

Assessment Report
06512

GEOCHEMICAL AND GEOPHYSICAL REPORT
ON THE BRIDESVILLE CLAIMS

BM CLAIMS 590, DB CLAIMS 591
BM CLAIM 590 - 16 UNITS
DB CLAIM 591 - 6 UNITS

OWNED AND OPERATED
By

BP MINERALS LIMITED

LOCATED 10 KM NNE OF BRIDESVILLE,
BRITISH COLUMBIA, GREENWOOD MINING DIVISION
LATITUDE 49°07'N LONGITUDE 119°07'W

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Dr. S.J. Hoffman ..Geochemistry
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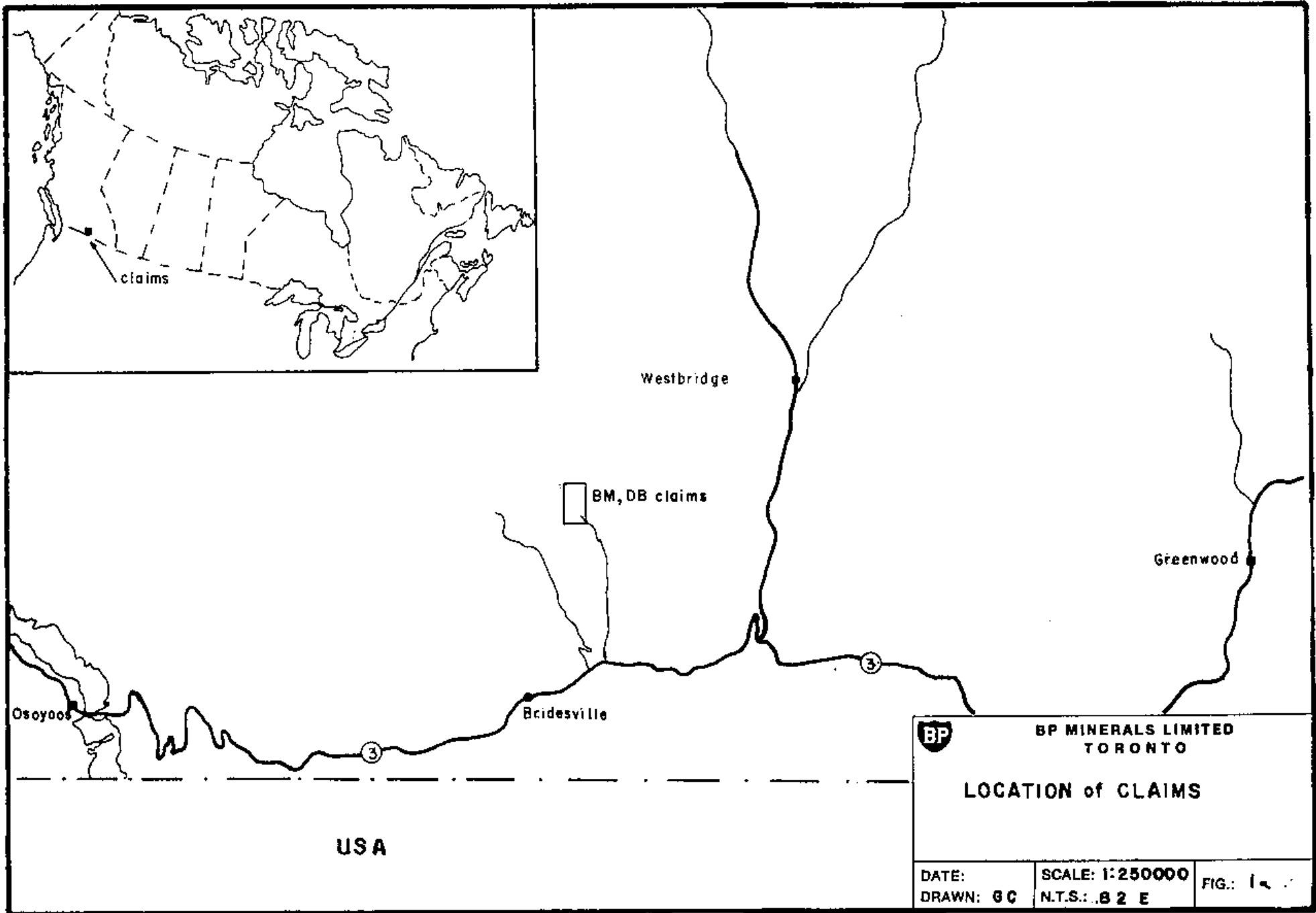
2 Cost of Work

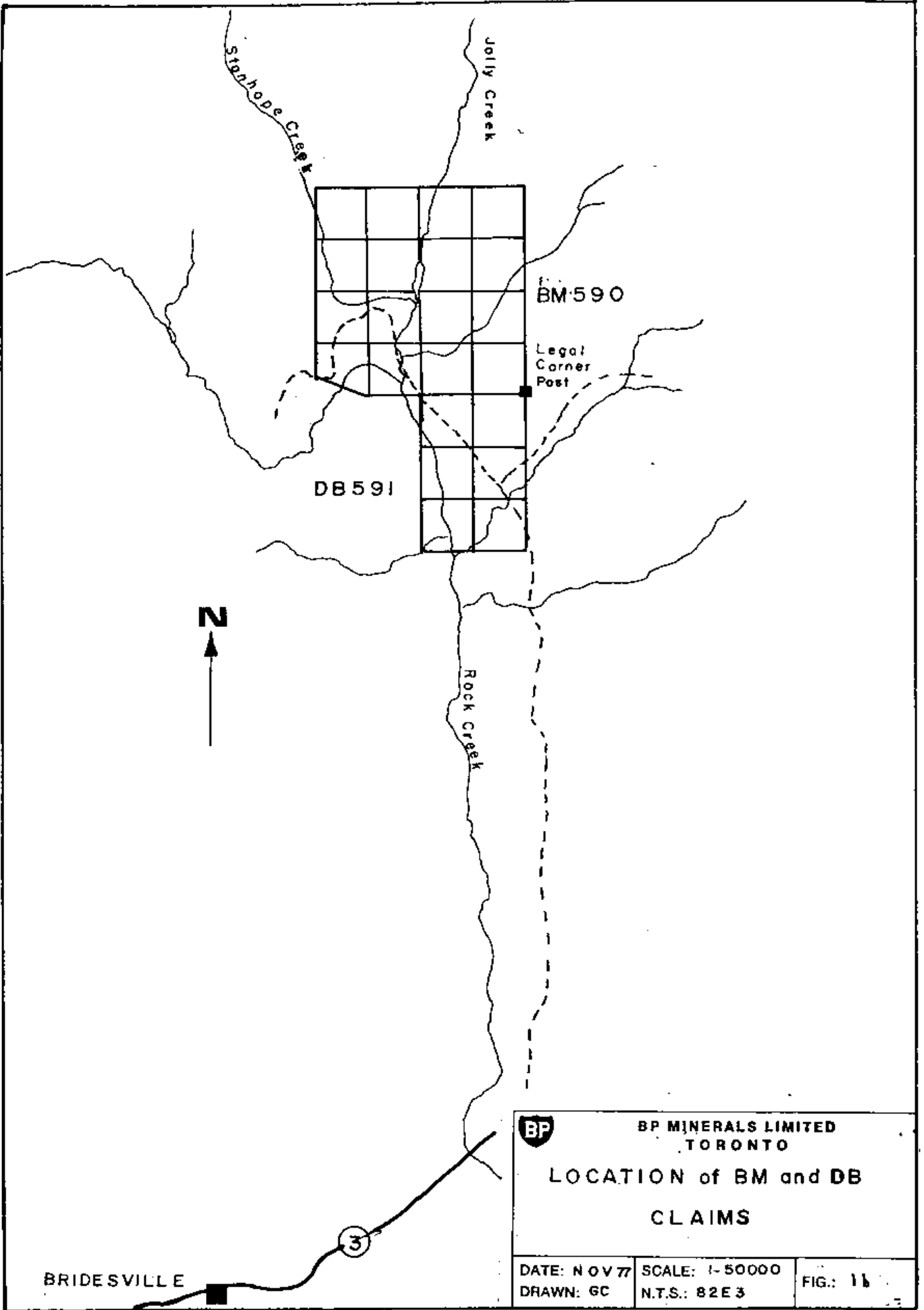
INTRODUCTION

The Bridesville property consists of two claims, BM 590 (16 units) and DB 591 (6 units). The claims were recorded on October 26, 1976.

During May and June 1977, a soil geochemical and radon survey were done by a four-man crew from BP Minerals over the BM and DB claims.

Claim credits of four years have been applied to each unit in BM 590 and DB 591.





LOCATION

The BM and DB claims are located in the Greenwood Mining District in NTS 82E/3E approximately 10 km., north-northeast of Bridesville, B.C. (Fig. 1).

ACCESS

The claims are located about 7.2 km. north of Highway # 3. Access to the claims is via the Canyon Road located 2.7 km east of Bridesville, which runs northwards through the middle of the claims. Numerous old logging roads are also found in the area.

WORK DONE

A four-man crew worked on the claims from May 17 - June 13, 1977. During this period, a grid was established and geochemical soil sampling was performed on 100 metre centres on lines 200 metres apart. Concurrent with the geochemical survey, a radon survey was performed with Track-Etch cups placed at 200-metre intervals (every second soil sample site).

GEOLOGY

Regional Of most interest in the area are a number of outliers of Tertiary continental sandstones which could host uranium mineralization. The sandstones are capped by Tertiary volcanic rocks which may have preserved the mineralization from erosion. The sandstone and volcanics are Eocene in age. The Tertiary outliers are fault bounded and are relatively limited in extent in the Southern British Columbia area. Tertiary rocks rest unconformably on a basement complex consisting of sediments and mafic metavolcanics which range in age from Precambrian to Triassic. This complex has been intruded by plutonic rocks of granitic composition which are Cretaceous in age. (See Table 1).

TABLE I

TABLE OF FORMATIONS

	Tertiary			
Cenozoic	[Miocene?		- basalt, minor olivine basalt
		Oligocene?	Coryell Plutonic Rocks	- Syenite, granite
		Eocene or Oligocene	includes Marron volcanics	- andesite, trachyte, local conglomerates tuffs and agglomerates.
		Paleocene or Eocene		- porphyritic granite and rhyolite
		Paleocene or Eocene	includes Kettle River Formation	- conglomerate, sandstone, shale
Mesozoic	[Cretaceous?	Valhalla Plutonic Rocks	- granite
			Nelson Plutonic Rocks	- granodiorite, syenite
Paleozoic	[includes Anarchist Group	- greenstone, quartzite, limestone, local paragneiss

After Little, 1958,59

LOCAL GEOLOGY

Anarchist Group

Basement rocks in the area consist of a complex mixture of metasediments, mafic volcanics and minor mafic intrusives. This group is believed to belong to the Anarchist Group which is Permian and/or Triassic in age. Sediments of this group are variable in composition. In the north of the claim group sediments in places were sometimes gneissic or consisted of quartzites which sometimes contains calcite veinlets. It has a very low radioactivity (50-75 cps) and has been called a metadiorite. In the southern part of the claims on either side of Rock Creek, sediments strike north-northwest and generally dip southwest. Sediments consist mainly of interbedded cherts and mudstones. Calcareous mudstones are also present and these may be mineralized with minor pyrite, galena and sphalerite in small zones which are parallel to the bedding. These sediments generally display a radioactivity of 80-150 cps. Mafic metavolcanics and tuff generally display carbonate veining and are dense, medium to light green in colour and contain some dark grey zones which appear to be chert. These rocks in many cases appear to be faulted into their present position as slickensides are prominent on outcrops near Rock Creek. Rock Creek flows in a steep sided valley on the extension of the northerly trending Conkle Lake Fault. At one location near the Fault, the rocks were composed of a talc schist and a dolomitized quartz-filled shear zone. Mafic metavolcanics generally give 60-90 cps radioactivity (Scintrex Model BGS-1SL) and overall are less prominent than the sediments.

KETTLE RIVER SANDSTONES

Kettle River sandstones are Eocene in age and rest unconformably on the Anarchist Group. The unconformity is exposed in outcrop beside Rock Creek in the southwest corner of the BM claims. Anarchist sediments, consisting of green mudstone and chert, are

overlain by medium-coarse grained buff-coloured feldspathic sandstones. The unconformity is marked by an irregular erosion surface marked by a basal conglomerate up to 20 cm. thick consisting of rounded chert clasts. The majority of the Kettle River sandstone consists of a coarse feldspathic sandstone with feldspar grains in some places up to 2 mm. in diameter. Geologists who have worked in the area have suggested these sandstones are due to the erosion of volcanic rocks because of the presence of angular quartz-feldspar porphyry clasts in the coarser layers. Bedding is absent in the coarse buff sandstones and radioactivity is generally 140-150 cps. The sediments strike northwest and dip northeastwards at 20-40 degrees. Although only a small stratigraphic section is seen on the claims, the coarse feldspathic sandstones grade upwards into "gritty" sandstones and siltstones containing organic debris and minor shaley beds which are generally less than 2 cm. in thickness. Minor conglomerates containing bleached rounded volcanic and granitic clasts up to 2 cm. in diameter are intercalated with the sandstone-siltstone units. Conglomerates were only found in the northeast corner of the DB claims. Background radioactivity was generally higher (150-220 cps) in the interbedded "trashy" sandstones and siltstones. One particular shaley horizon gave 400 cps but this single instance was the highest radioactivity found on the claims.

MARRON VOLCANICS

These rocks consist of volcanic flows and sills of similar composition which overlie and intrude the Kettle River sandstones and provide a resistant cap. The volcanic cap is composed of light brown coloured porphyritic trachyte which may be amygdaloidal. Amygdules consist of quartz-lined cavities filled by calcite. Phenocrysts are plagioclase and biotite. A number of dykes of similar composition are found in proximity to the extensive outcroppings of these volcanics which form a very prominent mountain on the eastern boundary of the BM claims. One dyke, west of Little Fish Lake has characteristics of a diatreme (B. Marten, B.P. Geologist). It is 50-75 metres wide and strikes northeast and appears to be controlled

by a subsidiary fault to the main ConkleLake Fault. It consists of porphyritic trachyte with numerous large (50-80 cm.) well rounded fragments of similar composition. No exotic fragments of country rock were noted. Although this rock type is very radioactive (300-400 cps.) an analysis gave only 3.5 ppm. uranium. Radioactivity is believed to be due to potassium 40.

Also found in the area are a set of lamprophyre or pyroxene porphyry sills that intrude the Kettle River sediments. These rocks give 180-250 cps and consist of 25-50% dark-green euhedral pyroxene phenocrysts in a feldspar-rich matrix. A chip sample of this rock gave 1.1 ppm. uranium, 3.3 ppm. Cu, 10.1 ppm. Pb, 350 ppm. Ni, 1 ppm. Mo and 177 ppm. Zn. The high Ni probably reflects the Mg content of the lamprophyre. One other type of dyke tentatively called an alkaline gabbro was noted to intrude close to the unconformity between the Anarchist and Kettle River Formations. It was very dark brown-black in colour and weathered into a rubble. A fresh surface was difficult to get. The rocks appeared quite mafic but radioactivity was from 150-220 cps. It was coarse grained and consisted mainly of feldspar and amphiboles. This dyke was found only in two places, both located in outcrops along Rock Creek. One such location is in the S.W. corner of the BM claims where the unconformity between the Kettle River sandstones and Anarchist Group is located.

The geology of the claims is shown in Figure 2.

GEOCHEMICAL SURVEY

a) Methods of sample collection

Samples were collected over most of the property at 100m intervals along Topofil grid lines spaced 100 to 200m apart. Soil material was sampled from the top of the 'B' horizon at 10 to 20cm depths. Additional samples were collected at 40 to 60cm depths at about 1/3 of the sample sites. Talus fine samples were taken at 0 to 5cm depths from talus fans over the more steeply sloping portions of the property. Stream and seepage sediments were collected from channelways that were crossed by traverse lines. All sample sites were marked by plastic flagging tape. Approximately 0.5kg of stream or seepage sediment, soil or talus fines were collected at each station, avoiding large pebbles, and placed in a numbered wet strength, 8 by 24cm Kraft paper envelope.

Samples were returned to base camp, dried at ambient temperatures, and sorted according to sample number. Samples were then shipped to Vancouver where they were disaggregated by pounding with a rubber mallet, and sieved at 80-mesh. The minus 80-mesh fraction was analyzed by Vangeochem Lab Ltd. for U, Cu, Pb, Ni, Mo, and Zn. The following reports outline the procedure used in the determination of metal concentrations:

Analytical procedure used to determine Uranium in geochemical samples.

Sample Preparation

- a) Geochemical rock, soil, silt, or drill cutting samples were received in the laboratory in 8 x 13 plastic bags, or in 4½ x 9 cotton mailing bags or in wet - strength 3½ x 6½ Kraft paper bags.

- b) The wet samples were dried in a ventilated oven.
- c) The dried soil, silt, or drill cutting samples were sifted by using a shaking machine with an 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- d) The dried rock samples were crushed and pulverized to minus 100-mesh. The pulverized sample was put in a new bag for later analysis.

Digestion

- a) 0.5gm samples were weighed out by using a top - loading balance.
- b) Samples were heated in a water bath for 2 hours (90-95C) with 4N HNO₃ acid.
- c) The digested samples were diluted with 4N HNO₃ acid to a fixed volume and shaken.

Analysis

- a) A 0.2ml aliquot pipetted into platinum dish and evaporated to dryness.
- b) Heated to dull red on a meker burner to burn off organic matter.
- c) A weighted pellet of carbonate flouride flux was put into platinum dish and fused for 10 minutes at 650C in a muffle furnace.

- d) Platinum dishes were removed from furnace to desiccator and allowed to cool.
- e) A Jarrell-Ash model 26-000 fluorimeter was used to determine the concentration of uranium in parts per million by comparing a set of uranium standards prepared similar the above procedure.

Calculation

$$\text{Uranium in ppm} = \frac{\text{Conc. of Standard} \times \text{Volume of Standard Used} \times \text{Dilution Factor}}{\text{Volume of Sample Used}}$$

$$\text{Dilution Factor} = \frac{\text{Volume of Dilution}}{\text{Weigh of Sample Used}}$$

Analytical procedure used to determine acid soluble Mo, Pb, Zn, Cu, Ni. in geochemical samples.

Sample Preparation

- a) Soil and silt samples analyzed as received.
- b) Rock chip samples first crushed and then pulverized to 100-mesh by using Siebtechnik Disc mill.

Methods of Digestion

- a) 0.50g of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.
- b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).
- c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

Methods of Analysis

Mo, Pb, Zn, Cu, and Ag analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamp. The digested samples were aspirated directly into an air and acetylene flame. Mo analyses were aspirated into nitrous oxide and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

b) Climate, Vegetation and Wild Life

The DB and BM claims are located in the semi and interior of southern British Columbia, in an area which receives 30cm of rainfall a year, primarily during the winter months. Temperatures can range between minus 30C in winter and plus 30C in summer. Autumn is generally mild and snow-free until December.

Vegetation consists of a very open forest of Ponderosa and Lodgepole Pine, alternating with numerous grassy meadows. Grass meadows also are commonly well developed beneath the pine trees and provide an adequate source of food for range cattle. Deer, moose and the occasional black bear are other large inhabitants of the forest.

c) Topography, drainage, soils and overburden

The claims were staked along both banks of Jolly and Rock Creeks near their confluence. Both streams are prominent rivers which dissect an upland surface by at least 200m. Storm Hill to the northeast of the property rises an additional 425m to an elevation of 1600m. Despite relief of over 600m, stream drainage is poorly developed. As a consequence of the semi-arid climate, water flow

diminishes greatly from peak flow during spring run-off to periods where streams are intermittent or dry during late summer and autumn.

Soil development has also been greatly influenced by climate. Calcium carbonate has not, as yet, been washed out of the profile, and has accumulated at 10 to 25 cm depths below the ground surface, imparting an alkaline pH (7.5 to 8.2) to the soil. Soils are water saturated in spring and identification of the calcium carbonate enrichment is difficult until later in summer when drying has accented the white colour.

