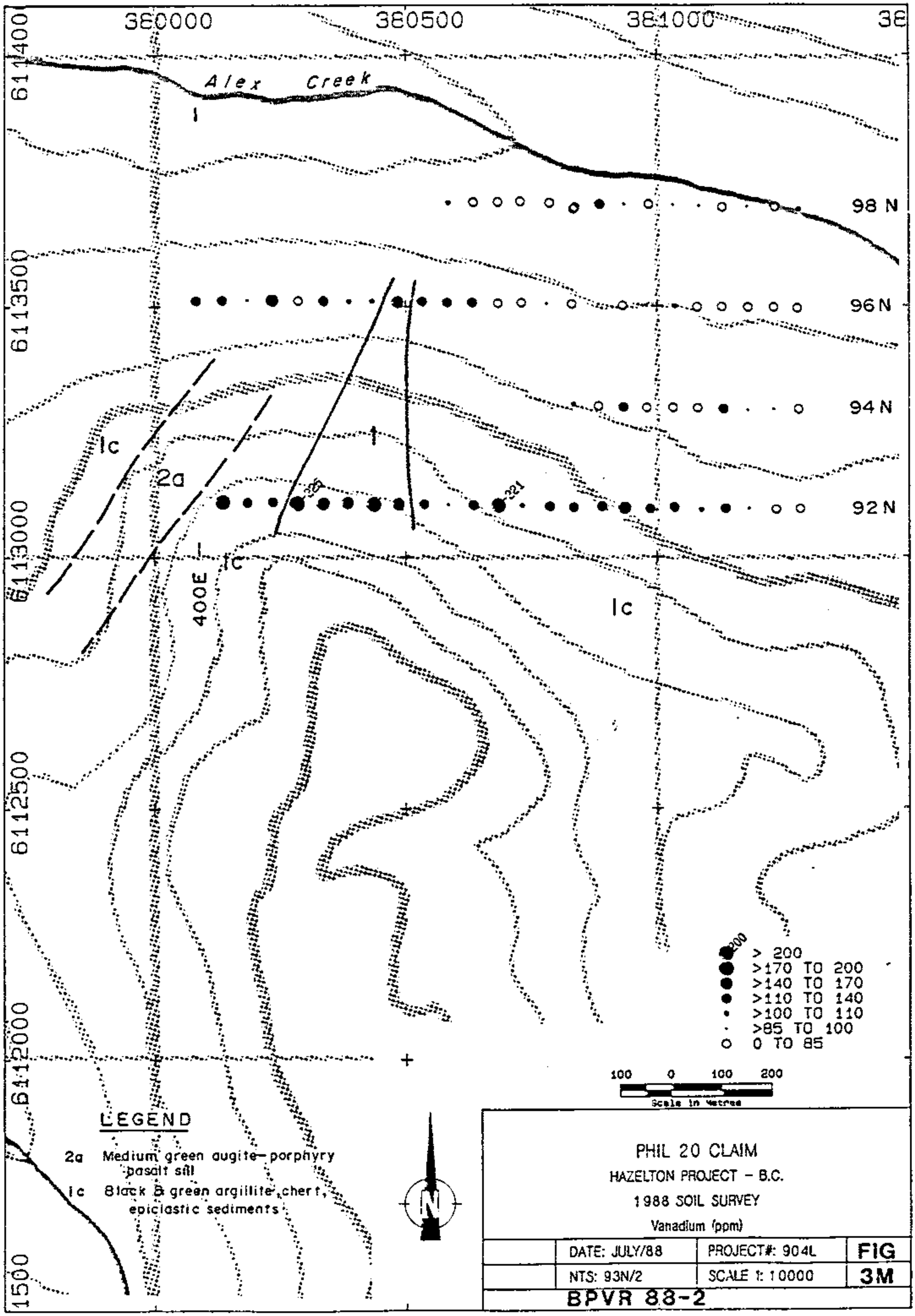
Alex Creek
98 N
96 N
94 N
92 N
400E
1c
2a
> 79
>70 TO 79
>60 TO 70
>57 TO 60
>50 TO 57
>40 TO 50
0 TO 40
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Chromium (ppm)
DATE: JULY/88
PROJECT#: 904L
NTS: 93N/2
SCALE 1: 10000
FIG 3L
BPVR 88-2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Alex Creek
98 N
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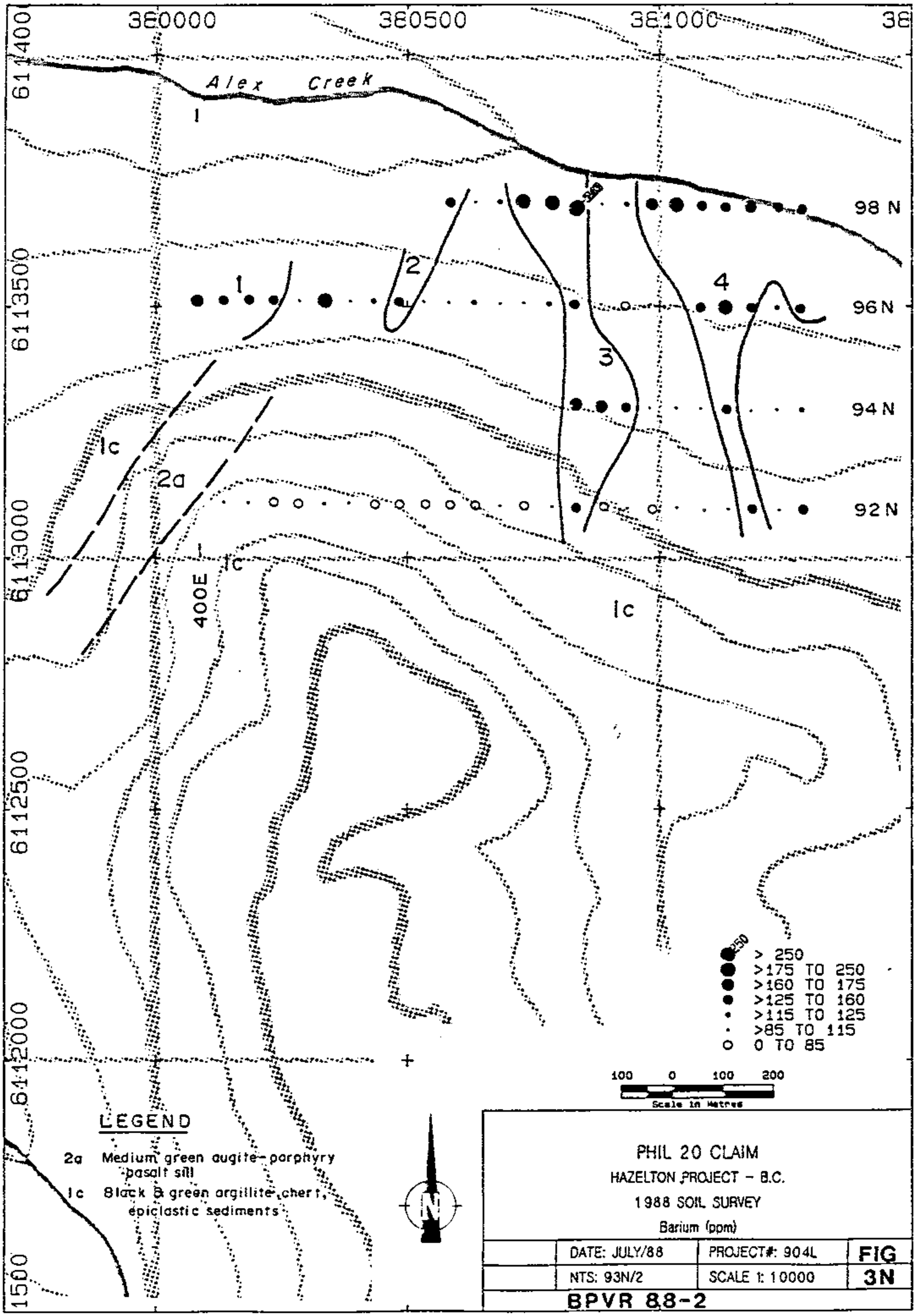
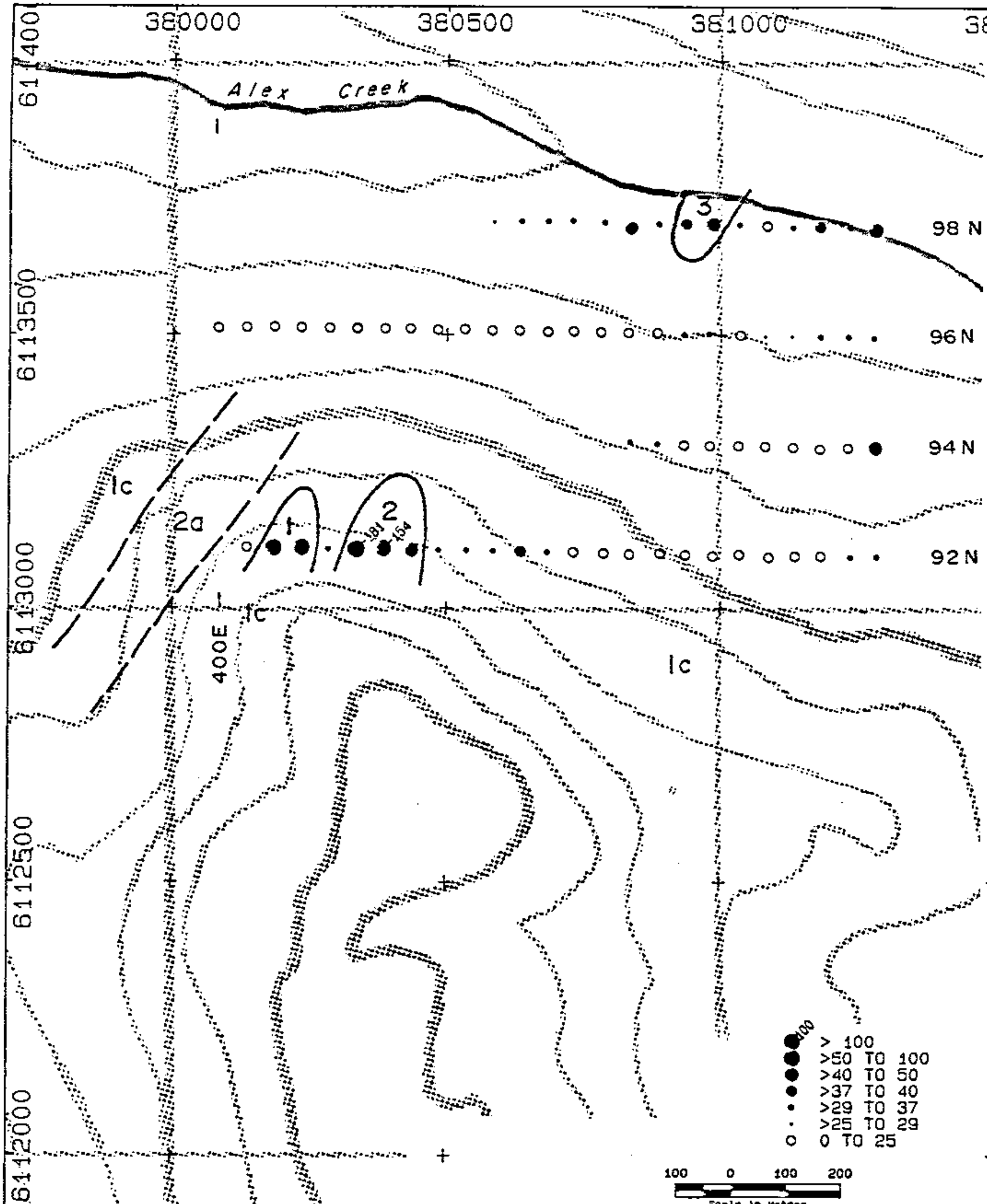
94 N
92 N
1c
2a
400E
> 200
>170 TO 200
>140 TO 170
>110 TO 140
>100 TO 110
>85 TO 100
0 TO 85
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite, chert, epiclastic sediments
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Vanadium (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG
3M
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



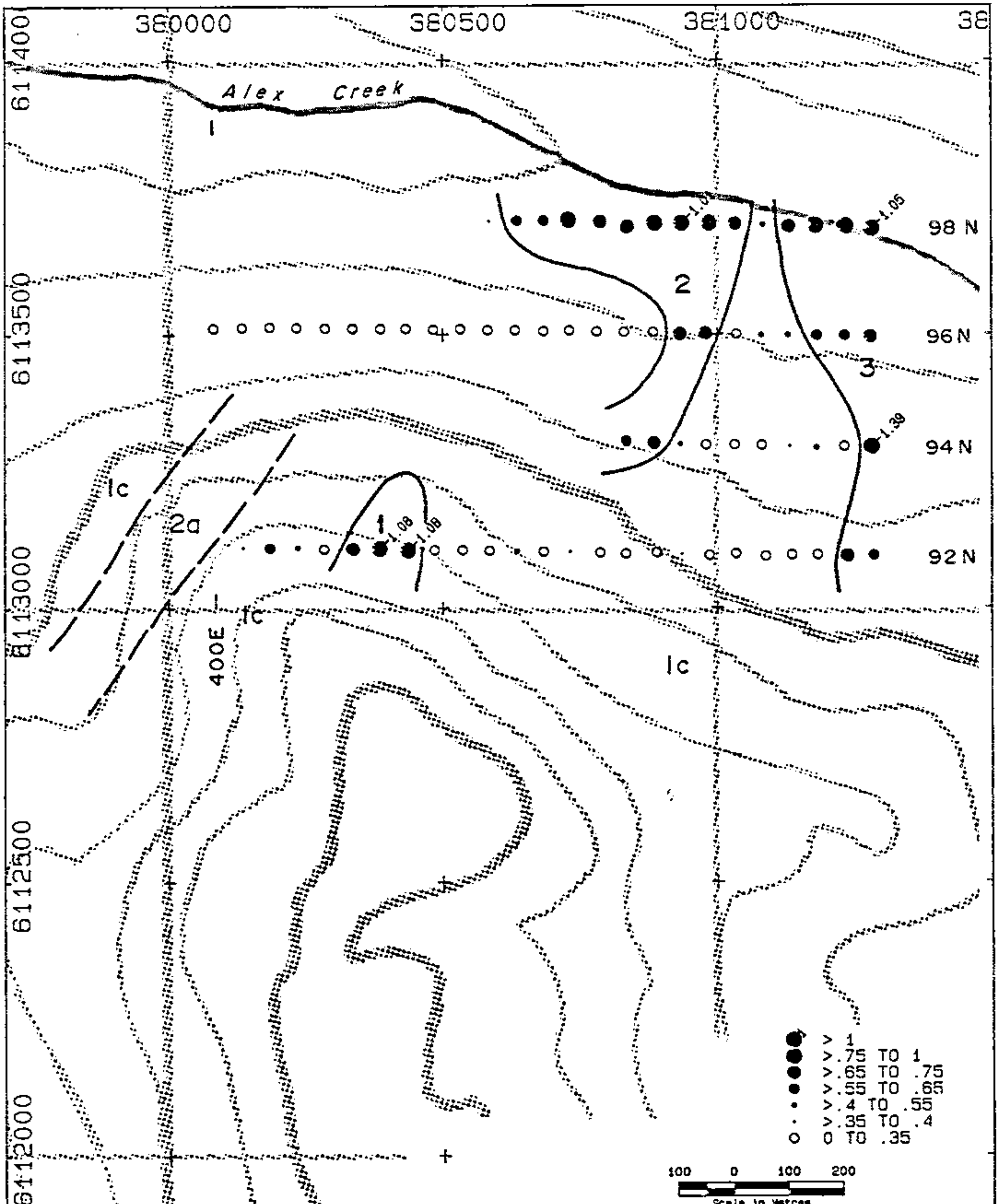
380000
380500
381000
6113500
6113000
6112500
6112000
Alex Creek
1
2
3
4
98 N
96 N
94 N
92 N
1c
2a
400E
> 250
>175 TO 250
>160 TO 175
>125 TO 160
>115 TO 125
>85 TO 115
0 TO 85
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite, chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Barium (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG 3N
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Strontium (ppm)

