

5896

GEOCHEMICAL, GEOPHYSICAL REPORT

on the

SOUTH VEGA CREEK PROPERTY

BEG Claims 102, 103, 104

BEG claim 102 - 15 units

BEG claim 103 - 20 units

BEG claim 104 - 6 units

Owned and Operated by

BP MINERALS LIMITED

Thane Creek Area

Omineca Mining Division

NTS 94C/3

Located 3 kilometres west of Uslika Lake, B.C.

56°04' Lat 125°17' Long



By: D.K. Mustard, P.Eng

April 30, 1976

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5896 MAP X

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INTRODUCTION

The South Vega Creek property comprises three claims, BEG 102 (15 units), BEG 103 (20 units) and BEG 104 (6 units).

The claims were staked on March 27, 28 and 29, 1975.

During late April, early May, a contract low-level airborne magnetic survey was flown over the property area as part of a larger airborne survey.

During the 1975 field season line-cutting, ground magnetometer and geochemical sampling surveys were conducted over the BEG claims by BP Minerals Limited.

Claim credits of 15 years have been applied to BEG 102 for 1 year's credit on each unit and 20 years have been applied to BEG 103 for 1 year's credit on each unit. Mineral claims BEG 102 and BEG 103 have been "grouped" together. Claim credits of 6 years have been applied to BEG 104 for 1 year's credit on each unit.

Airborne and ground magnetic surveys and overburden geochemical sampling surveys were used to define possible zones of interest in an area that is severely masked by glacial deposits.

The South Vega Creek property claims adjoin the Central and North Vega Creek property claims which are owned and operated by BP Minerals Limited.

LOCATION AND ACCESS (see Figures 1 and 2)

The BEG 102, 103, 104 mineral claims are situated in the Omineca Mining Division, astride Thane Creek and 3 kilometres west of Uslika Lake, B.C.

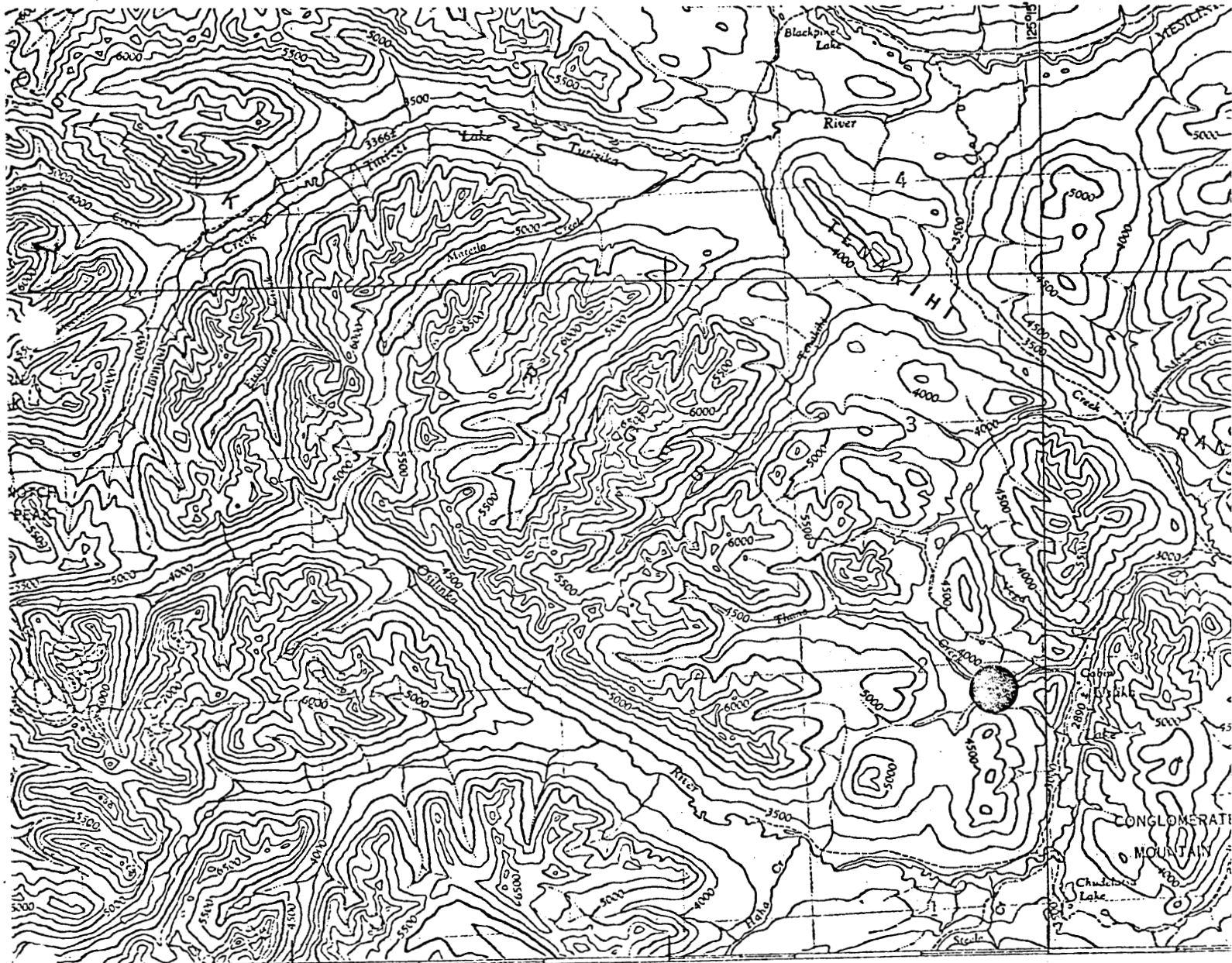
Figure 1

Location Map

SOUTH VEGA CREEK PROPERTY

BEG 102, 103, 104 Claims

Scale: 1" = 4 miles (1:253,440)



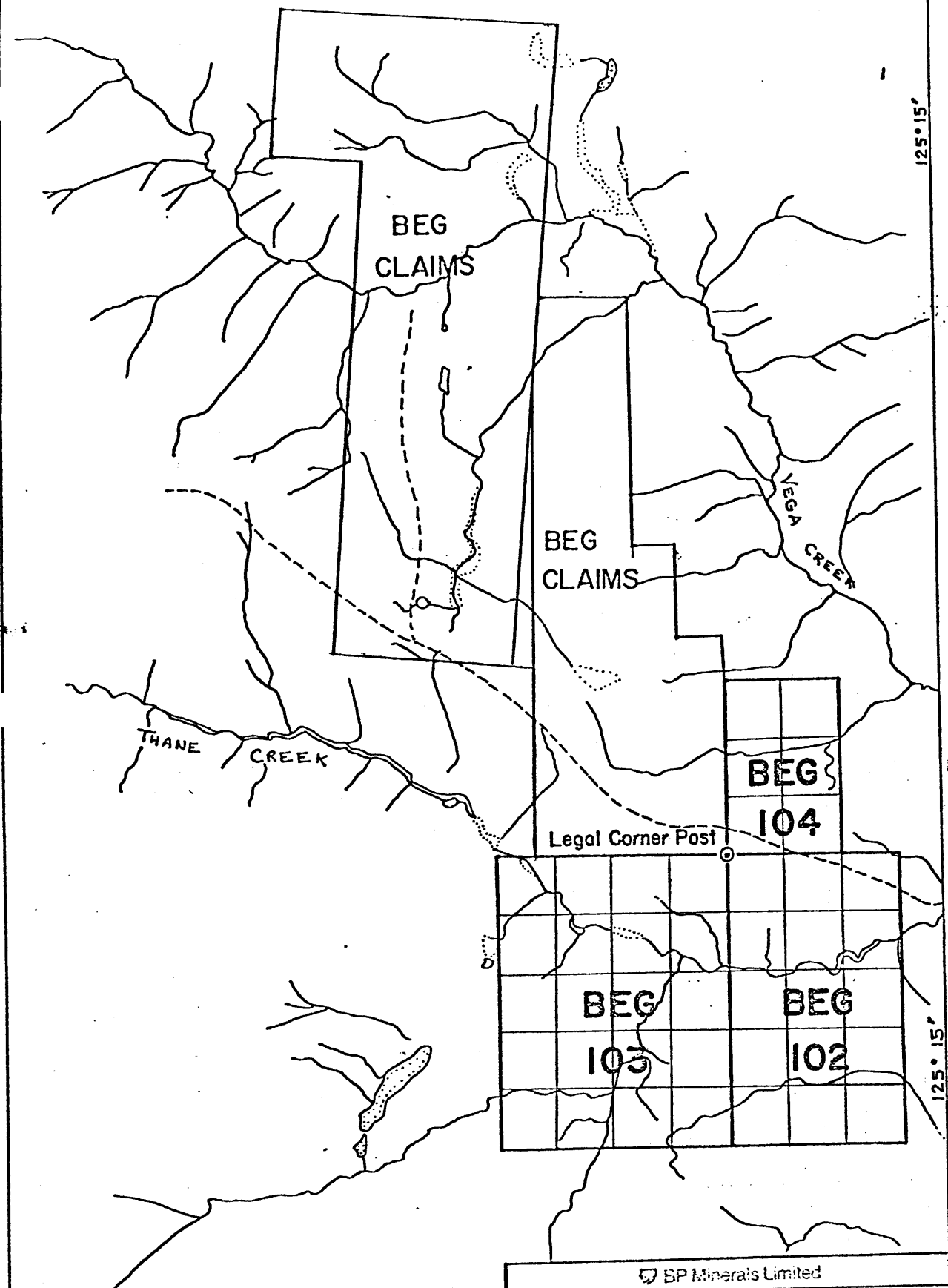
320000 - E

45° 30'

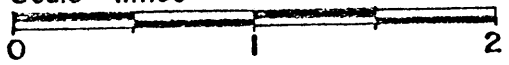
30°

5

15°



Scale - Miles



MINERAL CLAIM MAP
Section of 94-C3-W

BP Minerals Limited

BEG CLAIMS

SCALE	1:50,000(?)	SECTION	94-C3	FIG	2
DRAWN		CHECKED			
To accompany map...					

Access to the claims area is by helicopter from Uslika Lake which is located on the Omineca highway from Fort St. James.

FIELD WORK

i) Airborne Magnetic Survey (Appendix 1)

During the period April 25 to May 5, 1975, a low-level helicopter-borne aeromagnetic survey was flown in the Osilinka River and Tutizzi Lake area of northern B.C. The survey was flown by Morrison and DePaoli, geophysical consultants, on behalf of BP Minerals Limited. The report in Appendix 1 outlines the instrumentation, field procedure and results obtained from one segment of the total survey related to the South Vega Creek property claims. Of the 1244.5 line-kilometres of geophysical coverage attained over the total survey area some 120.75 line-kilometres have been applied to the BEG 102, 103, 104 claims.

ii) Grid Preparation (see Figure 3)

During the period June 14 - June 17 14 line-kilometres of line-cutting was conducted over the BEG 102, 103, 104 mineral claims.

The base-line was surveyed with transit and chain and was continued into the South Vega Creek property from an established base-line on the adjoining North and Central Vega Creek properties. The east-west cross-lines, which were surveyed with compass and tape, were established at 800 feet intervals along the base-line. Station intervals along the cross-lines were

established every 400 feet. The line-cutting survey, consisting of a 4 man-crew, was contracted to D.K. Bragg of Vancouver - an exploration service contractor.

Additional ground control was also established by BP personnel using compass and biodegradeable "Topofil" thread.

iii) Orthophotography (see Figure 3)

An orthophotograph was prepared for the South Vega Creek property area by McElhanney Surveying and Engineering Limited. This was done by obtaining additional coverage to an earlier orthophotograph which covered the adjoining Central Vega Creek property and most of the North Vega Creek property.

The orthophotograph is an aerial photo. mosaic which has been corrected for horizontal scale distortions, with superimposed contour intervals (contour interval 50 feet) and a scale of one inch equals 1000 feet. The orthophoto. was used as an additional control for geochemical, geophysical and line-cutting surveys.

iv) Ground Magnetometer Surveys (see Figures 4 and 5)

A total of 3 man days were spent conducting a ground magnetic survey over the established grid system on the BEG 102, 103, 104 mineral claims. Readings were taken every 100 feet along the base-line and cross-lines. A rented Scintrex MF-2 fluxgate magnetometer was used for the survey.

v) Geochemical Surveys (see Figures 6 and 7)

A geochemist, two geologists and a sampler spent 10 man days sampling various overburden sample types from the BEG

102, 103, 104 claims. Samples were collected at each station interval on the established grid system.

A total of two man-days were spent, by a field technician, in preparing samples (drying and sieving) and making pH measurements using an Orion model 410 pH meter.

A total of 204 samples were collected and submitted for AAS analysis by Vangeochem Lab Ltd. of North Vancouver, B.C. The samples were analyzed for copper, lead, zinc and molybdenum.