Overburden is of local derivation, forming primarily by mechanical disintegration of bedrock exposures which form numerous cliffs along the rivers and in the hills. Some surficial deposits, along the river valleys, have glacial origin and are comprised of glaciofluvial sands. Recent deposits of alluvium are restricted to valley floors along main channelways. Thickness of overburden is generally of the order of 1 to 3 metres.

d) Geochemical Interpretation of Results

1. Introduction

Trace metal contents of soils, stream sediments, and talus fines were divided into 3 groups, and in view of the fact that the number of talus fines and stream samples are 18 and 7, respectively, symbol plots were drawn only for the soil data. Numerical values for the trace metal content in talus fines and stream sediments are included on the soil grid data.

Trace metal levels in the shallow and deep soil samples are assumed to conform to a lognormal distribution. Data are transformed to logarithmic values and the mean content, range (mean minus one standard deviation to mean plus one standard

deviation, (M-1SD) to (M+1SD) and threshold (mean plus two standard deviations, (M+2SD) values are calculated (Table 1). Maps are plotted utilizing a symbol notation. Each symbol represents a range of trace metal concentrations and is chosen to indicate a statistical interval around the mean value. In order of size from smallest to largest, they represent:

< mean (M) - 2 standard deviations (SD)
(M-2SD) to (M-1SD)
(M-1SD) to (M)
(M) to (M+1SD)
(M+1SD) to (M+2SD)
(M+2SD) to 2(M+2SD)
>2(M+2SD)

Actual concentration values for stream and seepage sediments, soils, and talus fines are listed in Appendix I, which also shows sample identification number (ID) and grid co-ordinates.

Table 2

Summary of the Trace Metal Content (ppm) of shallow and deep soil samples, BM and DB claims, Bridesville, B. C.

		Shallow (10-25 cm) soils	Deep (40-60 cm) soils
U	Threshold	1.7	2.3
	Mean	0.5	0.8
	Range	0.2 - 1.0	0.3 - 1.4
Cu	Threshold	25	29
	Mean	13	16
	Range	10 - 18	12 - 22
Pb	Threshold	26	28
	Mean	16	18
	Range	13 - 20	15 - 23
Ni	Threshold	29	25
	Mean	15	15
	Range	11 - 21	12 - 19
Mo	Threshold	2.0	2.5
	Mean	1.1	1.3
	Range	0.9 - 1.5	0.9 - 1.8
Zn	Threshold	84	85
	Mean	50	57
	Range	38 - 65	46 - 70
Scint	Threshold		184
	Mean		133
	Range		113 - 156
Number of Samples		267	87

Mean -calculated for a lognormal distribution for Mo, Cu, Zn, and a normal distribution for pH.

Range -lognormal (or normal) mean \pm 1 standard deviation.

Threshold -represents 67% of the sample values
->(mean + 2 standard deviation intervals)
-represents 5% of the sample values.

Histograms showing the frequency distribution of the trace element contents are drawn on each map. The fact that the standard deviation interval around the mean is small for all elements means that the size coding of "ranges in concentration" are relatively small, particularly for concentrations below the mean value. It is in this region where small, secondary peaks are visible on several of the histograms. In some cases, these secondary peaks may be reflecting analytical variability near the detection limit. The assumption that the data follows a lognormal distribution is therefore sufficiently valid and allows for definition of coding intervals using a statistical bias.

2. Results

(a) Collection of Shallow versus Deep Samples

Choice of sample depth does not appear to control the extent of U or base metal enrichment. Metal levels generally increase slightly with depth (Table 1), but definition of areas where metal concentration are enhanced or depleted relative to other areas are similar for both surveys. Anomalous conditions are recognized regardless of the depth of same collection.

(b) Shallow Sample Soil Survey

i. Uranium and Scintillometer Counts

The highest value, 16 ppm, is associated with paragneiss and metadiorite units of the Anarchist group. The anomaly lies along the extreme western margin of the grid in an area of below average scintillometer readings and is unexplained.

Three anomalies can be defined in areas associated with sandstone of the Kettle River formation. The most prominent of these lies to the north of Little Fish Lake, in an area underlain by meta sediments of the Anarchist group, but immediately downslope of the sandstone unit. Anomalous conditions are indicated by 2 samples, one containing 9.5 ppm U, in a base of slope environment. The other 2 anomalies, both comprised of 3 samples exceeding the U anomaly threshold of 1.7 ppm are centered at 12400m N/10500mE and 11500m N/ 11000mE) respectively. U enrichment coincides with enhanced Cu, Pb, Mo, Zn and scintillometer values.

U contents and scintillometer readings associated with the Marron volcanics in the east (amygdaloidal trachytes and feldspar porphyries) are enhanced and show variability, suggesting the possibility that anomalous conditions can be defined as in the extreme northeast. These 'anomalies', however, probably reflected metal-rich lithologies comprising the Marron group. Pyroxene porphyry units of the Marron in the west are reflected by much lower U and scintillometer values, although a zone of U enrichment lies downslope along both sides of Rock Creek. The cause of this anomaly is unknown.

Anarchist group rocks are associated with soils notably low in U. The preceding zone of enhanced levels along Rock Creek is complemented by a second zone in the west-central part of the property of similar size in the same topographic environment. U accumulation may reflect metal deposition from groundwater in break of slope regions.

ii. Copper

Highest Cu values are found in areas underlain by paragneiss, metadiorite and metasediments of the Anarchist group in the northwest. Values associated with Anarchist group metasediments, metavolcanics, cherts, argillites and limestone in the south are much lower. Tertiary volcanic rocks and sandstones are associated with average concentrations of 10 - 20 ppm. Levels near the 2 U-rich zones at 12400mN/10500mE and 11500mN/11000mE are 10 to 20 ppm higher.

iii. Lead

The distribution of Pb associated with Anarchist group rocks is the reverse of that of Cu, being lower in the northwest than in the south where several small Pb/Zn showings are known. The Marron volcanics are differentiated similarly, with greatest concentrations in the northeast. The Kettle River sandstone is overlain by soils containing relatively low levels of the metal, with the exception of a zone joining the anomalies centered at 12400mE/10500mN and 11500mE/11000mN and continuing northward for an additional 600 metres.

iv. Molybdenum

The Mo distribution highlights Anarchist group rocks, particularly in the south. The Pb anomaly described above in association with sandstone bedrock is complemented by Mo enhancement to 3 ppm from a background of 1 ppm.

v. Zinc

Zinc concentrates do not define anomalous zones. Highest values are found in the west in an area underlain by meta-diorite and metavolcanics of the Anarchist group which are complemented by high Ni values. Levels associated with Tertiary Volcanics are generally much lower, whereas the Kettle River formation is characterized by a spotty distribution of above and below average values. The highest Zn values associated with sandstone coincide with the U, Cu, Pb, and Mo anomalies.

vi. Nickel

Ni values are generally low, with the exception of areas underlain by Anarchist group rocks. A slight enhancement in Ni levels coincides with or lies downslope of the above described U, Cu, Pb, Mo and Zn anomalies.

(c) Discussion

The trace metal distribution patterns appear to differentiate the major geological units, as well as indicating that subdivision of these units into smaller units is possible. This latter point is illustrated by the differences exhibited by areas underlain by the Marron volcanics, or by the Anarchist group rocks. Although base metal distribution patterns may be related to sulphide occurrences, this aspect of the geochemical survey has been subordinated unless the base metal anomalies coincide with those of U.

Of the six U anomalies, two associated with Anarchist group rocks in the west-central part of the property and Rock Creek area are considered of secondary importance and are probably

related to either units rich in U or to deposition of U from groundwater at topographic inflection points. A third, single point anomaly in the northwest underlain by the same rock type, lies open to the west and has an uncertain origin.

Three zones of U enrichment associated with sandstone units can be identified. The anomaly north of Little Fish Lake lies at the base of a prominent slope and may reflect deposition of metal from groundwater. The anomaly is found in an area where the geology is poorly known and where additional sampling is possible to the north to define a possible extension of the zone.

Two other U anomalies lie near the base of exposures of Marron volcanics in association with sandstone. Both anomalies are multi-element (U, Cu, Pb, Zn, Ni, Mo) and associated with distinctive anomalous levels radioactivity. Anomalous concentrations of these elements do not appear derived by sluffing from overlying rocks because the overlying volcanics are not generally metal-rich. Therefore, the source of the U is from within the sandstone itself, or from a zone along the unconformity separating the sandstone from the volcanics. The presence of dirty sandstones, shales, and carbonaceous sandstones within the Kettle River formation may provide the source of the enhanced metal levels.

The U values are not exceptionally high. However, within the alkaline surficial environment of the BM and DB claims, U is a mobile element which is probably migrating as a carbonate complex ion out of the area dissolved in groundwater. Therefore, interpretation of the significance of the U anomalies, particularly those associated with carbonaceous sandstone lithologies, must be based by the favourability of the geology.

GEOPHYSICAL PROGRAM

TRACK-ETCH SURVEY

In addition to the geochemical soil survey a Track-Etch survey was performed at the same time to further evaluate the BM and DB claims. The Track-Etch survey is based on the detection of radon gas in soil near the ground surface. High concentration of radon in soils is presumably related to high uranium concentrations since radon is produced as a decay product of uranium and can migrate from bedrocks through the overburden to the ground surface.

The Terradex Track-Etch technique is a patented process whereby Track-Etch films record the tracks of alpha particles emitted by radon 219, 220, and 222. In uranium exploration, radon 222 is of the greatest interest since it is a daughter product of the uranium-238 decay chain and has a reasonably long half life of 3.8 days. It may be found in surface soils over fairly deep uranium ore deposits. However, concentrations of Radon-220 (thoron) may cause interference in detecting Radon 222 in areas with high concentrations of near-surface thorium mineralization. Thoron filters are used to provide a selected permeable barrier that stops the short-lived radon-220 and permits almost all the long lived radon-222 to penetrate into the cup.

Once the films have been exposed, a chemical etching makes the alpha tracks visible so that they may be counted. The density of alpha tracks recorded on the film during a given exposure time indicates the concentration of radon in soil which reflects nearby uranium concentrations. The Track-Etch films are attached to numbered plastic cups and are protected from exposure to alpha particles during shipment and storage by enclosure of the cups in polyethylene bags.

The cups were placed in holes dug to 55 cm. in depth and covered with a shallow layer of earth. Exposure time was 21 days whereupon the cups were collected and shipped to Terradex for processing.

A total of 85 Track-Etch cups were used to cover the BM and DB claims. Readings are reported in tracks per square millimetre and are normalized to equivalent 30 day exposures. The readings over the claims ranged from 3.6 to 70.6T/sq. mm. with the mean of the background distribution 30.5T/sq. mm. or 52%. The standard deviation of the background mean was 16.0 sq.mm. or 52%.

The background mean is substantially higher in this area than the Canadian average of 11T/sq. mm. Samples with values greater three times the standard deviation above the mean were accepted as being anomalous. In this survey, no points were greater than three times the standard deviation above the mean and the data appears to be almost pure background.

The Track-Etch radon contour map was computer generated using a 6-point weighted average computer smoothing routine and it was drawn with 5T/sq. mm. contour intervals. A contour interval at 50% of background mean is usually used but in this case it is much lower in order to pick out any low level detail. With this technique higher contour intervals may be found between actual data points but this is usual since the computer interpolates immediate values based on the general average values measured in the area. The contour map (Fig. 22) shows small +'s at the locations where the field cups were located. Included is a map (Fig. 23) showing the Track-Etch data with squares around statistically low order anomalous points.

RESULTS AND CONCLUSIONS

1. By definition, no radon anomalies (values greater than 3 standard deviations) were found during the survey. A low-order 2-point Track-Etch anomaly is co-incident with a soil geochemical anomaly at 11000 mE/11500 mN at the north end of the DB claims. A low order single point anomaly is also located at the same stratigraphic horizon just east of the north end of Little Fish Lake. Soil geochemistry is low here but a soil anomaly of 9.5 ppm U is located at the break in shape immediately to the north at a similar stratigraphic horizon. Only slightly higher radon values are noted over the soil anomaly east of the central part of the BM claims.
2. All three anomalous radon values are associated with carbonaceous and shaley-sandstones of the Kettle River Formation. Enhanced scintillometer readings were also found here.
3. Track-Etch results are generally below background (31T/mm^2) over Anarchist Group rocks. The single high soil value of 16.0 ppm uranium in the north western part of the BM claims was not covered by the radon survey. The soil anomaly in the southwest part of the BM claims had one Track-Etch cup placed on it but it was only 6T/mm^2 . The interpretation that this anomaly reflects metal deposition from ground water at the break in slope appears valid.
4. The U geochemistry and high radon background is associated with favourable geology, but appears to reflect enhanced metal levels in the carbonaceous shaley-sandstones.

5. Soil Geochemistry and the Track-Etch method appear to be an efficient way of evaluating this property.

RECOMMENDATIONS

Further evaluation of the U anomalies on the claims would require precision drilling. Although these particular sandstones could provide an excellent host for mineralization, the limited aerial extent of these rocks, the magnitude of the anomalies and the radioactivity discourages further follow-up at this time, unless mineralization is found in the area.

Respectfully submitted

S. J. Hoffman
Geochemist

G.J. Campbell
Geologist

REFERENCES

Little, H.W., 1961 Geology Kettle River, (West Half) B.C.
1" = 4 mi., Map 15 - 1961.

Monger, J.W.H., 1968 Early Tertiary Stratified Rock, .
Greenwood Map - Area (82E2) B.C.
GSC Paper 67 - 42

Appendix 1

Geochemical Data

Record No.	Sample Type Year Proj. Code	Sample No.	Grid East	Grid North	NTS Map Sheet	Horizon Soil Type	Scint. Counts	U (ppm)	Cu (ppm)	Pb (ppm)	Ni (ppm)	Mo (ppm)
1	5077301A	0008 YF	11000	10000	82E03 672E02	448 51BMB	2 100		0.3	21	23	1
2	5077301A	0009 YF	10900	10000	82E03 271E02	423 29BMB	2 130 15 W	0.1	14	21		2
3	5177301A	0010 YF	10800	10000	82E03 771E02	455 61BMB	2 120		0.5	14	19	2
4	5077301A	0011 YF	10800	10000	82E03 771E02	425 30BMB	2 120		0.7	12	15	1
5	5077301A	0012 YF	10700	10000	82E03 771E02	430 35BMB	2 140		0.4	15	21	2
6	5177301A	0013 YF	10600	10000	82E03 271E02	245 48C1R	2 160 5SW	0.9	15	21		2
7	5077301A	0014 YF	10600	10000	82E03 271E02	219 23C1R	2 160 5SW	0.7	14	21		1
8	5077301A	0015 YF	10500	10000	82E03 271E02B	425 29C1R	2 150 30 R	0.3	14	20		1
9	5177301A	0016 YF	10400	10000	82E03 271E02	450 51C1R	2 150 15 W	1.1	20	23		3
10	5077301A	0017 YF	10400	10000	82E03 271E02	430 35BMB	2 150 15 W	0.7	15	23		2
11	1077301A	0018 YF	10350	10000	82E03 6 R 2B	3 5 0305	2 140		0.8	20	25	2
12	5077301A	0019 YF	10985	10100	82E03 271E02	612 20BMB	2 125 5 S	0.3	15	16		1
13	5177301A	0020 YF	11000	10200	82E03 271E02	440 50BMB	2 120 15 W	0.3	17	21		2
14	5077301A	0021 YF	11000	10200	82E03 271E02	7 9 16BMB	2 120 15 W	0.3	16	23		1
15	5077301A	0022 YF	10900	10200	82E03 371E02	4 6 14C1R	2 110 20 W	0.4	16	21		1
16	5177301A	0023 YF	10400	10200	82E03 271E02	460 45C1R	2 100 5 W	0.7	15	18		2
17	5077301A	0024 YF	10800	10200	82E03 271E02	4 7 13C1R	2 100 5 W	0.3	11	16		2
18	5077301A*	0025 YF	10700	10200	82E03 371E02	4 8 16C1R	2 140 45 W	0.3	14	18		2
19	5077301A*	0026 YF	10700	10200	82E03 371E02	4 8 16C1R	2 140 45 W	0.2	13	23		1
20	5177301A	0027 YF	10600	10200	82E03 271E02	445 50C1R	2 145 15 S	0.9	20	25		2
21	5077301A	0028 YF	10600	10200	82E03 271E02	413 16C1R	2 145 15 S	0.3	15	19		2
22	5077301A	0029 YF	10500	10200	82E03 371E02B	415 19C1R	2 115 50 W	0.4	12	16		1
23	6177301A	0030 YF	10400	10200	82E03 301E08B	TF	2 100 50 W		395	32		8
24	5077301A	0031 YF	10250	10225	82E03 371E02	4 7 13BMB	2 115 35 S	0.7	12	21		1