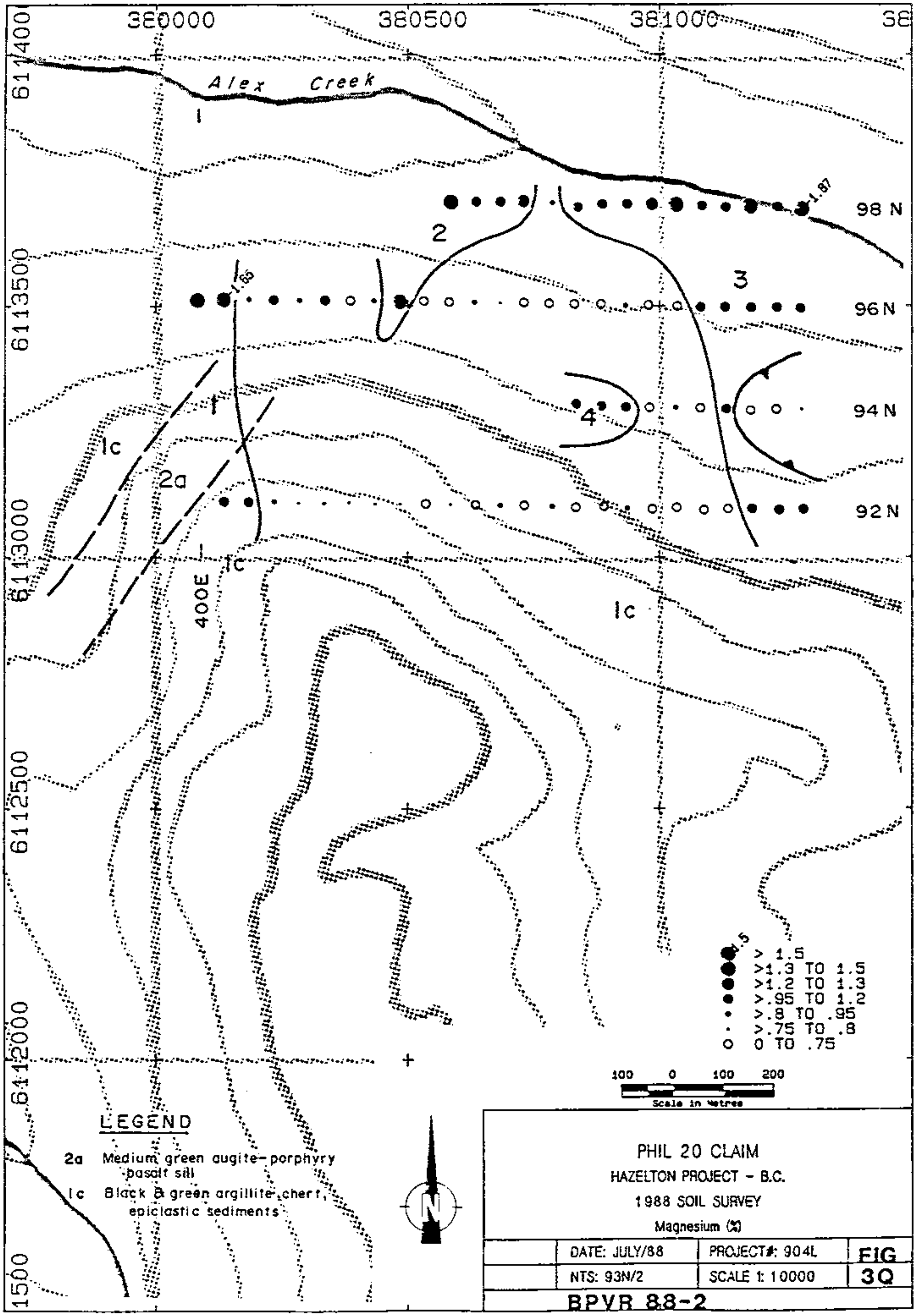
DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	30

BPVR 88-2

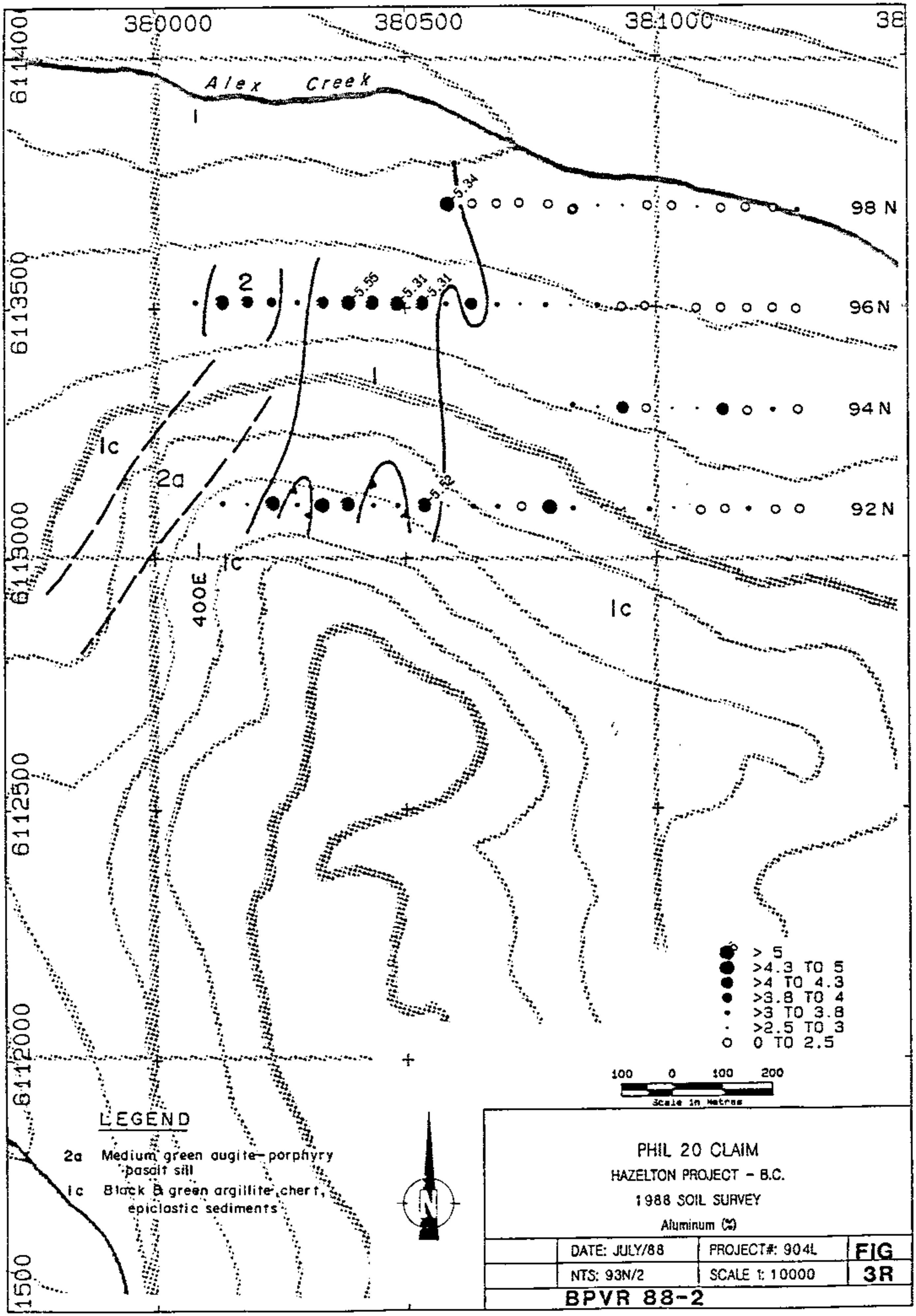


PHIL 20 CLAIM HAZELTON PROJECT - B.C. 1988 SOIL SURVEY Calcium (%)		
DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	3P

BPVR 88-2



380000
380500
381000
6113500
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
400E
1.87
1.65
1
1c
2a
2
3
4
> 1.5
>1.3 TO 1.5
>1.2 TO 1.3
>.95 TO 1.2
>.8 TO .95
>.75 TO .8
0 TO .75
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite, chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Magnesium (%)
DATE: JULY/88
PROJECT#: 904L
FIG 3Q
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



PHIL 20 CLAIM

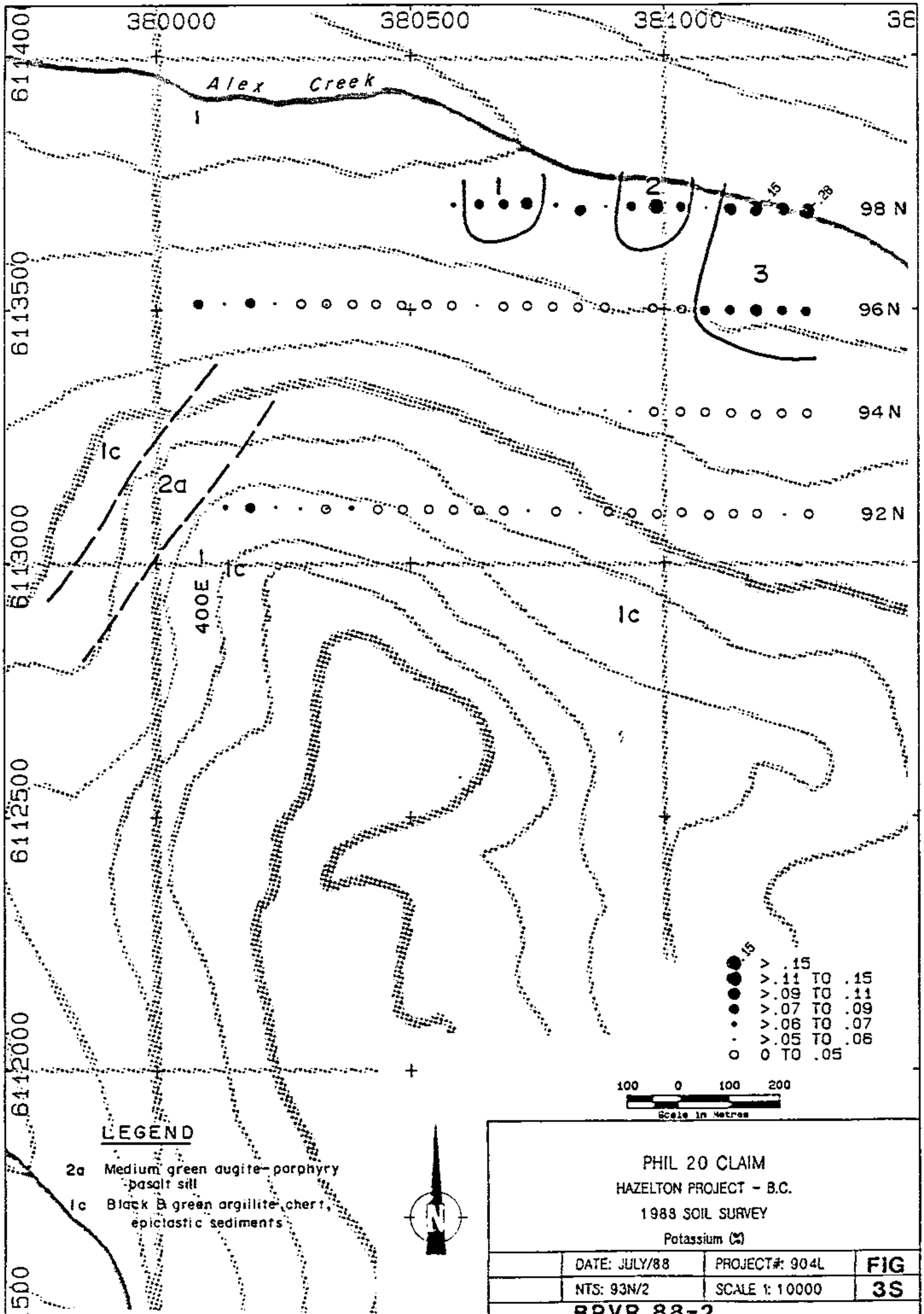
HAZELTON PROJECT - B.C.

1988 SOIL SURVEY

Aluminum (%)

	DATE: JULY/88	PROJECT#: 904L	FIG
	NTS: 93N/2	SCALE 1: 10000	3R

BPVR 88-2



PHIL 20 CLAIM

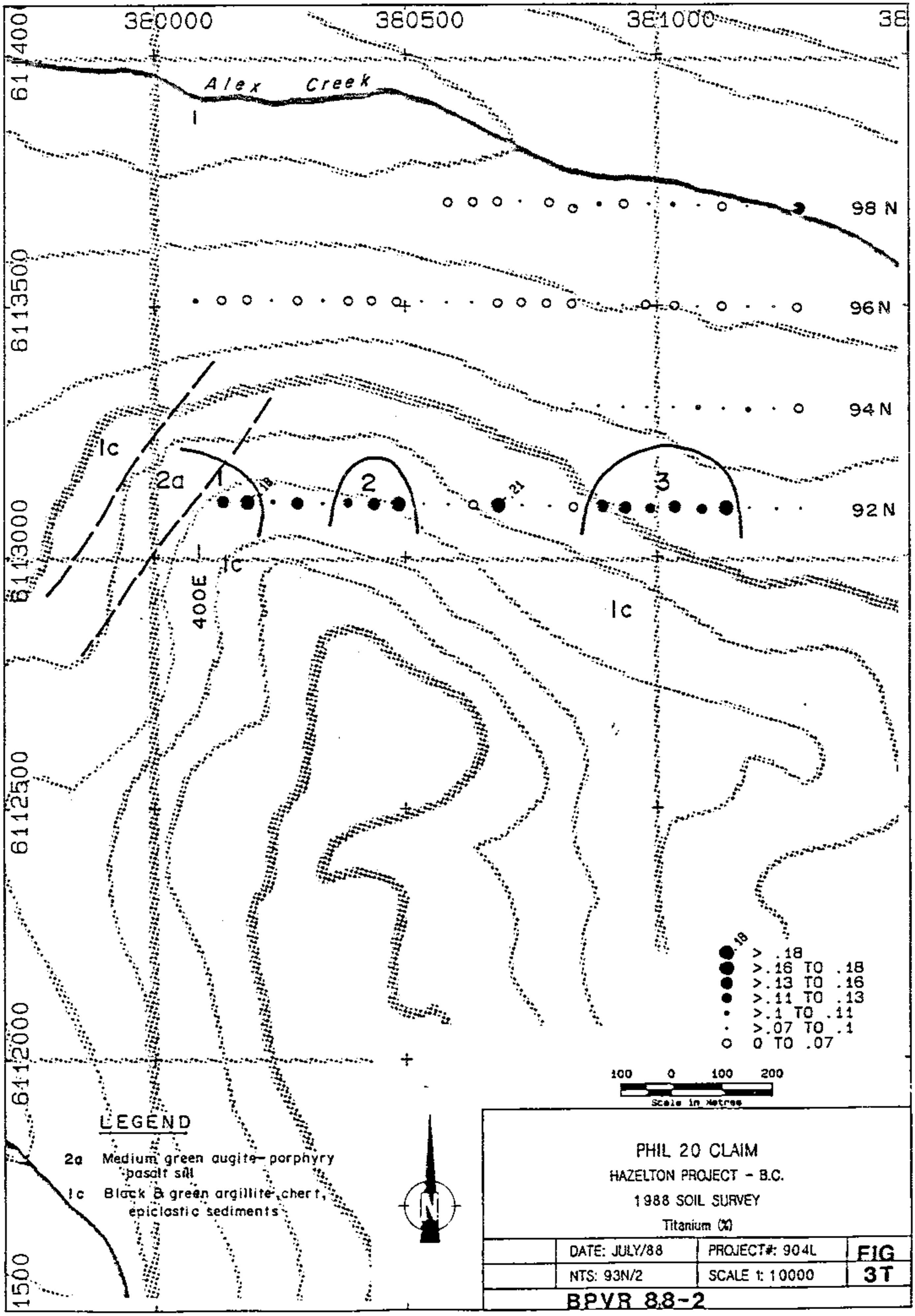
HAZELTON PROJECT - B.C.