GEOCHEMISTRY

Overburden sampling

Samples were collected over most of the property at 400-foot intervals along Topofil or cut grid lines spaced 800 feet apart. Soil samples were taken from the top of the 'B' horizon at 10 to 20 cm depths. Stream and seepage sediment was also collected when channelways were crossed by traverse lines. All sample sites were marked by plastic flagging tape. Approximately 0.5 kg of stream, seepage sediment or soil was collected at each station, avoiding large pebbles, and placed in a numbered wet strength, 8 by 24 cm Kraft paper envelope.

Samples were returned to base camp and dried in a field oven, sorted according to sampler and sample number, disaggregated by pounding with a rubber mallet, and sieved at 10 to 80 mesh. The +10 mesh fraction was used to prepare pebble cards according to a procedure reported by Hoffman (1974) in the "Journal of Geochemical Exploration". The -80 mesh fraction was submitted to Vangeochem Lab Ltd. for chemical analysis of trace metals.

Trace metal determination

The following report by Vangeochem Lab Ltd. outlines the procedure used to determine acid soluble Mo, Cu, Pb and Zn in geochemical samples.



VANGEOCHEM LAB LTD. 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C., CANADA

TO: B. P. Minerals Ltd.,
405 - 1199 West Pender Street,
Vancouver, B. C.

FROM: Mr. Conway Chun,
Vangeochem Lab Ltd.,
1521 Pemberton Avenue,
North Vancouver, B. C.

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

1. 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.

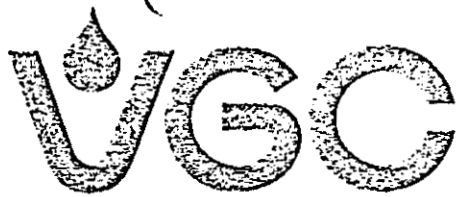
2. Methods of Digestion

- (a) 0.50 gram 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.

3. Method 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

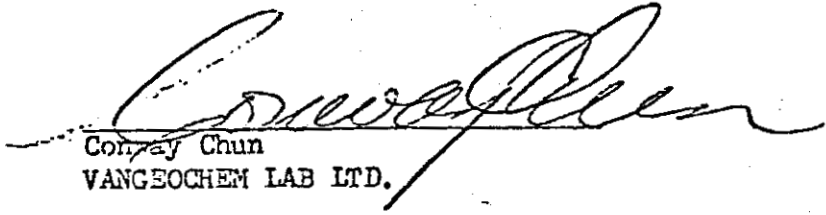
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VANGEOCHEM LAB LTD. 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C., CANADA 604-988-2172

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.

4. The analyses were supervised or determined by Mr. Conway Chun, and the laboratory staff.


Conway Chun
VANGEOCHEM LAB LTD.

CC:smb

pH determination

pH was determined on the -10 +80 mesh sample splits by a procedure modified from that in current use at the Soil Science Department of the University of British Columbia. Approximately 16 gm of sample was placed in a 100 ml dixie cup to which 20 ml of deionized water was added. The suspension was stirred at 0, 15 and 30 minutes and allowed to stand 30 minutes prior to pH determination. pH measurements were made using a combination glass electrode and a calibrated Orion Model 401 pH meter. Calibration standards were included every 100 determinations to check on instrument drift. About two percent of the determinations were duplicated to check the precision of the technique.

Geochemical interpretation

i) Introduction

Trace metal levels in stream and seepage sediments, soils and talus samples were assumed to conform to a log normal distribution. Data were 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 were calculated (Table 1). Maps were plotted utilizing a symbol notation. Each symbol represents a range of trace metal concentrations and was chosen to indicate a statistical interval

TABLE 1 SUMMARY OF TRACE METAL IN DIFFERENT OVERBURDEN TYPES

Overburden Type		Mo-ppm	Cu-ppm	Pb-ppm	Zn-ppm	Ag-ppm	pH
Stream Sediments (10)	Threshold	5.4	148		134	2.3	
	Mean	2.7	68		91	1.3	
	Range	1.9-3.8	46-100		75-110	0.9-1.7	
	No. of samples	16	18		18	18	
Spring Sediments (20)	Threshold	3.7	176		151	1.7	
	Mean	2.4	77		75	1.2	
	Range	1.9-2.9	51-116		53-106	1.1-1.4	
	No. of samples	5	5		5	5	
Bogs (40)	Threshold	6.2	209	25	198	1.1	
	Mean	3.1	59	14	28		
	Range	2.2-4.4	31-110	10-19	10-74		
	No. of samples	12	12	11	12	1	
Soils (50)	Threshold	7.4	135	34	182	2.2	6.1
	Mean	2.6	55	23	98	1.4	4.9
	Range	1.5-4.4	36-87	19-28	72-133	1.1-1.7	4.3-5.5
	No. of samples	889	902	261	902	643	1003
Talus fines (60+61+62)	Threshold	18	1070	35	261	2.2	6.3
	Mean	3.7	136	28	90	1.3	5.3
	Range	1.7-8.2	48-382	25-31	53-153	1.0-1.7	4.8-5.8
	No. of samples	35	35	10	35	24	35

Mean - determined after logarithmic transformation

Range - (mean - 1 standard deviation) to (mean + 1 standard deviation)

- represents 67% of sample data

Threshold - (mean + 2 standard deviations)

- represents 2.5% of sample data

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, bogs, soils and talus fines are listed in Appendix 4, which also shows sample identification (ID) and grid coordinates.

ii) Results

The stream sediment and soil geochemical surveys over the southern BEG claims give similar results and only the soil survey is described. Mean and standard deviation intervals were calculated in 1974 for the property as a whole, and these are used to extend the 1974 survey southward.

Cu, Zn and Mo values fluctuate apparently randomly at levels near property averages. Slight Cu and Zn enrichment between L200N and L232N and 160E to 224E lies in an area of extensive glacial overburden. Soils containing anomalous metal concentrations are organic soils, gleysols or luvisols. Consequently, Cu and Zn accumulation probably reflects organic matter scavenging in boggy or water-saturated environments.

A second Cu anomaly at 144E/152N in the southwest consists of 2 soil and 1 stream sediment samples. Overburden

in the region appears to exceed 50 feet (estimated from overburden thickness along the canyon of Thane Creek), and contains numerous rounded granodiorite boulders. The Cu anomaly, with values up to 270 ppm (90-0395) cannot be explained by presence of bogs or other environmental factors. Consequently, source of the Cu enrichment remains unknown.

iii) Anomaly genesis

Genesis of Zn and/or Cu anomalies on the south BEG claims is obscure because of the poor exposure of bedrock. The Cu anomaly in the southwest is the more important of the two, but is probably reflecting mineralized boulders in the overburden.

1975 GEOPHYSICAL REPORT
ON A LOW-LEVEL AEROMAGNETIC
SURVEY OVER THE SOUTH VEGA CREEK PROPERTY
NORTHERN BRITISH COLUMBIA

Date: July 4, 1975

Author: Garry M. DePaoli
Geophysicist, B.Sc.

1975 GEOPHYSICAL REPORT
ON A LOW-LEVEL AEROMAGNETIC
SURVEY OVER THE SOUTH VEGA CREEK PROPERTY

located in

NORTHERN BRITISH COLUMBIA

in the

OMINECA MINING DIVISION

approximately

29 miles North of Germansen Landing, B.C.

at coordinates

$56^{\circ}04'$ N lat.; $125^{\circ}17'$ W long. NTS 94C/3

work for

BP MINERALS LIMITED

work by

MORRISON & DEPAOLI GEOPHYSICAL CONSULTANTS

work period

April 29, 1975

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(Section of Oslinka River Contour Plans)
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- #4 Magnetic Interpretation Map
(Section of Oslinka River Interpretation)
Figure 4 In Pocket

INTRODUCTION

During the period April 25 to May 5, 1975 a low-level helicopter borne aeromagnetic survey was flown in the Oslinka River and Tutizzi Lake area in Northern British Columbia. The survey was flown by Morrison & DePaoli Geophysical Consultants on behalf of BP Minerals Limited. The purpose of the survey was to reveal the magnetic character of a favourable geological environment suited to mineral exploration.

The following report outlines the instrumentation, field procedure and results obtained from one segment of the total survey related to the South Vega Creek Property. Within the total survey approximately 773 line miles of geophysical coverage was attained in two survey blocks.

Location and Access

The South Vega Creek Property is located in northern B.C.; approximately 29 air miles north of Germansen Landing or 2 miles west of the northern end of Uslika Lake. It lies within the Omineca Mining Division at $56^{\circ}04'$ N lat.; $125^{\circ}17'$ W long. (NTS 94C/3).

Road access to within 2 miles of the property is provided by the Germansen Landing-Aiken Lake road. Final access is by helicopter.

GENERAL GEOLOGY

Regional geologic mapping of the survey area is hampered by overburden cover. Most of the area is thought to be underlain by Takla volcanic rocks of Triassic Age in sequence with Lower Jurassic sediments. The Hogem Batholith occurs along the western margins of the survey and several Cretaceous intrusions have been mapped within the survey area.

Several mineral prospects containing copper, gold and silver are known near the southern portion of the survey. The most important of these is the Vega prospect near Uslika Lake.

AEROMAGNETIC SURVEY

Method

A Scintrex Map-2 total intensity nuclear resonance magnetometer was utilized on the survey. This unit was installed, together with a Bonzer radio altimeter, a Vinton 16mm positioning camera and a Scintrex 1A-2 intervalometer, in a Jet Ranger (206) helicopter on charter from Northern Vancouver Island Helicopters. The installation of equipment took place at Smithers while Germansen Landing was used as a local base for execution of the survey.

The survey traverses were flown at a line spacing of $\frac{1}{2}$ mile. The flight direction was eastwest for the Oslinka River sheet. Flight navigation and flight path recovery were based on photomosaics on a scale of 1"=1320'. The magnetometer sensor was flown 75 feet below the helicopter and mean terrain clearance for the aircraft was 350 feet. Magnetic and radio altimeter data was recorded on a multichannel analogue recorder.

The total magnetic field within the survey area is approximately 58,000 gammas and the inclination of the field is 76° N.

Instrumentation

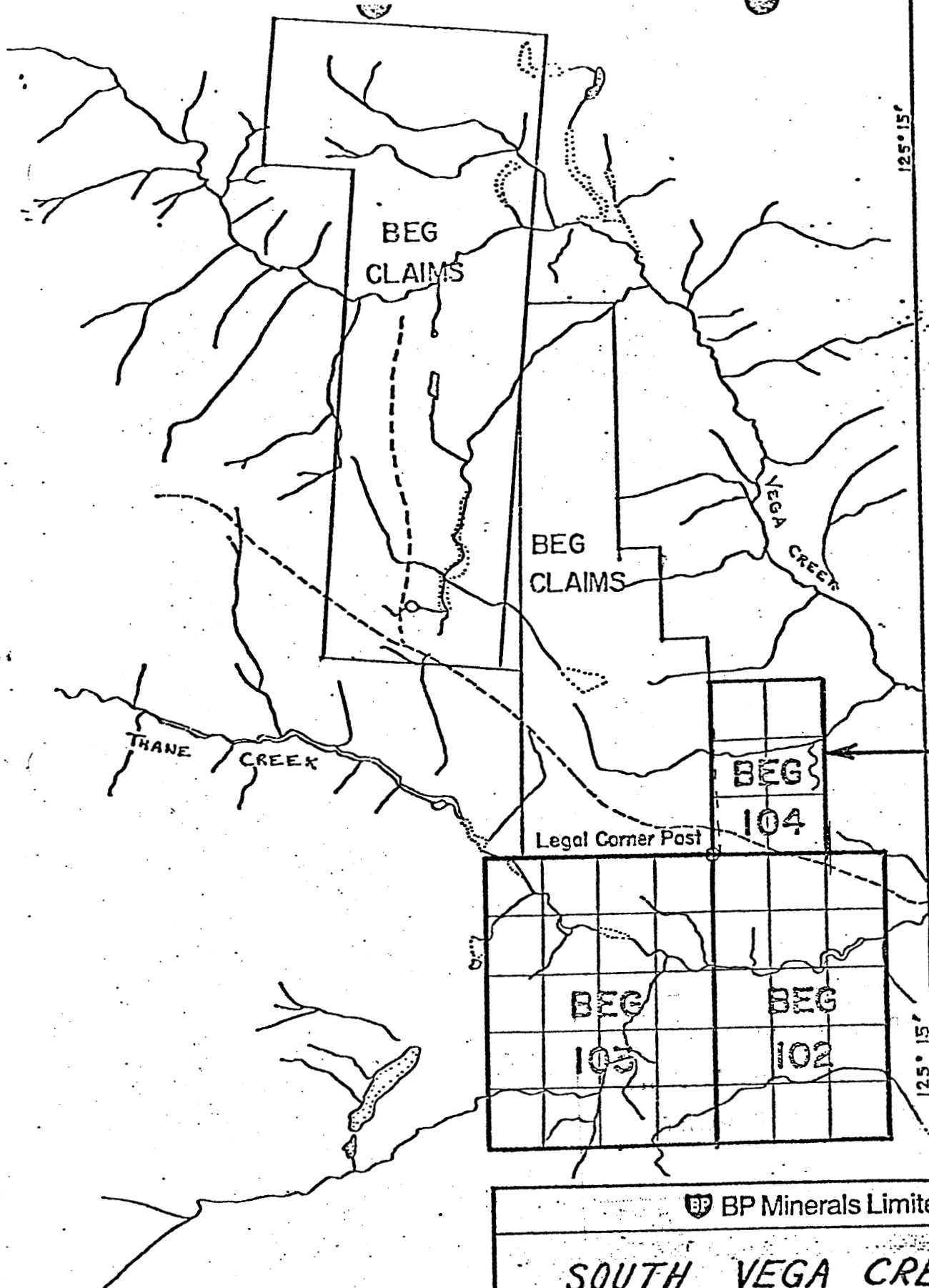
Magnetometer Map-2

The Map-2 is a lightweight, one gamma airborne proton precession magnetometer with a range of 20,000 to 100,000 gammas and an automatic five digit visual display.