Record No.	Sample Type Year	Proj. Code	Sample No.	Grid East	Grid North	NTS Map Sheet	Horizon Soil Type	Scint. Counts	U (ppm)	Cu (ppm)	Pb (ppm)	Ni (ppm)	Mo (ppm)
25	5177301A	0032	YY	10135	10240	82E01 771E02	447 50BMB	2 130	0.7	32	19		1
26	5077301A	0031	YY	10135	10240	82E01 771E02	414 20BMB	2 130	0.3	8	17		1
27	5077301A	0034	YY	10000	10235	82E01 271E02	412 20C1B	2 130	BSZ 0.5	15	16		1
28	5177301A	0035	YY	10000	10100	82E01 771E02	442 50C1B	2 105	2.3	15	23		2
29	5077301A	0036	YY	10000	10100	82E01 771E02	4 7 15C1R	2 105	0.4	13	18		2
30	5177301A	0037	YY	10000	10000	82E03 271E02	453 55BMB	2 120	55E 0.8	14	20		1
31	5077301A	0038	YY	10000	10000	82E01 271E02	425 30BMB	2 120	55E 0.6	15	22		2
32	5077301A	0039	YY	10100	10000	82E03 271E02	420 21BMB	2 115	5 E 0.5	14	17		1
33	5177301A	0040	YY	10200	10000	82E01 271E02	448 50BMB	2 120	15 E 0.5	12	13		1
34	5077301A	0041	YY	10200	10000	82E01 271E02	420 23BMB	2 140	10 E 0.3	11	16		1
35	5077301A	0042	YY	10200	10000	82E03 271E02	410 15BMB	2 140	10 E 0.2	18	15		1
36	5077301A	0043	YY	11000	10275	82E01 271E02	415 20C1R	2 120	5W 0.4	15	20		1
37	5177301A	0044	YY	11000	10375	82E03 271E02	445 48C1R	2 125	5 W 1.2	18	21		2
38	5077301A	0045	YY	11000	10375	82E01 271E02	419 23C1R	2 125	5 W 0.8	16	23		2
39	5077301A	0046	YY	10900	10375	82E03 271E02	414 17BMB	2 115	0.3	11	16		2
40	5177301A	0047	YY	10800	10375	82E01 241E02B	447 50C1R24	2 110	10 W 0.3	12	22		2
41	5077301A	0048	YY	10800	10375	82E03 241E02B	425 30C1R24	A2 110	10 W 0.3	11	25		1
42	5077301A	0049	YY	10710	10375	82E03 291E04B	415 20C1R	R2 165	5 W 0.3	11	17		3
43	1077301A	0050	YY	10700	10375	82E01 4 E 2D	2 1 0104L	11R2 160	5 S 0.8	17	22		2
44	5177301A*	0051	YY	10600	10375	82E03 141E02	653 56C1R	2 140	1.2	9	13		2
45	5077301A*	0052	YY	10600	10375	82E03 141E02	622 30C1R	2 140	0.8	9	16		1
46	5177301A*	0053	YY	10600	10385	82E03 141E02	652 56C1R	2 130	0.5	10	12		1
47	5077301A*	0054	YY	10600	10305	82E01 141E02	625 28C1R	2 130	0.5	11	17		1
48	5077301A	0055	YY	10500	10375	82E03 271E02	411 15C1R	2 110	5 S 0.2	6	15		2
49	5177301A	0056	YY	10400	10375	82E01 371E04B	948 50C1R311	A2 120	45 W 1.7	21	23		2
50	5077301A	0057	YY	10400	10375	82E01 371E06B	915 20C1R311	A2 120	45 W 0.7	25	22		1
51	5077301A	0058	YY	10300	10275	82E01 472E06	415 17BMB	A2 110	2.1	18	32		1
52	5177301A	0059	YY	10200	10375	82E01 371E02	349 52BMB	2 140	40 E 1.9	12	21		1
53	5077301A	0060	YY	10200	10375	82E01 371E02	310 22C1R	2 140	40 E 1.2	9	15		1
54	5077301A	0061	YY	10100	10375	82E03 271E02	315 20C1R	2 125	5 E 1.3	15	25		1
55	5177301A	0062	YY	10000	10375	82E03 271E02	447 50BMB	2 145	5 E 0.8	14	22		1
56	5077301A	0063	YY	10000	10375	82E03 271E02B	413 168MB27P	2 145	5 E 0.7	11	23		2
57	5177301A	0064	YY	10000	10500	82E03 271E02B	410 158MB27P	2 120	5 E 0.4	9	14		1
58	5177301A	0065	YY	10000	10600	82E03 271E02	412 18C1R	2 120	10 E 0.4	11	15		1
59	5077301A	0066	YY	10000	10600	82E03 271E02	412 18C1R	2 120	10 E 0.7	9	16		2
60	5077301A	0067	YY	10100	10600	82E03 371E02	312 19C1R	2 120	3009 0.5	6	18		2
61	5177301A	0068	YY	10200	10600	82E03 371E02	440 50C1R	2 130	30 E 1.2	17	22		1
62	5077301A	0069	YY	10200	10600	82E03 371E02	4 8 19C1R	2 130	30 E 1.0	11	16		1
63	6277301A	0070	YY	10225	10625	82E03 471E02B	9						1
64	5077301A	0071	YY	10300	10600	82E03 592E04B	315 208MB321	2 120	1.8	11	26		2
65	5177301A	0072	YY	10400	10600	82E03 171E02	342 51C1R	2 135	40SW 0.7	11	18		2
66	5177301A	0073	YY	10400	10600	82E03 171E02	316 21C1R	2 135	40SW 0.8	12	22		1
67	5077301A	0074	YY	10500	10600	82E03 771E02	413 21BPP	2 125	0.6	10	20		1
68	5177301A	0075	YY	11020	10750	82E03 241E02	440 55BMB	2 155	5 W 0.9	15	24		2
69	5077301A	0076	YY	11020	10750	82E03 241E02	415 25BMB	2 155	5 W 0.4	12	23		2
70	5077301A	0077	YY	10920	10750	82E03 271E02	415 20BMB	2 135	55E 0.4	12	18		2
71	5177301A	0078	YY	10825	10750	82E03 271E02	445 55BMB	2 140	10 W 0.7	10	23		1
72	5077301A	0079	YY	10825	10750	82E03 271E02	420 25BMB	2 140	0.9	7	15		1
73	5077301A	0080	YY	10725	10750	82E03 271E02	445 55BMB	2 130	5 W 0.6	9	16		1
74	5177301A	0081	YY	10625	10750	82E03 271E02	445 55BMB	2 130	5 W 0.5	13	17		1
75	5077301A	0082	YY	10625	10750	82E03 271E02	415 25BMB	2 130	5 W 0.5	11	15		2
76	5077301A	0083	YY	10525	10750	82E03 271E02	410 15C1R	2 135	5SW 0.2	7	12		1
77	5177301A	0084	YY	10425	10750	82E01 171E02	445 55BMB	2 125	0.2	10	15		1
78	5077301A	0085	YY	10425	10750	82E03 171E02	410 20BMB	2 125	0.6	9	15		2
79	5177301A	0086	YY	10325	10750	82E03 371E02	415 25C1R	2 155	35 W 0.3	12	16		2
80	1077301A	0087	YY	10225	10750	82E03 2 E 4B	2 5 0205	2 100	2 S 0.9	15	20		1
80.5	5177301A	0088	YY	10125	10750	82E03 371E02	355 60BMB	2 135	30 E 1.2	15	20		0
81	5077301A	0089	YY	10125	10750	82E03 371E02	315 25BMB	2 135	30 E 0.5	6	15		1
82	5077301A	0090	YY	10000	10750	82E03 271E02	415 20	2 130	0.5	16	22		2
83	5177301A	0091	YY	10000	10900	82E03 371E02	355 60BMB	2 130	35NE 1.5	20	21		2

Record No.	Sample Type Year Proj. Code	Sample No.	Grid East	Grid North	NTS Map Sheet	Horizon Soil Type	Scint. Counts	U (ppm)	Cu (ppm)	Pb (ppm)	Ni (ppm)	Mo (ppm)
364	50763004	200089	11 19350	21900	82E03 251 192	315 25DBB2	HBR 5 155W	0.8	13	24	13	1
365	50763004	200090	11 19350	22350	82E03 251 192	310 20BBB2	HBR 51 3W	1.0	13	31	12	1
366	50763004	200091	11 19350	22750	82E03 251 192	310 20BBB2	HBR 5 3W	0.8	18	30	10	1
367	50763004	200092	11 19350	23200	82E03 251 19	320 30BCK2	LBR 5 35W	2.6	22	25	12	1

END OF FILE
 TRO.44 DR=0 \$1.52, \$1.637
 1618 RELEASED.

APPENDIX 2
Statement of Costs - DB

1. <u>Geochemical Survey</u>	\$
Geologist - G. Campbell - May 21, 27, 28 3 man days at \$81.26/day	.. 243.78
Geologist - G. Heavysege - May 21, 27, 28, June 14 4 man days @ \$ 56.06/day	.. 224.24
Geologist - R. Skeries - May 21, 27, 28, June 14 4 man days @ \$51.39 per day	.. 205.56
Geologist - D. Dean - May 21, 27, 28, June 14 4 man days @ \$46.72 per day	.. <u>186.88</u>
	860.46 =====
2. <u>Geophysical Survey</u>	
Geologist - G. Campbell - May 17, 26 2 man days @ \$81.26/day	.. 162.52
Geologist - G. Heavysege - May 17, 22, 26 3 man days @ \$ 56.06 per day	.. 168.18
Geologist - R. Skeries - May 17, 26 2 man days @ \$51.39 per day	.. 102.78
Geologist - D. Dean - May 17, 22, 26 3 man days @ \$46.72 per day	.. <u>140.16</u>
	573.64 =====
3. <u>Food and Accommodation</u>	
26 man days @ \$19.00 per man day	.. <u>494.00</u>
4. <u>Sample Analyses (Vangeochem.Labs.Limited)</u>	
(i) Total soil samples collected = 94 @ \$6.35 per sample	.. 596.90
(ii) Rock samples = 2 @ \$7.25	.. <u>14.50</u>
	<u>611.40</u>

Appendix 2 (Continued)

2.

5. Transportation (Car Rentals)

GMC Jimmy rental	- May 9 to 19th (11 days)	\$ <u>221.07</u>
------------------	------------------------------	------------------

6. Report Preparation 150.00

7. Miscellaneous

Track Etch cup Service (Terradex Corp.)		
85 cups (including analyses and plotting)		
@ \$20.00 per cup.		1,700.00
		=====

TOTAL: \$ 4,610.57

November 30, 1977.

Statement of Costs - BM

(16 Units)

1. Geochemical Survey

	\$
Geologist - G. Campbell - May 29, June 1-9 incl. 10 man days @ \$81.26 per day ..	812.60
Geologist - G. Heavysege - May 29, June 1-9 incl. 10 man days @ \$56.06 per day ..	560.60
Geologist - R. Skeries - May 29, June 1-9 incl. 10 man days @ \$51.39 per day ..	513.90
Geologist - D. Dean - May 29, June 1-9 incl. 10 man days @ \$46.72 per day ..	<u>467.20</u>
	<u>2,354.30</u>

2. Geophysical Survey

Geologist - G. Campbell - May 18,19,20,22,23,25, June 10. 7 man days @ \$81.26 per day ..	568.82
Geologist - G. Heavysege - May 18, 19, 20, 23,25, June 10, 13. 7 man days @ \$56.06 ..	392.42
Geologist - D. Dean - May 18, 19, 20, 23, 25, June 10, 13. 7 man days @ \$46.72 per day	327.04
Geologist - R. Skeries - May 18, 19,20,22,23,25, June 10, 13. 8 man days @ \$51.39 per day	<u>411.12</u>
	<u>1,699.40</u>

3. Food and Accommodation

71 man days @ \$19 per man day 1,349.00

4. Sample Analyses (Vangeochem Labs.Limited)

(i) Total soil samples = 251 @ \$6.35 per	1,593.85
(ii) Rock samples = 4 @ \$7.25 per	<u>29.00</u>
	<u>1,622.85</u>

Statement of Costs
BM (16 Units)

2.

5. Transportation (Car Rentals)

GMC Jimmy - rental - May 20 - June 16 incl.
28 days \$ 562.71

6. Report Preparation \$ 150.00

7. Miscellaneous

Track Etch Cup Service (Terradex Corp)
85 cups (including analyses and plotting
@ \$20 per cup \$1,700.00

Total .. 9,438.36

November 30, 1977

List of Qualifications

Gregory J. Campbell

B.Sc 1974 Laurentian University (Hons.Geology)

M.Sc Est.1978 Laurentian University (Economic Geology)

VANA RENTALS LTD.

595 EAST BROADWAY
VANCOUVER, B.C.

Telephone:
873-4447

ALL CORRESPONDENCE AND
REMITTANCES MUST SHOW
THIS RENTAL AGREEMENT
NUMBER.

RENTAL AGREEMENT No 8186

B. P. MINERALS		MAKE AND MODEL G.M.C.		CAR RETURNED AT		DATE AND TIME IN: JUN 30 1977 1 PM	
25 ADELAIDE ST. EAST		LICENSE NUMBER JIMMY		CAR RENTED AT		DATE AND TIME OUT: MAY 9 1977 1 PM	
TORONTO, ONTARIO		UNIT NUMBER 183		DESTINATION B.C.		CAR TO BE RETURNED ON: A/R DAY MO. YEAR	
# 212							
TYPE OF CHARGE CARD		EXPIRES		CAR WILL BE USED IN PROVINCES OR STATES OF B.C.		AUTHORIZED EXTENDED BY DAY MO. YEAR	
PURCHASE ORDER NO.							
CARRIER NO. GREG CAMPBELL		MILEAGE DETERMINED BY FACTORY INSTALLED ODOMETER		HOURS @			
OWNER'S LICENSE C0368-		PROV. AGE EXPIRES ONT 30 578		21 DAYS @ 18.33		384.95	
LOCAL ADDRESS 30254-90530		MILEAGE IN		WEEKS @			
		MILEAGE OUT 11503		1 550.00 MONTH		550.00	
		MILES DRIVEN		1500 N/C \$ PER MILE			
PHONE NO.		DEPOSIT		12+ OVER			
COND DRIVER		\$ NIL		JACKALL SPARE ETC			
C. NO.		\$		TOTAL TIME & MILEAGE CHARGES		934.95	
		\$					
		\$					

COLLISION PROTECTION
BY SIGNING THIS RENTAL AGREEMENT, CUSTOMER AGREES TO PAY A FEE STIPULATED BELOW AND TO WAIVE ALL CLAIMS OF DAMAGE BY COLLISION EXCEPT AS SPECIFIED BELOW TO VEHICLE WHILE IT IS USED, OPERATED OR DRIVEN IN CONFORMANCE WITH THIS RENTAL AGREEMENT. BUT NOT WITHSTANDING PAYMENT OF SAID FEE CUSTOMER SHALL BE FULLY LIABLE FOR ALL COLLISION DAMAGE IF VEHICLE IS USED, OPERATED OR DRIVEN IN VIOLATION OF ANY OF THE PROVISIONS OF THIS RENTAL AGREEMENT.
I AGREE TO PAY:

PER DAY OR FRACTION THEREOF FOR 100.00 DEDUCTIBLE COLLISION INITIALS bc

50.00 / MONTH
CUSTOMER SUPPLIES GAS.
MINIMUM CHARGE ONE DAY PLUS MILEAGE.
RENTER IS LIABLE FOR ALL PARKING AND TRAFFIC VIOLATIONS.
RENTER MUST HAVE READ AND UNDERSTAND THE TERMS AND CONDITIONS ON THE REVERSE SIDE OF THIS AGREEMENT AND AGREE THERE TO.

SIGNATURE: *Greg Campbell*

EMPLOYED WITH: _____ NOW LONG: _____ OCCUPATION: _____

EMPLOYER'S ADDRESS: _____ PHONE: _____

REFERENCE: _____ ADDRESS: _____ PHONE: _____

REFERENCE: _____ ADDRESS: _____ PHONE: _____

WEIGHT: _____ COLOR OF EYES: _____ COLOR OF HAIR: _____

SOURCE	DOCUMENT / UNIT	1831
31		
Revenue - Cars		934.95
Revenue - Trucks		654.95
Tax 7%		
Collision Damage Waiver - Cars		
Collision Damage Waiver - Trucks	84.80	
Gasoline	F	
Amount Due	1085.24	
Less Deposit		
Less Maintenance - Cars		
Less Maintenance - Trucks		
Net Due:	1085.24	
Charge Customer No.	I 103524	
Cash Report No.	I	
PREPARED BY:	REFUND RECEIVED (SIGNATURE)	CASH CHECK CREDIT
<i>RE</i>		
		COMPUTED BY <i>RE</i>

EXPLORATION RECEIVED
SEP 15 1977

BP MINERALS LIMITED
APPROVED FOR PAYMENT
CHARGE 850.50 / 425
DATE B. D. MOSSNLS

Urgent Memo
18/

SEP 16 1977
Invoiced to 39000

Corporation
mpic Boulevard
reek, California 94596
(415) 2545 Telex: 33-7793

TERRADEX

B P Minerals Limited
Suite 212
25 Adelaide Street East
Toronto, Ontario M5C 1Y2
Canada

June 27, 1977
Invoice #1698-77
Net 30 days

Billing for the balance of a 500 cup Track Etch Service Program.

B P Purchase order #40012

Full basic cost of above program = US\$8900.00

Already billed on basic charges = US\$8090.10

Balance due = US\$ 809.90

plus extra charge for an additional group with map 450.00

TOTAL DUE = US\$1259.90

BP MINERALS LIMITED

APPROVED FOR PAYMENT
CHARGE 85050/472
DATE R.D. MOSS

JUL 4 - 1977

BP MINERALS LIMITED
100% BP PROJECT

RECEIVED
JUL 4 - 1977



VANGEOCHEM LAB LTD.

604-988-2172

1521 PEMBERTON AVE., NORTH VANCOUVER, B.C.
CANADA

IN ACCOUNT WITH:

B.P. Minerals Ltd.
#212-25 Adelaide Street, East,
Toronto, Ontario.
M5C 1W5

INVOICE: 4168

DATE: June 10, 1977.

TERMS: NET 21 DAYS

FOR REPORT 77 20 007

PROJECT: 301

ORDER NO.

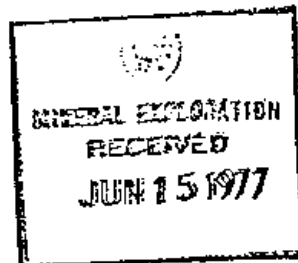
Job#77040

224 soil samples for preparation @\$0.35	\$ 78.40
224 soil samples trace analysis for Mo,Cu,Pb,Zn,Ni @\$3.25	\$ 728.00
224 soil samples trace analysis for U @\$2.75	\$ 616.00
Total:	<u>\$1422.40</u>

BP MINERALS LIMITED
100% BP PROJECT

BP MINERALS LIMITED

APPROVED FOR PAYMENT
CHARGE 85050 / HSI
DATE 17/6/77 INTLS



50
1877



VANGEOCHEM LAB LTD.

604-988-2172

1521 PEMBERTON AVE., NORTH VANCOUVER, B.C.
CANADA

IN ACCOUNT WITH:

B. P. Minerals Ltd.
212 - 25 Adelaide Street E.
Toronto, Ontario
MSC 1Y2

INVOICE: 4187

DATE: June 20, 1977

TERMS: NET 21 DAYS

FOR REPORT 77 20 009
Job# 77 055

PROJECT: 301

ORDER NO.

3 rock samples for preparation	@\$1.25	\$ 3.75
6 soil samples for preparation	@\$0.35	\$ 2.10
6 trace analysis for Mo, Cu, Pb, Zn, Ni	@\$3.25	\$19.50
1 trace analysis for Mo, Cu, Pb, Zn, Ni, Mn	@\$3.75	\$ 3.75
2 trace analysis for Ni	@\$1.25	\$ 2.50
9 trace analysis for U	@\$3.00	\$27.00
	Total:	<u>\$58.60</u>

MINERAL EXPLORATION
RECEIVED
JUN 22 1977

BP MINERALS LIMITED

APPROVED FOR PAYMENT
CHARGE 28050/H51

DATE 22/06/77 INTLS

BP MINERALS LIMITED
100% BP PROJECT

50

18/77



VANGEOCHEM LAB LTD.

604-988-2172

1521 PEMBERTON AVE., NORTH VANCOUVER, B.C.
CANADA

IN ACCOUNT WITH:

INVOICE: 4178

DATE: June 16, 1977

TERMS: NET 21 DAYS

B.P. Minerals Ltd.
212 - 25 Adelaide Street E.
Toronto, Ontario M5C 1Y2

FOR REPORT 77 20 008
Job# 77 045

PROJECT: 301

ORDER NO.

15 soil samples for preparation	@\$0.35	\$ 5.25
3 rock samples for preparation	@\$1.25	\$ 3.75
17 trace analysis for Cu,Pb,Ni,Mo,Zn	@\$3.25	\$ 55.25
1 trace analysis for Cu,Pb,Ni,Mo,Zn,Ag	@\$3.75	\$ 3.75
18 trace analysis for U	@\$3.00	\$ 54.00
	Total:	<u>\$122.00</u>

MINERAL EXPLORATION
RECEIVED
JUN 20 1977

BP MINERALS LIMITED
100% BP PROJECT BP MINERALS LIMITED

APPROVED FOR PAYMENT
CHARGE 3050 / 451
DATE 20/7/77 INTLS

50

18/77



VANGEOCHEM LAB LTD. 604-988-2172
 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C.
 CANADA

IN ACCOUNT WITH:

B. P. Minerals Ltd.,
 # 405 - 1199 West Pender Street,
 Vancouver, B. C.,
 V6E 2R1

INVOICE: 4153 ✓

DATE: May 27, 1977

TERMS: NET 21 DAYS

FOR REPORT 77 20 005
 Job # 77-031

PROJECT: 301

ORDER NO.

97 soil & silt samples for preparation	@ \$0.35	\$ 33.95
97 geochem analyses for Mo, Cu, Pb, Zn, Ni	@ \$3.25	315.25
97 geochem analyses for U	@ \$2.75	<u>266.75</u>
		Total <u>\$615.95</u>

BP MINERALS LIMITED
 100% BP PROJECT

BP
 MINERAL EXPLORATION
 RECEIVED
 MAY 31 1977

BP MINERALS LIMITED

APPROVED FOR PAYMENT
 CHARGE 85050 HSI.