1988 SOIL SURVEY

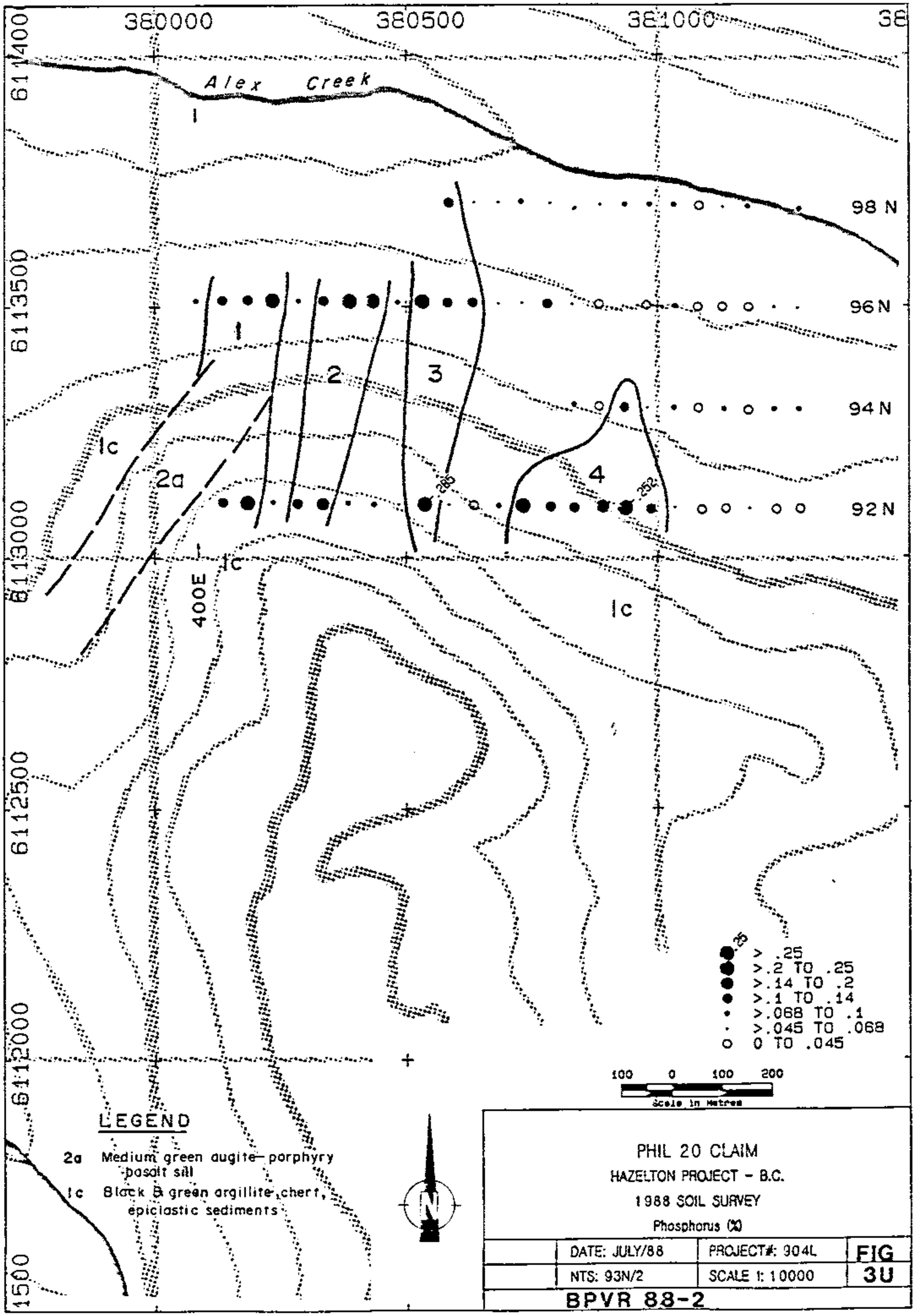
Potassium (%)

DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	3S

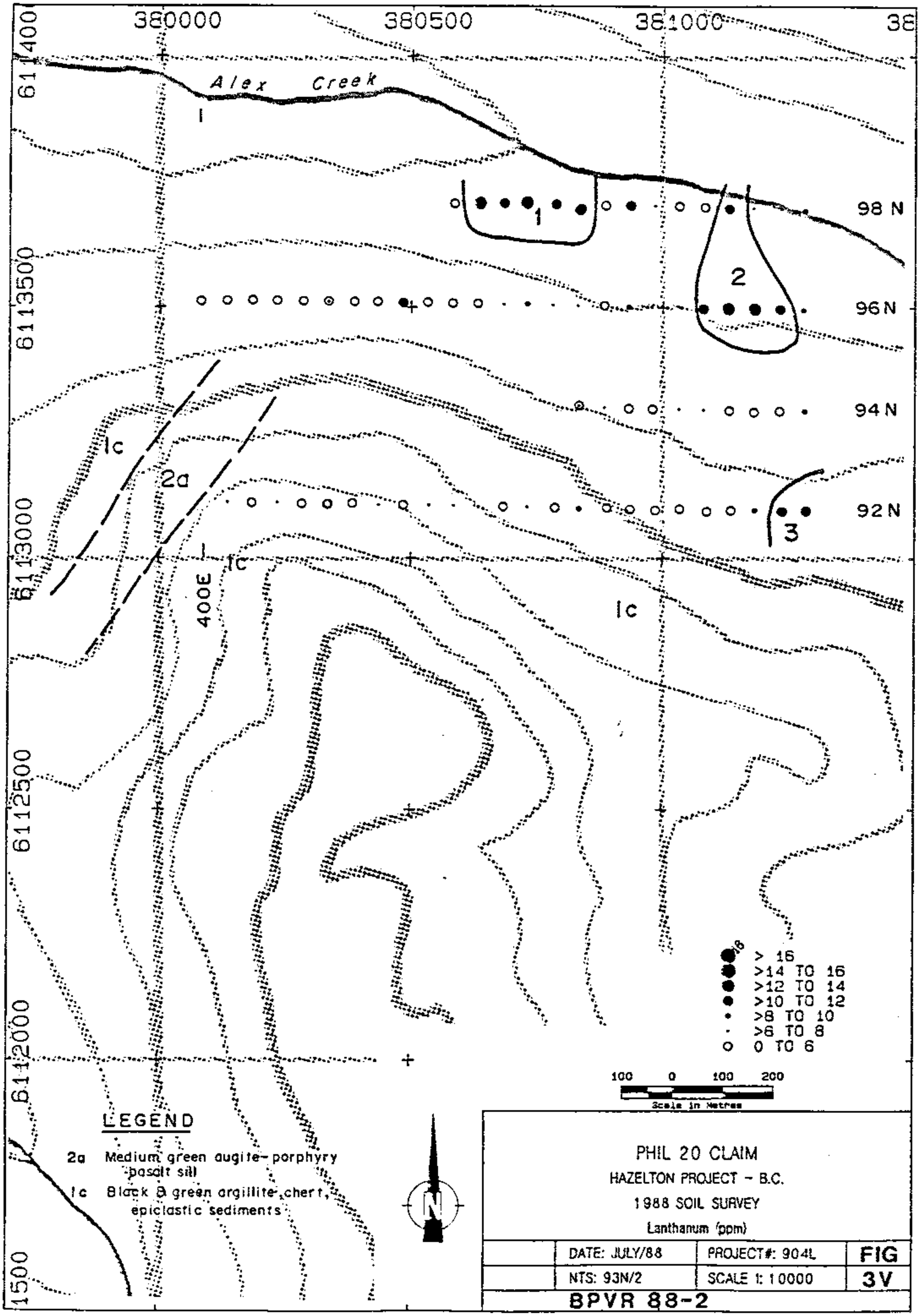
BPVR 88-2

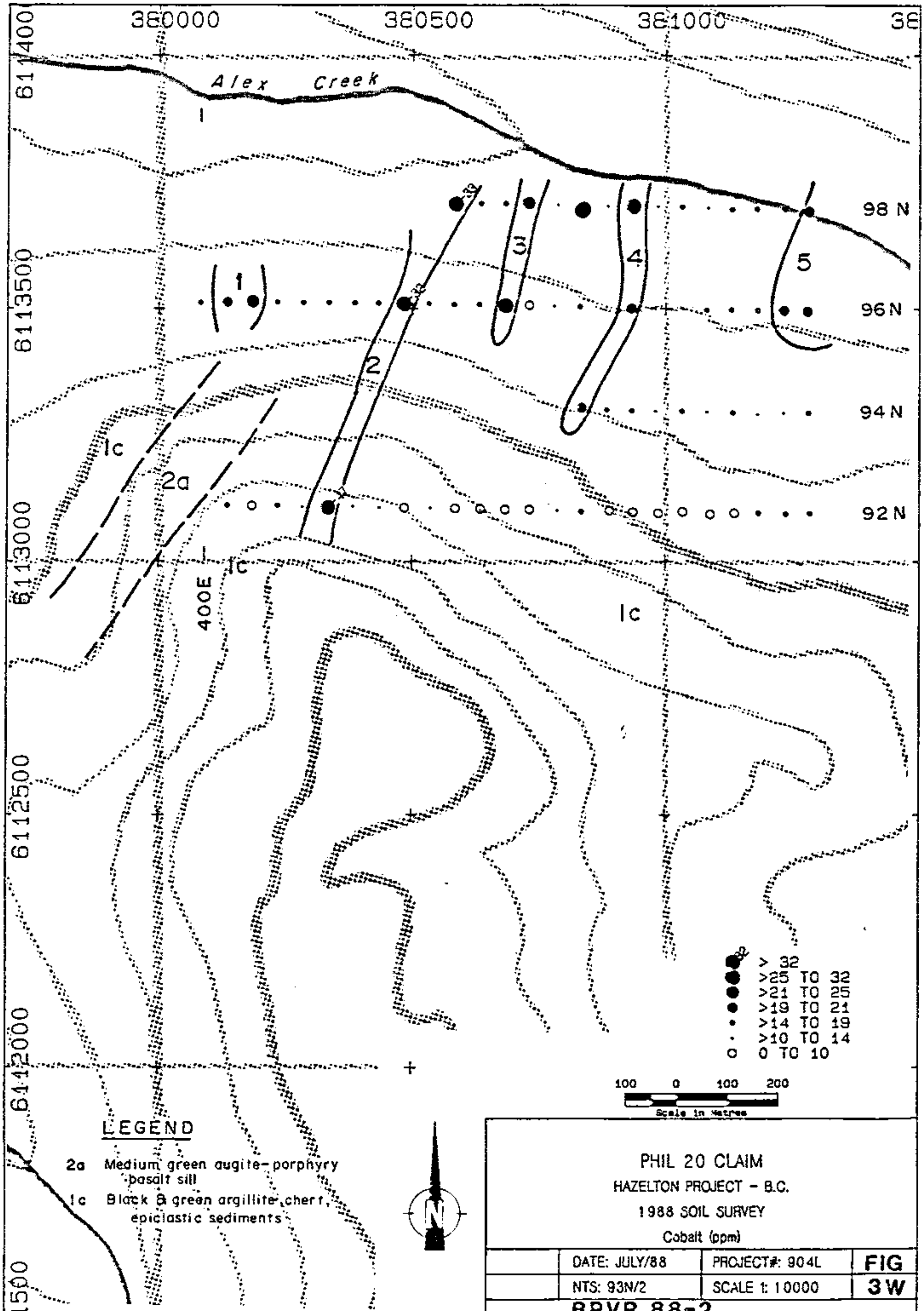


380000
380500
381000
6113500
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
1c
2a
1
2
3
400E
.18
.21
> .18
>.16 TO .18
>.13 TO .16
>.11 TO .13
>.1 TO .11
>.07 TO .1
0 TO .07
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Titanium (%)
DATE: JULY/88
PROJECT#: 904L
NTS: 93N/2
SCALE 1: 10000
FIG 3T
BPVR 88-2



380000
380500
381000
6114000
6113500
6113000
6112500
6112000
6111500
Alex Creek
98 N
96 N
94 N
92 N
1
2
3
4
1c
2a
400E
.285
.252
.25
> .25
>.2 TO .25
>.14 TO .2
>.1 TO .14
>.068 TO .1
>.045 TO .068
0 TO .045
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite,chert, epiclastic sediments
N
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Phosphorus (%)
DATE: JULY/88
PROJECT#: 904L
FIG 3U
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2


380000
380500
381000
6113500
6113000
6112500
6112000
Alex Creek
98 N
96 N
94 N
92 N
400E
1c
2a
> 16
>14 TO 16
>12 TO 14
>10 TO 12
>8 TO 10
>6 TO 8
0 TO 6
100 0 100 200
Scale in Metres
LEGEND
2a Medium green augite-porphyry basalt sill
1c Black & green argillite, chert, epiclastic sediments
PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Lanthanum (ppm)
DATE: JULY/88
PROJECT#: 904L
FIG 3V
NTS: 93N/2
SCALE 1: 10000
BPVR 88-2



PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
Cobalt (ppm)

DATE: JULY/88	PROJECT#: 904L	FIG
NTS: 93N/2	SCALE 1: 10000	3W

BPVR 88-2

CONCLUSIONS AND RECOMMENDATIONS

Although sulphide-bearing volcanics and sediments are present within the claim, no economic mineralization has been found to date.

Preliminary soil sampling has indicated that a potential source(s) for the geochemically anomalous gold values may be present within the claim boundary.

'Fill-in grid' soil sampling along a line spacing of 100 metres is required to properly delineate the anomalies. Samples would be collected at 50 metre intervals along the lines. This grid should extend out to the claim's eastern boundary. The unsampled portion of lines from this year should be completed. The grid coverage in the #1 gold anomaly area should be reduced to 25 X 50 m.

The soil grid and the acquisition of recent airphotography will help with control for the necessary, additional geological mapping and rock sampling.

Respectfully submitted

Rex Pegg, BASc., P.Eng

BIBLIOGRAPHY

Humphreys, N., 1984 : Summary Report on the 1984 Geological and Geochemical Exploration Activities - Phil 20 Claim.