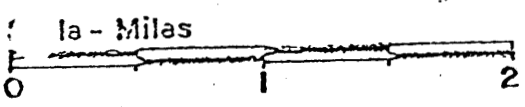
The Map-2 tracks automatically over its full 80,000 gamma range. This advantage is particularly significant in surveys flown at low terrain clearances in areas of high magnetic relief, conditions which are common in mineral prospecting.

The instrument is of compact modular design and has both digital and analogue outputs. The analogue outputs are either 100 or 1000 gammas full scale, with automatic stepping.


The measuring sequence can either be sequentially triggered internally through its own programmer or initiated by a suitable command pulse.



BEG CLAIM
102, 103, 104



MINERAL CLAIM MAP
Section of 94-C3-W

 BP Minerals Limited		
<h2 style="margin: 0;">SOUTH VEGA CREEK CLAIM MAP</h2>		
SCALE 1: 50,000	NTS 94 C/3	FIG.
DRAWN G.M.D.	DATE JULY 175	PROJ.
1975 GEOPHYSICAL REPORT ON LOW		

In addition while on internal triggering, the instrument provides an external output command pulse enabling other instrumentation to be synchronized with the magnetometer.

Altimeter

A Bonzer, high frequency solid state radio altimeter was employed to continuously indicate the mean terrain clearance of the helicopter. The altimeter is installed in the aircraft so that the elevation of the sensing bird will be less by the usual vertical displacement of the bird below the aircraft.

The output of the Bonzer was expressed in analogue form on a suitable graphic recorder.

Positioning Camera

A Vinton mark III 16mm positioning camera was employed with a wide angle lens. Photographs of the ground were taken with sufficient frequency to give a complete record of the flight path of the helicopter. The frequency of exposure is controlled by the intervalometer referred to below.

Intervalometer

A Scintrex IA-2 intervalometer provided regularly spaced timing pulses which drive the positioning camera exposure mechanism and produces synchronous fiducial marks on the side pen of the geophysical graphic recorder. Because of the synchronization of the geophysical traces and the positioning camera it is then possible to relate the geophysical events of interest to their proper ground location. The timing pulse frequency may be adjusted in accordance with the ground speed of the aircraft so that an adequate flight path record is obtained.

Ground Base Station

During flight periods a ground magnetometer base station was set up at Germansen Landing to monitor the diurnal variation of the Earth's Field. The instrument employed was a Scintrex MF-2 fluxgate magnetometer and readings were recorded on a EPR-2T Poly-recorder manufactured by TOA Electronics.

All survey flying was completed between April 29 and May 2, 1975. During flight periods diurnal variations of less than 5 gammas were observed.

DATA PRESENTATION

The results of a portion of the survey are presented in contour form in Figure 3 on a scale of 1"=1320'. Flight lines, fiducial points and pertinent topographic features are shown. The contour interval is 20 gammas where magnetic intensities will allow.

An interpretation of the magnetic features is presented in Figure 4. Magnetic boundaries, possible faults and labelled anomalies are displayed.

RESULTS AND INTERPRETATION

The predominant magnetic trend is northwest. Northeast faulting provides a structural intersection to this trend and is associated with several mineral showings.

Within this segment of the survey two magnetic anomalies were labelled as favourable sites for more detailed mineral exploration.

Anomaly labelled #2 is a discreet low to intermediate susceptibility anomaly with no direct topographic correlation. It lies within a northwest trend of magnetic features which encompass the Vega Property to the north.

Anomaly labelled #3 displays an intermediate susceptibility with no topographic correlation. Its linear appearance suggests that it may be associated with northwest faulting.

CONCLUSIONS AND RECOMMENDATIONS

Both of the interpreted magnetic anomalies are considered second priority exploration targets. Anomaly #2 is of slightly higher interest because of its southern strike alignment with the Vega Property. The shape and susceptibility of anomaly #3 is often characteristic of magnetic basaltic flows.

These anomalies should be screened and also priority rated from a geological viewpoint. Those anomalies still of interest should be thoroughly prospected and more accurately defined with ground magnetic profiles. More information can be obtained over portions of the anomalies which are drift covered through geochemical soil sampling profiles and reconnaissance induced polarization traverses.

Respectfully submitted,

Garry DePaoli

Garry M. DePaoli
Geophysicist, B.Sc.

Vancouver, B.C.
July 4, 1975

CERTIFICATION

I, Garry M. DePaoli, of the City of Burnaby, in the Province of British Columbia, HEREBY CERTIFY AS FOLLOWS:

1. That I am a graduate of the University of British Columbia, Vancouver, B.C., with a Bachelor of Science Degree in Combined Honours Geophysics and Geology (1969).
2. That I have practiced my profession as a Geophysicist continuously for the past 6 years in Northern Ontario, Quebec, Manitoba, Western USA, Alaska, Yukon Territories and British Columbia.
3. That I am a member in good standing of the Society of Exploration Geophysicists, the Geological Association of Canada, the Canadian Institute of Mining and Metallurgy, and the B.C. Society of Exploration Geophysicists.
4. That I have no interest directly in the South Vega Creek Property nor do I expect to receive any.
5. That the information contained herein was compiled under my direction and supervision during the period April 25 to May 5, 1975.

Garry M. DePaoli
Geophysicist, B.Sc.

Vancouver, B.C.

July 3, 1975

APPENDIX 1

Airborne Magnetic Survey

APPENDIX 2

Statement of Costs

APPENDIX 2

Statement of Costs

Group 4 - BEG 102, BEG 103

BEG 102 - 15 units (record #6)

BEG 103 - 20 units (record #7)

1. Grid Preparation

Contractor: D.K. Bragg - 4 man-crew - 10 man-days
 June 14,15,16 12.48 line-kilometres @ \$215.49 line-mile

\$1680.81

2. Geochemical Survey

Geochemist - S. Hoffman/June 26,27,28, July 1
 4 man days @ \$91/day \$ 364.00

Geologist - R. Wong/June 28/July 1
 2 man days @ \$60/day 120.00

Geologist - M. Bradley/July 1
 1 man day @ \$68/day 68.00

Sampler - B. McBride/June 27
 1 man day @ \$45/day 45.00

Technician - M. Wilson/June 30, July 2
 2 man days @ \$41/day 82.00

Consultant - Prof. K. Fletcher(UBC)/June 26
 1 consulting day @ \$150/day 150.00

\$829.00

3. Ground Magnetometer Survey

Geologist - D. Baker/June 18,19
 2 man days @ \$60/day \$120.00

4. Aeromagnetic Survey (see Appendix 1)

Total line-kilometres claimed for total claim group
 of 41 units = 120.75
 BEG 102(15 units) and BEG 103(20 units) total 35 units
 (BEG 104 totals 6 units)
 therefore 6/7th claimed for BEG 102 and BEG 103
 = 103.5 line-kilometres

Cost per 1.61 line-kilometres = \$26.02 \$1672.78

APPENDIX 2 (cont)

Statement of Costs

BEG 104 (6 units)

1. Grid Preparation

Contractor - D.K. Bragg - 2 man-crew - 2 man days
June 17 1.6 line-kilometres @ \$215.49/line-mile \$215.49

2. Geochemical Survey

Geologist - M. Bradley/ June 27 @ \$68/day \$ 68.00
Geologist - R. Wong / June 27 @ \$60/day 60.00
\$128.00

3. Ground Magnetometer Survey

Geologist - D. Baker / June 30 @ \$60/day \$60.00

4. Aeromagnetic Survey (see Appendix 1)

Total line-kilometres claimed for total claim
group of 41 units = 120.75
BEG 104 (6 units)
(BEG 102(15), BEG 103(20), totals 35 units)
therefore 1/7th claimed for BEG 104
= 17.25 line-kilometres
Cost per 1.61 line-kilometres = \$26.02 \$278.38

5. Food and Accommodation

5 man days @ \$15/day \$75.00

6. Sample Analysis (Vangeochem Lab Ltd.)

Total number of samples collected within BEG 104 = 42
42 samples @ \$2.42/sample \$101.64

7. Helicopter Support (Bell 206B)

Contractor: Vancouver Island Helicopters
(i) 3 days (6 trips @ .3 hrs/trip)
1.8 hrs @ \$250/hr \$450.00
(ii) operating costs 1.8 hrs @ \$18/hr 32.40
(\$482.40)
50% claimed towards assessment \$241.20

8. Report Preparation

(i)	Key punching and computing/42 samples @ \$0.50	\$ 21.00
(ii)	Drafting and printing	14.30
(iii)	Report compilation - S. Hoffman/1 day @ \$91/day	<u>91.00</u>
		<u>\$126.30</u>

9. Miscellaneous

(i)	Magnetometer rental 1 day @ \$8.60/day (Scintrex MF-2)	\$ 8.60
(ii)	Topofil rental 1 day @ \$4.00/day	<u>4.00</u>
		<u>\$12.00</u>

TOTAL 1-9 \$1,223.61

APPORTIONMENT

Credit BEG 104 (6 units) for 6 years (1 year/unit) \$1,200

D.K. Bragg
3567 West 27th Ave.,
Vancouver, B.C. V6S 1P9
Phone 733 7260

July 7, 1975.

IN ACCOUNT WITH:

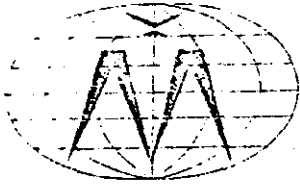
B P Minerals Limited,
405, 1199 West Pender Street,
Vancouver, B.C. V6E 2R1 .

South Vega Project

To cutting out six drill sites with helipads and flight approach lanes.	
To leveling slash and cleaning slash out of creek	\$ 3550.00
To orienting to existing base lines, picking up transit hubs and recutting <u>700 feet of base line.</u> To cutting and chaining 6800 feet of base line and cutting helipads along base line	\$ 1200.00
To flagging, blazing and chaining 33,400 feet (6.33miles) of grid lines and to chaining 6000 feet of tie line	\$ 696.30
	<hr/>
Total	\$ 5446.30
Less advance June 5th 1975	\$ 1000.00
	<hr/>
Balance	\$ 4446.30

APPROVED FOR PAYMENT
CHARGE 80017
DATE JUL 8 1975 INTS 1/31

INVOICE



McELHANNEY SURVEYING & ENGINEERING LTD.

Please remit to:

In account with:

B.P. Minerals Ltd.
#405 - 1195 West Pender Street
Vancouver, B.C.

Invoice No. 75-071

Date 30 May 1975

Your Order No.

Attention: Mr. C. Bates

Our Job No. 06041-4

FOR PROFESSIONAL SERVICES IN RESPECT TO:

Orthophoto mapping extension in the vicinity of Vega
Creek in accordance with our letter of 17 March 1975

\$1,180.00 75% cost
to Beg 102,103

B.P. Minerals Limited
RECEIVED

JUN 5 1975

Vancouver, B.C.

APPROVED FOR PAYMENT
CHARGE 80017
DATE JUN 10 1975 NTL

RAB/b-at

Terms: Net 30 days. Interest at 1 1/2% per-month will be charged on overdue accounts.