DATE R.D. MOSSITLS

MAY 31 1977

Dist. 15/51 79

80

M. B. P. Edelweiss Inn & Motel Ltd.

172-2000, Wood, P.T.T. Rte. Moss;

IN ACCOUNT WITH EDELWEISS INN & MOTEL LTD.
TERMS ROCK CREEK, BRITISH COLUMBIA

	Balance - Paid, West - June 2, 1977				
	Ed. Campbell, 2nd Floor				
	Mr. Sierico, Mr. Heavens				
	17 Days		29	50	499.20
	17 Days Meals				213.20
	Tea Cases				36.05
	Taxes				1,354.05
	BP-MINERALS LIMITED				
	APPROVED FOR PAYMENT				
	CHARGE 85050 / H 31				
	DATE R. D. MOSS				
	EDELWEISS INN & MOTEL LTD.				
	ROCK CREEK, BRITISH COLUMBIA				
	JUN 8 1977				
	Regency J. Campbell				
	BP MINERALS LIMITED				
	100% BP. PROJECT				
	MINERAL EXPLORATION RECEIVED				
	JUN 8 1977				
	16/77				

50

M.B.P. MINERALS LTD

TORONTO; ONT. ATT: Mr MOSS

IN ACCOUNT WITH _____

EDELWEISS INN & MOTEL LTD
ROCK CREEK BRITISH COLUMBIA

TERMS _____

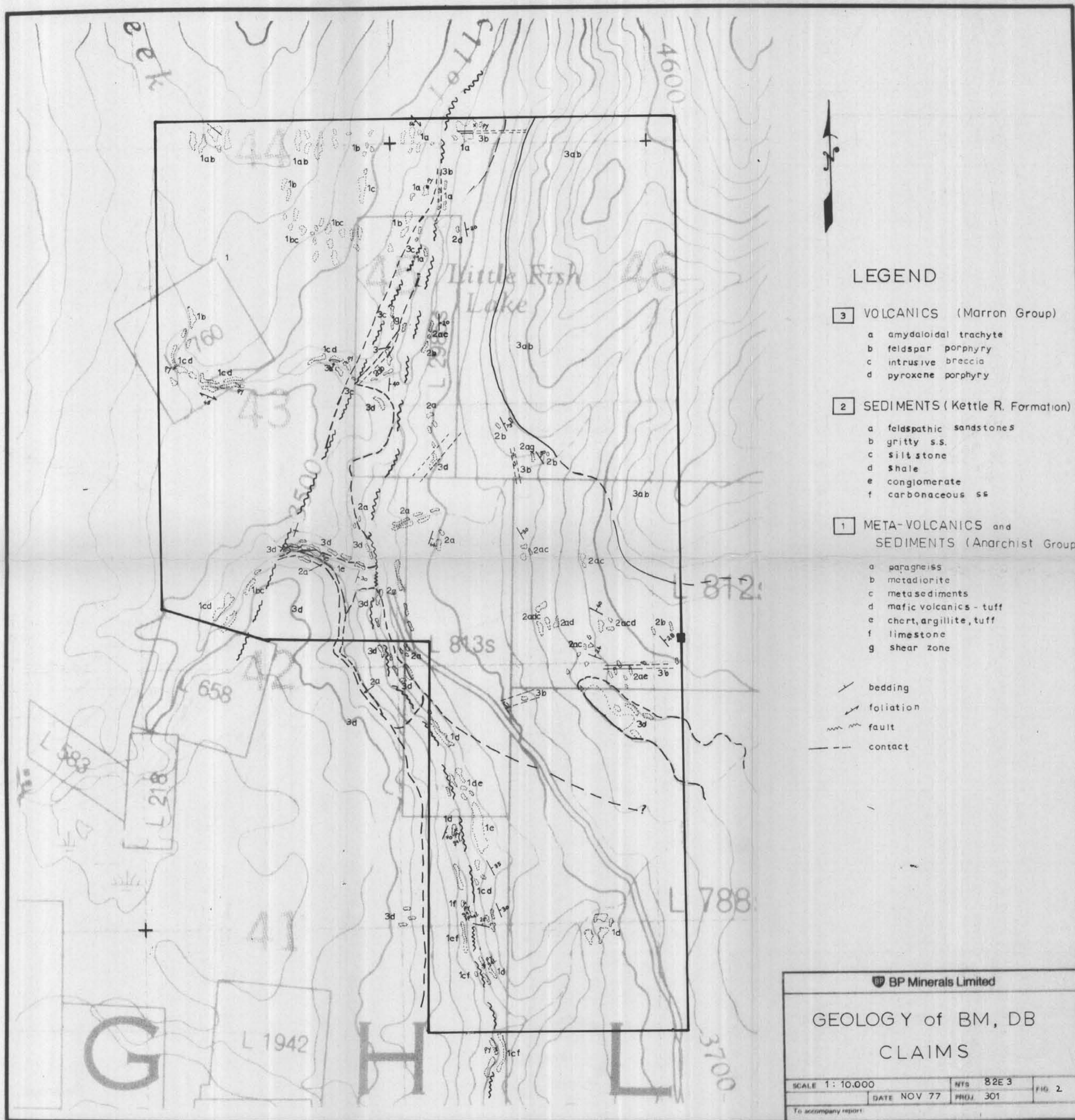
<u>Resort Band June 1 - June 16/1977</u>			
# 6;	15 Days	a \$14.70	\$220.50
# 3;	15 Days	a \$14.70	\$220.50
# 10;	6 Days	a \$12.60	\$75.60
<u>Meals</u>			\$798.95
<u>Telephone</u>			\$46.03
<u>Todae Amud;</u>			\$1361.58
<u>Thank you;</u>			
<u>V. Zimmerman</u>			
<u>EDELWEISS INN & MOTEL</u>		<u>BP MINERALS LIMITED</u>	
<u>ROCK CREEK BRITISH COLUMBIA</u>		<u>APPROVED FOR PAYMENT</u>	
<u>R.D. Moss</u>		<u>CHARGE CARD / 431</u>	
<u>R.D. Moss</u>		<u>DATE R.D. MOSS N.T.S.</u>	
<u>R.D. Moss</u>		<u>JUN 22 1977</u>	

BP MINERALS LIMITED
100% BP PROJECT

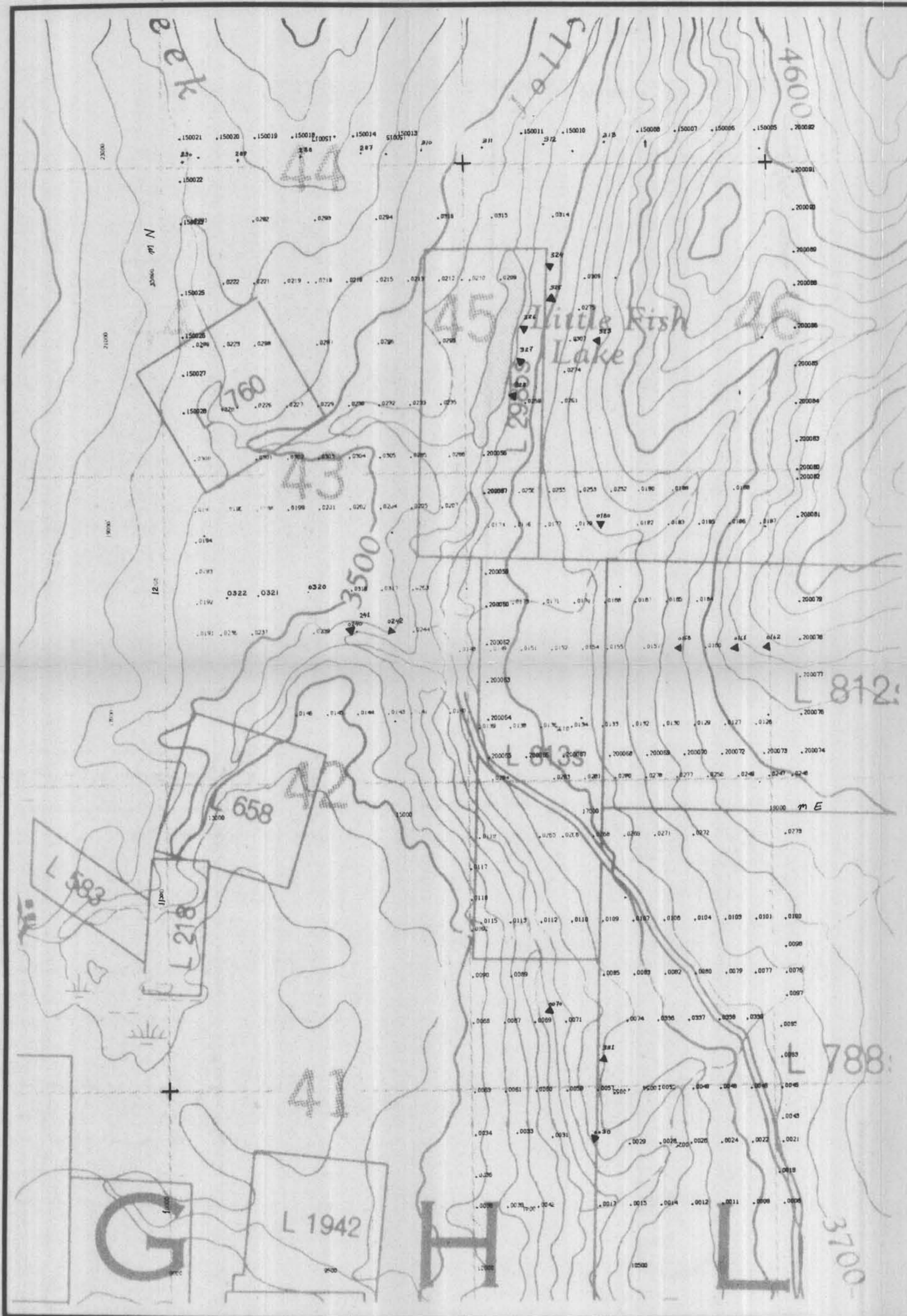
MINERAL EXPLORATION
RECEIVED
JUN 22 1977

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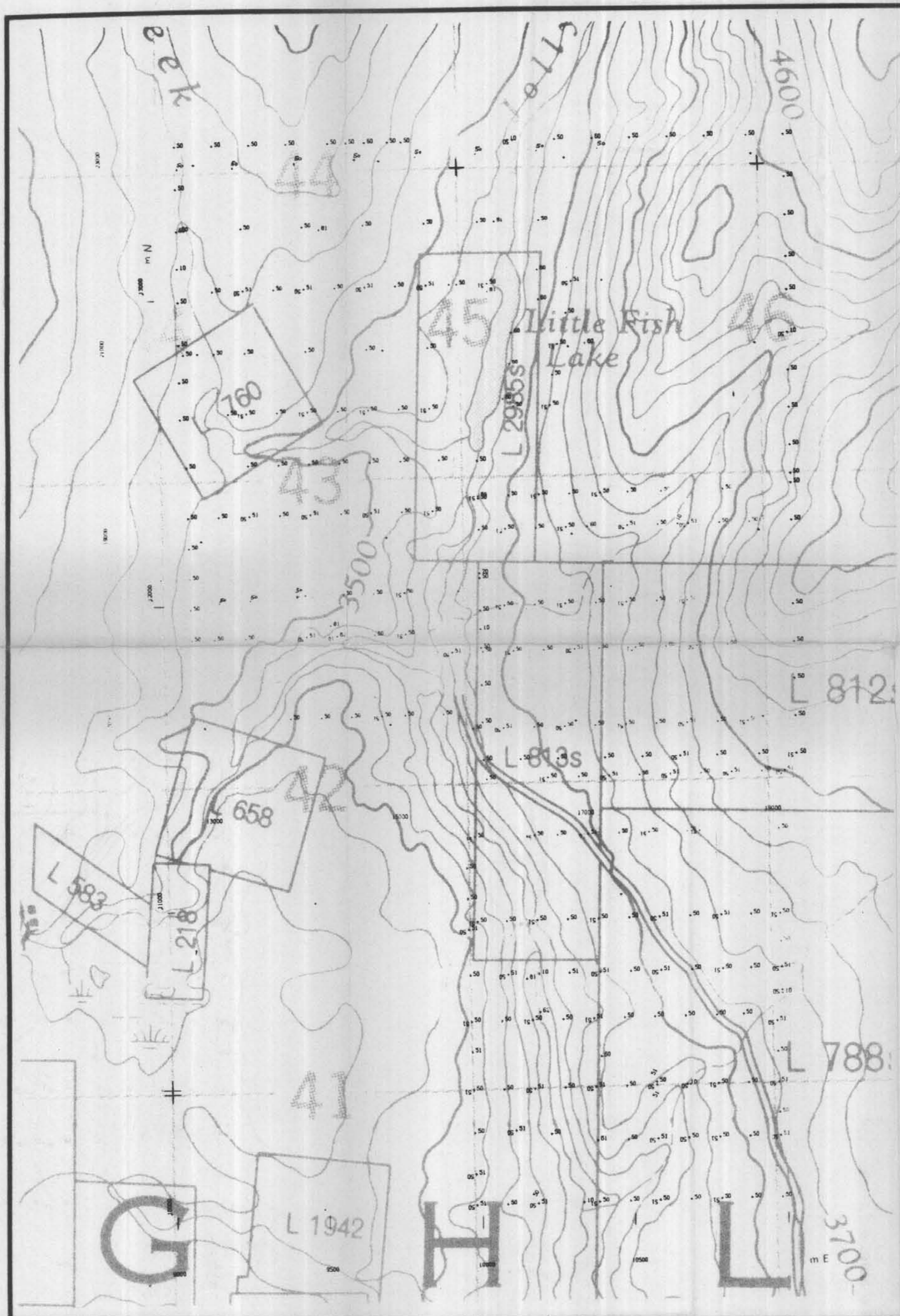
18/77



BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 SOIL SAMPLE LOCATION
 NTS 82E 3 SCALE 1 CM:100 METRES
 JULY 1977



BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82 E 43	FIG 3
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		



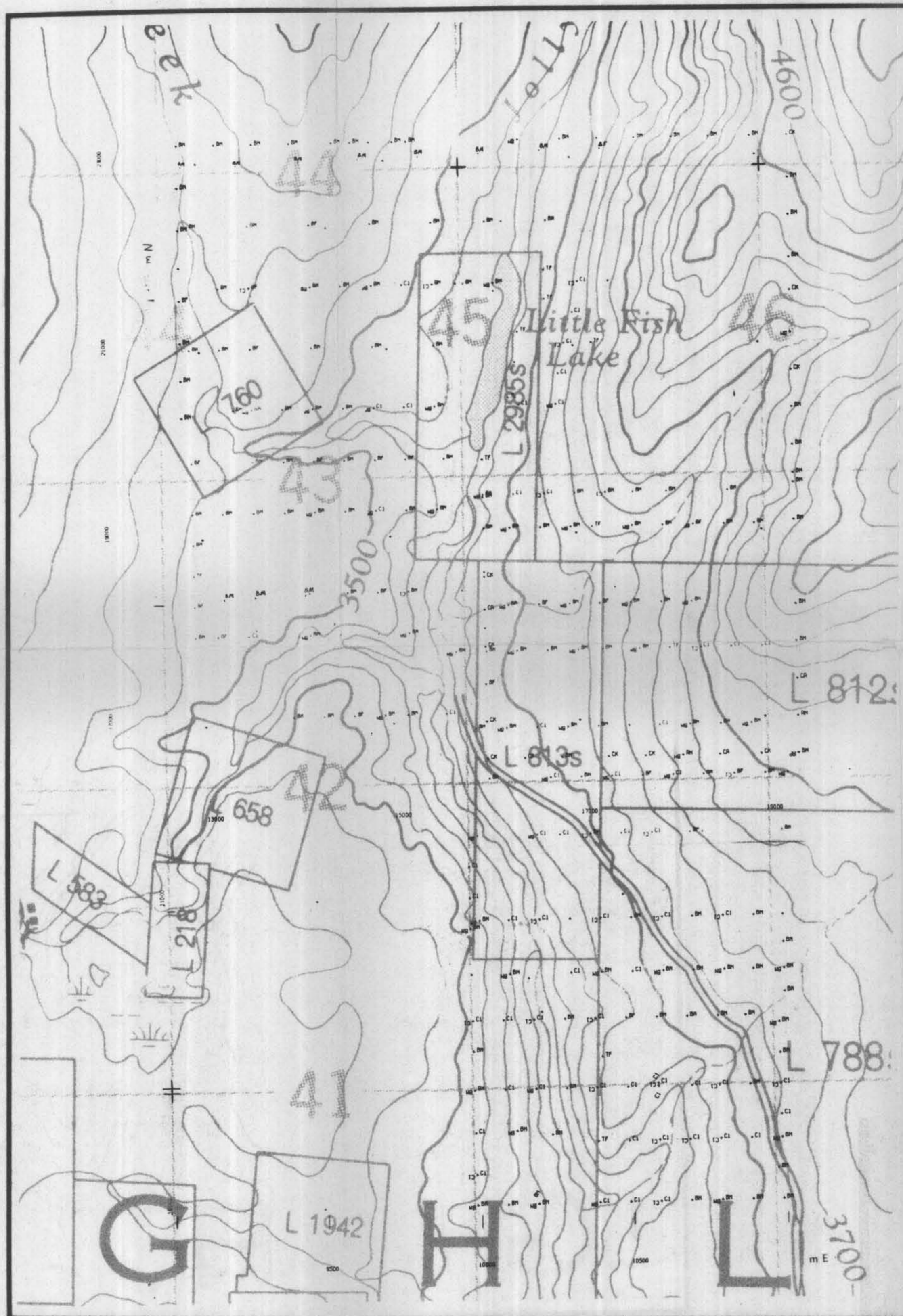
BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 SAMPLE TYPE
 NTS 82E 3 SCALE 1 CM:100 METRES
 JULY 1977

50 - Sample at 10-25cm depth
 51 - Deep Sample at 40-60cm

BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82 E 03	FIG.
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