APPENDIX I: Field Personnel

R. Pegg	- Project Geologist	- July 6,9,11.
S. Hoffman	- Senior Geochemist	- July 6,9,11.
V. Malo	- Geological Assistant	- July 6,9,11.

APPENDIX II: Statement of Qualifications

I, Rex Pegg of 700-890 West Pender Street, in the City of Vancouver, in the Province of British Columiba, DO HEREBY CERTIFY:

1. That I am an exploration geologist employed by BP Minerals Limited, which has its office located at 700-890 West Pender Street, Vancouver, B.C. V6C 1K5.
2. That I am a graduate of the University of Toronto, located in Toronto, Ontario, where I obtained a Bachelor of Applied Science degree in Geological Engineering (Exploration Option) in 1976.
3. That I am a Registerd Member, in good standing, of the Association of Professional Engineers of British Columbia.
4. That I have practised my profession as a geologist for the past twelve years.
5. That I have supervised the geological and geochemical field work.

Rex S. Pegg, BASC., P.Eng.

Dated this 18th day of July, 1988.

<u>Statement of Qualifications - S. J. Hoffman</u>

BSc 1969 - McGill University (Hons., Geology and Chemistry)

MSc 1972 - The University of British Columbia (Geochemistry)

PhD 1976 - The University of British Columbia (Geochemistry)

1. He has worked continuously for BP Minerals Limited since 1976, as an exploration geochemist.

2. He collected and/or supervised the collection of the soil samples.

3. He has interpreted the soil sample results.

APPENDIX III: Rock Sample Descriptions

COLLECTORS R.P.

BP SE CO

ROCK SAMPLES

Phil 20 PROJECT – SURFACE ✓ UNDERGROUND ☐

DATE: July 9, 1988

SAMPLE NUMBER	LOCATION NOTES	REP. SAMPLE NUMBER	SAMPLE TYPE (LENGTH) GRAB	CHIP	CHANNEL	CORE	FLOAT	ROCK TYPE	SAMPLE DESCRIPTION	MAP SHEET
705012			✓					Argillite	≤1% Po f.f.; lt. green; minor carb f.f.	93N/2
705013			✓					"	1% Po f.f. + minor Py; v.f.g.; silica f.f. (v. narrow)	"
705014	on N. slope; 1250m elev^n		✓					Epiclastic	1-2% diss. Po	"

COLLECTORS R.P.

BP SL CO

ROCK SAMPLES

Phil 17 PROJECT — SURFACE ✓ UNDERGROUND ☐

DATE: July 11, 1988

SAMPLE NUMBER	LOCATION NOTES	REP. SAMPLE NUMBER	SAMPLE TYPE (LENGTH) GRAB	CHIP	CHANNEL	CORE	FLOAT	ROCK TYPE	SAMPLE DESCRIPTION	MAP SHEET
705015	road cut near creek		✓					Tuff	1% f.g. Py (diss + f.f.); med. green-grey; > minor carb ff	93N/2
705016	on hill side 10m east of rd.		✓					Lapilli Tuff	1% diss. Po; polylithic	"

APPENDIX IV: Rock Sample Results

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 12 1988 DATE REPORT MAILED: July 16/88 ASSAYER. C. Leong ..D.TOYE OR C.LEONG, CERTIFIED B.C. ASSAYERS

BP RESOURCES PROJECT-10200 File # 88-2629

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
705012	6	114	7	46	.4	16	11	447	2.67	6	5	ND	1	31	1	2	2	53	1.13	.117	4	15	.65	37	.14	10	1.17	.06	.10	2	1
705013	1	125	4	38	.3	19	12	850	3.20	8	5	ND	1	39	1	2	2	69	.05	.095	4	33	1.03	50	.27	7	1.60	.04	.13	1	6
705014	1	91	5	39	.2	25	19	522	4.40	2	5	ND	1	36	1	2	3	193	1.34	.069	4	36	1.63	91	.23	3	2.34	.07	.26	1	2
705015	1	91	10	371	.4	23	19	1050	5.12	4	5	ND	2	47	1	2	2	122	1.75	.088	5	42	1.91	110	.23	14	2.45	.03	.03	1	3
705016	1	53	5	93	.3	24	15	657	3.00	2	5	ND	1	20	1	2	2	90	2.05	.059	2	40	1.73	132	.21	13	2.73	.05	.11	1	1
STD C/AU-R	17	57	41	131	6.5	68	28	1056	3.94	40	21	6	36	48	17	16	19	55	.48	.085	39	55	.90	175	.06	37	1.90	.06	.14	12	520

APPENDIX V: Soil Sample Results

SELECTION # 1

SAMPLE TYPE(S) ALL
BEDROCK TYPE(S) ALL
SOIL HORIZON(S) ALL
SAMPLE TEXTURE(S) ALL
OVERBURDEN ORIGIN(S) ALL
LABORATORY-SIZE FRACTION-EXTRACTION(S) ALL
PAIR STATUS ALL

REC#		SMPL# UTM-E UTM-N						MO	CU	PB	ZN	NI	U	MN	FE	AG
983	5088904L	996116A8A3801256113111	93N02	371L 9B	510 25BFP	MRB	95A	20NW2	108	15	122	22	5	594	9.1	1
984	5088904L	996117A8A3801846113110	93N02	471L 9B	5 5 25BFP	MBR	98A	20NW1	43	14	86	23	5	386	5.94	.2
985	5088904L	996118A8A3802356113111	93N02	371L 8P	510 40BMB	MBR	60A	30NW2	163	24	189	22	5	700	6.22	.5
986	5088904L	996119A8A3802846113108	93N02	372L 8P	510 45BFP	MOB	95A	35NW2	101	20	89	14	5	575	10.98	.5
987	5088904L	996120A8A3803366113108	93N02	372L 8P	5 5 60BFP	MRBORB	99A	40N 2	108	15	143	38	5	1280	7.1	.6
988	5088904L	996121A8A3803346113107	93N02	372L 8P	510 60BFP	MRBORB	98A	40N 2	196	21	174	38	5	2312	7.06	.3
989	5088904L	996122A8A3803946113109	93N02	371L 8P	510 35BFP	MRBORB	99A	30N 2	71	14	56	22	5	301	6.91	.4
990	5088904L	996123A8A3804366113106	93N02	371L 8P	510 30BFP	MOB	90A	20N 2	114	18	131	19	5	296	7.76	.4
991	5088904L	996124A8A3804856113106	93N02	372L 8P	510 30BFP	MRBORB	70A	20N 2	68	13	89	25	5	266	7.12	.5
992	5088904L	996125A8A3805366113106	93N02	272L 8	410 30BFP	MRBORB	99A	15N 1	110	16	89	14	5	404	6.69	.6
993	5088904L	996126A8A3805856113105	93N02	372L 6	510 30BFP	MBR	50A	20N 1	69	10	97	35	5	242	4.15	.4
994	5088904L	996127A8A3806356113104	93N02	372L 6	510 30BFP	MRB	20A	20N 2	90	14	83	19	5	283	5.5	.3
995	5088904L	996128A8A3806846113103	93N02	372L 6	510 30BFP	MRB	30A	25N 2	80	18	91	25	5	355	8.31	.2
996	5088904L	996129A8A3807326113103	93N02	372L 8	5 5 40BFP	MRBORB	98A	30N 1	46	13	86	18	5	512	4.81	.4
997	5088904L	996130A8A3807876113101	93N02	172L 1	510 30BFP	MRB	50S	2N 1	78	14	146	30	5	786	5.96	.6
998	5088904L	996131A8A3808346113099	93N02	472L 6	510 30BFP	MRB	60A	15N 2	261	20	130	29	5	1016	6.43	.8
999	5088904L	996132A8A3803906113101	93N02	372L 6	510 30BFP	MRB	55A	20N 1	39	9	107	19	5	328	5.51	.3
1000	5088904L	996133A8A3809366113098	93N02	372L 1	510 30BFP	MOB	25S	20N.1	50	15	74	26	5	358	6.92	.4
1001	5088904L	996134A8A3809866113096	93N02	372L 1	510 30BFP	MOB	25S	20N 1	46	12	87	19	5	270	6.28	.4
1002	5088904L	996135A8A3810346113099	93N02	472L 1	510 30BFP	MOB	20S	15N 2	34	15	127	18	5	294	5.25	.4
1003	5088904L	996136A8A3810886113094	93N02	372L 1	510 40BFP	MOB	25S	20N 1	56	13	74	29	5	300	4.91	.2
1004	5088904L	996137A8A3811366113096	93N02	472L 1	510 30BFP	MOB	10S	20N 2	48	11	76	28	5	277	5.09	.1
1005	5088904L	996138A8A3811836113096	93N02	472L 1	510 30BFP	MOB	15S	5N 1	113	15	163	49	5	456	5.63	.7
1006	5088904L	996139A8A3812376113094	93N02	473L 1	510 45BMB	MOLMBR	10S	2N 1	257	13	266	75	5	779	4.37	.7
1007	5088904L	996140A8A3812856113095	93N02	472L 1	510 75BGG	LOLLRB	30S	3N 1	115	12	69	54	5	680	3.98	.5
1008	5088904L	996141A8A3812826113294	93L02	472LS1	510 80BMB	DBR	50S	8N 1	141	12	97	36	5	986	3.5	1.1
1009	5088904L	996142A8A3812326113294	93L02	272L 1	510 30BFP	MOB	30S	10N 1	51	13	131	33	5	310	5.2	.3
1010	5088904L	996143A8A3811816113292	93L02	471L 1	510 30BFP	MOB	30S	10S 1	59	12	130	27	5	343	4.54	.2
1011	5088904L	996144A8A3811326113295	93L02	472L 1	510 30BFP	MRB	60S	15N 1	117	17	133	49	5	421	6.55	.8
1012	5088904L	996145A8A3810816113297	93L02	272L 1	510 30BFP	MOB	25S	15S 1	50	11	150	31	5	395	4.28	.4
1013	5088904L	996146A8A3810326113298	93N02	172L 1	510 30BFP	MOBOL	20S	5S 1	69	13	134	49	5	354	4.05	.3
1014	5088904L	996147A8A3809806113298	93N02	472L 1	510 30BFP	MOB	5S	10S 1	51	9	103	36	5	363	3.96	.3
1015	5088904L	996148A8A3809336113299	93N02	272L 1	410 30BFP	MOB	40M	10N 1	67	14	161	41	5	388	5.9	1.1
1016	5088904L	996149A8A3808846113301	93N02	472L 1	510 40BMB	MOL	10S	15N 1	128	14	92	71	5	559	4.17	.3
1017	5088904L	996150A8A3808346113305	93N02	4A2L 1	510 35BFP	MOB	50S	15N 1	111	15	168	69	5	416	5.86	.5
1018	5088904L	996151A8A3808346113305	93N02	4A2L 1	510 30BFP	MOB	50S	15N 1	92	17	113	45	5	415	5.13	.8
1020	5088904L	996175A8A3800826113512	93N02	272L 6	510 30BFP	MRB	30A	10N 1	48	12	139	38	5	602	5.84	.5
1021	5088904L	996176A8A3801346113513	93N02	272L 9B	510 25BFP	MOBYE	40A	10N 1	77	15	153	59	5	493	7.14	.6
1022	5088904L	996177A8A3801856113514	93N02	272L 9B	510 35BFP	MOB	50A	8N 1	83	13	131	45	5	868	5.66	.5

1023	5088904L	996178A8A3802346113513	93N02	472L 6	510 308FP	MOB	50A	8N 1	72	15	157	40	5	415	7.39	.6
1024	5088904L	996179A8A3802966113512	93N02	272L 6	510 308FP	MOB	20S	10N 1	87	15	95	38	5	492	4.26	.3
1025	5088904L	996180A8A3803366113511	93N02	271L 9B	510 308FP	MOB	50A	15N 1	46	13	155	28	5	334	6.08	.7
1026	5088904L	996181A8A3803366113512	93N02	271L 9B	510 308FP	MOB	50A	15N 2	72	15	133	43	5	391	7.2	.8
1027	5088904L	996182A8A3803876113511	93N02	272L 1	510 308FP	MRB	60M	10N 1	66	15	125	35	5	480	6.1	.4
1028	5088904L	996183A8A3804336113511	93N02	271L 1	510 308FP	MOB	60S	15N 1	64	22	159	42	5	533	6.49	.7
1029	5088904L	996184A8A3804836113509	93N02	4A2L 1	510 308FP	MOB	20M	5N 1	124	23	287	45	5	493	8.2	.4
1030	5088904L	996185A8A3805326113510	93N02	271L 9B	510 308FP	MOB	40A	5N 1	70	16	111	27	5	460	6.27	.5
1031	5088904L	996186A8A3805826113508	93N02	271L 9B	510 308FP	MOB	40A	7N 2	65	15	104	35	5	344	6.64	.6
1032	5088904L	996187A8A3806326113508	93N02	272L 9B	510 308FP	MOB	30A	10N 2 .	62	16	156	37	5	380	7.23	.9
1033	5088904L	996188A8A3806846113506	93N02	272L 9	510 308FP	MOB	20A	12N 1	124	11	134	39	5	273	4.91	1.9
1034	5088904L	996189A8A3807316113507	93N02	272L 1	510 308FP	MOBOL	50S	10N 1	31	8	100	24	5	232	3.83	.7
1035	5088904L	996190A8A3807816113505	93N02	272L 9B	510 308FP	MOB	50A	8N 2	38	14	140	36	5	292	5.33	.2
1036	5088904L	996191A8A3808316113504	93N02	272L 1	510 309MP	MOL	10S	15N 1	64	14	102	39	5	306	3.83	.4
1037	5088904L	996192A8A3808846113504	93N02	272L 1	510 358FP	MOBOL	10S	10N 1	54	12	93	29	5	259	4.94	.2
1038	5088904L	996193A8A3809326113501	93N02	473LS1	410 708MB	MOL	20S	10N 1	120	11	77	39	5	854	3.49	.5
1039	5088904L	996194A8A3809786113502	93N02	272L 1	510 308FP	MBR	20S	10N 2	52	13	110	30	5	289	4.22	1.3
1040	5088904L	996195A8A3810356113500	93N02	372L 1	510 308FP	MBR	10S	15N 1	48	15	100	28	5	378	5.15	.7
1041	5088904L	996196A8A3810806113498	93N02	273LS1	510 708MB	MOL	15S	15N 1	135	13	75	58	5	648	3.78	.6
1042	5088904L	996197A8A3811296113498	93N02	272L 1	510 408MB	MOL	15S	15N 1	91	15	102	88	5	1056	3.84	.4
1043	5088904L	996198A8A3811816113497	93N02	472LS1	410 708MB	LOLBR	25S	20N 1	186	12	59	58	5	748	4.31	.5
1044	5088904L	996199A8A3812326113497	93N02	473LS1	4101008MB	LOLBR	25S	15N 1	114	13	77	55	5	804	3.74	.3
1045	5088904L	996200A8A3812796113495	93N02	473LS1	510 708GG	MGYMOL	25S	10N 1	94	16	102	57	5	433	4.27	.6
1046	5088904L	996201A8A3812826113692	93N02	572L 1	510 708MB	MOL	25S	1N 1	83	12	145	44	5	1156	5.26	.3
1047	5088904L	996202A8A3812346113696	93N02	572E 4	410 808MB	MOL	25S	1N 1	73	11	103	48	5	986	4.08	.3
1048	5088904L	996203A8A3811796113697	93N02	572E 4	210 608MB	MOL	70S	1NW1	75	13	103	52	5	1102	4.83	.2
1049	5088904L	996204A8A3811306113696	93N02	272E 4	310 708MB	MOL	20S	1NW1	75	12	91	54	5	942	4.31	.5
1050	5088904L	996205A8A3810836113699	93N02	572E 4	310 308FP	MRB	60S	1NW2	63	13	102	42	5	465	4.39	.1
1051	5088904L	996206A8A3810326113701	93N02	4631S1	510 708GG	MOLDOB	25A	2N 13	40	16	90	27	5	819	11.55.2	
1052	5088904L	996207A8A3809846113702	93N02	574E54	410 608MB	MOL	70S	2NW2	56	13	92	42	5	1375	4.33	.5
1053	5088904L	996208A8A3809356113702	93N02	472U 4	510 808MB	MOL	50S	5N 1	280	23	130	56	5	1309	4.91	1.3
1054	5088904L	996209A8A3808866113702	93N02	472U 1	510 358FP	MRB	40S	5N 2	58	18	139	33	5	376	5.84	.3
1055	5088904L	996210A8A3808376113696	93N02	472U 1	510 358FP	MRB	40S	5N 3	93	13	81	70	5	2724	3.67	.5
1056	5088904L	996211A8A3808346113693	93N02	463US1	410 808GG	MGYMRB	50S	5N 4	93	13	95	73	5	7373	3.67	.5
1057	5088904L	996212A8A3807876113705	93N02	473US1	510 808GG	MGYMRB	10S	7N 3	55	11	80	70	5	741	3.51	.4
1058	5088904L	996213A8A3807296113708	93N02	473US1	510 708GG	MGYMRB	50S	7N 2	73	13	134	89	5	954	4.32	.5
1059	5088904L	996214A8A3806846113707	93N02	472US1	410 508GG	MGYMRB	50S	5N 1	163	11	83	65	5	811	3.79	.4
1060	5088904L	996215A8A3806356113707	93N02	462LS1	510 758MB	MOL	25S	5N 1	336	13	84	72	5	800	3.95	.4
1061	5088904L	996216A8A3805856113706	93N02	371L 2B	510 308FP	MOB	90A	20N 2	158	19	157	74	5	1309	6.19	.2
1086	5088904L	996210	93N02	463US1	410 808GG	MGYMRB	50S	5N								