APPENDIX 3

Tabulation of Overburden Geochemical Results

SAMPLE

Type	I.D.	East	North							Mo	Cu	Pb	Zn			
1	50505D	860007	XX	2620	40240	94C03	251119	56230	35PDP	101 6 N	5075505	860007	3	74	20	117
2	1075505D	860004	XX	2860	41100	94C03	1 355	644		5NE	1075505	860004	4	82	45	97
3	1075505D	860015	XX	9700	41100	94C03	1 356	644	2 225	1 10 E	1075505	860015	2	76	19	98
4	1075505D	870067	XX	20810	16680	94C03	0050053	2721	123	1 15NE	1075505	870067	1	40	11	57
5	1075505D	890013	XX	15200	43000	94C03	005	84	1441	2	3 3NW3850	5075505	2	45	14	61
6	1075505D	890016	XX	14600	42150	94C03	0010434	263		3 05SW3770	5075505	890016	1	56	14	70
7	1075505D	890226	XX	23660	18820	94C03	1	90407364	122	2 10E	5075505	890226	1	35		68
8	1075505D	900343	XX	7500	41600	94C03	0.5	3565624	225	2 5E	5075505	900343	6	125		95
9	1075505D	900346	XX	7000	42020	94C03	0.3	1462444		1 3SE	2075505	900346	2	105		72
10	1075505D	900348	XX	8200	43200	94C03	1.5	6565444		3 5SE	1075505	900348	3	63		90
11	1075505D	900372	XX	9150	42400	94C03	1.0	5565644		3 5S	1075505	900372	3	85	18	71
12	1075505D	900392	XX	14400	15050	94C03	0.3	24702401		10YR21 1 1E	5075505	900392	2	84	12	35
13	1075505D	900397	XX	13200	15200	94C03	0.6	34652401		10YR21 1 2N	1075505	900397	2	150	20	95
14	1075505D	900403	XX	14380	16000	94C03	0.5	45702441		BLACK 2 3N	1075505	900403	2	105	11	34
15	1075505D	900406	XX	14400	16500	94C03	0.3	24652431		1 2NE	1075505	900406	2	75	11	33
16	1075505D	900408	XX	14750	16800	94C03	0.5	45701441		3 5NE	1075505	900408	2	94	10	33
17	1075505D	900413	XX	13450	16800	94C03	0.3	3568043	2 225	2 25N	1075505	900413	1	102	17	84
18	1075505D	950070	10	19550	20060	94C03	.3	53651		1 10W	1075505	950070	1	35		76
19	1075505D	950071	10	17240	20300	94C03	.2	33702		1 35 W	1075505	950071	0	83		70
20	1075505D	950073	10	16700	20800	94C03	.5	54751		2 40 W	1075505	950073	1	78		55
21	1075505D	950075	10	22400	20540	94C03	.7	5470643	235	2 35N	1075505	950075	1	68		88
22	1075505D	950077	10	19690	20900	94C03	.5	337046	2 226	1 30N	1075505	950077	1	100		78
23	1075505D	950115	10	7500	44000	94C03	.7	83 644		1 10S	1075505	950115	2	43		83
24	2075505D	900344	XX	7000	41800	94C03	0.9	1465474		1 3E	1075505	900344	3	178		65
25	2075505D	900347	XX	8050	43200	94C03	0.2	1365842		R 1 5SE	2075505	900347	2	85		102
26	2075505D	900374	XX	9000	42400	94C03	0.5	25656421		L 1 8SE	2075505	900374	3	116	15	54
27	5075505D	860002	XX	3260	41400	94C03	851116	53225	30PBP	15 8SE	5075505	860002	3	49	20	188
28	5075505D	860003	XX	3080	41250	94C03	851119	57235	40PBP	50 8SE	5075505	860003	3	81	20	106
29	5075505D	860005	XX	2770	40740	94C03	51119	54620	25PBP	40 10 N	5075505	860005	4	100	20	95
30	5075505D	860006	XX	2690	40480	94C03	251119	55230	35PBP	10110NW	5075505	860006	4	66	23	120
31	5075505D	860008	XX	2640	39880	94C03	251116	56225	30PBP	201 5 E	5075505	860008	3	70	18	113
32	5075505D	860009	XX	2870	39600	94C03	251116	53230	35PBP	251 3SE	5075505	860009	3	49	18	80
33	5075505D	860010	XX	3010	39420	94C03	253119	60225	33PBP	201 3SE	5075505	860010	2	50	15	85
34	5075505D	860011	XX	3150	39300	94C03	351 16	55225	30BBP	20135SE	5075505	860011	3	84	16	78
35	5075505D	860012	XX	3300	39180	94C03	351 16	60230	35BBM	20130SE	5075505	860012	3	72	18	75
36	5075505D	860013	XX	3420	39050	94C03	351 16	66220	25BBM	25120SE	5075505	860013	2	94	18	92
37	5075505D	860016	XX	9200	42500	94C03	351119	55220	25PBP	35130 S	5075505	860016	4	89	18	115
38	5075505D	860017	XX	9250	42800	94C03	751 19	220	25BBM226	501	5075505	860017	2	41	18	100
39	5075505D	860018	XX	8800	43150	94C03	2511192	2	PBP225	601 3 S	5075505	860018	4	67	26	116
40	5075505D	860019	XX	8500	43500	94C03	251 192		BBM	501 5 S	5075505	860019	2	37	18	123
41	5075505D	860020	XX	8200	44200	94C03	151 19255		BBM	501 3SW	5075505	860020	2	35	20	73
42	5075505D	860021	XX	8100	44600	94C03	251119	54220	25BBM	601 5 S	5075505	860021	3	50	20	82
43	5075505D	860022	XX	7900	45100	94C03	251119	54220	25PBP	70110SW	5075505	860022	4	37	20	78
44	5075505D	860023	XX	7800	45700	94C03	351 19257	20	25BBM226	50135 S	5075505	860023	3	50	29	145
45	5075505D	860024	XX	7450	46000	94C03	351 19251	25	30BBM226	25135 N	5075505	860024	3	52	24	68
46	5075505D	860025	XX	8000	46100	94C03	351 19253	20 25	226	28135 N	5075505	860025	3	43	21	52
47	5075505D	860027	XX	8800	45650	94C03	351 19255	20	25BBM226	10135NE	5075505	860027	3	65	25	48
48	5075505D	860032	XX	10250	43500	94C03	251119248215		20PBP226	25120 E	5075505	860032	4	45	20	78
49	5075505D	860033	XX	10200	43050	94C03	351 19260210		15BBM226	50125SE	5075505	860033	2	94	24	140
50	5075505D	870056	XX	23700	17350	94C03	752 23	55325030BBM		65 0000	5075505	870056	1	35	12	57
51	5075505D	870057	XX	23900	17250	94C03	251422	51320030BBM		25 05E	5075505	870057	2	47	13	72
52	5075505D	870058	XX	23860	16800	94C03	251424	52225035BBM		15 05E	5075505	870058	1	50	13	46
53	5075505D	870059	XX	23800	16350	94C03	251121	50325035PBP		55 10S	5075505	870059	1	58	16	146
54	5075505D	870060	XX	23400	16400	94C03	252 21	54325035BBM		45 10E	5075505	870060	1	45	10	65

55	5075505D	870061	XX	23010	16440	94C03	751	21	49325035PBP	35	0000	5075505	870061	2	36	10	53		
56	5075505D	870062	XX	22610	16490	94C03	2521	5	68 50070BBM	02	10E	5075505	870062	2	96	17	76		
57	5075505D	870063	XX	22220	16520	94C03	252	21	60350070BBM	05	10E	5075505	870063	2	40	15	53		
58	5075505D	870064	XX	21820	16580	94C03	252	21	68350060BBM	60	15NE	5075505	870064	1	54	16	70		
59	5075505D	870065	XX	21400	16600	94C03	251321		60345060BBM	40	15NE	5075505	870065	2	72	12	68		
60	5075505D	870066	XX	21010	16660	94C03	251421		50315020BBM	65	15NE	5075505	870066	1	50	12	65		
61	5075505D	870068	XX	20600	16700	94C03	251	21	64350065BBM	55	20NE	5075505	870068	1	90	12	74		
62	5075505D	870069	XX	20600	16300	94C03	251121		50320030BBM	30	20E	5075505	870069	1	50	10	65		
63	5075505D	870070	XX	20560	15900	94C03	251121		50325040BBM	65	20E	5075505	870070	2	50	12	61		
64	5075505D	870071	XX	20950	15850	94C03	252121		68340055BBM	60	20E	5075505	870071	1	50	10	43		
65	5075505D	870072	XX	21340	15800	94C03	251221		61340050BBM	15	20E	5075505	870072	2	120	22	83		
66	5075505D	870073	XX	21750	15780	94C03	252321		68355065LBT	10	20E	5075505	870073	2	145	20	84		
67	5075505D	870074	XX	22150	15720	94C03	251121		67325035BBM	05	10E	5075505	870074	2	65	15	120		
68	5075505D	870075	XX	22550	15700	94C03	252321		64365075BBM	20	10E	5075505	870075	2	65	12	71		
69	5075505D	870076	XX	22940	15640	94C03	751121		54320030BBM	30	0000	5075505	870076	1	105	13	95		
70	5075505D	870077	XX	23340	15600	94C03	251121		61330040BBM	25	15E	5075505	870077	1	62	11	89		
71	5075505D	890001	XX	13100	41600	94C03	251	21	55208015BBM	RB	35	08NE3930	5075505	890001	2	60	17	155	
72	5075505D	890002	XX	13600	42100	94C03	251	21	58510020BBM	ORD		39005075505	890002	4	60	15	86		
73	5075505D	890003	XX	13350	43000	94C03	733	21	65506012LBT	40		39405075505	890003	2	34	14	64		
74	5075505D	890004	XX	13200	43850	94C03	743	21	61505015GNG	GYBR	40	39805075505	890004	2	50	17	60		
75	5075505D	890005	XX	13200	44500	94C03	261	21	54503006PBP	RB		39705075505	890005	2	52	19	93		
76	5075505D	890006	XX	13000	45150	94C03	753521		54510015GNG	GYBR	40	000039905075505	890006	1	24	14	32		
77	5075505D	890007	XX	13000	45900	94C03	253521		57509018GNG	GYBR		10NE39605075505	890007	2	44	14	60		
78	5075505D	890008	XX	13700	45600	94C03	351	21	56510020BBM	MBR	80	25	E39305075505	890008	1	35	12	63	
79	5075505D	890009	XX	14300	45100	94C03	751	21	57303008PBP	RDBR		000049105075505	890009	2	44	15	65		
80	5075505D	890010	XX	14900	44800	94C03	851122		57204010	RDBR		000038205075505	890010	2	38	13	83		
81	5075505D	890011	XX	15500	44250	94C03	452	21	62510020LBT	GYBR	35	15NW38505075505	890011	2	55	15	62		
82	5075505D	890012	XX	15700	43550	94C03	451	21	56305015PBP	RDBR	45	15	W38505075505	890012	3	100	17	71	
83	5075505D	890014	XX	15000	42550	94C03	851	22	58706015BBM	ORBR	40	3NW38005075505	890014	3	94	20	103		
84	5075505D	890015	XX	14650	42250	94C03	351	22	59710015BBM	ORBR	40	25SE38005075505	890015	2	105	16	67		
85	5075505D	890213	XX	22150	19900	94C03	251	21	53315025PBP	75YR56	30	15E	5075505	890213	2	26		48	
86	5075505D	890214	XX	21780	19830	94C03	751	21	49315025PBP	05Y	65	25	0000	5075505	890214	1	47		140
87	5075505D	890215	XX	21360	19880	94C03	751	11	54315030PBP	75YR56	30	0000	5075505	890215	1	64		96	
88	5075505D	890216	XX	20960	19910	94C03	252	21	53330040BBM	10YR44	25	05E	5075505	890216	1	43		98	
89	5075505D	890217	XX	20900	19570	94C03	752	21	45310020BBM122	10YR44	20	0000	5075505	890217	1	31		65	
90	5075505D	890218	XX	20890	19110	94C03	251	1	5535045PBP122	5YR56	30	10SE	5075505	890218	1	38		40	
91	5075505D	890219	XX	21280	19090	94C03	251	21	7009015PBP122	5YR56		0000	5075505	890219	1	55		36	
92	5075505D	890220	XX	21680	19020	94C03	751	21	65220030PBP122	05YR56		05	5075505	890220	1	23		110	
93	5075505D	890221	XX	22060	19000	94C03	251	21	50315030BBM122	75YR44	40	05E	5075505	890221	1	28		82	
94	5075505D	890222	XX	22480	18960	94C03	751421		55235045PBP	75YR44	30	0000	5075505	890222	1	40		35	
95	5075505D	890223	XX	22980	18900	94C03	251	21	56225035BBM	75YR44	25	15S	5075505	890223	2	30		88	
96	5075505D	890224	XX	23250	18880	94C03	352321		58320030LBT	10YR44	25	30S	5075505	890224	1	52		74	
97	5075505D	890225	XX	23660	18820	94C03	352321		01440050LBT	10YR44	20	20N	5075505	890225	1	30		58	
98	5075505D	890227	XX	24090	18790	94C03	251	21	52320030BBM	75YR44	35	20N	5075505	890227	2	30		60	
99	5075505D	890228	XX	24080	18400	94C03	251	21	49325035BBM	75YR44	20	10E	5075505	890228	1	30		82	
100	5075505D	890229	XX	24030	17990	94C03	252521		53330040GNG	10YR44	35	10E	5075505	890229	1	30		49	
101	5075505D	890230	XX	23610	18000	94C03	751	21	52320035PBP	75YR56	20	0000	5075505	890230	2	41		55	
102	5075505D	890231	XX	23210	18040	94C03	751	21	53325035BBM	10YR44	25	0000	5075505	890231	2	56		68	
103	5075505D	890232	XX	22820	18090	94C03	753321		57325035GNG	10YR52	25	0000	5075505	890232	2	56		69	
104	5075505D	890233	XX	22420	18110	94C03	751521		60320030GNG	10YR54	20	0000	5075505	890233	2	26		55	
105	5075505D	890234	XX	22020	18180	94C03	751	21	56320025BBM	10YR44	20		5075505	890234	0	35		83	
106	5075505D	890235	XX	21620	18200	94C03	253	21	350060GNG	10YR44	20	05N	5075505	890235	2	62		98	
107	5075505D	890236	XX	21220	18250	94C03	251	21	66330040BBM	10YR44	25	15N	5075505	890236	2	35		49	
108	5075505D	890237	XX	20800	18280	94C03	251	21	5935045BBM	10YR44	25	20N	5075505	890237	1	45		40	
109	5075505D	890239	XX	20760	17910	94C03	351	21	44325035BBM	75YR44	40	30N	5075505	890238	2	38		110	
110	5075505D	890239	XX	20710	17510	94C03	251	21	44330040BBM	10YR44	40	15E	5075505	890239	1	20		45	
111	5075505D	890240	XX	21100	17520	94C03	252521		62330040GNG	10YR44	25	15E	5075505	890240	2	55		93	
112	5075505D	890241	XX	21495	17530	94C03	251	21	47335045BBM	10YR44	25	20E	5075505	890241	0	61		105	
113	5075505D	890242	XX	21900	17540	94C03	753121		5940050GNG		35	0000	5075505	890242	1	60		67	
114	5075505D	890243	XX	22300	17550	94C03	251	21	44320030BBM	10YR44	60	05E	5075505	890243	0	36		65	