Office File Copy

BPTR 77-96

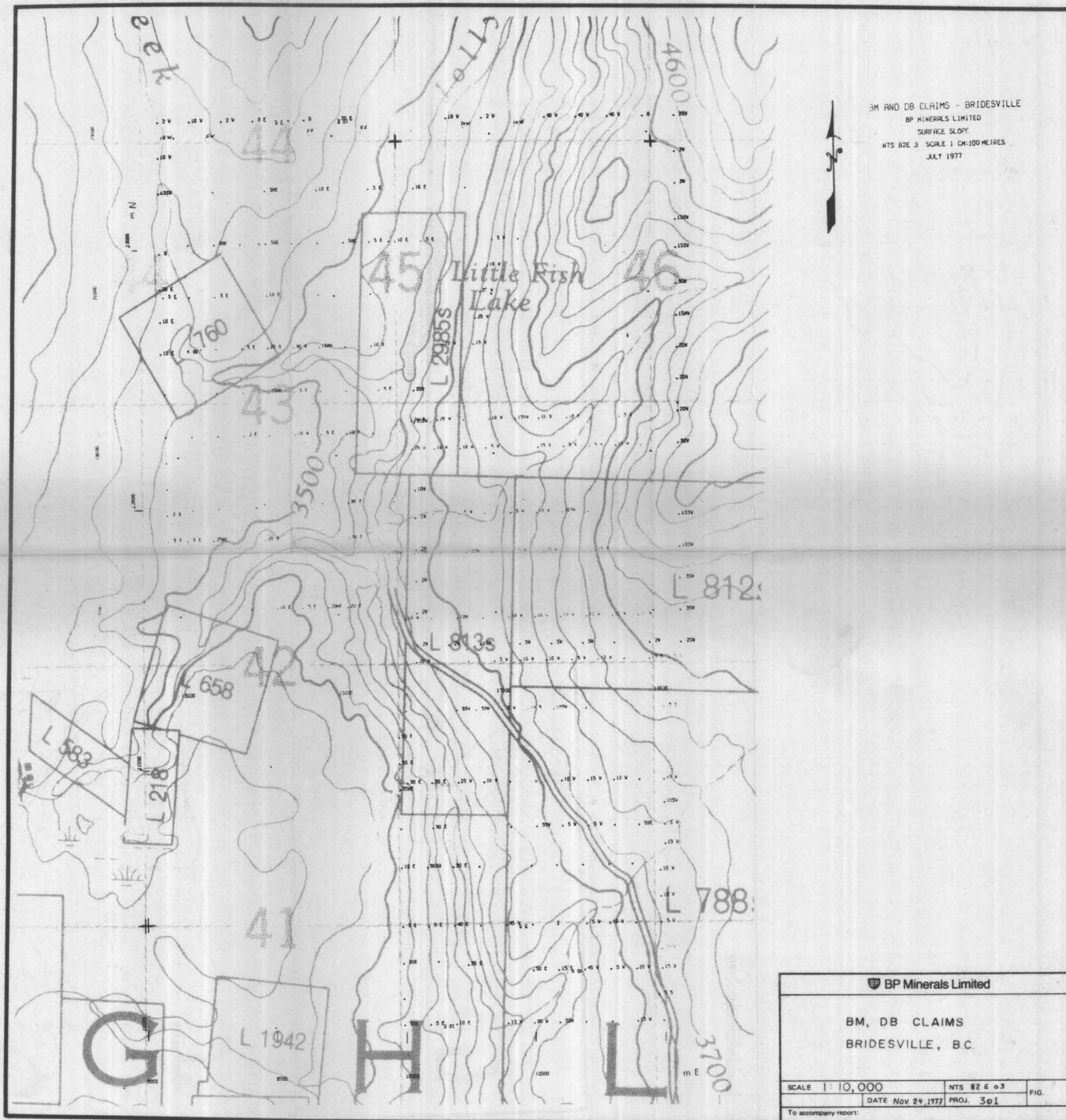


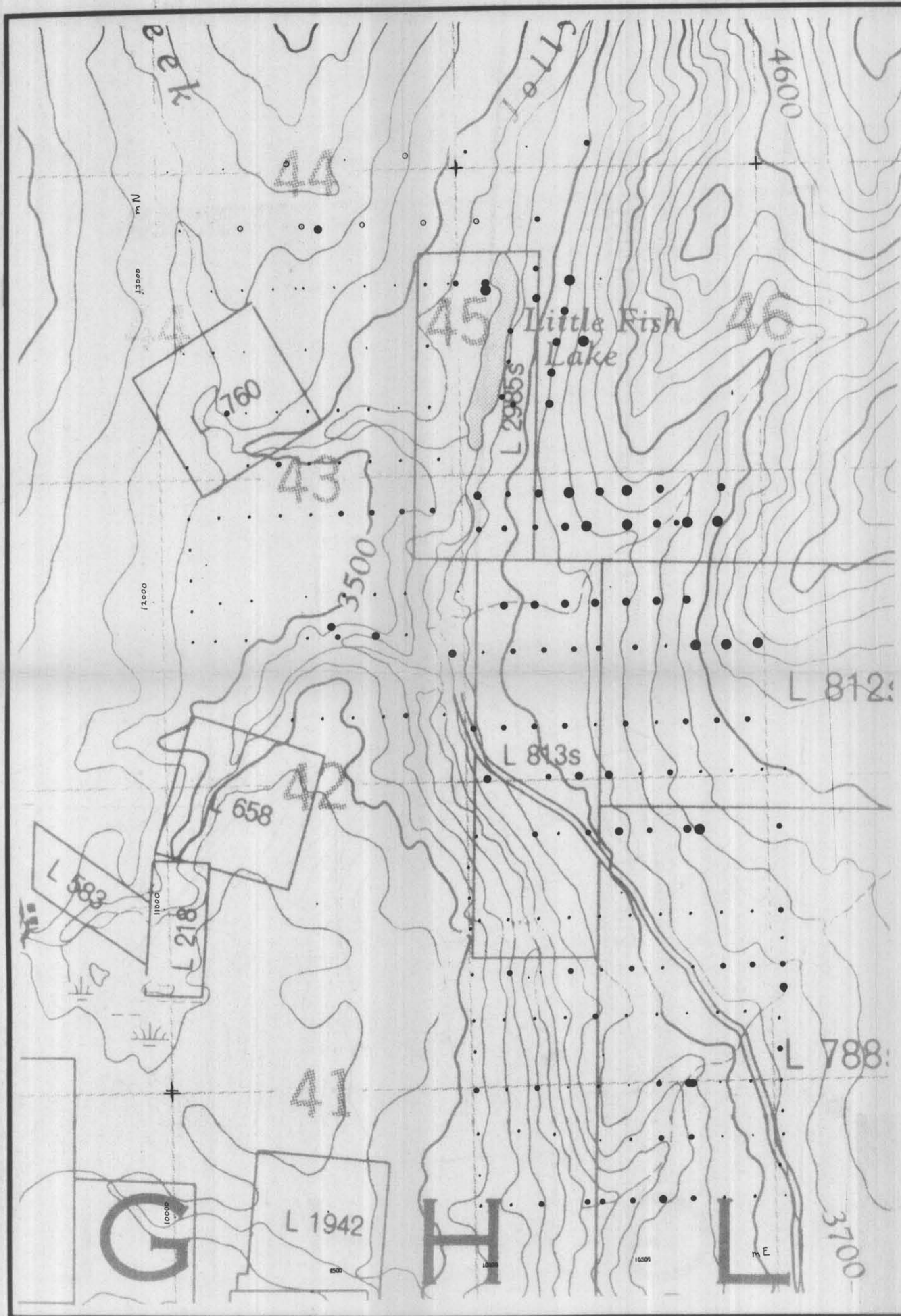
BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 SOIL HORIZON
 NTS 82 E 3 SCALE 1 CM:100 METRES
 JULY 1977

BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1 : 10,000	NTS 82 E 03	FIG.
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

Office File Copy.

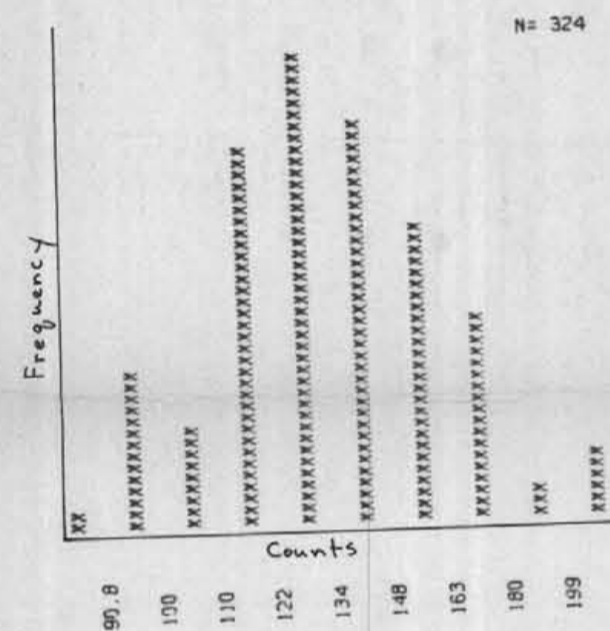
BPTR 77-98





BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 SCINT COUNTS
 NTS 82E 3 SCALE 1 CM 100 METRES
 JULY 1977
 LEGEND-PPN

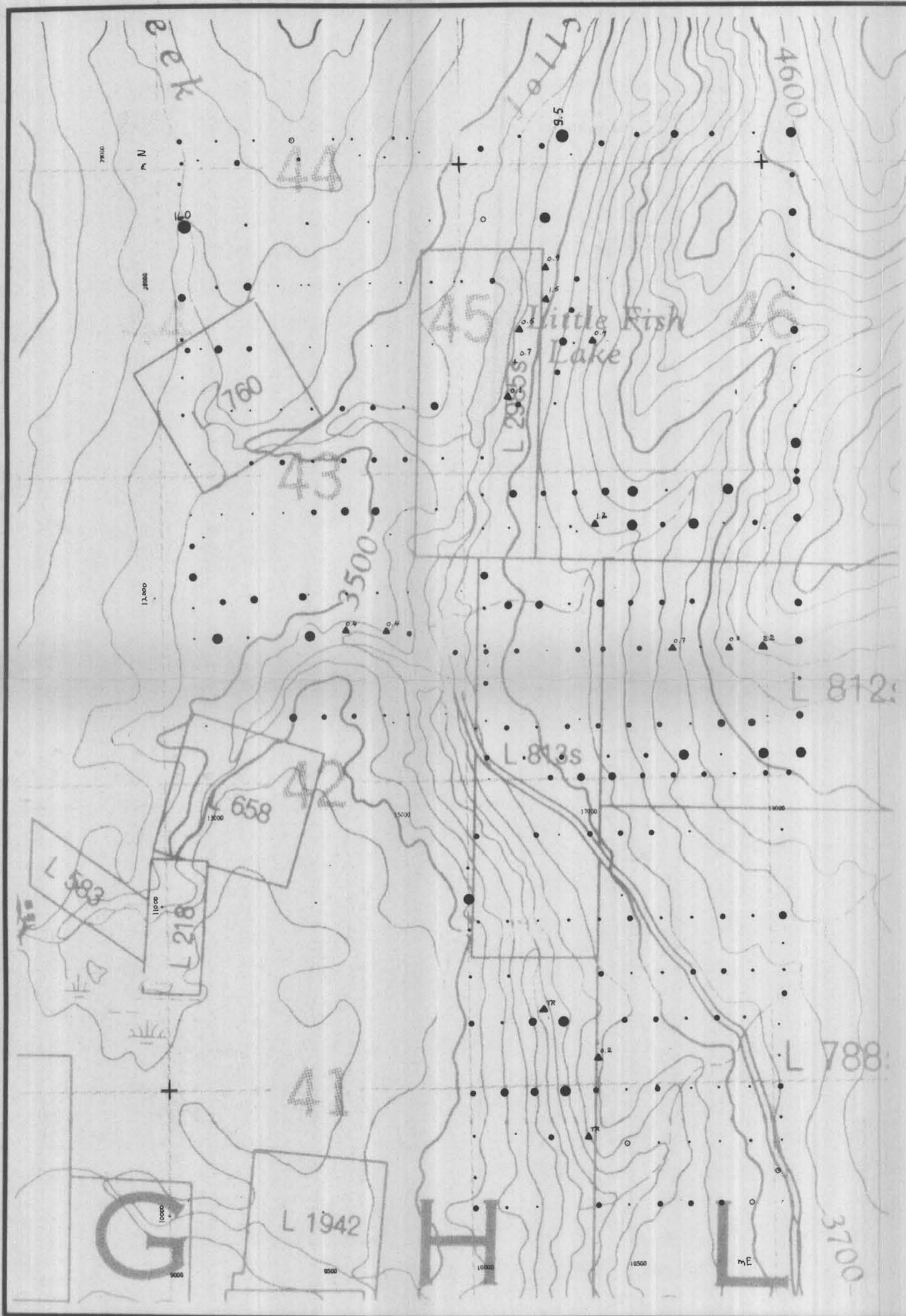
<96.0 ○
 96.0-113 ·
 113-133 ·
 133-156 ●
 156-184 ●
 184-369 ●
 >369 ●



BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1: 10,000	NTS 82 E 03	FIG 7
DATE Nov 24, 1977		PROJ. 301
To accompany report:		

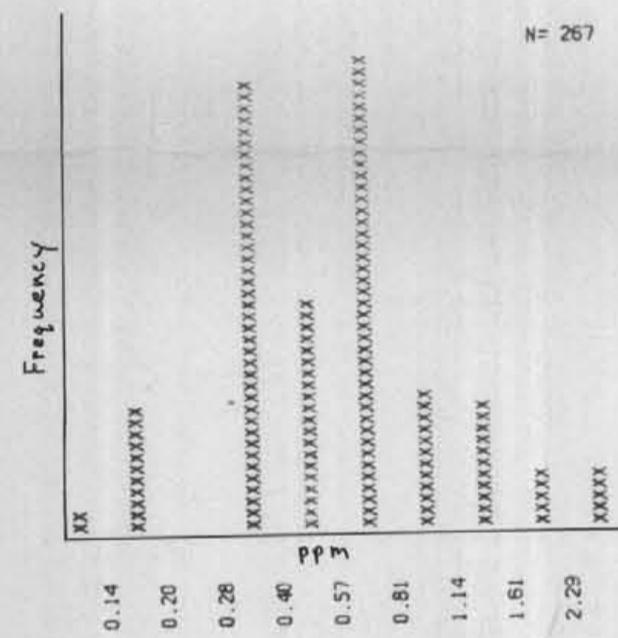
Office File Copy

BPTR 77-98



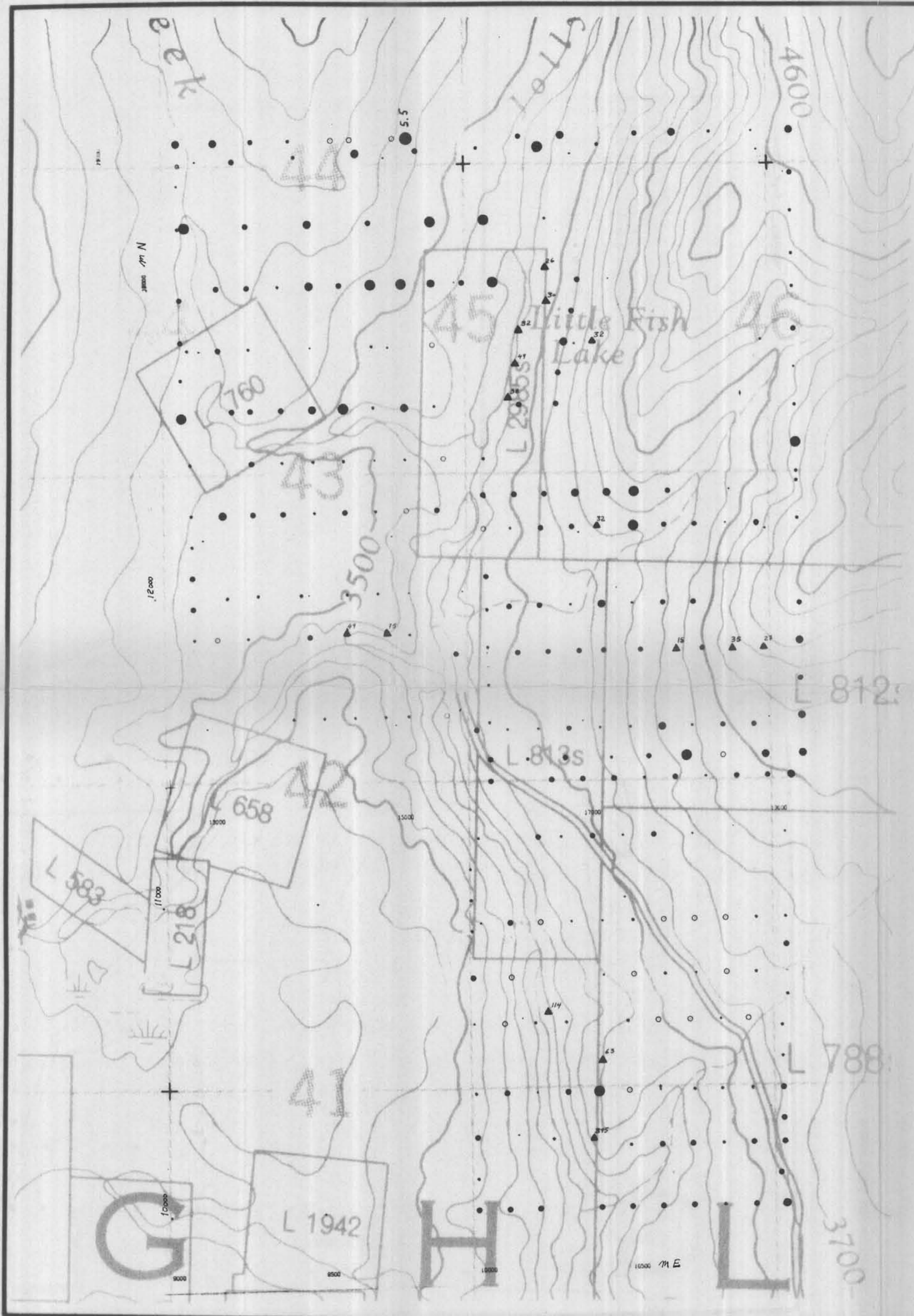
BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 U CONTENT (PPM) OF SOILS
 NTS B2E 3 SCALE 1 CM:100METRES
 JULY 1977
 LEGEND-PPM

<0.17 ○
 0.17-0.30 ●
 0.30-0.54 ●
 0.54-0.97 ●
 0.97-1.71 ●
 1.71-3.43 ●
 >3.43 ●
 TALUS in PPM ▲



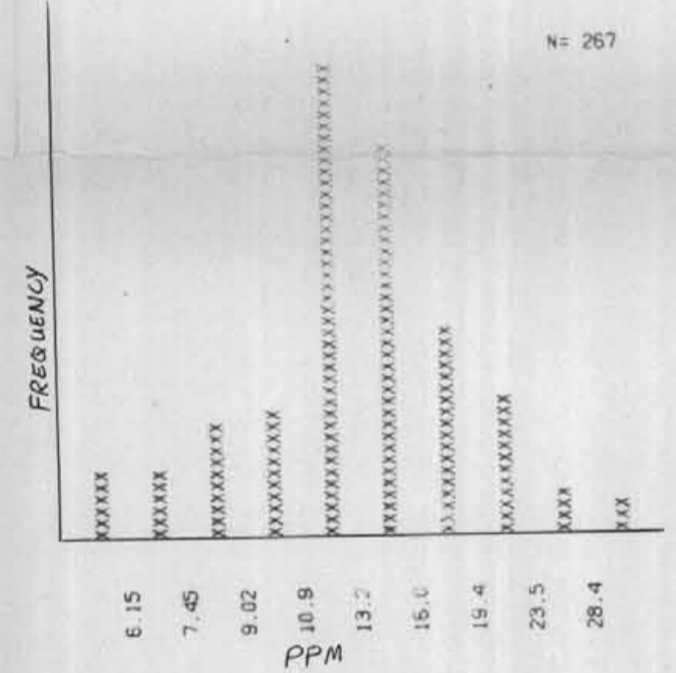
BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, BC		
SCALE 1:10,000	NTS B2E 03	FIG 8
DATE Nov 24, 1977		PROJ. 301
To accompany report:		

Office File Copy



BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 CU CONTENT (PPM) OF SOILS
 NTS 82E 3 SCALE 1 CM:100METRES
 JULY 1977
 LEGEND-PPM

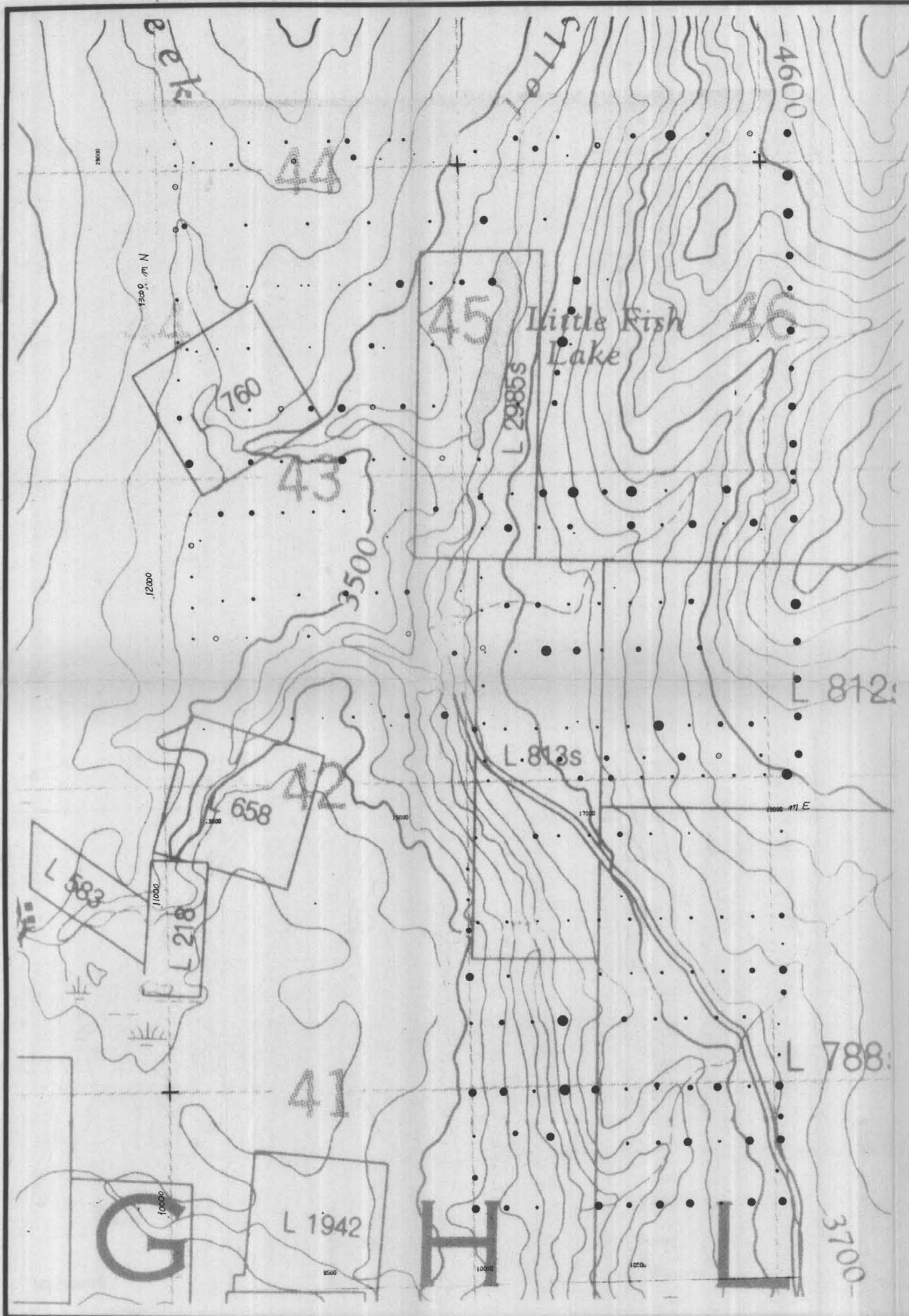
<7.23 ○
 7.23-9.82 ●
 9.82-13.3 ●
 13.3-18.1 ●
 18.1-24.6 ●
 24.6-49.2 ●
 >49.2 ●
 TALUS - in PPM ▲



BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82E 3	FIG. 9
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

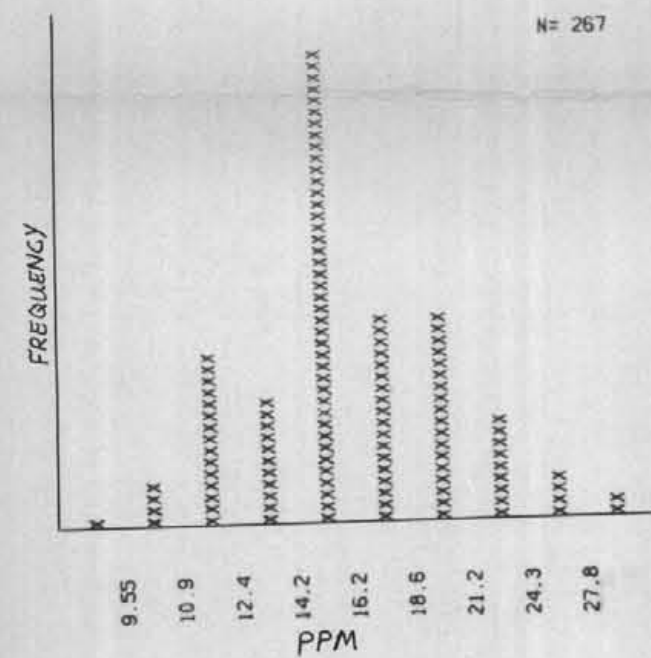
Office File Copy

BPTR 77-98

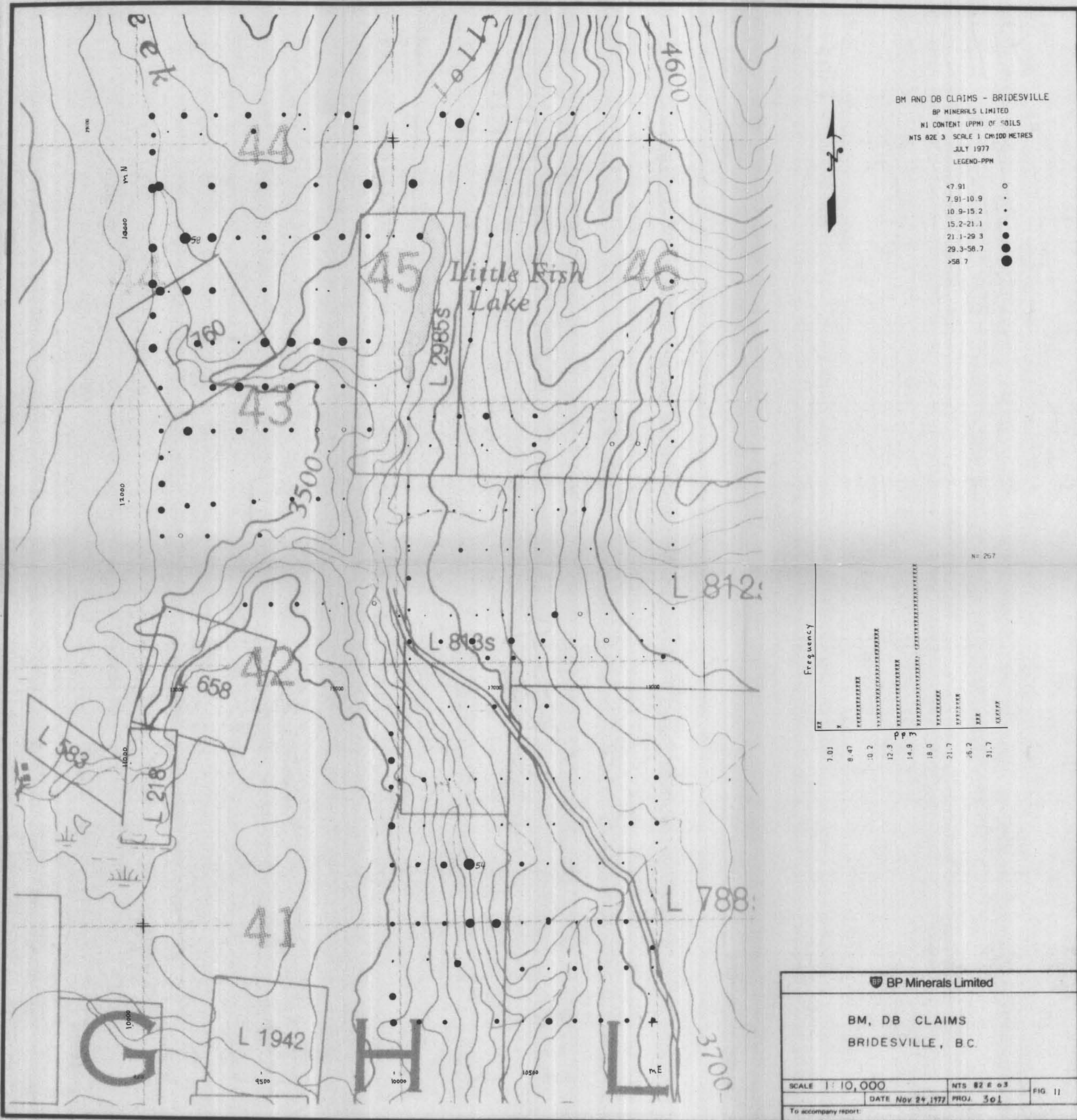


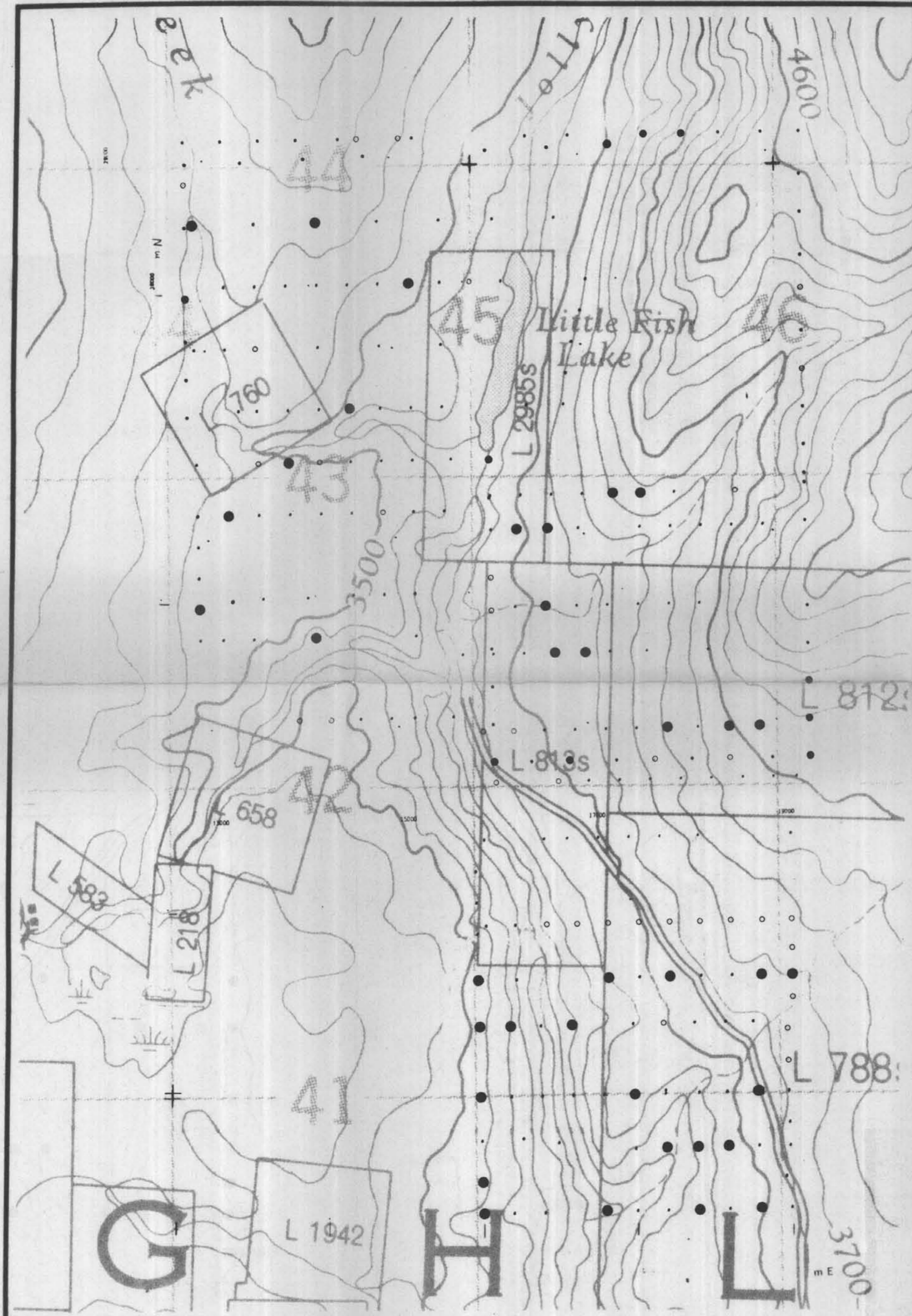
BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 PB CONTENT (PPM) OF SOILS
 NTS 82E 3 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

- <10.1 ○
- 10.1-12.8 ●
- 12.8-16.1 ●
- 16.1-20.4 ●
- 20.4-25.7 ●
- 25.7-51.5 ●
- >51.5 ●



BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1 : 10,000	NTS 82 E 03	FIG. 10
DATE Nov 24, 1977		PROJ. 301
To accompany report:		





BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 NO CONTENT (PPM) OF SOILS
 NTS 82 E 03 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

- <1.85 ○
- 0.85-0.86 ·
- 0.85-1.15 ·
- 1.15-1.53 ·
- 1.53-2.04 ·
- 2.04-4.08 ●
- 4.08 ●

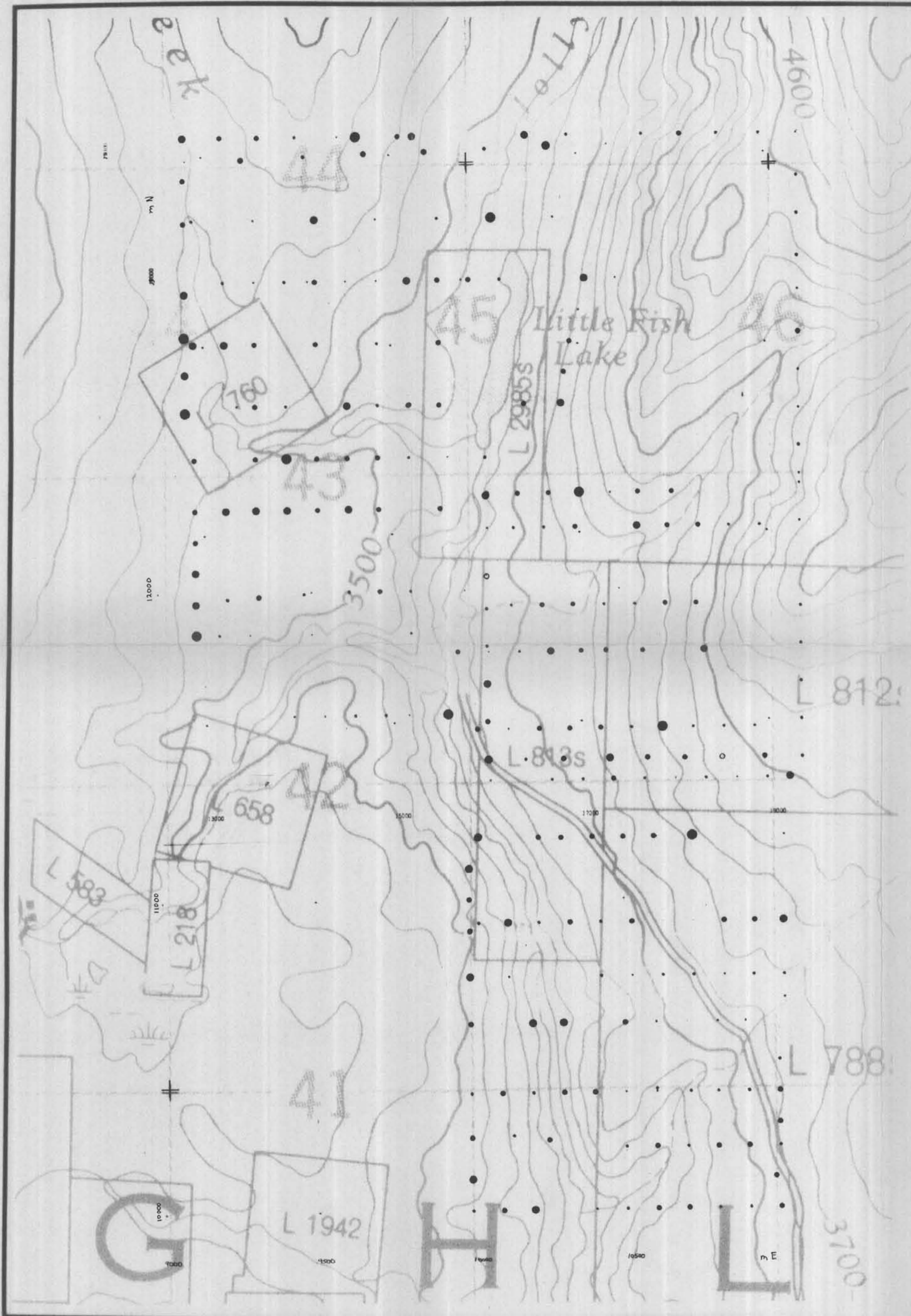
N = 267

- XXXXXXX
- 0.64
- 0.74
- 0.86
- 1.00
- 1.15
- 1.33
- 1.54
- 1.78
- 2.05
- XXXXXXXXX

BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82 E 03	FIG.
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

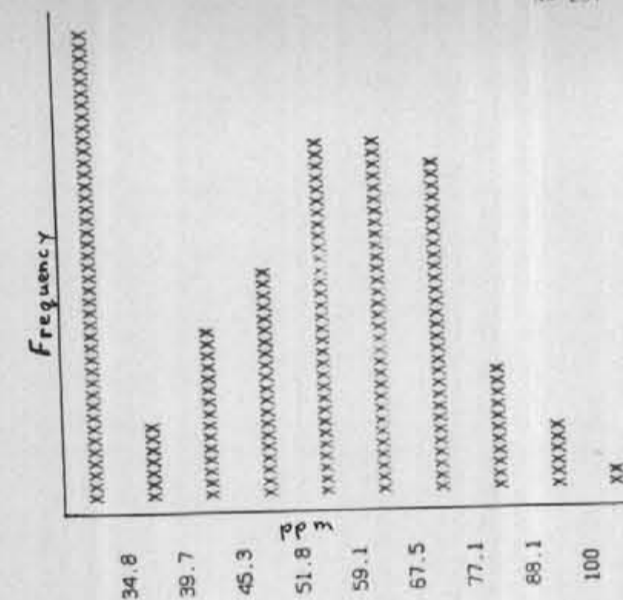
Office File Copy

BPTR 77-96



BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 ZN CONTENT (PPM) OF SOILS
 N15 B2E 3 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

<29.4 ○
 29.4-38.2 ·
 38.2-49.7 ·
 49.7-64.7 ●
 64.7-84.1 ●
 84.1-168 ●
 >168 ●



BP Minerals Limited

BM, DB CLAIMS
 BRIDESVILLE, B.C.