EC#	SMPL#	CO	AU	AU?	AS	HG	SB	SN	W	F	TH	CD	BI	V	BA	SR	SI	AL	CA	MG	NA	K	CE?	ZR?	TI
983	996116	17	33	0	49		2		1		1	1	2	185	90	23		3.6	.39	1.06	.01	.07			.15
984	996117	10	27	0	7		2		1		1	1	4	139	96	85		3	.6	1.1	.05	.08			.18
985	996118	15	23	0	35		2		1		1	1	2	114	83	98		4.65	.43	.92	.01	.06			.11
986	996119	11	3	0	36		2		1		1	1	2	225	50	34		3.8	.27	.78	.01	.06			.16
987	996120	16	7	0	48		2		1		1	1	3	155	103	181		3.36	.66	.8	.01	.06			.1
988	996121	47	13	0	74		2		1		1	1	2	142	99	91		4.44	.55	.78	.01	.05			.1
989	996122	13	825	0	155		2		1		1	1	2	167	102	154		4.85	1.08	.76	.01	.07			.12
990	996123	12	14	0	128		2		1		1	1	2	189	53	49		3.09	1.08	.76	.02	.03			.15
991	996124	9	4	0	113		2		1		1	1	2	149	75	36		3.43	.3	.79	.01	.04			.17
992	996125	12	5	0	34		2		1		1	1	2	122	74	35		5.52	.3	.5	.01	.03			.09
993	996126	10	12	0	36		2		1		1	1	2	89	81	35		2.84	.27	.77	.02	.05			.09
994	996127	10	1	0	49		2		2		1	1	3	137	85	40		3.26	.52	.7	.01	.05			.04
995	996128	10	3	0	60		2		1		1	1	2	221	99	31		3.47	.33	.92	.02	.05			.21
996	996129	9	1	0	26		2		1		1	1	3	102	75	25		2.3	.37	.7	.02	.06			.1
997	996130	14	4	0	79		2		1		1	1	2	112	95	20		4.66	.23	.82	.01	.05			.08
998	996131	16	3	0	189		2		1		1	1	2	116	140	23		3.2	.27	.67	.01	.06			.07
999	996132	8	1	0	20		2		1		1	1	2	121	70	15		2.54	.27	.67	.01	.05			.14
1000	996133	9	6	0	38		2		1		1	1	2	165	100	20		2.64	.37	.87	.01	.05			.15
1001	996134	7	1	0	36		2		1		1	1	2	133	76	21		3.67	.33	.68	.01	.03			.13
1002	996135	8	13	0	25		2		1		1	1	2	125	107	18		2.67	.25	.52	.01	.04			.16
1003	996136	9	2	0	33		2		1		1	1	2	104	109	22		2.22	.28	.69	.03	.03			.12
1004	996137	8	7	0	40		2		1		1	1	2	128	113	20		2.08	.33	.72	.01	.03			.17
1005	996138	15	4	0	287		2		1		1	1	2	98	159	22		3.41	.34	1.04	.01	.04			.1
1006	996139	19	29	0	305		2		1		1	1	2	73	111	35		2.12	.67	1.06	.02	.06			.09
1007	996140	15	11	0	95		2		1		1	1	2	76	148	31		2.24	.64	1.05	.03	.05			.1
1008	996141	15	3	0	229		2		1		1	1	2	63	124	49		2.1	1.39	.77	.01	.05			.04
1009	996142	11	6	0	65		2		1		1	1	2	89	106	17		3.04	.29	.75	.01	.04			.08
1010	996143	12	1	0	59		2		1		1	1	2	100	89	23		2.47	.47	.63	.01	.03			.11
1011	996144	18	8	0	222		2		1		1	1	2	112	133	22		4.06	.4	1	.04	.05			.09
1012	996145	14	19	0	51		2		1		1	1	2	83	94	16		2.69	.26	.63	.02	.04			.11
1013	996146	16	27	0	68		2		1		1	1	2	79	106	18		2.67	.3	.98	.03	.04			.09
1014	996147	13	2	0	52		3		1		1	1	2	82	99	18		2.4	.32	.7	.01	.05			.1
1015	996148	15	6	0	59		3		1		1	1	2	119	144	25		4.2	.48	1.18	.01	.06			.1
1016	996149	19	17	0	82		2		1		1	1	2	90	164	36		2.71	.68	1.18	.03	.06			.09
1017	996150	21	3	0	145		2		1		1	1	2	107	163	36		3.57	.63	1.16	.01	.06			.1
1018	996151	19	1	0	108		2		1		1	1	2	99	122	28		3.07	.51	1.18	.01	.06			.1
1020	996175	19	7	0	44		2		1		1	1	2	134	171	13		3.43	.29	1.39	.01	.09			.11
1021	996176	20	1	0	40		2		1		1	1	2	126	152	24		4.95	.28	1.65	.01	.06			.06
1022	996177	23	55	0	42		2		1		1	1	2	98	130	24		4.04	.25	.93	.01	.08			.06
1023	996178	16	1	0	59		2		1		1	1	2	156	140	21		3.85	.28	1	.01	.06			.09
1024	996179	16	11	0	34		2		1		1	1	2	77	104	21		3.55	.3	.81	.01	.04			.07
1025	996180	14	6	0	41		2		1		1	1	2	119	128	17		3.64	.19	.74	.01	.06			.09
1026	996181	16	1	0	49		2		1		1	1	2	117	197	21		4.24	.26	1.09	.01	.05			.08
1027	996182	17	1	0	49		2		1		1	1	2	103	97	18		5.55	.22	.64	.01	.04			.06
1028	996183	16	11	0	119		2		1		1	1	2	107	121	21		4.44	.24	.88	.01	.05			.06
1029	996184	32	1	0	58		2		1		2	1	2	151	148	20		5.31	.18	1.37	.01	.05			.03
1030	996185	18	6	0	164		2		1		1	1	2	119	91	18		5.31	.21	.71	.01	.05			.08
1031	996186	15	10	0	115		2		1		1	1	2	117	105	16		3.68	.19	.72	.01	.05			.09
1032	996187	16	3	0	86		2		1		1	1	4	136	124	15		4.3	.24	.89	.01	.06			.08
1033	996188	28	39	0	355		2		1		1	1	2	82	109	16		3.06	.19	.77	.01	.04			.06
1034	996189	8	14	0	33		2		1		1	1	2	72	101	14		2.54	.17	.54	.01	.04			.06
1035	996190	12	1	0	39		2		1		2	1	2	92	125	14		3.56	.15	.74	.01	.04			.06
1036	996191	17	5	0	67		3		1		2	1	2	72	128	15		2.79	.15	.69	.01	.05			.07
1037	996192	13	1	0	99		2		1		1	1	2	86	105	14		3.69	.24	.62	.01	.04			.09
1038	996193	21	14	0	234		3		1		1	1	2	70	82	32		1.4	.73	.87	.02	.06			.08
1039	996194	11	11	0	127		2		1		1	1	2	97	105	34		2.31	.71	.62	.02	.05			.06
1040	996195	12	1	0	55		2		1		1	1	2	101	110	15		2.61	.19	.6	.02	.04			.06
1041	996196	16	1	0	70		2		1		1	1	2	69	149	29		2.03	.55	1.16	.01	.09			.1
1042	996197	15	40	0	63		2		1		1	1	2	66	207	29		2.48	.47	.96	.01	.09			.04
1043	996198	18	21	0	107		2		1		1	1	3	77	141	32		2.15	.64	1.06	.01	.1			.09
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			.08

1045	996200	21	11	0	76	2	1	1	1	2	78	135	31	2.19	.7	1.14	.01	.08	.07
1046	996201	20	5	0	199	2	1	1	1	2	101	143	45	3.19	1.05	1.87	.01	.28	.14
1047	996202	15	1	0	152	2	3	1	1	2	75	136	36	2.15	.83	1.1	.02	.1	.09
1048	996203	18	1	0	82	2	1	1	1	3	90	166	39	2.35	.81	1.39	.03	.15	.1
1049	996204	15	9	0	107	2	1	1	1	2	79	148	35	2.23	.75	1.04	.01	.11	.07
1050	996205	14	1	0	58	2	1	1	1	2	89	135	25	2.59	.52	1.05	.03	.06	.09
1051	996206	15	1	0	644	2	1	1	1	2	99	199	35	2.5	.72	1.36	.01	.08	.11
1052	996207	11	8	0	219	2	1	1	1	2	85	161	41	2.41	.9	1.29	.03	.13	.09
1053	996208	29	22	0	485	3	1	1	1	2	86	118	39	2.8	1.01	1.14	.01	.09	.06
1054	996209	11	1	0	173	3	1	1	1	2	122	114	31	2.75	.76	.98	.02	.06	.11
1055	996210	31	12	0	101	2	1	1	1	2	74	269	38	1.95	.66	1.05	.01	.08	.08
1056	996211	31	6	0	178	2	1	1	1	3	71	590	39	1.98	.63	.95	.01	.08	.07
1057	996212	13	2	0	93	2	1	1	1	3	59	196	36	1.53	.69	.81	.02	.07	.06
1058	996213	22	1	0	209	3	1	1	1	2	79	199	37	2.1	.76	1.24	.01	.1	.08
1059	996214	18	4	0	523	4	1	1	1	2	68	120	31	1.93	.65	.97	.01	.08	.07
1060	996215	18	9	0	425	3	1	1	1	2	62	111	36	1.78	.64	1.05	.01	.08	.07
1061	996216	33	3	0	80	3	1	1	1	2	106	159	27	5.34	.37	1.31	.01	.07	.06
1086	996210																		

REC#	SMPL#	P	LA	PH	B	CR	AE5	AE6	GRIDE	GRIDN
983	996116	.13	7		26	41			10050E	9200
984	996117	.233	5		11	57			10100E	9200
985	996118	.075	7		7	23			10150E	9200
986	996119	.123	6		6	22			10200E	9200
987	996120	.117	3		9	34			10250E	9200
988	996121	.143	5		6	33			10250E	9200N
989	996122	.084	3		12	30			10300E	9200N
990	996123	.073	7		6	33			10350E	9200N
991	996124	.049	6		9	44			10400E	9200N
992	996125	.285	7		7	28			10450E	9200N
993	996126	.052	8		7	51			10500E	9200N
994	996127	.037	7		6	34			10550E	9200N
995	996128	.094	6		6	49			10600E	9200N
996	996129	.247	7		10	38			10650E	9200N
997	996130	.107	5		14	50			10700E	9200N
998	996131	.128	10		14	44			10750E	9200N
999	996132	.15	6		9	43			10800E	9200N
1000	996133	.252	5		12	53			10850E	9200N
1001	996134	.134	6		8	44			10900E	9200N
1002	996135	.06	6		10	46			10950E	9200N
1003	996136	.036	6		11	50			11000E	9200N
004	996137	.03	6		16	50			11050E	9200N
005	996138	.052	9		14	56			11100E	9200N
006	996139	.04	12		18	64			11150E	9200N
007	996140	.023	11		9	56			11200E	9200N
008	996141	.089	10		8	50			11200E	9400N
009	996142	.075	6		9	51			11150E	9400N
010	996143	.034	6		8	47			11100E	9400N
011	996144	.085	6		11	60			11050E	9400N
012	996145	.038	7		12	54			11000E	9400N
013	996146	.078	7		11	59			10950E	9400N
014	996147	.053	5		7	52			10900E	9400N

1015	996148	.126	5	10	63	10850E	9400N
1016	996149	.036	8	8	73	10800E	9400N
1017	996150	.073	8	11	69	10750E	9400N
1018	996151	.056	6	7	54	10750E	9400N
1020	996175	.075	6	8	70	10000E	9600N
1021	996176	.11	4	11	84	10050E	9600N
1022	996177	.102	6	4	50	10100E	9600N
1023	996178	.201	6	4	68	10150E	9600N
1024	996179	.076	5	6	45	10200E	9600N
1025	996180	.082	7	10	50	10250E	9600N
1026	996181	.109	5	9	60	10250E	9600N
1027	996182	.209	5	9	53	10300E	9600N
1028	996183	.241	6	9	56	10350E	9600N
1029	996184	.084	11	10	56	10400E	9600N
1030	996185	.221	5	5	50	10450E	9600N
1031	996186	.101	5	4	59	10500E	9600N
1032	996187	.107	5	9	59	10550E	9600N
1033	996188	.049	8	11	52	10600E	9600N
1034	996189	.054	9	3	45	10650E	9600N
1035	996190	.105	9	5	58	10700E	9600N
1036	996191	.05	8	5	54	10750E	9600N
1037	996192	.045	6	7	51	10800E	9600N
1038	996193	.068	9	6	50	10850E	9600N
1039	996194	.026	8	9	48	10900E	9600N
1040	996195	.081	8	6	46	10950E	9600N
1041	996196	.028	12	5	65	11000E	9600N
1042	996197	.044	13	11	77	11050E	9600N
1043	996198	.039	13	5	75	11100E	9600N
1044	996199	.057	11	7	58	11150E	9600N
1045	996200	.061	10	7	65	11200E	9600N
1046	996201	.092	9	5	55	11200E	9800N
1047	996202	.066	8	13	59	11150E	9800N
1048	996203	.07	8	10	56	11100E	9800N
1049	996204	.067	11	10	67	11050E	9800N
1050	996205	.041	5	10	58	11000E	9800N
1051	996206	.088	6	3	43	10950E	9800N
1052	996207	.075	7	11	55	10900E	9800N
1053	996208	.072	12	12	60	10850E	9800N
1054	996209	.057	5	7	48	10800E	9800N
1055	996210	.068	11	5	55	10800E	9800N
1056	996211	.062	11	9	52	10750E	9800N
1057	996212	.058	11	11	73	10700E	9800N
1058	996213	.077	13	10	84	10650E	9800N
1059	996214	.055	11	5	63	10600E	9800N
1060	996215	.053	13	13	63	10550E	9800N
1061	996216	.122	5	21	59	10500E	9800N
1086	996210					10750E	9800N

APPENDIX VI: Geochemical Analytical Procedures

The geochemical samples were shipped to Acme Analytical Laboratories Ltd. of Vancouver for analysis.