115	5075505D	890244	XX	22700	17560	94C03	251	21	47325035PDF	75YR44	35	10M	5075505	890244	2	56	118
116	5075505D	890339	XX	14400	23200	94C03	251	21	50315035BBM	10YR44	35	5S	5075505	890339	2	30	15 48
117	5075505D	890340	XX	14800	23200	94C03	251	21	52310025BBM	75YR44	10S		5075505	890340	2	43	16 70
118	5075505D	890341	XX	15200	23200	94C03	252	21	61310025DBG	10YR44	20	5S	5075505	890341	1	38	15 26
119	5075505D	890342	XX	15600	23200	94C03	251	1	61315030BBM	10YR44	30	15E	5075505	890342	1	40	15 138
120	5075505D	890343	XX	16000	23200	94C03	251	21	50315035BBM	10YR44	25	10S	5075505	890343	2	40	21 210
121	5075505D	890344	XX	16400	23200	94C03	251	21	52315030BBM	10YR44	20	10S	5075505	890344	1	25	16 155
122	5075505D	890345	XX	16800	23200	94C03	351	21	52310020BBM	10YR44	20S		5075505	890345	4	35	22 173
123	5075505D	890346	XX	17200	23200	94C03	351	21	54310025BBM	10YR44	25	20S	5075505	890346	1	27	15 106
124	5075505D	890347	XX	17600	23200	94C03	351	21	56310025BBM	75YR44	25	20S	5075505	890347	1	35	16 86
125	5075505D	890348	XX	18000	23200	94C03	251	21	57320035BBM	75YR44	15	10S	5075505	890348	3	32	17 95
126	5075505D	890349	XX	18400	23200	94C03	251	21	54315030BBM	75YR44	20	5S	5075505	890349	2	42	13 75
127	5075505D	890350	XX	18800	23200	94C03	251	21	60310020BBM	75YR44	5S		5075505	890350	2	132	21 115
128	5075505D	890351	XX	19200	23200	94C03	251	21	67330045BBM	10YR44	30	10S	5075505	890351	1	70	17 74
129	5075505D	890352	XX	19600	23200	94C03	251	21	59330045BBM	10YR44	20	5S	5075505	890352	1	32	15 80
130	5075505D	890353	XX	20000	23200	94C03	251	21	50305030BBM	10YR44	45	10S	5075505	890353	1	34	14 90
131	5075505D	890354	XX	20400	23200	94C03	252221		72340055GBG	10YR44	30	10SE	5075505	890354	1	55	17 82
132	5075505D	890355	XX	20400	24000	94C03	252221		57340055BBM	10YR44	30	05SE	5075505	890355	2	60	15 100
133	5075505D	890356	XX	20000	24000	94C03	751	21	48310025BBM	10YR44	20	0000	5075505	890356	1	32	15 60
134	5075505D	890357	XX	19600	24000	94C03	751	21	64325040BBM	10YR44	25	0000	5075505	890357	2	45	14 143
135	5075505D	890358	XX	19200	24000	94C03	752221		67345060GBG	10YR44	30	0000	5075505	890358	2	52	14 55
136	5075505D	890359	XX	18800	24000	94C03	251	21	58320035BBM	75YR44	25	05SE	5075505	890359	2	68	17 90
137	5075505D	890360	XX	18400	24000	94C03	251	21	63310020BBM	75YR44	30	10E	5075505	890360	1	46	12 85
138	5075505D	890361	XX	18000	24000	94C03	251	21	51310020BBM	10YR44	25	10E	5075505	890361	1	50	15 83
139	5075505D	890362	XX	17600	24000	94C03	251	21	48315025BBM	10YR44	20	15E	5075505	890362	2	30	12 83
140	5075505D	890363	XX	17200	24000	94C03	251	21	51310030BBM	10YR44	30	115S	5075505	890363	3	44	16 150
141	5075505D	890364	XX	16800	24000	94C03	351	21	53320035BBM	75YR44	30	25E	5075505	890364	3	32	16 108
142	5075505D	890365	XX	16400	24000	94C03	51	21	49320030BBM	10YR44	35	125E	5075505	890365	2	23	12 85
143	5075505D	890366	XX	16000	24000	94C03	251	21	55305015BBM	10YR44	20	15SE	5075505	890366	3	45	15 95
144	5075505D	890367	XX	15600	24000	94C03	251	21	56310025BBM	10YR44	25	10SE	5075505	890367	4	46	13 105
145	5075505D	890368	XX	15200	24000	94C03	251	21	55320030BBM	10YR44	35	5SE	5075505	890368	4	59	15 75
146	5075505D	890369	XX	14800	24000	94C03	251	21	52315025BBM	10YR44	25	5SY	5075505	890369	4	39	12 77
147	5075505D	890370	XX	14400	24000	94C03	242	21	60340055GBG	10YR44	20	05SE	5075505	890370	1	42	11 69
148	5075505D	890371	XX	21200	20800	94C03	751	21	61325035BBM	10YR44	35	10000	5075505	890371	2	43	12 81
149	5075505D	890372	XX	21600	20900	94C03	251	21	50320035BBM	10YR44	40	10E	5075505	890372	2	36	15 120
150	5075505D	890373	XX	22000	20800	94C03	751	21	58320030BBM	10YR44	25	0000	5075505	890373	1	64	11 65
151	5075505D	890374	XX	22400	20800	94C03	751	21	56315030BBM	10YR44	0000		5075505	890374	2	42	10 70
152	5075505D	890375	XX	22400	20400	94C03	751321		64330045LBT	10YR44	25	0000	5075505	890375	3	157	20 190
153	5075505D	890376	XX	22400	20000	94C03	793215		631400600BBM	10YR31	00	0000	5075505	890376	6	141	10 35
154	5075505D	890377	XX	22000	20000	94C03	251	21	55330045BBM	75YR44	25	10E	5075505	890377	3	35	14 192
155	5075505D	890378	XX	21600	20000	94C03	751	21	53340055BBM	10YR44	30	0000	5075505	890378	2	43	15 73
156	5075505D	890379	XX	21200	20000	94C03	751	21	54315030PBP	5YR58	35	0000	5075505	890379	4	75	15 112
157	5075505D	890380	XX	20800	20000	94C03	271121		59330040PBBM	10YR32	15	5E	5075505	890380	2	49	12 80
158	5075505D	890381	XX	20400	20000	94C03	751	21	56310030BBM	75YR44	35	0000	5075505	890381	2	56	15 75
159	5075505D	890382	XX	20000	20000	94C03	251	21	52325040BBM	10YR44	20	10E	5075505	890382	1	21	7 55
160	5075505D	890383	XX	29600	20000	94C03	751	21	58320035BBM	10YR44	25	0000	5075505	890383	2	43	10 63
161	5075505D	890384	XX	19400	20200	94C03	751	21	48315030BBM	10YR44	20	0000	5075505	890384	2	22	12 55
162	5075505D	890385	XX	19400	20600	94C03	51	21	52320035BBM	10YR44	40	5E	5075505	890385	2	42	13 107
163	5075505D	890386	XX	19800	20800	94C03	251	21	54330045PBP	75YR76	25	5E	5075505	890386	2	57	11 89
164	5075505D	890387	XX	20200	20800	94C03	242215		641300500BBM	10YR32	00	5E	5075505	890387	5	121	5 17
165	5075505D	890388	XX	20600	20800	94C03	241	21	68325040BBM	10YR44	40	5E	5075505	890388	2	44	14 163
166	5075505D	890389	XX	21000	20800	94C03	751	21	57325035PBP	75YR56	35	0000	5075505	890389	2	68	13 158
167	5075505D	890390	XX	22400	21200	94C03	752	21	67320030GBG	10YR44	25	0000	5075505	890390	2	90	12 83
168	5075505D	890391	XX	22400	21600	94C03	751	21	49320030PBP	75YR56	30	0000	5075505	890391	2	37	8 73
169	5075505D	890392	XX	22400	22000	94C03	751	21	59240055PBP	75YR56	45	0000	5075505	890392	2	84	8 60
170	5075505D	890393	XX	22400	22400	94C03	751	21	52310020BBM	75YR44	25	0000	5075505	890393	1	32	12 83
171	5075505D	890394	XX	22000	22400	94C03	351	21	51315025BBM	10YR44	15	35N	5075505	890394	1	60	15 84
172	5075505D	890395	XX	21600	22400	94C03	751	21	54310025BBM	75YR44	20	0000	5075505	890395	2	58	15 70
173	5075505D	890396	XX	21200	22400	94C03	351	21	56330045BBM	10YR44	25	45NE	5075505	890396	1	48	15 84
174	5075505D	890397	XX	20800	22400	94C03	251	21	53315025BBM	10YR44	30	15NE	5075505	890397	2	42	15 78