SCALE 1/10,000	NTS B2E 03	FIG. 15
DATE Nov 24, 1977	PROJ. 301	
To accompany report		

Office File Copy

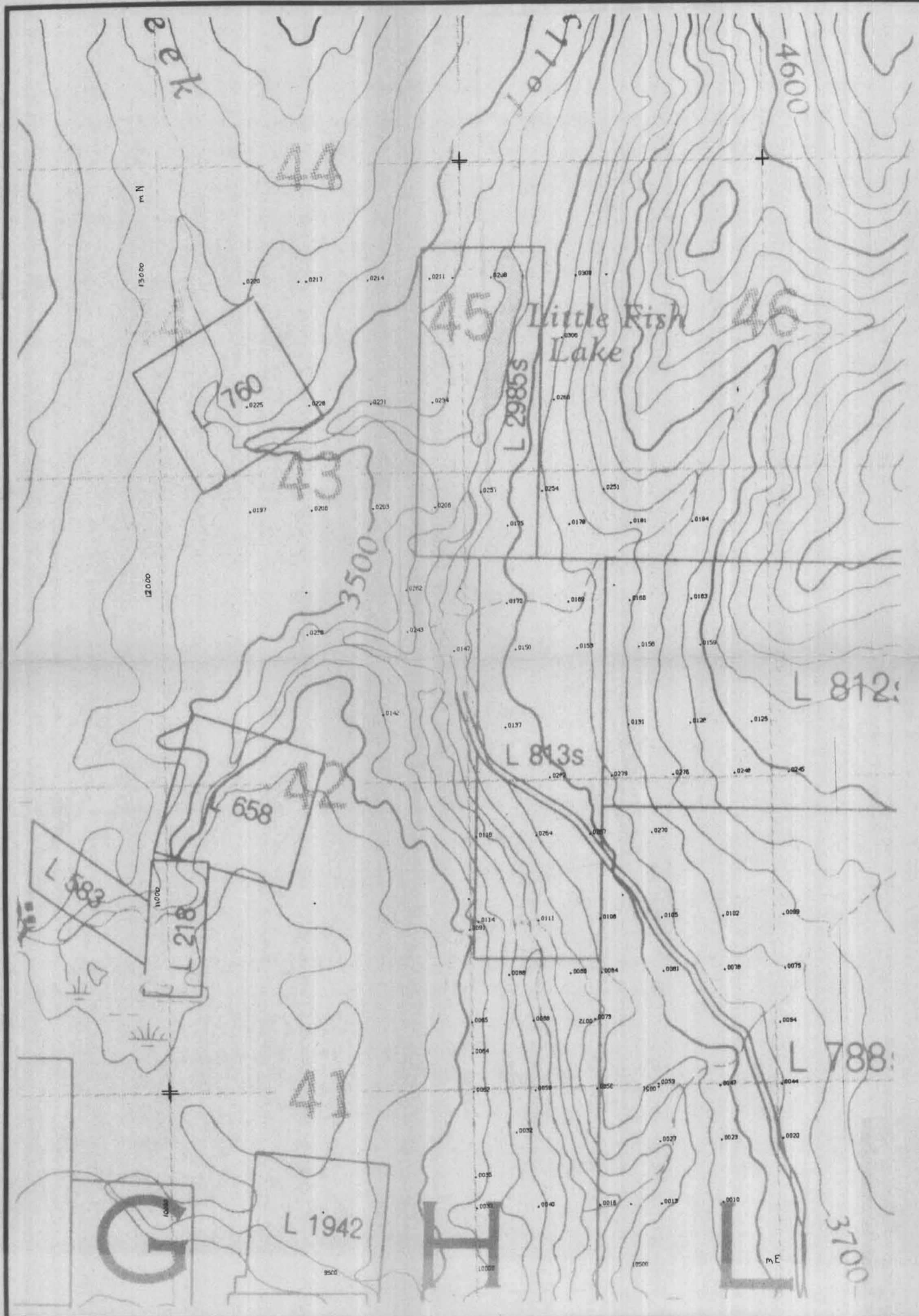
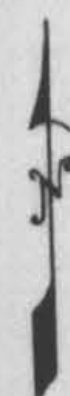
BPTR 77-98

BM AND DB CLAIMS - BRIDESVILLE

5011 SAMPLE LOCATION FOR SAMPLE

NTS B2 E 3 SCALE 1 CM=100 METRES

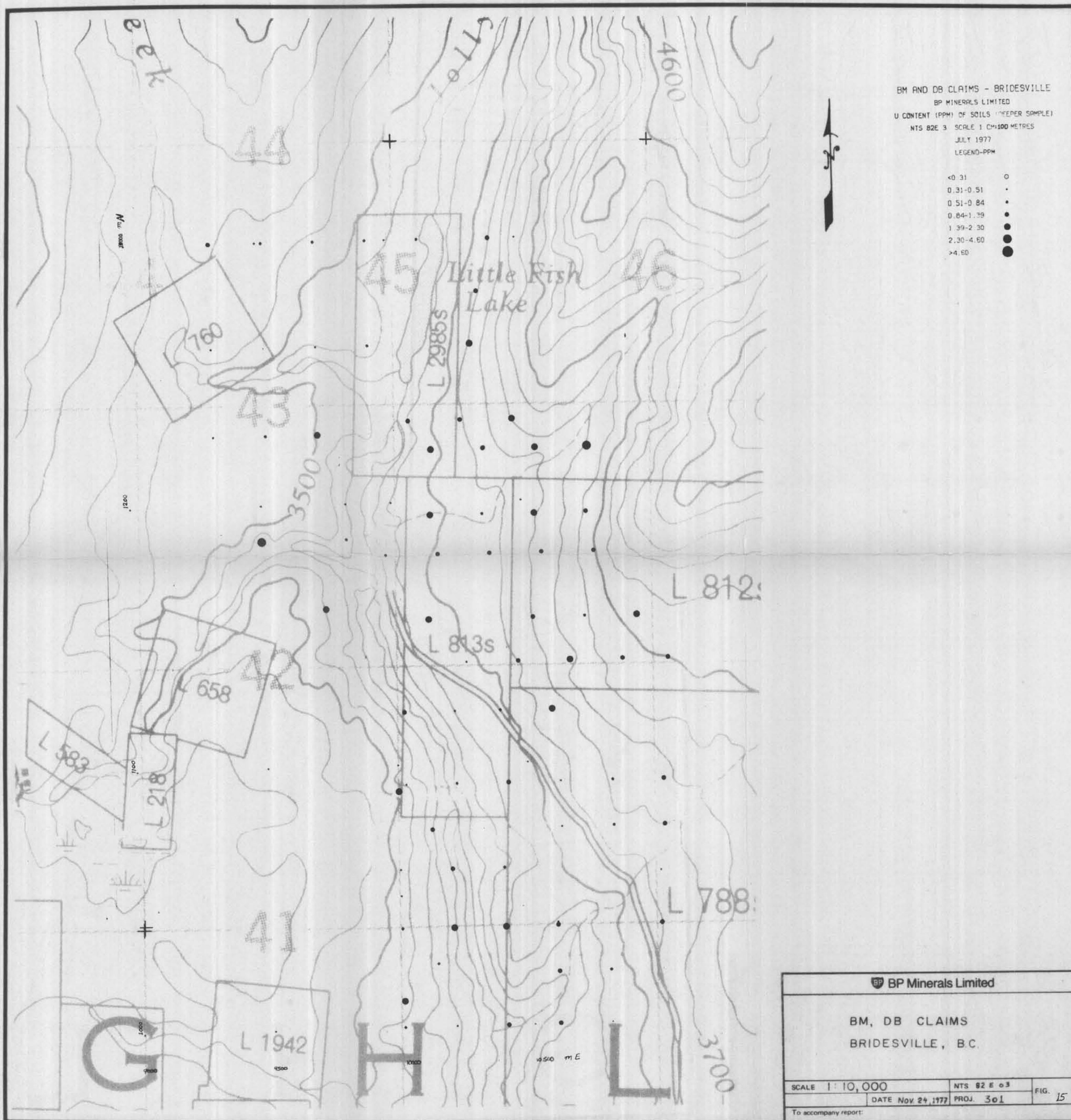
JULY 1977

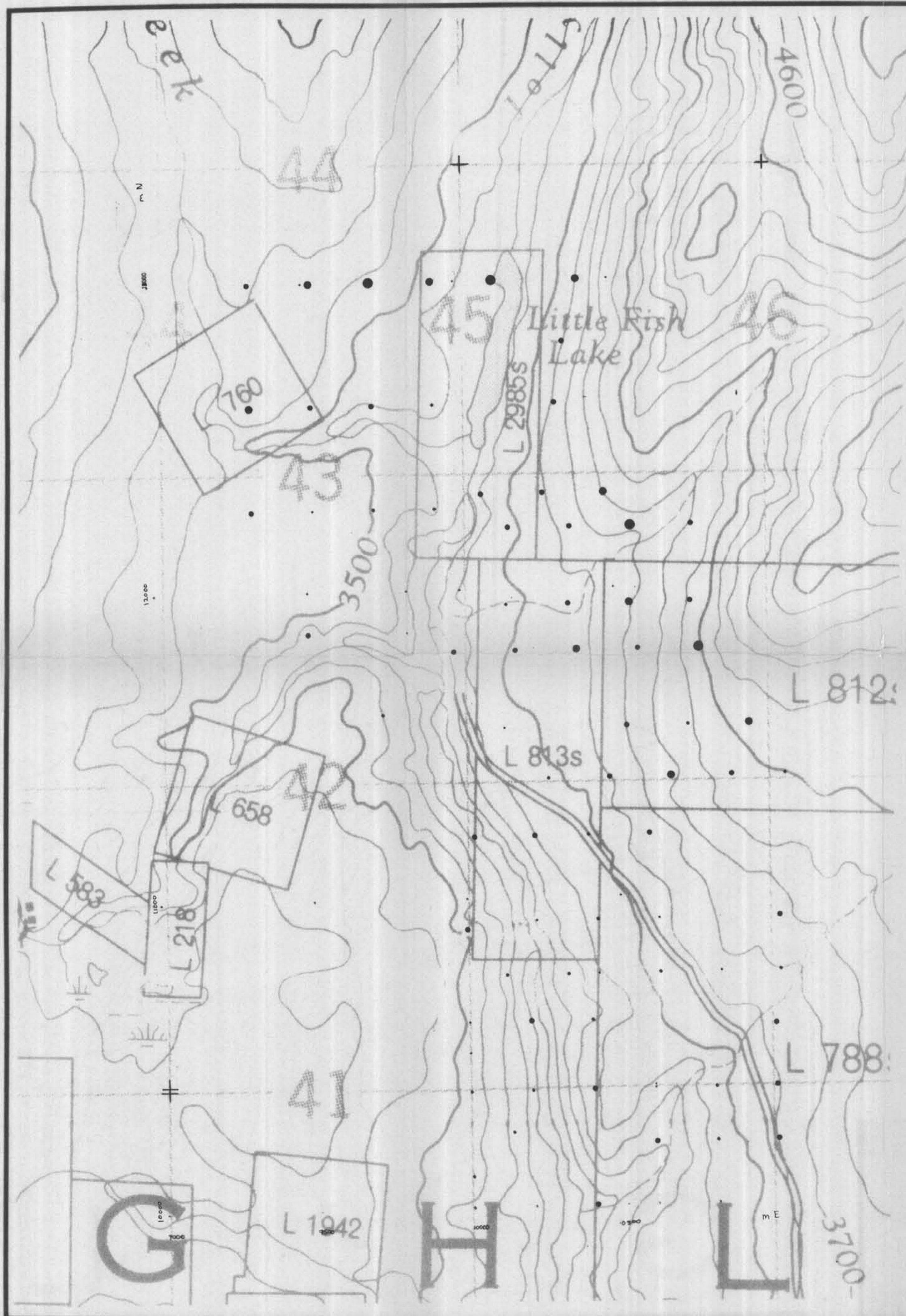


BP Minerals Limited			
BM, DB CLAIMS BRIDESVILLE, B.C.			
SCALE 10,000	NTS B2 E 3	FIG. 14	
	DATE Nov 29, 1977	PROJ. 301	
To accompany report			

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BPTR 77-98





BM AND DB CLAIMS BRIDESVILLE
 BP MINERALS LIMITED
 CU CONTENT (PPM) OF SOILS (PER SAMPLE)
 NTS B2E 3 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

< 8.69 ○
 8.69-11.7 ●
 11.7-15.9 ●
 15.9-21.6 ●
 21.6-29.3 ●
 29.3-58.6 ●
 > 58.6 ●

BP Minerals Limited

BM, DB CLAIMS
 BRIDESVILLE, B.C.

SCALE 1:10,000

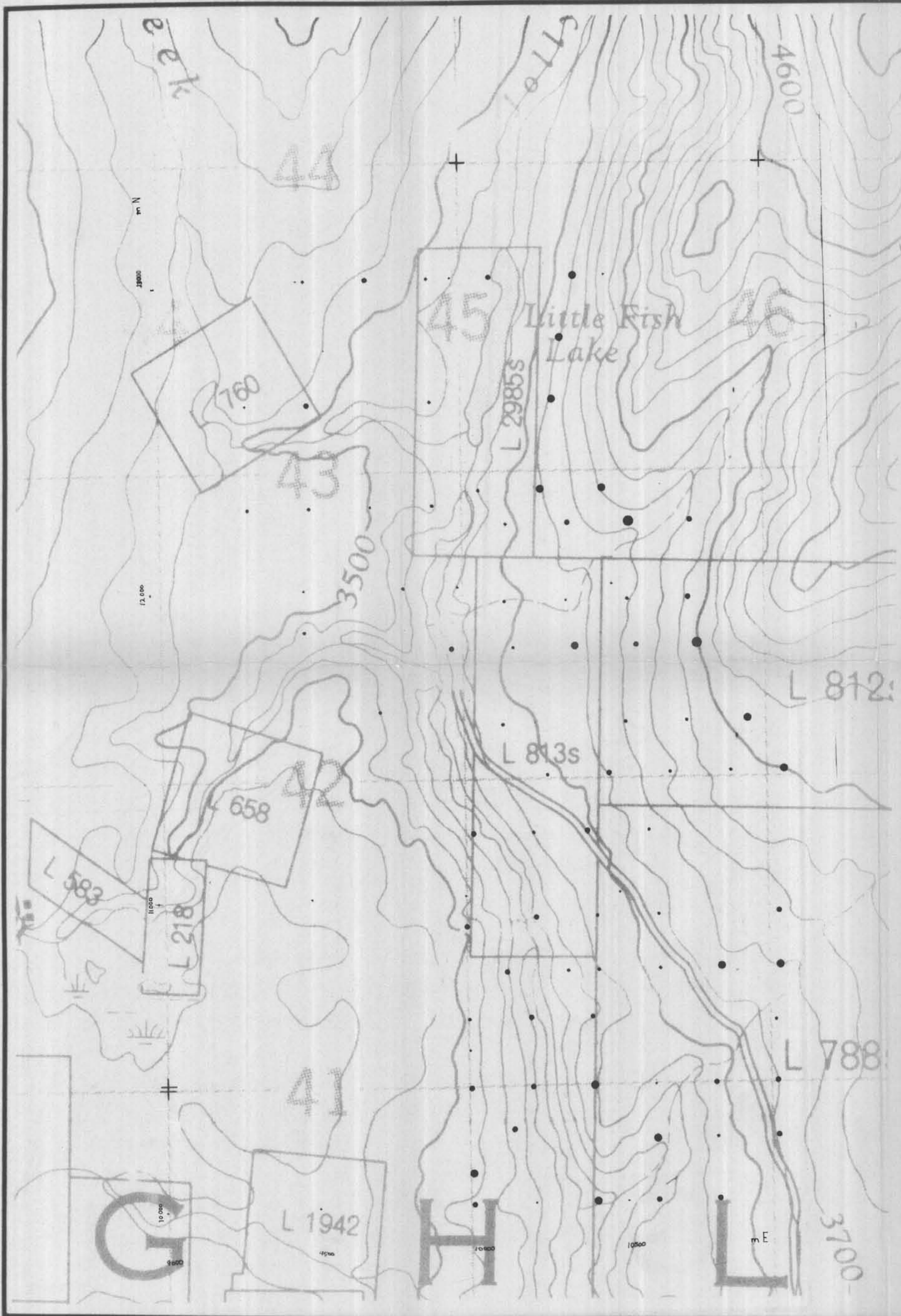
NTS B2E 03

FIG. 16

DATE Nov. 24, 1977

PROJ. 301

To accompany report:



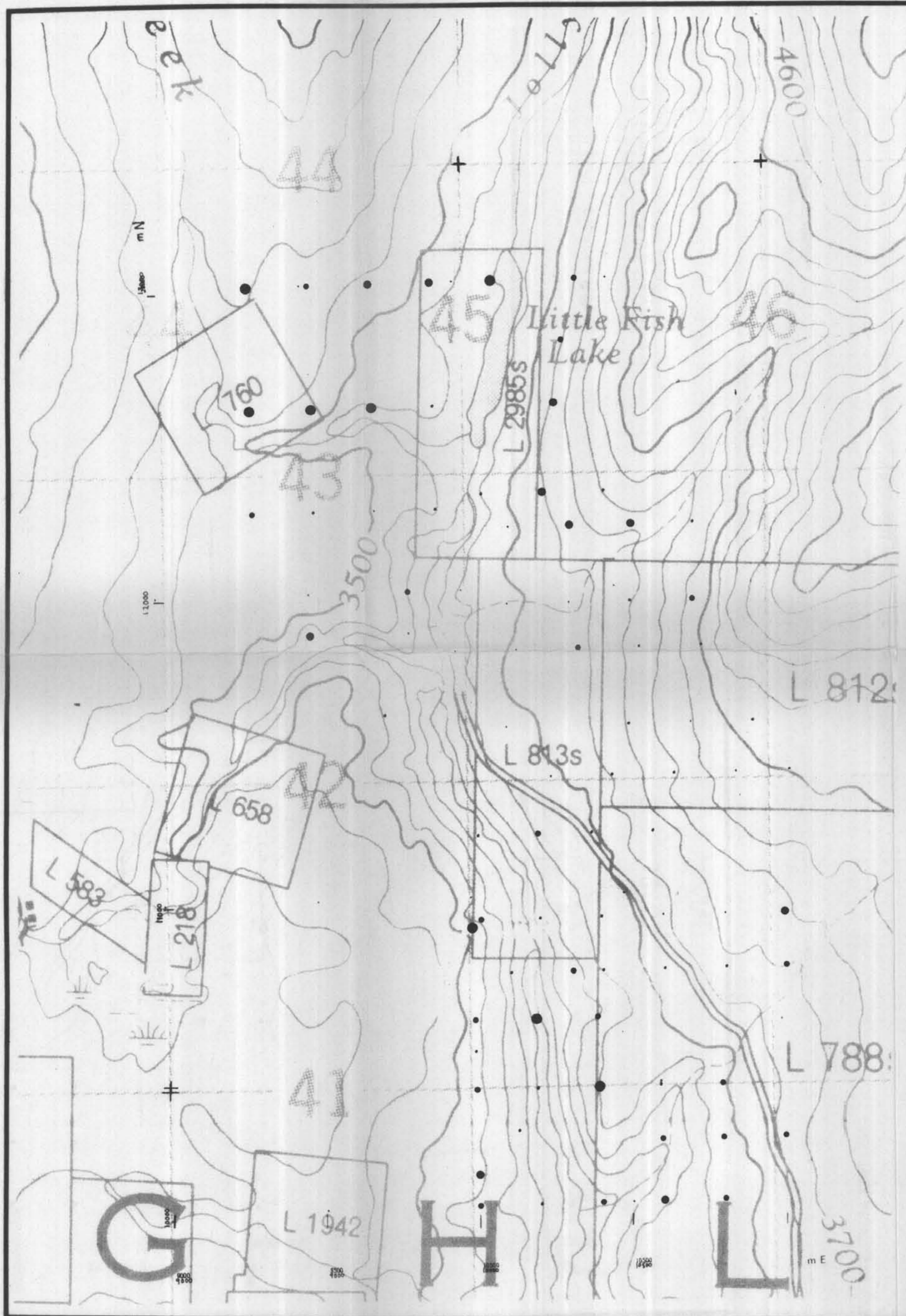
BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 PB CONTENT (PPM) OF SOILS (DEEPER SAMPLE)
 NTS 82E 3 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

<10.1 ○
 12.1-14.9 ·
 14.9-18.4 ·
 18.4-22.5 ·
 22.5-27.8 ●
 27.8-55.7 ●
 >55.7 ●

BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82 E 03	FIG. 17
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