All the rock, soil and silt samples were analyzed for the thirty element I.C.P. package (Mo,Cu,Pb,Zn,Ag,Ni,Co,Mn,Fe,As,U,Au,Th,Sr, Cd,Sb,Bi,V,Ca,P,La,Cr,Mg,Ba,Ti,B,Al,Na,K,W) and gold.

The Acme methods are as follows:

a) I.C.P. Package: a 0.500 gram sample is digested with 3 ml. 3-1-2 ($HCL-HNO_3-H_2O$) at 95° for one hour and is diluted to 10 ml. with water. This leach is partial for Mn,Fe,Ca,P,Cr,Mg,Ba,Ti,B,Al, Na,K and W. The Au detection limit is 3 ppm.

b) Geochemical Au: 10.0 gram sample ignited, hot aqua regia leached, MIBK extraction and analyzed by Atomic Absorption.

APPENDIX VII: Method of Histogram Interpretation

RULES FOR CHOICE OF SIZE CODING OR CONTOURING INTERVALS

(1) Examine both arithmetic and logarithmic histograms for each geochemical survey. Choose the histogram which most closely approximates a normal (or lognormal) distribution. If several populations are present on the histogram, subjectively divide the data into a series of (overlapping ?) normal or lognormal distributions. Always avoid interpreting histograms which are strongly skewed. Portions of arithmetic or logarithmic histograms may be chosen over specific metal concentration intervals, if this allows for the best portrayal of the data in graphitical form.

(2) Choose, as two of the coding intervals, points which represent between 90% and 95%, and 95% and 97.5% of the data; two different numbers. These choices highlight from 1 in 10 to 1 in 20 samples which are considered slightly anomalous and definately anomalous, respectively. These limits are optimistic in that the two categories are defined to be anomalous regardless of the distribution of values on the remainder of the histogram. A rigorous statistical approach would suggest that only values above the 97.5 percentile should be considered anomalous. Choice of any of the above percentiles is entirely subjective and meant to highlight the highest values of the survey.

(3) Divide the remaining portion of the histogram into recognizable populations. The dividing point of each of these populations is chosen as a coding interval. Artifacts introduced as a consequence of detection limit considerations are ignored. These artificial breaks in the histogram can be recognized by referring to the laboratory reports and scanning data results.

(4) For each population, choose one or two numbers which correspond to the 90% and 95% cumulative frequencies for that population (1 in 10 and 1 in 20 samples for that population). These will also be used to represent anomalous conditions for each population. Coding intervals can be no closer than 2X the detection limit for each element being considered.

(5) A maximum of six numbers can be chosen to plot symbol maps. This number is dictated by the ability to present data in graphical form with sufficiently different symbol sizes for them to be easily distinguishable, particularly if maps are to be reduced. The seven defined concentration classes are normally sufficient to represent geochemical data on a map. More intervals can be chosen if data are to be contoured. Avoid choosing arithmetic intervals without considering rules (1) and (4).

(6) Maps plotted using the preceeding instructions might result in two areas being distinguished from each other by a relatively uniform density of symbol sizes, yet only poor contrast anomalies are indicated. Difference between the two areas, A and B, might be due to underlying geology, overburden character, soils etc. Whatever the cause, the data are not well displayed. If the underlying control distinguishing A and B can be recognized, the data can be divided and re-interpreted following steps (1) to (5). Two sets of maps can be drawn, or both sets of interpreted data can be plotted on a single map. For such superimposed geochemical maps, symbol sizes lose their absolute meaning but assume a more important stance, that of reflecting anomalous conditions regardless of the underlying control. To illustrate, consider the case where A and B are areas underlain by very different geology. Anomalous conditions for low background rock types might be concentrations which are much lower than average values for the high background rock types. Nevertheless, anomalies defined in each area are considered significant. Reliance on absolute concentrations can be misleading in such cases.

APPENDIX VIII: Statement of Expenditures

1. Geochemical Analysis:

   i) 5 rock samples
   (sample prep., I.C.P. and Au analysis
   @ $14.17/sample) = $ 70.85

   ii) 80 soil samples
   (sample prep., I.C.P. and Au analysis
   @ $10.85/sample) = $ 868.00

   Total Geochemical Analysis Costs: = $ 938.85

2. Helicopter

   (Bell 206) 5.8 hrs. @ $564/hr. = $3,271.20

3. Airfares:

   (Vancouver to Prince George, return) = $ 393.20

4. Taxi:

   (Vancouver to airport) = $ 12.00

5. 4 x 4 Vehicle:

   (includes fuel) 3 days @ $99/day = $ 297.00

6. Computer Processing of Soil/Silt Data:

   (80 samples @ $2/sample) = $ 160.00

7. Wages:

   i) R. Pegg (project geologist)
   5 days @ $240/day
   (July 6,9,11,13,14) = $1,200.00

   ii) S. Hoffman (senior geochemist)
   6 days @ $300/day
   (June 20, July 6,9,11,13,14) = $1,800.00

   iii) V. Malo (geological assistant)
   3 days @ $61.60/day
   (July 6,9,11) = $ 184.80

   Total Wages: = $3,184.80

8. Room and Board:

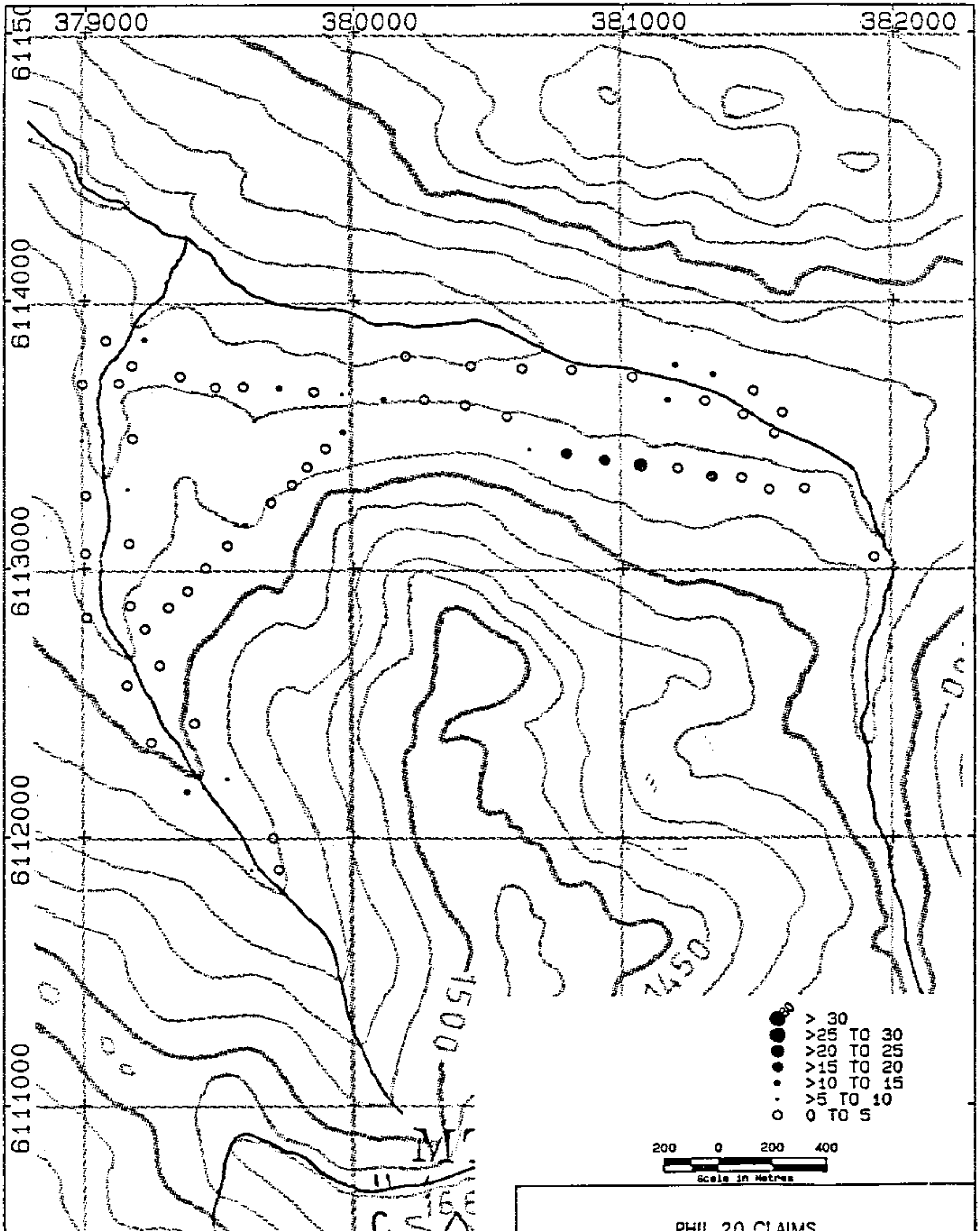
   9 man-days @ $55/man-day = $ 495.00

9. Report (drafting, typing, copying, etc.) = $ 500.00

TOTAL EXPENDITURES: = $9,252.05

APPENDIX IX: Re-Interpretation of the 1984 Soil Data

The soil data identified an area of anomalous Au and As, surrounded by weakly anomalous (150 to 200 ppm) Cu values. A significant Sb anomaly was not outlined, although a 1 point value (4-6 ppm) is located near a 1 cm wide galena vein which carries 16.1 g/t Au and 265 g/t Ag. Several Pb soil anomalies lie within 1 km of this occurrence, see attached sketches.



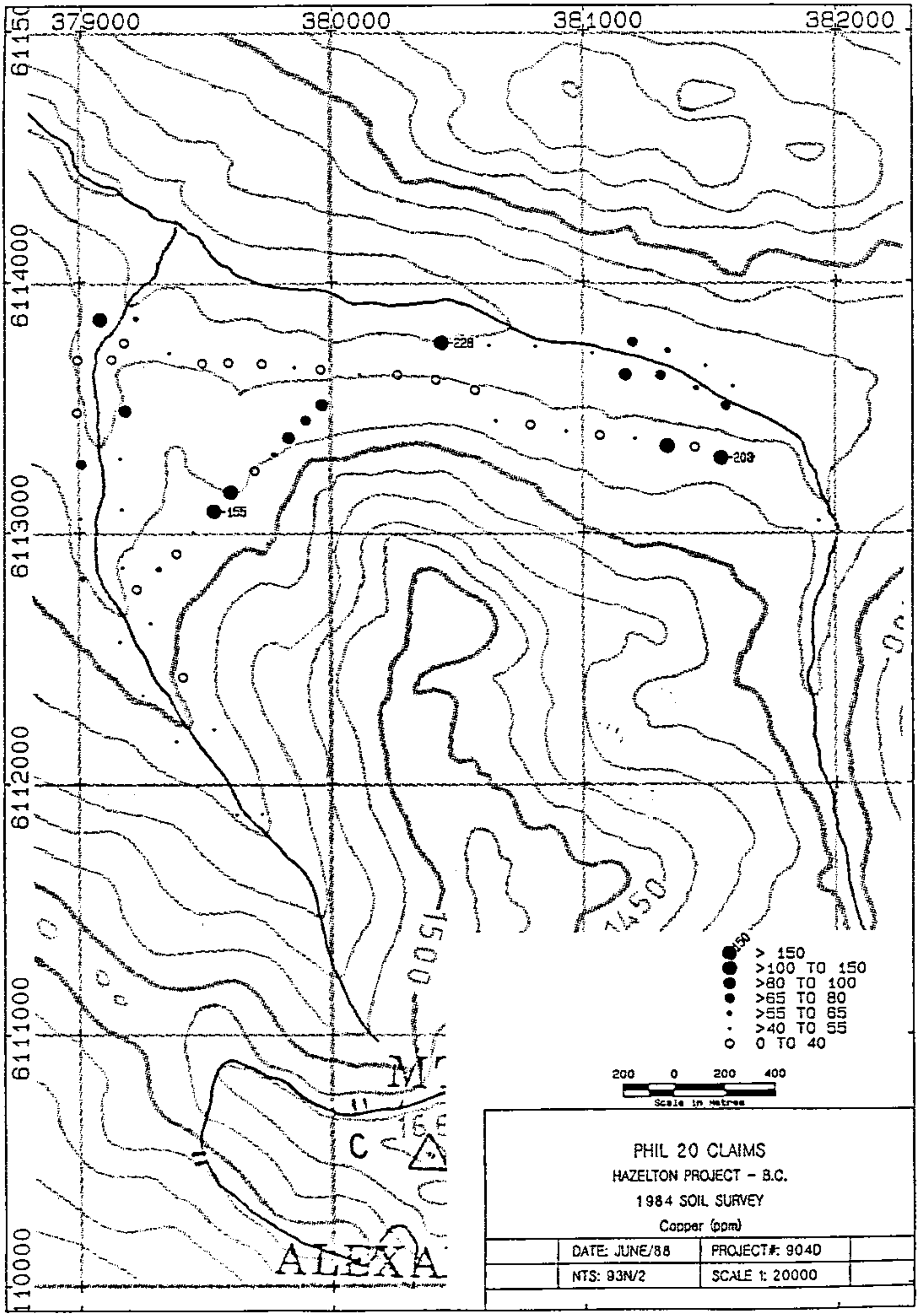
PHIL 20 CLAIMS

HAZELTON PROJECT - B.C.