175	5075505D	890398	XX	20400	22400	94C03	251	21	54315030BBM	75YR44	22	5NE	5075505	890398	2	35	15	82		
176	5075505D	890399	XX	20000	22400	94C03	351	21	53310020BBM	10YR44	25	30NW	5075505	890399	2	85	15	85		
177	5075505D	890400	XX	19600	22400	94C03	751	21	57105020PBP	75YR56	35	10000	5075505	890400	3	35	19	127		
178	5075505D	890401	XX	19800	22000	94C03	751	21	72340055GBG	10YR44	35	10000	5075505	890401	2	159	20	50		
179	5075505D	890402	XX	19900	21600	94C03	351	19	683350450BH	10YR32	45	135E	5075505	890402	3	125	30	78		
180	5075505D	890403	XX	20200	21600	94C03	751	21	55315030BBM	10YR44	20	0000	5075505	890403	2	59	15	80		
181	5075505D	890404	XX	20600	21600	94C03	292215		711300450BH	10YR32	00	10S	5075505	890404	2	163	12	28		
182	5075505D	890405	XX	21000	21600	94C03	751	21	633300450BH	10YR44	25	0000	5075505	890405	2	49	20	72		
183	5075505D	890406	XX	21400	21600	94C03	751	21	53310020BBM	75YR44	35	0000	5075505	890406	2	46	21	135		
184	5075505D	890407	XX	21800	21600	94C03	351	21	60315025BBM	10YR44		25S	5075505	890407	2	60	16	75		
185	5075505D	890408	XX	22000	21600	94C03	251	21	54310025BBM	75YR44	35	05E	5075505	890408	10	38	16	58		
186	5075505D	900231	XX	20570	19950	94C03	271	22	62210	20BBM	10YR44	50	3NE	5075505	900231	1	62		74	
187	5075505D	900232	XX	20150	20000	94C03	271	22	70220	30CBM	10YR44	10	5NE	5075505	900232	2	50		79	
188	5075505D	900233	XX	19750	20050	94C03	271	22	51210	20BBM	10YR44	5	3N	5075505	900233	2	35		72	
189	5075505D	900234	XX	19350	20100	94C03	271	22	50210	20BBM	10YR44	10	3N	5075505	900234	2	50		85	
190	5075505D	900235	XX	18970	20120	94C03	251	22	49210	20PBP	75YR44	10	10N	5075505	900235	1	48		82	
191	5075505D	900236	XX	18570	20160	94C03	251	22	47210	20BBM	10YR44	25	8W	5075505	900236	1	20		55	
192	5075505D	900237	XX	18160	20210	94C03	251	22	55210	20BBM	10YR44	20	1W	5075505	900237	2	60		80	
193	5075505D	900238	XX	17790	20250	94C03	251	22	68220	30PBP	75YR32	10	10W	5075505	900238	2	38		103	
194	5075505D	900239	XX	17390	20300	94C03	371	22	56220	30BBM	10YR44	10	45 W	5075505	900239	1	80		44	
195	5075505D	900240	XX	16980	20340	94C03	251	22	58210	20PBP	75YR44	10	20W	5075505	900240	2	65		44	
196	5075505D	900241	XX	16610	20380	94C03	251	22	55210	20PBP	75YR44	25	20W	5075505	900241	2	28		40	
197	5075505D	900242	XX	16320	20400	94C03	451		18254215	25BBM112	10YR32	40	145W	5075505	900242	0	10		35	
198	5075505D	900243	XX	16550	20700	94C03	451		18252215	25BBM112	10YR44	50	145W	5075505	900243	0	88		47	
199	5075505D	900245	XX	22550	19760	94C03	251	22	56210	20BBM	10YR44	25	1NW	5075505	900245	1	75		74	
200	5075505D	900246	XX	22950	19700	94C03	252	22	58315	25GBG	10YR54	25	1W	5075505	900246	0	20		38	
201	5075505D	900247	XX	23340	19680	94C03	272	22	68315	25CBM	10YR44	40	2W	5075505	900247	2	40		64	
202	5075505D	900248	XX	23740	19620	94C03	251	22	53320	30PBP	75YR44	10	3S	5075505	900248	2	33		42	
203	5075505D	900249	XX	24120	19590	94C03	251	22	57310	20BBM	10YR54	1	5S	5075505	900249	1	58		64	
204	5075505D	900250	XX	24160	19980	94C03	272	22	48320	30BBM	10YR54	10	1S	5075505	900250	2	57		58	
205	5075505D	900251	XX	24200	20390	94C03	251	22	49210	20PBP	75YR44	10	3W	5075505	900251	2	100		72	
206	5075505D	900252	XX	23800	20420	94C03	251	22	50210	20BBM	10YR54	10	3NW	5075505	900252	1	60		70	
207	5075505D	900253	XX	23400	20450	94C03	251	22	52210	20PBP	75YR44	5	1N	5075505	900253	1	38		52	
208	5075505D	900254	XX	23010	20500	94C03	251	22	47210	20BBM	10YR44	20	15W	5075505	900254	1	45		65	
209	5075505D	900255	XX	22640	20520	94C03	351	22	52210	20PBP	75YR44	10	25N	5075505	900255	1	85		57	
210	5075505D	900256	XX	22250	20560	94C03	351	16	53215	25BBM	10YR44	10	35N	5075505	900256	2	85		78	
211	5075505D	900257	XX	21870	20600	94C03	251	22	47210	20BBM	10YR44	80	15N	5075505	900257	1	38		120	
212	5075505D	900258	XX	21470	20620	94C03	351	22	52210	20PBP	75YR44	10	25N	5075505	900258	2	43		70	
213	5075505D	900259	XX	21100	20670	94C03	371	11	57220	30BBM	10YR44	10	50N	5075505	900259	3	68		112	
214	5075505D	900260	XX	20700	20700	94C03	351	22	50210	20BBM	10YR44	20	25N	5075505	900260	1	43		58	
215	5075505D	900261	XX	20330	20740	94C03	371	22	48210	20PBP	50Y	32	50	30N	5075505	900261	1	45		85
216	5075505D	900262	XX	19960	20780	94C03	351	22	47210	20PBP	75YR44	30	30N	5075505	900262	1	55		55	
217	5075505D	900263	XX	19570	20800	94C03	351	11	66315	25BBM226	10YR32	5	30NE	5075505	900263	1	90		58	
218	5075505D	900264	XX	19200	20830	94C03	351	22	52310	20BBM	10YR44	20	20N	5075505	900264	1	37		87	
219	5075505D	900265	XX	18940	20880	94C03	271	21	65310	20BBM	10YR44	30	2N	5075505	900265	1	40		65	
220	5075505D	900266	XX	18490	20900	94C03	271	22	63210	20BBM	10YR44	10	5W	5075505	900266	3	55		62	
221	5075505D	900267	XX	18120	20950	94C03	251	22	52210	20PBP	5 Y	32	1	15W	5075505	900267	2	35		58
222	5075505D	900268	XX	17730	20980	94C03	351	21	59320	30BBM	10YR32	1	50W	5075505	900268	1	58		54	
223	5075505D	900269	XX	17350	21010	94C03	271	22	56210	20PBP	75YR44	5	5W	5075505	900269	2	40		48	
224	5075505D	900270	XX	17000	21050	94C03	471		19276220	30BBM235	10YR54	30	140W	5075505	900270	1	90		54	
225	5075505D	900271	XX	17000	21400	94C03	471		18277215	25BBM22564	10YR54	40	135W	5075505	900271	2	110		60	
226	5075505D	900272	XX	17200	21800	94C03	471		22253210	20PBP	75YR44	30	45W	5075505	900272	2	85		35	
227	5075505D	900308	XX	8800	40000	94C03	251	19	54210	20PBP	75YR44	45	115E	5075505	900308	3	63		92	
228	5075505D	900309	XX	8600	40000	94C03	251	19	57210	20BBM	10YR44	40	115E	5075505	900309	2	63		79	
229	5075505D	900310	XX	8400	40000	94C03	251	11	59210	20BBM	10YR44	40	1E	5075505	900310	2	50		85	
230	5075505D	900311	XX	8200	40000	94C03	251	11	52210	20BBM	10YR44	50	110E	5075505	900311	2	35		56	
231	5075505D	900312	XX	8000	40000	94C03	251	11	58210	20PBP	75YR44	50	1E	5075505	900312	4	65		74	
232	5075505D	900313	XX	7400	40800	94C03	251	11	59210	20BBM	10YR44	25	1E	5075505	900313	10	63		115	
233	5075505D	900314	XX	7600	40900	94C03	251	19	58210	20PBP	75YR44	40	1E	5075505	900314	4	70		56	
234	5075505D	900315	XX	7800	40800	94C03	251	19	55210	20PBP	75YR44	40	1E	5075505	900315	5	53		72	

235	5075505D	900316	XX	8000	40800	94C03	251	22	58210	20PBP	75YR44	201	5NE	5075505	900316	6	43	67
236	5075505D	900317	XX	8200	40800	94C03	251	12	57215	25BDM	10YR44	251	5NE	5075505	900317	3	38	55
237	5075505D	900318	XX	8400	40800	94C03	351	12	53215	25BDM	10YR44	25120NE		5075505	900318	3	45	68
238	5075505D	900319	XX	8600	40800	94C03	251	12	55210	20PBP	75YR44	35115NE		5075505	900319	3	58	99
239	5075505D	900320	XX	8800	40800	94C03	351	12	51210	20PBP	50Y 44	20125NE		5075505	900320	1	60	56
240	5075505D	900321	XX	8800	41600	94C03	251	12	49215	25BDM	10YR44	20115SE		5075505	900321	1	125	110
241	5075505D	900322	XX	8600	41600	94C03	351	19	54215	25PBP	75YR32	40135SE		5075505	900322	1	48	150
242	5075505D	900323	XX	8400	41600	94C03	351	19	55215	25PBP	75YR44	40135E		5075505	900323	2	50	78
243	5075505D	900324	XX	8200	41600	94C03	351	19	59210	20BDM	10YR44	20140E		5075505	900324	4	70	115
244	5075505D	900326	XX	7800	41600	94C03	351	19	259210	20PBP2255	75YR44	50135E		5075505	900326	5	160	280
245	5075505D	900327	XX	7600	41600	94C03	251	16	65215	25BDM2255	10YR32	401 5E		5075505	900327	10	85	138
246	5075505D	900329	XX	7400	41600	94C03	351	16	53215	25PBP	5 75YR44	20125NE		5075505	900328	7	58	68
247	5075505D	900329	XX	7200	41600	94C03	251	12	67215	25BDM	5 10YR44	251 5E		5075505	900329	6	83	99
248	5075505D	900330	XX	7000	41600	94C03	251	22	58210	20PBP	75YR44	5E		5075505	900330	10	73	99
249	5075505D	900331	XX	7000	41800	94C03	432	14	70720	30RC1	10YR44	901 2E		5075505	900331	3	98	68
250	5075505D	900332	XX	7000	42000	94C03	251	19	271215	25PBP2255	75YR44	201 5E		5075505	900332	3	78	70
251	5075505D	900333	XX	7000	42200	94C03	251	12	55210	20PBP	75YR44	101 3E		5075505	900333	2	88	68
252	5075505D	900334	XX	7200	42400	94C03	251	19	56210	20PBP	75YR44	401 3E		5075505	900334	4	63	94
253	5075505D	900335	XX	7000	42400	94C03	231	19	63210	20PBP	75YR44	601 1E		5075505	900335	3	90	85
254	5075505D	900336	XX	6800	42400	94C03	251	19	55210	20PBP	75YR44	451 5E		5075505	900336	3	73	99
255	5075505D	900337	XX	6600	42400	94C03	251	16	52215	25PBP	75YR44	501 5E		5075505	900337	3	73	92
256	5075505D	900338	XX	6400	42400	94C03	251	16	53210	20PBP	75YR44	501 1E		5075505	900338	2	90	100
257	5075505D	900339	XX	6200	42400	94C03	251	16	54210	20PBP	75YR44	401 1W		5075505	900339	3	57	77
258	5075505D	900340	XX	6200	42400	94C01	251	12	66715	25BDM	10YR44	401 5W		5075505	900340	3	73	77
259	5075505D	900351	XX	5960	42800	94C03	251	16	210	20PBP	75YR44	401 3S		5075505	900351	5	43	102
260	5075505D	900352	XX	6000	43200	94C03	251	16	210	20PBP	50Y 44	251 2S		5075505	900352	14	140	470
261	5075505D	900353	XX	6400	43200	94C03	231	19	57710	15PBP	5 75YR44	901 1E		5075505	900353	4	64	21
262	5075505D	900354	XX	6800	43200	94C03	251	16	54710	20PBP	5 75YR44	601 2E		5075505	900354	3	44	15
263	5075505D	900355	XX	7200	43200	94C03	331	18	52725	35PBP	75YR44	80150E		5075505	900355	6	66	17
264	5075505D	900356	XX	7600	43200	94C03	251	16	64215	25BDM	10YR44	20115E		5075505	900356	4	42	20
265	5075505D	900357	XX	8000	43200	94C03	451	16	53210	20PBP	75YR44	201 2E		5075505	900357	3	95	15
266	5075505D	900358	XX	8400	43200	94C03	251	12	269210	20BDM2265	10YR44	401 2SW		5075505	900358	1	55	17
267	5075505D	900359	XX	8800	43200	94C03	251	16	252210	20PBP2265	75YR44	101 5S		5075505	900359	3	80	25
268	5075505D	900360	XX	9200	43200	94C03	251	16	50210	20BDM	10YR44	60110S		5075505	900360	2	44	25
269	5075505D	900361	XX	9600	43200	94C03	251	16	253210	20BDM2255	10YR44	50110S		5075505	900361	3	49	22
270	5075505D	900362	XX	10000	43200	94C03	271	19	249210	20BDM2255	10YR44	501 5SE		5075505	900362	2	44	16
271	5075505D	900363	XX	10000	42800	94C03	351	18	255210	20BDM2255	10YR44	50125S		5075505	900363	2	65	17
272	5075505D	900364	XX	9800	42400	94C03	351	16	55220	30PBP	75YR44	20 25S		5075505	900364	2	72	20
273	5075505D	900365	XX	9600	42400	94C03	351	16	67210	20BDM	10YR44	60125S		5075505	900365	2	63	22
274	5075505D	900366	XX	9400	42400	94C03	351	16	53210	20PBP	75YR44	25120S		5075505	900366	3	48	15
275	5075505D	900367	XX	9200	42400	94C03	251	16	51210	20PBP2251	50Y 32	5S		5075505	900367	3	57	20
276	5075505D	900368	XX	9000	42350	94C03	451	16	50210	20PBP	75YR44	30110E		5075505	900368	3	56	16
277	5075505D	900369	XX	8300	42400	94C03	251	16	55210	20PBP	75YR44	40110E		5075505	900369	4	70	20
278	5075505D	900370	XX	8600	42400	94C03	251	16	53210	20PBP	75YR44	30110E		5075505	900370	3	52	18
279	5075505D	900375	XX	7400	42400	94C03	251	16	58210	20PBP	10YR56	501 1SE		5075505	900375	4	99	16
280	5075505D	900376	XX	8400	42400	94C03	371	18	48220	30PBP	75YR44	25135E		5075505	900376	3	54	15
281	5075505D	900377	XX	8200	42400	94C03	351	16	62210	20PBP	75YR44	40125E		5075505	900377	3	66	20
282	5075505D	900378	XX	8000	42400	94C03	251	16	46210	20PBP	75YR44	20110E		5075505	900378	4	61	20
283	5075505D	900379	XX	7800	42400	94C03	251	16	50715	25PBP	75YR44	801 8E		5075505	900379	3	110	18
284	5075505D	900380	XX	7600	42400	94C03	251	16	54710	20PBP	75YR44	601 3E		5075505	900380	4	55	15
285	5075505D	900381	XX	14600	13600	94C03	251	22	54210	20BDM	10YR44	70 5E		5075505	900381	3	82	13
286	5075505D	900382	XX	14200	13600	94C03	251	22	58210	20PBP	75YR44	40 1E		5075505	900382	3	65	18
287	5075505D	900383	XX	13800	13600	94C03	251	22	53210	20PBP	75YR44	80 1E		5075505	900383	1	75	18
288	5075505D	900394	XX	13400	13600	94C03	251	22	60210	20BDM	10YR44	40 1E		5075505	900384	2	72	15
289	5075505D	900385	XX	13000	13600	94C03	52	22	57220	30BDM	10YR44	70 1W		5075505	900385	3	57	15
290	5075505D	900386	XX	13000	14400	94C03	251	22	61210	20BDM	10YR44	50 5W		5075505	900386	3	90	15
291	5075505D	900387	XX	13400	14400	94C03	251	22	54210	20BDM	10YR44	50 1E		5075505	900387	3	45	15
292	5075505D	900388	XX	13800	14400	94C03	251	22	54210	20PBP	75YR44	50 1E		5075505	900388	2	74	18
293	5075505D	900389	XX	14200	14400	94C03	251	22	59210	20BDM	10YR44	50 1E		5075505	900389	2	54	15
294	5075505D	900390	XX	14600	14400	94C03	251	22	66210	20PBP	75YR44	50 4E		5075505	900390	1	68	20