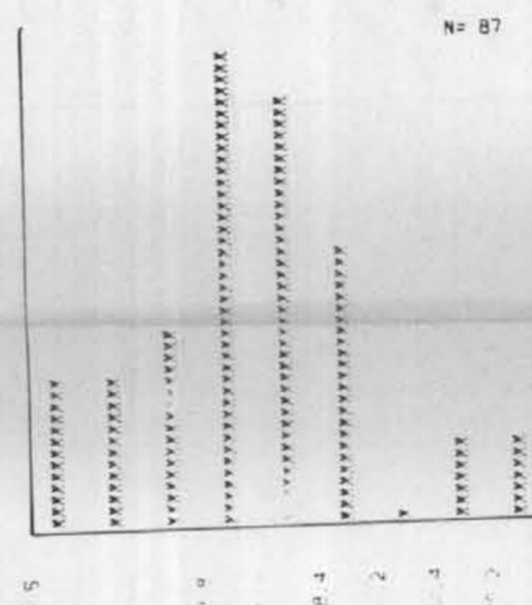
Office File Copy

BPTR 77-98

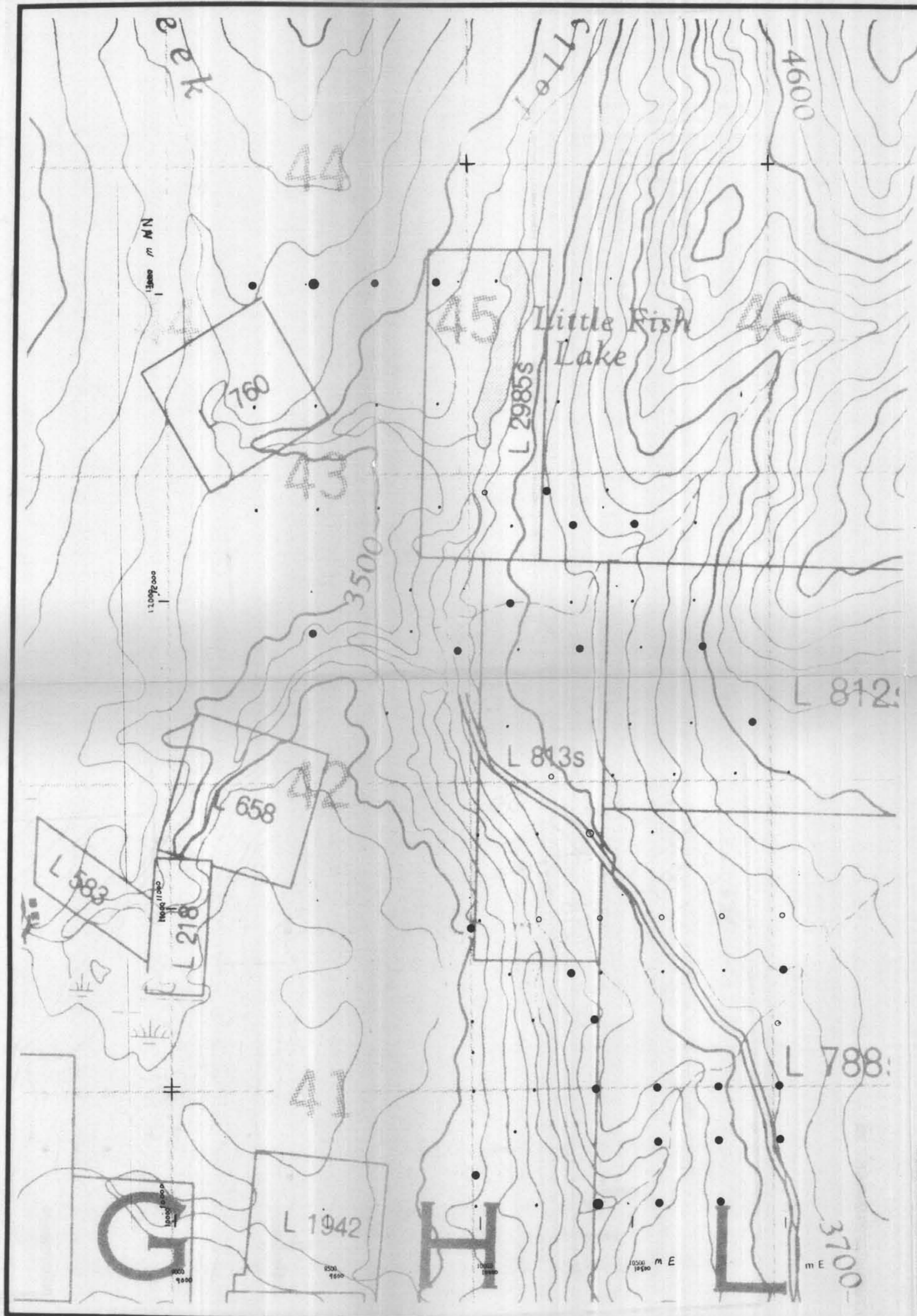


BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 NI CONTENT (PPM) OF SOILS (DEEPER SAMPLE)
 NTS 82 E 3 SCALE 1 CM/100 METRES
 JULY 1977
 LEGEND-PPM

<9.68 ○
 9.68-12.2 ·
 12.2-15.4 *
 15.4-19.4 ●
 19.4-24.5 ●
 24.5-49.1 ●
 >49.1 ●

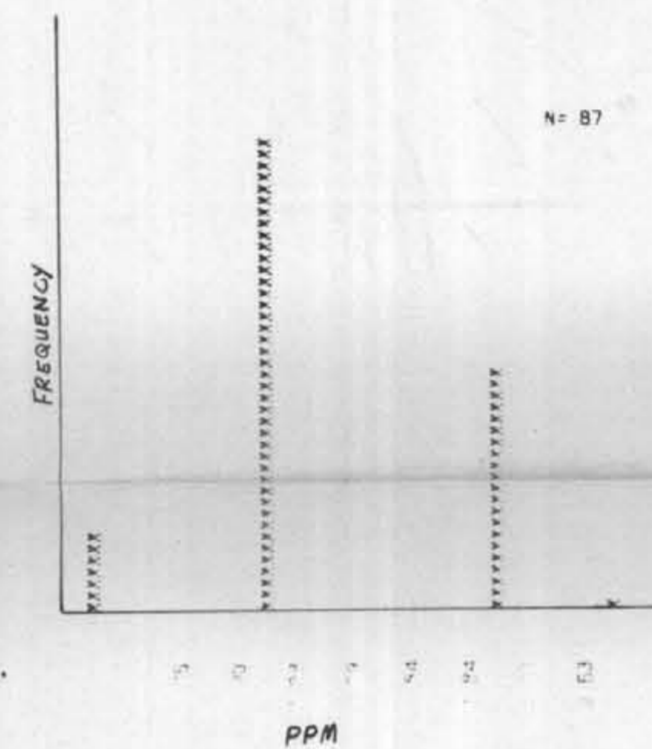


BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, BC		
SCALE 1:10,000	NTS 82 E 03	FIG. 78
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		



BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 MO CONTENT (PPM) OF SOILS (DEEPER SAMPLE)
 NTS 82E 3 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

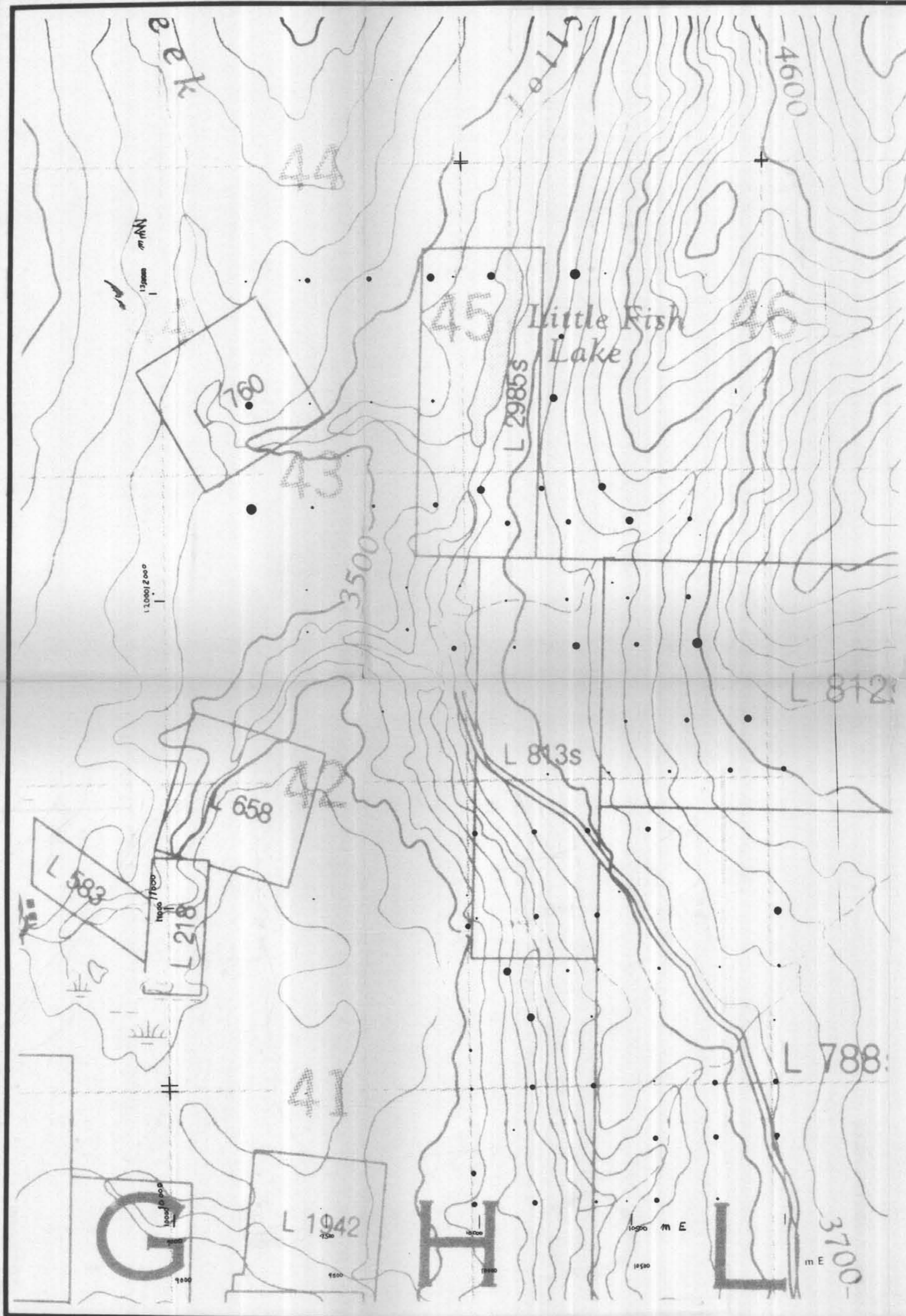
<0.65 ○
 0.65-0.91 ·
 0.91-1.26 ·
 1.26-1.76 ●
 1.76-2.45 ●
 2.45-4.91 ●
 >4.91 ●



BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82 E 03	FIG. 19
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

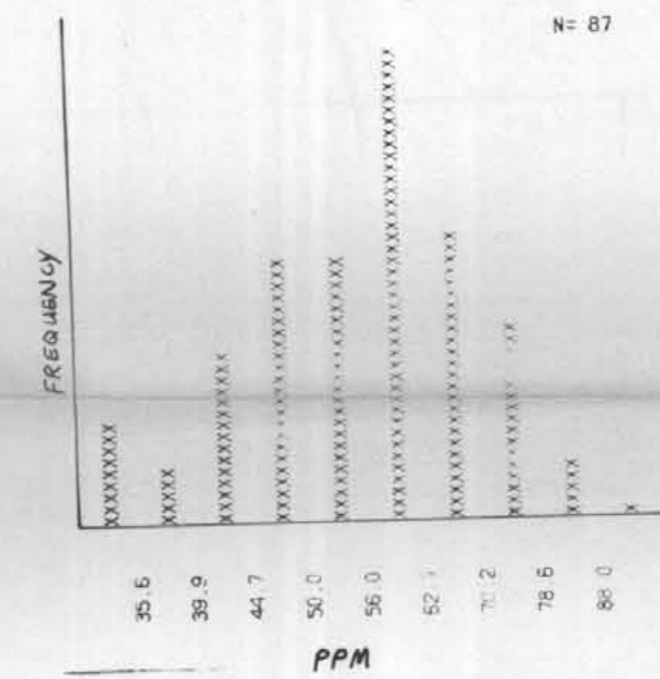
BPTR 77-98

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BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 ZN CONTENT (PPM) OF SOILS (DEEPER SAMPLE)
 NTS 82E 3 SCALE 1 CM:100 METRES
 JULY 1977
 LEGEND-PPM

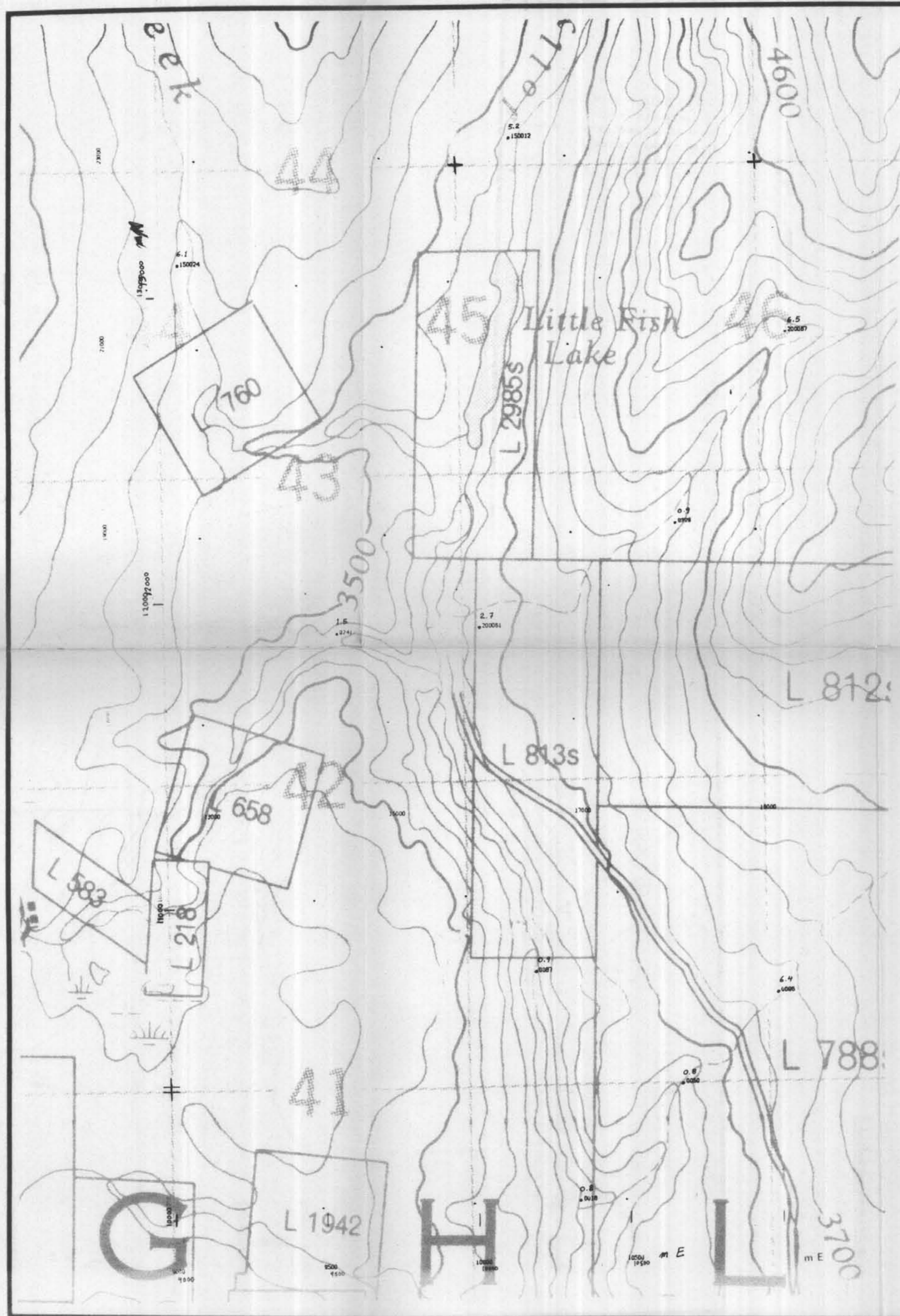
<37.8 ○
 37.8-46.3 ·
 46.3-56.7 •
 56.7-69.5 ●
 69.5-85.2 ●●
 85.2-170 ●●●
 >170 ●●●●



BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82E 03	FIG. 20
DATE Nov. 24, 1977	PROJ. 301	
To accompany report:		

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BM AND DB CLAIMS - BRIDESVILLE
 BP MINERALS LIMITED
 STREAM SEDIMENT SAMPLE LOCATION + ANALYSIS
 NTS 82 E 3 SCALE 1 CM:100 METRES
 JULY 1977

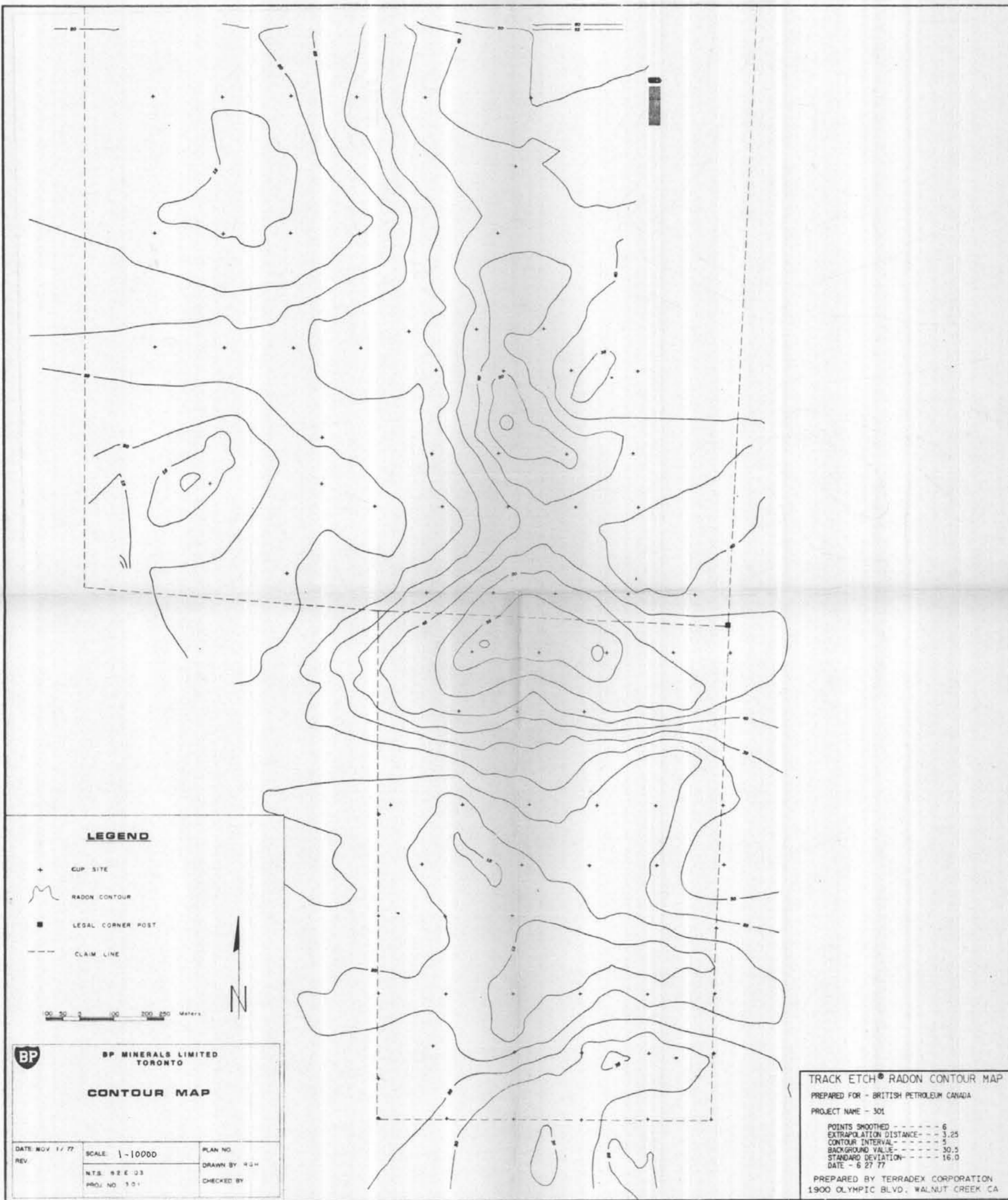
5-2 U in PPA

XXXX

BP Minerals Limited		
BM, DB CLAIMS BRIDESVILLE, B.C.		
SCALE 1:10,000	NTS 82 E 03	FIG 21
DATE Nov 24, 1977	PROJ. 301	
To accompany report:		

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BPTR 77-98



LEGEND

- + GUP SITE
- ~ RADON CONTOUR
- LEGAL CORNER POST
- - - CLAIM LINE

0 50 100 200 250 Meters



BP MINERALS LIMITED
TORONTO

CONTOUR MAP

DATE NOV 17 77	SCALE 1-10000	PLAN NO
REV	N.T.S. 92 E 03	DRAWN BY HSH
	PROJ NO 101	CHECKED BY

TRACK ETCH® RADON CONTOUR MAP

PREPARED FOR - BRITISH PETROLEUM CANADA
PROJECT NAME - 301
POINTS SMOOTHED - - - - - 6
EXTRAPOLATION DISTANCE - - - 3.25
CONTOUR INTERVAL - - - - - 5
BACKGROUND VALUE - - - - - 30.5
STANDARD DEVIATION - - - - - 16.0
DATE - 6 27 77

PREPARED BY TERRADUX CORPORATION
1900 OLYMPIC BLVD., WALNUT CREEK CA