1984 SOIL SURVEY

Gold (ppb)

DATE: JUNE/88	PROJECT#: 9040	
NTS: 93N/2	SCALE 1: 20000	



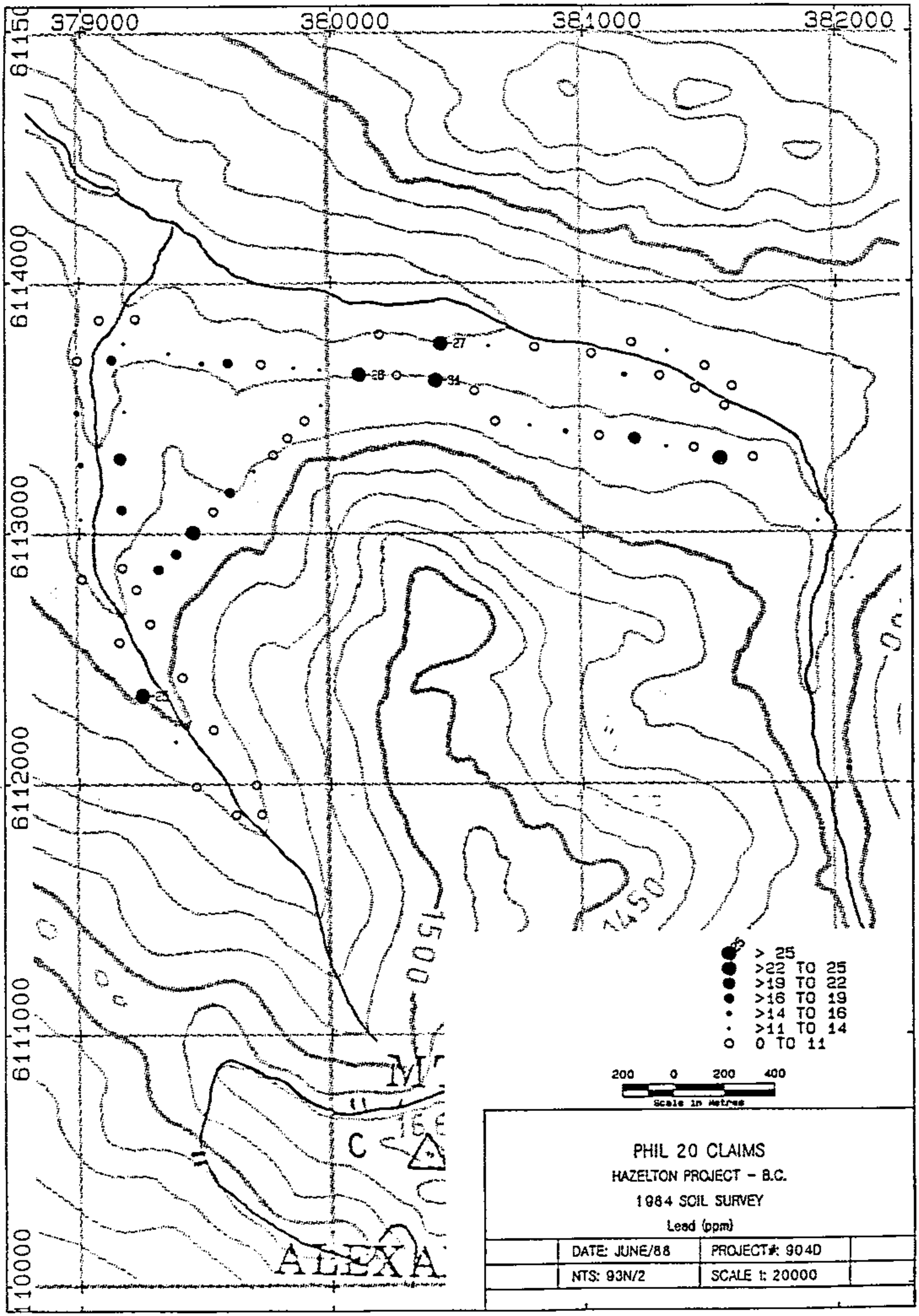
PHIL 20 CLAIMS

HAZELTON PROJECT - B.C.

1984 SOIL SURVEY

Copper (ppm)

DATE: JUNE/88	PROJECT#: 904D	
NTS: 93N/2	SCALE 1: 20000	



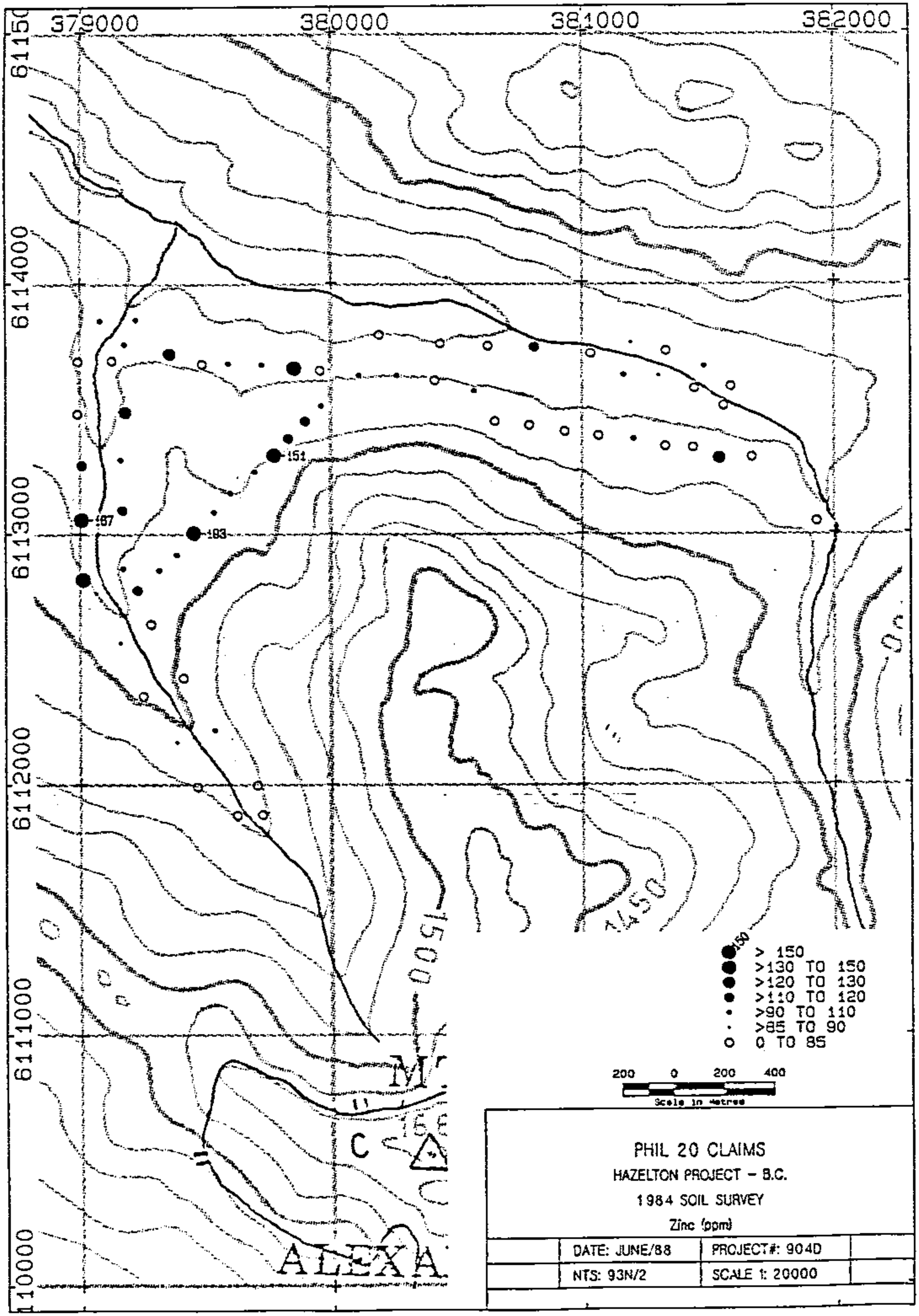
PHIL 20 CLAIMS

HAZELTON PROJECT - B.C.

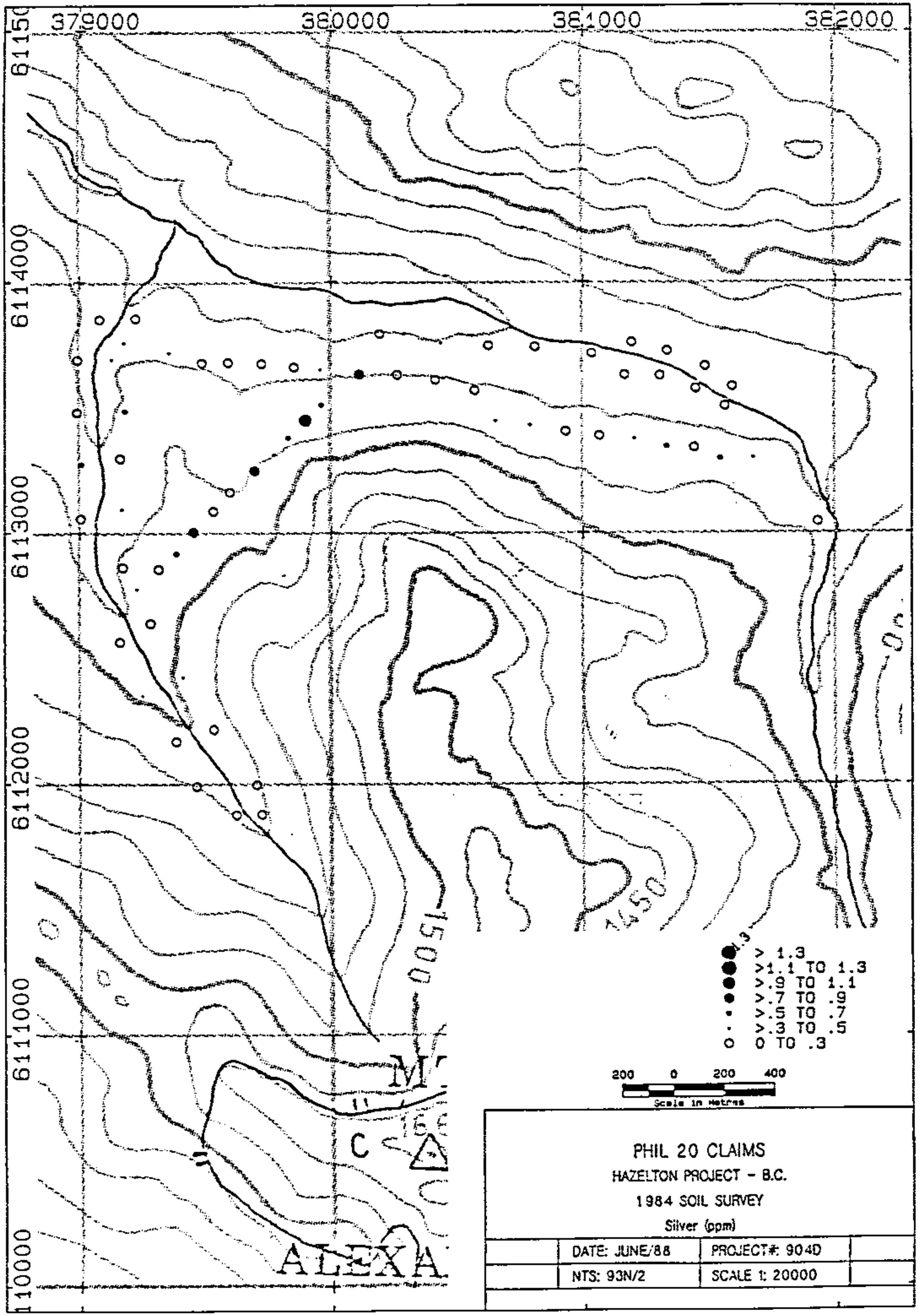
1984 SOIL SURVEY

Lead (ppm)

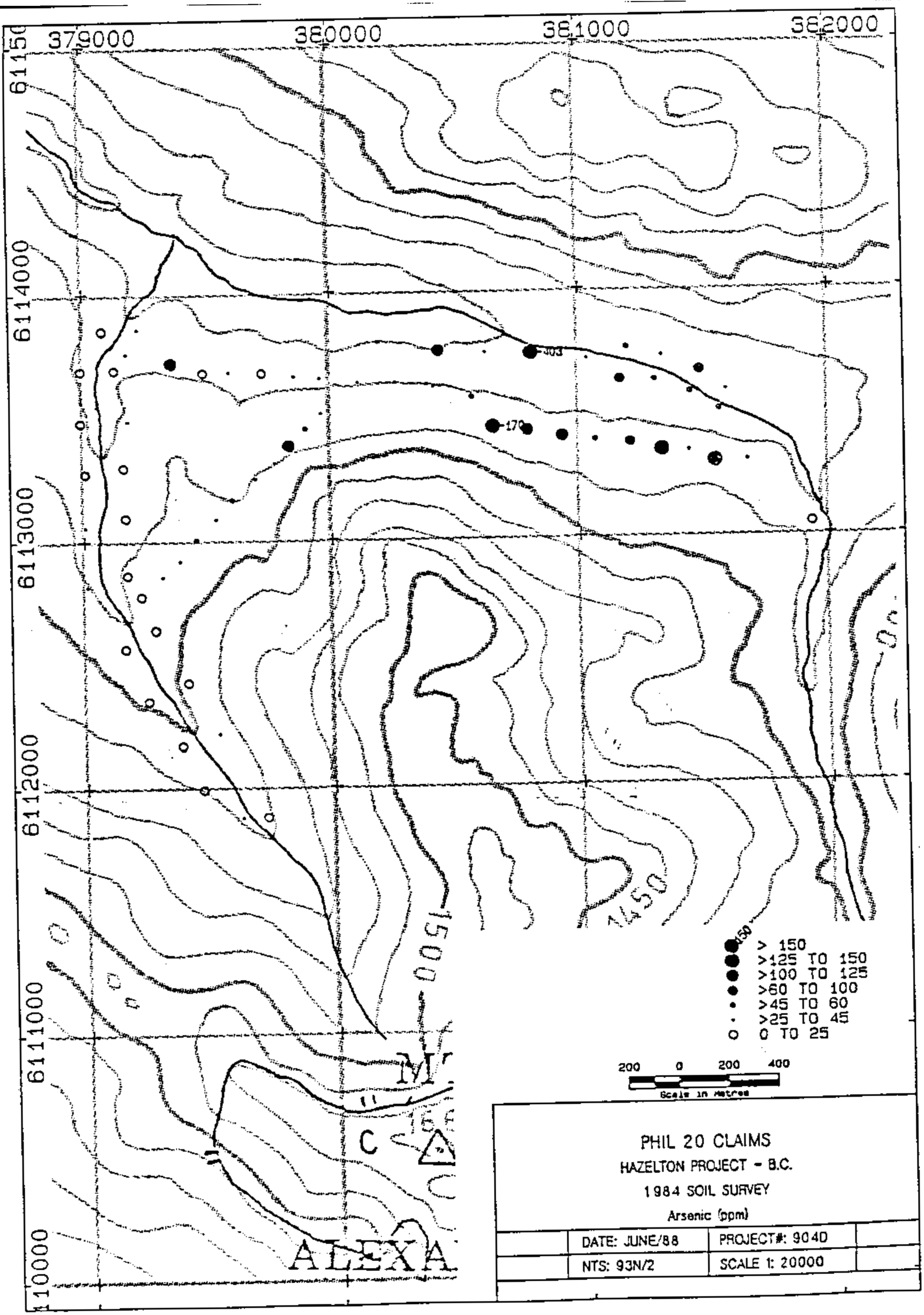
DATE: JUNE/88	PROJECT#: 904D
NTS: 93N/2	SCALE 1: 20000



379000
380000
381000
382000
6115000
6114000
6113000
6112000
6111000
6110000
151
187
183
1500
1450
> 150
>130 TO 150
>120 TO 130
>110 TO 120
>90 TO 110
>85 TO 90
0 TO 85
200 0 200 400
Scale in Metres
PHIL 20 CLAIMS
HAZELTON PROJECT - B.C.
1984 SOIL SURVEY
Zinc (ppm)
DATE: JUNE/88
PROJECT#: 904D
NTS: 93N/2
SCALE 1: 20000