295	5075505D	900391	XX	14400	14800	94C03	251	22	54210	20BBM	10YR44	50	1NE	5075505	900391	1	49	16	82	
296	5075505D	900393	XX	14600	15200	94C03	251	22	64215	25PBP	75YR44	50	5E	5075505	900393	3	61	19	58	
297	5075505D	900394	XX	14200	15200	94C03	252	22	57210	20BBM	10YR32	85	2E	5075505	900394	3	190	20	70	
298	5075505D	900395	XX	13800	15200	94C03	252	22	69710	20CBM	10YR44	75	2E	5075505	900395	4	270	22	61	
299	5075505D	900396	XX	13400	15200	94C03	251	22	57210	20BBM	10YR44	30	1N	5075505	900396	3	48	17	87	
300	5075505D	900398	XX	13000	15200	94C03	251	22	62240	50HBM	10YR33	99	5E	5075505	900398	4	102	17	40	
301	5075505D	900399	XX	13000	16000	94C03	151	22	60210	20BBM	10YR44	75	1N	5075505	900399	2	75	12	47	
302	5075505D	900400	XX	13400	16000	94C03	251	22	58215	25PBP	75YR44	80	3E	5075505	900400	1	73	17	56	
303	5075505D	900401	XX	13800	16000	94C03	251	22	60215	25PBP	75YR44	75	3E	5075505	900401	2	56	11	67	
304	5075505D	900402	XX	14200	16000	94C03	251	12	62215	25UBM	10YR44	251	>E	5075505	900402	2	72	12	50	
305	5075505D	900404	XX	14600	16000	94C03	251	22	56215	25PRP	75YR44	50	5E	5075505	900404	1	36	16	69	
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310	5075505D	900411	XX	14200	16800	94C03	251	22	50210	20PBP	75YR44	50	15N	5075505	900411	2	27	16	63	
311	5075505D	900412	XX	13900	16800	94C03	351	22	66220	30CAH	10YR32	50	25N	5075505	900412	1	90	12	32	
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313	5075505D	900415	XX	13000	16800	94C03	351	22	57210	20BBM	10YR44	50	25E	5075505	900415	2	110	15	66	
314	5075505D	900417	XX	13000	17600	94C03	251	22	55210	20BBM	10YR44	60	15N	5075505	900417	3	50	17	59	
315	5075505D	900419	XX	13400	17600	94C03	251	22	51210	20BBM	10YR44	50	15N	5075505	900418	2	35	17	49	
316	5075505D	900419	XX	13800	17600	94C03	451	22	49210	20BBM	10YR32	25	35N	5075505	900419	4	90	14	43	
317	5075505D	900420	XX	14200	17600	94C03	551	24	58310	20BBM	10YR44	0	FLAT	5075505	900420	3	125	19	50	
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319	5075505D	950089	XX	9000	44800	94C03	121	19	2527	8	15BBM226	MBR	60	20	W	5075505	950089	2	28	62
320	5075505D	950091	XX	10200	44800	94C03	321	19	248515	20BBM226	MBR	50	40	E	5075505	950091	1	28	105	
321	5075505D	950092	XX	10600	44800	94C03	351	19	44310	15BBM226	MBR	50	40	E	5075505	950092	1	38	85	
322	5075505D	950093	XX	11000	44800	94C03	351	16	46310	15BBM	MBR	45	30	E	5075505	950093	2	43	53	
323	5075505D	950094	XX	11000	44000	94C03	251	16	45320	25BBM	YEBR	25110	E	5075505	950094	1	38	90		
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326	5075505D	950098	XX	9400	44000	94C03	121	19	52310	15BBM226	MBR	70120	E	5075505	950098	1	28	110		
327	5075505D	950099	XX	9000	44000	94C03	121	19	53310	15PBP226	ORBR	60110	W	5075505	950099	2	40	65		
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330	5075505D	950102	XX	7800	44800	94C03	221	19	49710	15PBP226	RDBR	60125	W	5075505	950102	3	30	73		
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333	5075505D	950105	XX	6600	44800	94C03	253	16	60315	20LBT	GYBR	30110N		5075505	950105	2	48	76		
334	5075505D	950106	XX	6200	44800	94C03	252	16	46310	15PBP	RDBR	50110NE		5075505	950106	1	48	83		
335	5075505D	950107	XX	6000	44800	94C03	352	16	51310	15BBM	DBR	50125NE		5075505	950107	2	45	65		
336	5075505D	950108	XX	6000	44000	94C03	121	19	50310	15PBP	RDBR	60115	E	5075505	950108	2	50	65		
337	5075505D	950110	XX	6200	44000	94C03	221	19	2503	5	10PBP224	RDBR	60120	E	5075505	950110	3	73	78	
338	5075505D	950112	XX	6600	44000	94C03	352	16	51310	15PBP224	RDBR	60135	E	5075505	950112	2	95	104		
339	5075505D	950113	XX	7000	44000	94C03	252	16	61415	20BBM	YEBR	30110	E	5075505	950113	3	68	80		
340	5075505D	950114	XX	7400	44000	94C03	551	16	53322	25BBM	MBR	301	5	E	5075505	950114	3	40	96	
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344	5075505D	950120	XX	10000	43200	94C03	221	19	251315	20PBP226	ORBR	40120SE		5075505	950120	2	43	162		
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356	6075505D	860014	XX	9700	41100	94C03	351	58	225			38NE	6075505	860014	3	190	18	54	
357	6075505D	860026	XX	8450	46000	94C03	3	53	18	25BBM	226	30NE	6075505	860026	3	44	18	50	
358	6075505D	860028	XX	9200	45300	94C03	3	53	20	25	226	35NE	6075505	860028	2	40	24	148	
359	6075505D	860029	XX	9550	44950	94C03	3	53	25	30	226	40NE	6075505	860029	4	57	19	75	
360	6075505D	860030	XX	9700	44400	94C03	2	51	20	25	226	20SE	6075505	860030	3	30	17	92	
361	6075505D	860031	XX	10000	43950	94C03	3	50				25 E	6075505	860031	2	27	17	82	
362	6075505D	860017	XX	11300	41200	94C03		68				45 S4750	5075505	890017	3	110	22	158	
363	6075505D	900325	XX	8000	41600	94C03	351	182582	0	5	TP2255	10YR44	70140E	6075505	900325	3	128		135
364	6075505D	950090	XX	9800	44800	94C03	3	54		226		45 E	6075505	950090	2	30		68	
365	6075505D	950097	XX	9800	44000	94C03	3	57		226		45 E	6075505	950097	2	33		102	
366	6275505D	900244	XX	16840	20970	94C03	451	181762	0	5	TP23529LBN	70145W	5075505	900244	0	98		43	

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\$DES 1975_BEG
DONE.
T=0.07 DR=0 \$.03, \$2.55T

APR 1975 BUSINESS PUBLICATIONS

APPENDIX 4

List of Qualifications

List of Qualifications - S.J. Hoffman

BSc 1969 - McGill University (Hons Geology and Chemistry)
MSc 1972 - The University of British Columbia (Geochemistry)
PhD est 1976 - The University of British Columbia (Geochemistry)

List of Publications

1. Hoffman, S.J., 1972
Geochemical dispersion in bedrock and glacial overburden around a copper property in south central British Columbia.
MSc thesis, unpublished, U.B.C., 209 pp.
2. Hoffman, S.J. and Fletcher, W.K., 1972
Distribution of copper at the Dansey-Rayfield River property, south central British Columbia.
J. Geoch. Expl. 1, 163-180.
3. Hoffman, S.J. and Waskett-Myers, M.J., 1974
Determination of molybdenum in soils and sediments with a modified zinc dithiol procedure.
J. Geoch. Expl. 3, 61-66.
4. Hoffman, S.J., 1974
Pebble Cards - A record of the coarse fraction of stream sediments for geochemical exploration.
J. Geoch. Expl. 3, 387-388.
5. Hoffman, S.J. and Fletcher, W.K., 1976
Reconnaissance lake sediment geochemistry over the Nechako Plateau, B.C.
In press, J. Geoch. Expl.
6. Hoffman, S.J., 1976
Talus fine sampling - an alternative to drainage surveys in mountainous terrain.
In preparation, (presented at the GAC Symposium, Vancouver, February 1976).
7. Hoffman, S.J., Arnold, P.M. and Zink, E.W., 1976
Rapid field determination of copper by anodic stripping voltammetry (ASV).
In press, Encyclopedia of Earth Sciences

8. Hoffman, S.J., 1976
Lake sediment geochemistry.
In press, Encyclopedia of Earth Sciences.
9. Hoffman, S.J. and Fletcher, W.K., 1976
Detailed lake sediment sampling of anomalous lakes
on the Nechako Plateau, central British Columbia -
Comparison of trace metal distributions in Capoose
and Fish Lakes.
In preparation.
10. Hoffman, S.J. and Fletcher, W.K., 1976
Sequential extraction of copper, zinc, iron,
manganese and molybdenum from lake sediments.
In preparation.



VANCOUVER ISLAND HELICOPTERS LTD.

P.O. BOX 2095 SIDNEY, BRITISH COLUMBIA V8L 3S6 TELEPHONE 656-3987

S4

DATE MAY 12, 1975

In Account With

B.P. MINERALS LTD.,

#405, 1199 WEST PENDER ST.,

VANCOUVER, B.C.

B.P. Minerals Limited

RECEIVED

MAY 14 1975

Vancouver, B.C.

REFERENCE INV.#'S 3773, 74, 75, 6601, 02, 03, 04, 05.

FLYING SERVICE FOR MONTH OF APR. 26 - MAY 3 1975
AS PER ATTACHED FLIGHT INVOICES.

HELICOPTER TYPE BELL 206B REG. No. C.F. HSO

BASE OF OPERATION VICTORIA, B.C.

BALANCE FORWARD		
<u>33.0</u> HOURS	@ \$ <u>250.00</u> PER HR.	\$ 8,250.00
<u>1.3</u> HOURS V.I.H. FUEL	@ \$ <u>17.25</u> PER HR.	22.43
_____ HOURS V.I.H. FUEL	@ \$ _____ PER HR.	
MINIMUM CHARGES (IF APPLICABLE)		
CREW EXPENSES	PILOT: HOTEL APR. 27/75	14.70
	MEALS	28.00
ADDITIONAL CHARGES	<u>109 GALS. JP4</u>	75.21
APPROVED FOR PAYMENT		
CHARGE	<u>80017</u>	
DATE	<u>MAY 20 1975</u>	
TOTAL CHARGES		\$ 8,390.34

TERMS: 30 DAYS NET

Interest at 1 1/2% per month (18 per cent per annum) charged on overdue accounts.

This company complies with the CODE OF ETHICS of the Helicopter Association of America.

- d) Living and Travelling expenses for 2 men.
6 days at \$45,00 per day..... \$270.00
- e) Mobilization Charge for airborne geophysical equipment and operator from Toronto. \$1,100.00

TOTAL COST \$11,685.00

LESS DEPOSIT UPON COMPLETION OF FLYING \$7,000.00

BALANCE OUTSTANDING AND PAYABLE \$4,685.00

We have enjoyed working on this project and it has been my pleasure to analyse and interpret the results of the survey in conjunction with BP Personnel.

We hope that we can be of service in the future.

Yours very truly,

MORRISON & DEPAOLI,

Garry DePaoli


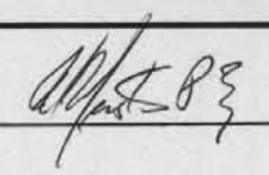
G.M. DEPAOLI,
GEOPHYSICIST, B.Sc.