379000
380000
381000
382000
6115000
6114000
6113000
6112000
6111000
6110000
1500
1450
> 1.3
>1.1 TO 1.3
>.9 TO 1.1
>.7 TO .9
>.5 TO .7
>.3 TO .5
0 TO .3
200 0 200 400
Scale in Metres
PHIL 20 CLAIMS
HAZELTON PROJECT - B.C.
1984 SOIL SURVEY
Silver (ppm)
DATE: JUNE/88
PROJECT#: 9040
NTS: 93N/2
SCALE 1: 20000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382000
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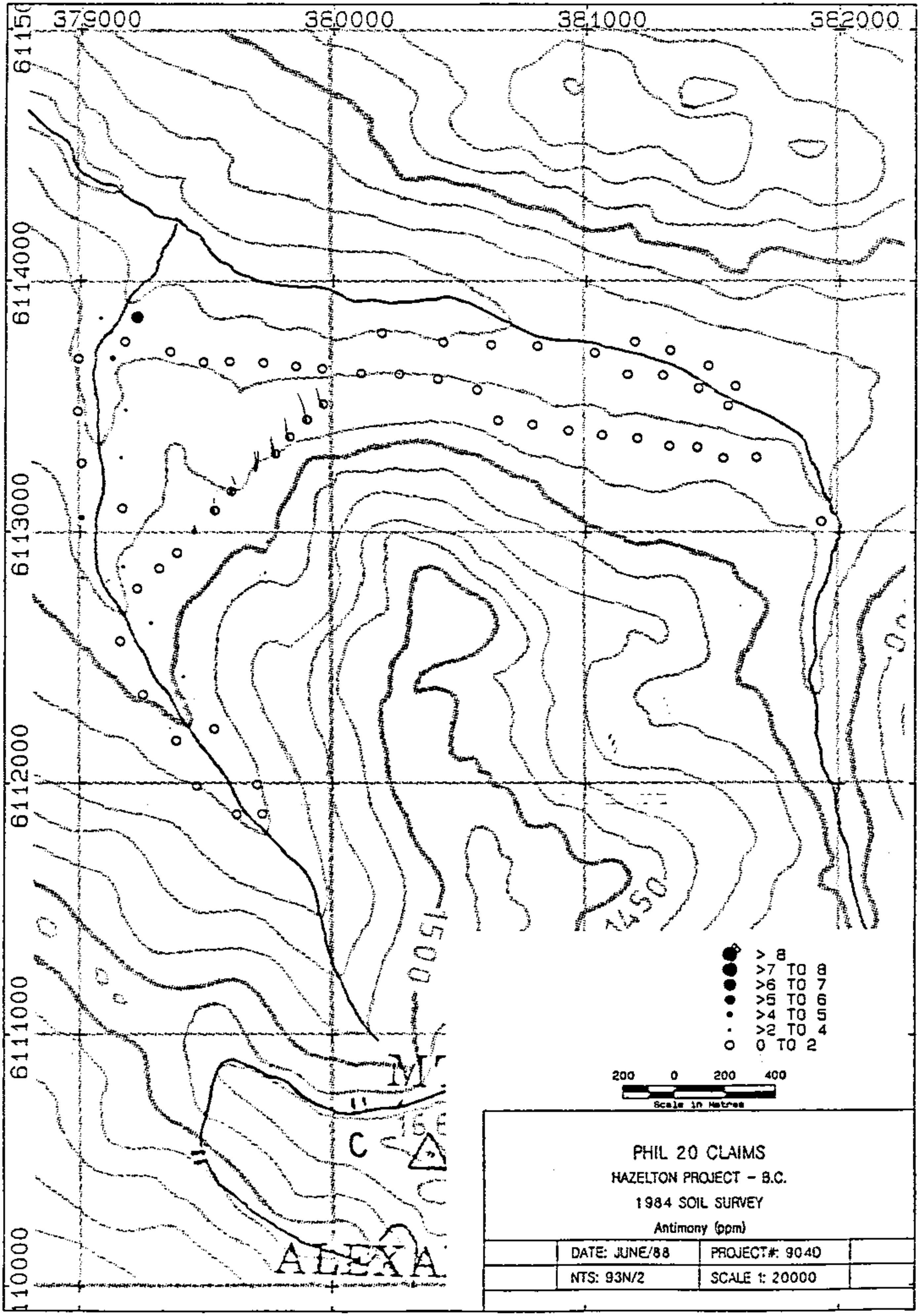
6113000
6112000
6111000
303
170
1500
1450
> 150
>125 TO 150
>100 TO 125
>60 TO 100
>45 TO 60
>25 TO 45
0 TO 25
200 0 200 400
Scale in Metres
ALEXA
PHIL 20 CLAIMS
HAZELTON PROJECT - B.C.
1984 SOIL SURVEY
Arsenic (ppm)
DATE: JUNE/88
PROJECT#: 9040
NTS: 93N/2
SCALE 1: 20000



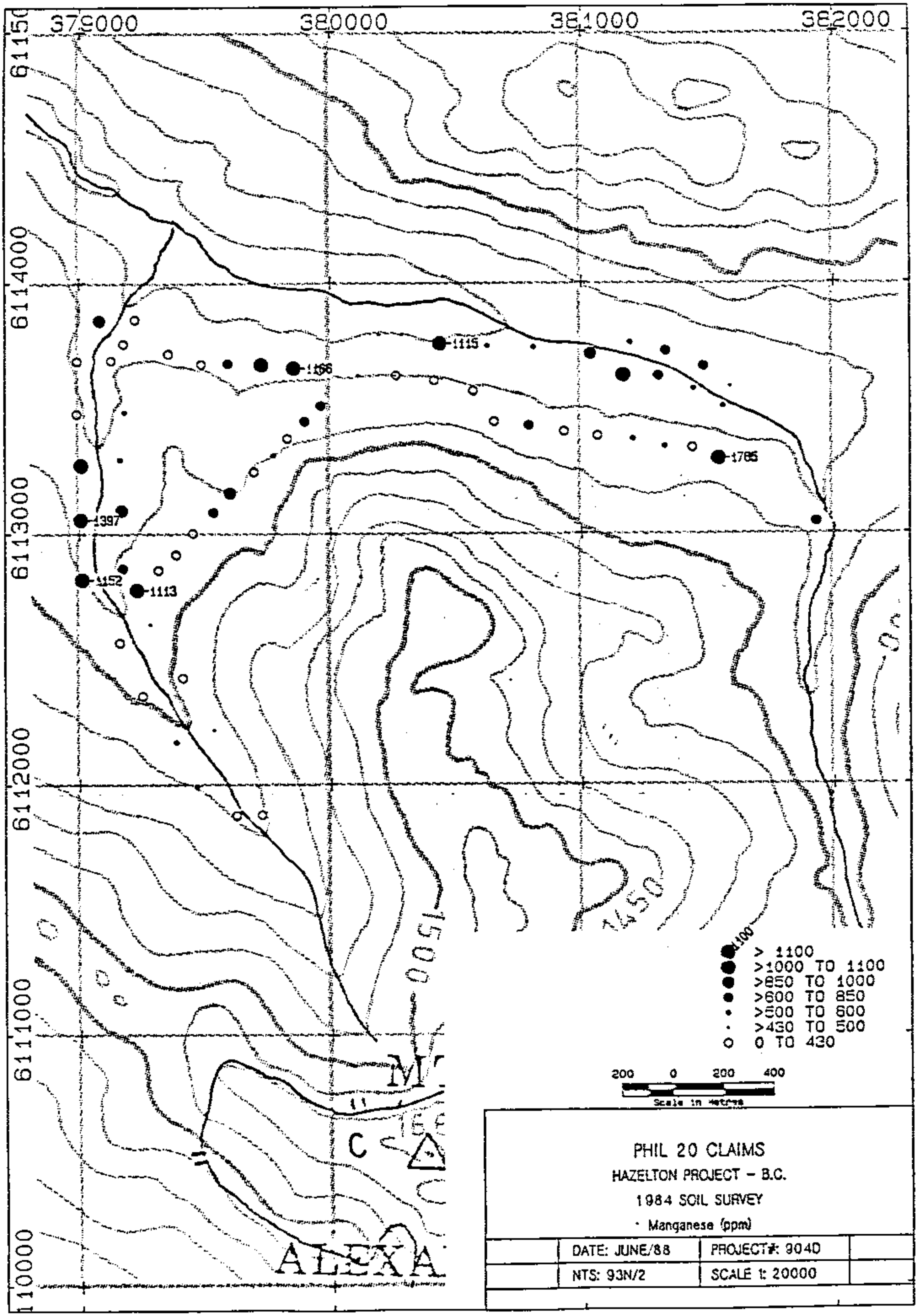
PHIL 20 CLAIMS

HAZELTON PROJECT - B.C.

1984 SOIL SURVEY

Antimony (ppm)

DATE: JUNE/88	PROJECT#: 9040
NTS: 93N/2	SCALE 1: 20000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382000
6115000
6114000
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6112000
6111000
6110000
1115
1166
1765
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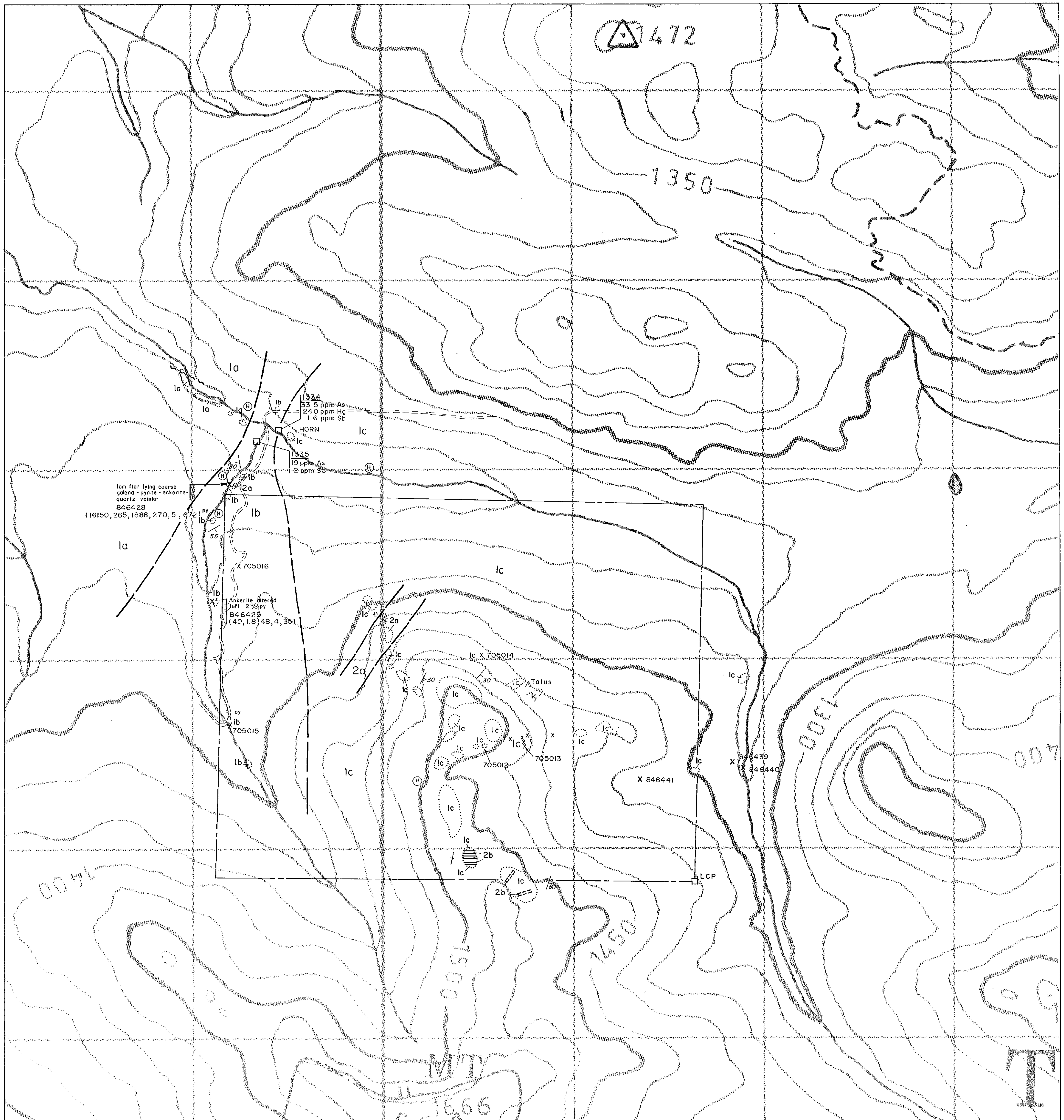
1113
1500
1450
> 1100
>1000 TO 1100
>850 TO 1000
>600 TO 850
>500 TO 600
>430 TO 500
0 TO 430
200 0 200 400
Scale in Metres
PHIL 20 CLAIMS
HAZELTON PROJECT - B.C.
1984 SOIL SURVEY
Manganese (ppm)
DATE: JUNE/88
PROJECT#: 9040
NTS: 93N/2
SCALE 1: 20000



N

LEGEND

TRIASSIC

[2] Intrusive Rocks

2a. Medium-Green Augite-Porphyry Basalt Sill

2b. Light Grey Augite-Hornblende-Plagioclase Dykes

TAKLA GROUP

[1] Volcanic and Sedimentary Rocks

1a. Medium-Green Augite-Porphyry Andesite Flow, Flow Breccia

1b. Medium-Green Cherty Dacite Tuff, Ash Tuff

1c. Black and Green Argillite, Chert, Epiclastic Sediments

△	Angular Float or Subcrop
X :::	Outcrop (small , large)
— —	Geological Contact
30	Bedding
~ ~ ~	Fault
HORN	Hornfelsing
X 846428 (50,65,88,270,5,672)	Rock Chip Sample Location with Results: (Au ppb, Ag ppm, As ppm, Sb ppm, Hg ppb, Cu ppm)
□ 1335	Government Survey Stream Sediment Anomaly
(H)	Helicopter Landing Spot
x 705016	1988 Rock Sample location
——- —	Claim boundary taken from Gov't. Claim Map

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,859

Geology by N. Humphreys, 1988
R. Pegg, 1988

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
REX PEGG

METRES
200 0 200 400 600 800

BP Resources Canada Limited
MINING DIVISION

PHIL 20 CLAIM

GEOLOGY

SCALE: 1:10,000		DRAWN BY: N.H. / R.P.	PLAN 1
DATE: JULY '88	REV.:	DRAFTED BY: CHONG	
N.T.S. 93N/2W	PROJ.: 10215	REPORT: BPVR 88-2	

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,859

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — REX PEGG

DISTRIBUTION HISTOGRAMS

LIN = LINEAR
LOG = LOGARITHMIC
LINT= TRUNCATED LINEAR
LOGT= TRUNCATED LOGARITHMIC

SAMPLE SELECTION CRITERIA:

SAMPLE TYPE	ALL
PROPERTY CODE	L
LSE CODE	ALL
OB ORIGIN	ALL
SAMPLE TEXTURE	ALL
SOIL HORIZON	ALL
BEDROCK GEOLOGY	ALL
NORTH LIMIT	NONE
SOUTH LIMIT	NONE
EAST LIMIT	NONE
WEST LIMIT	NONE

PHIL 20 CLAIM
HAZELTON PROJECT - B.C.
1988 SOIL SURVEY
HISTOGRAMS

DATE: JULY/88	PROJECT#: 904L
NTS: 93N/2	PLAN 2

[redacted]