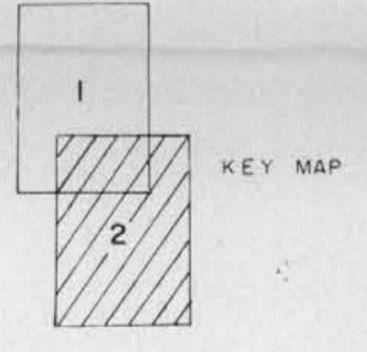
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APPROVED FOR PAYMENT

CHARGE 80017

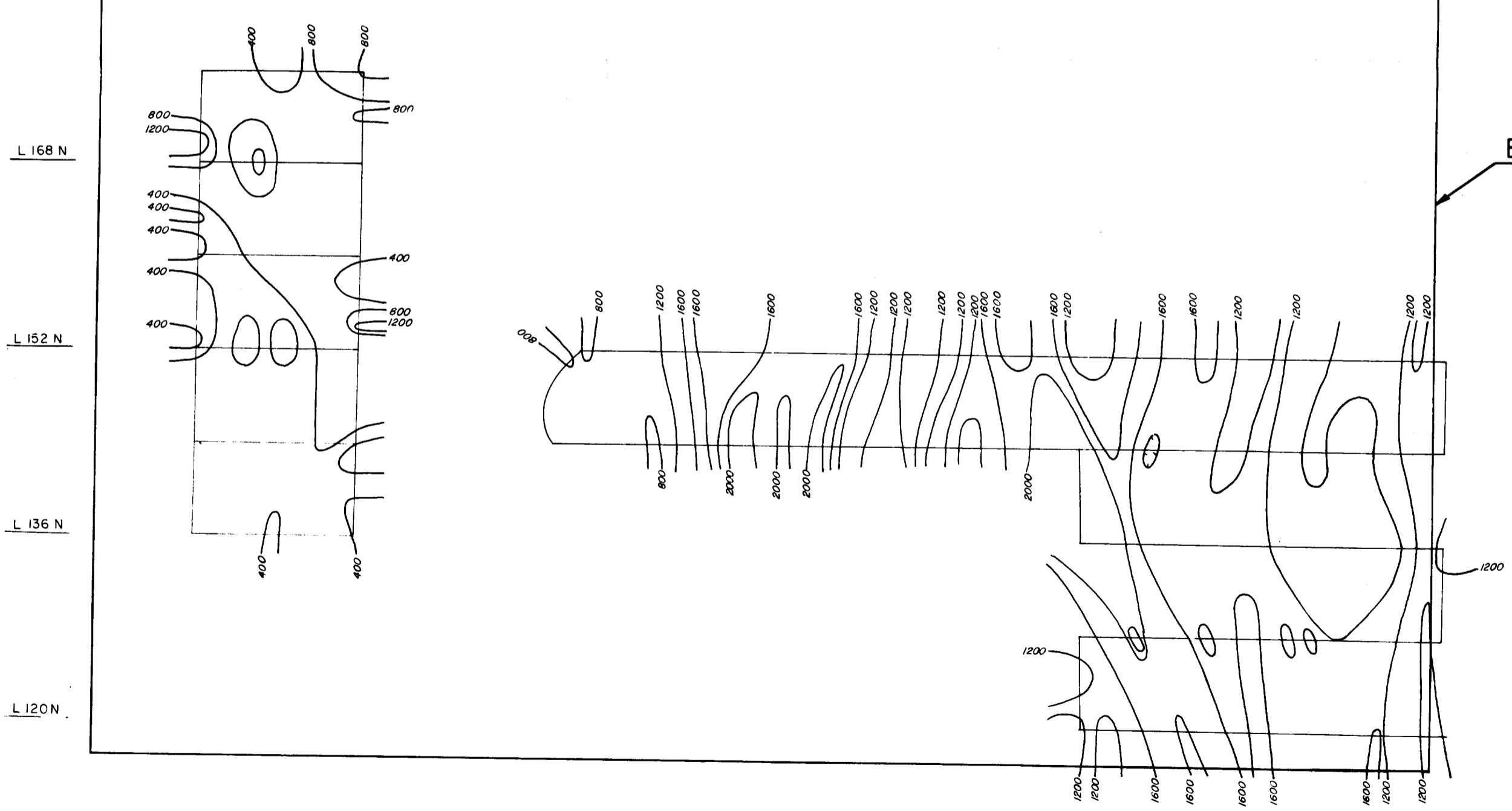
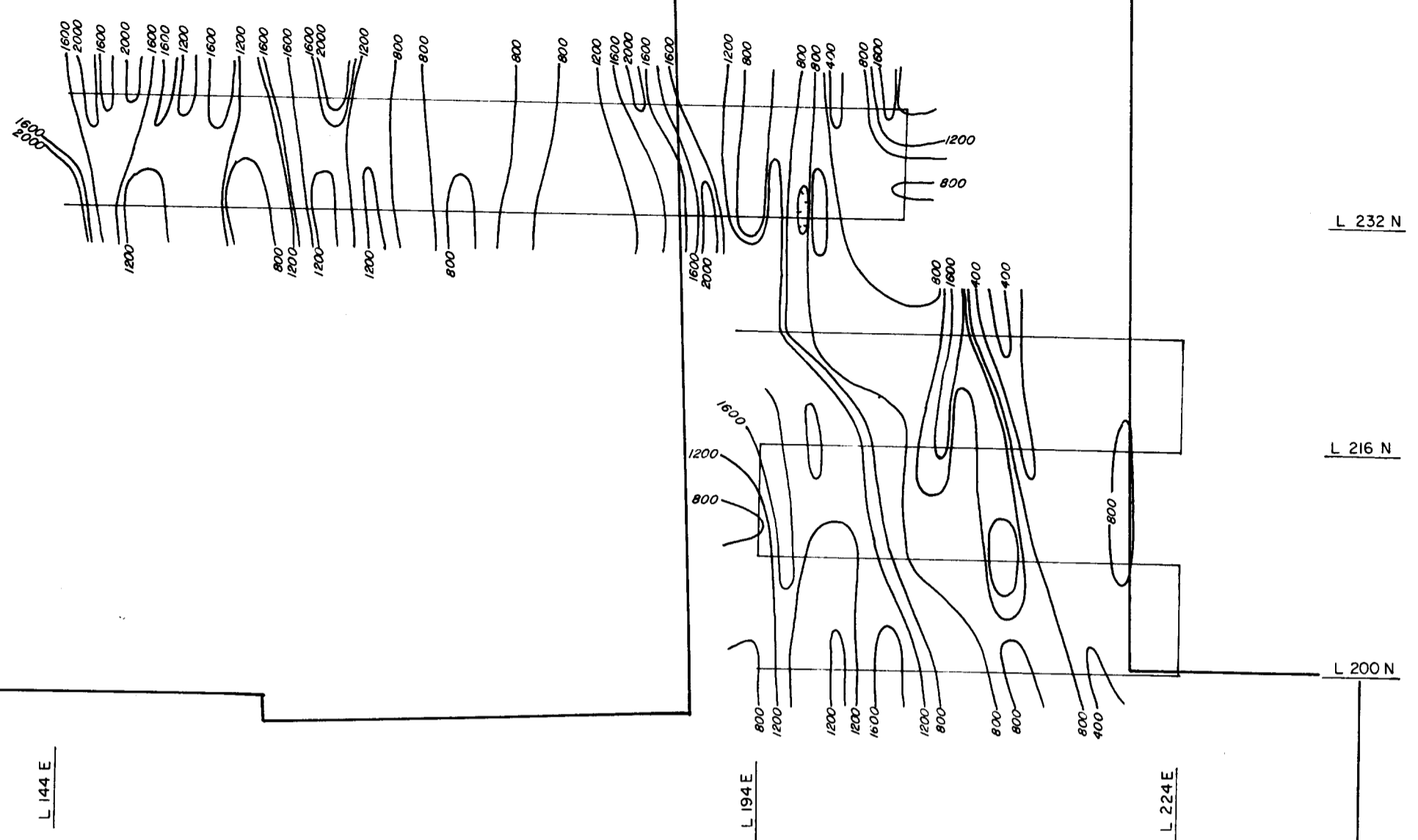
DATE AUG 8 1975 INTLS

 Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 5896 MAP #3	B P MINERALS LTD.	
	VEGA CREEK	
	ORTHOPHOTO MAP	
Scale 1" = 1000' Contour Interval 50 feet Date JUNE 1975 Job No. 06041-4 Sheet No. 2 of 2	FIG. 3	

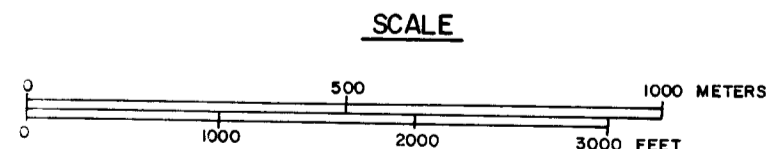


5896 M-3

125,000 N 130,000 N 135,000 N 140,000 N 145,000 N 150,000 N 155,000 N



**Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT**
 NO. 5896 MAP # 5

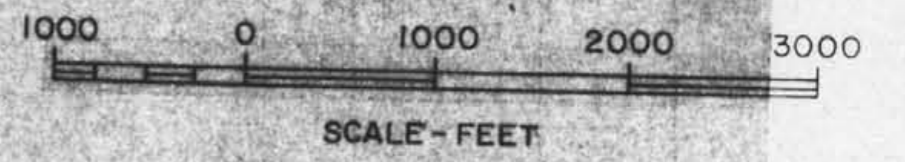


BP Minerals Limited <i>[Signature]</i>			
GROUND MAGNETOMETER SURVEY CONTOUR MAP BEG CLAIMS (south) VEGA CREEK, OMINECA M. D., B.C.			
SCALE	1" = 1000'	NTS 94 C-3	FIG. 5
DRAWN	76-23	DATE MARCH, 1976	PROJ. 505
To accompany report:			

STREAM-SEDIMENT LOCATION MAP

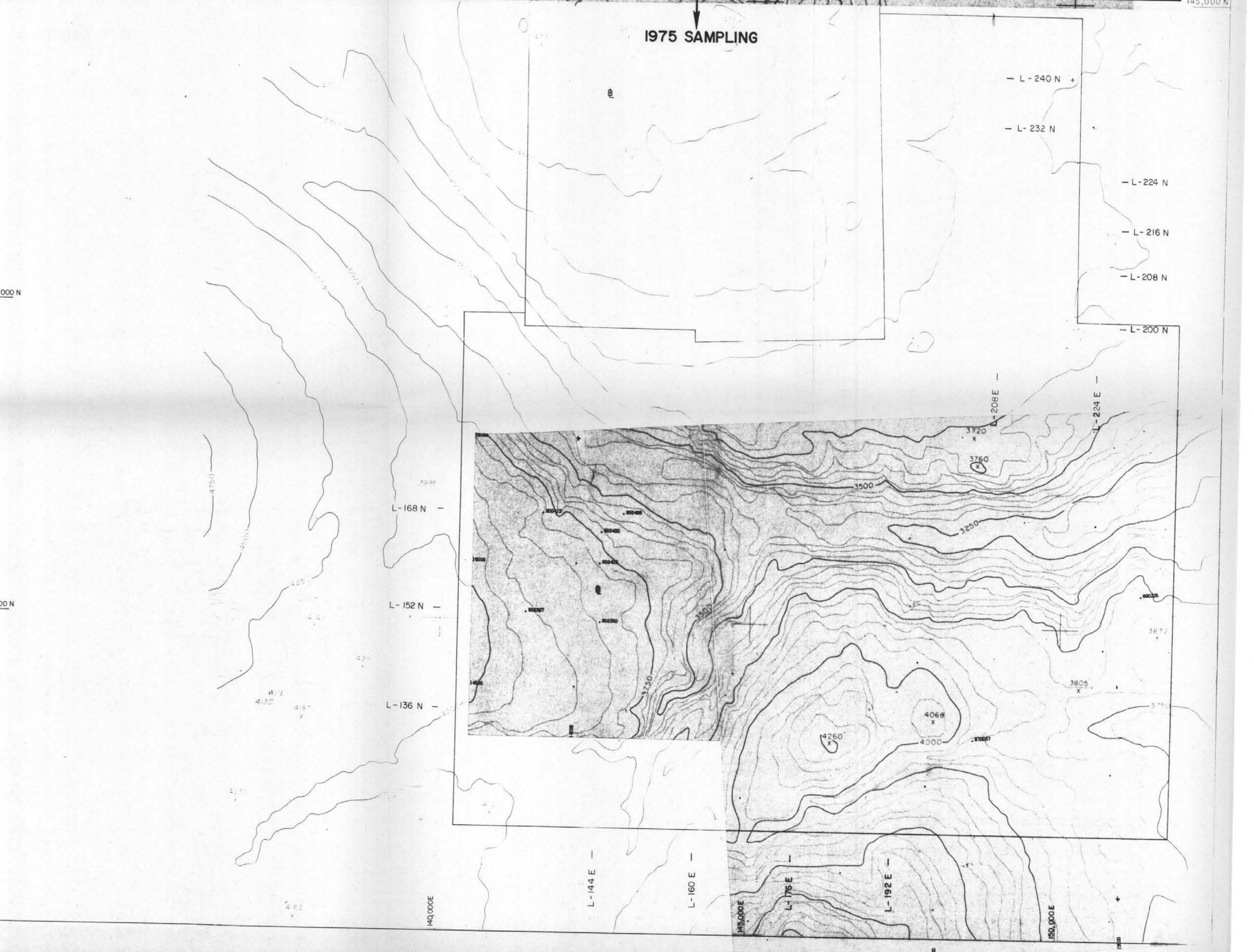
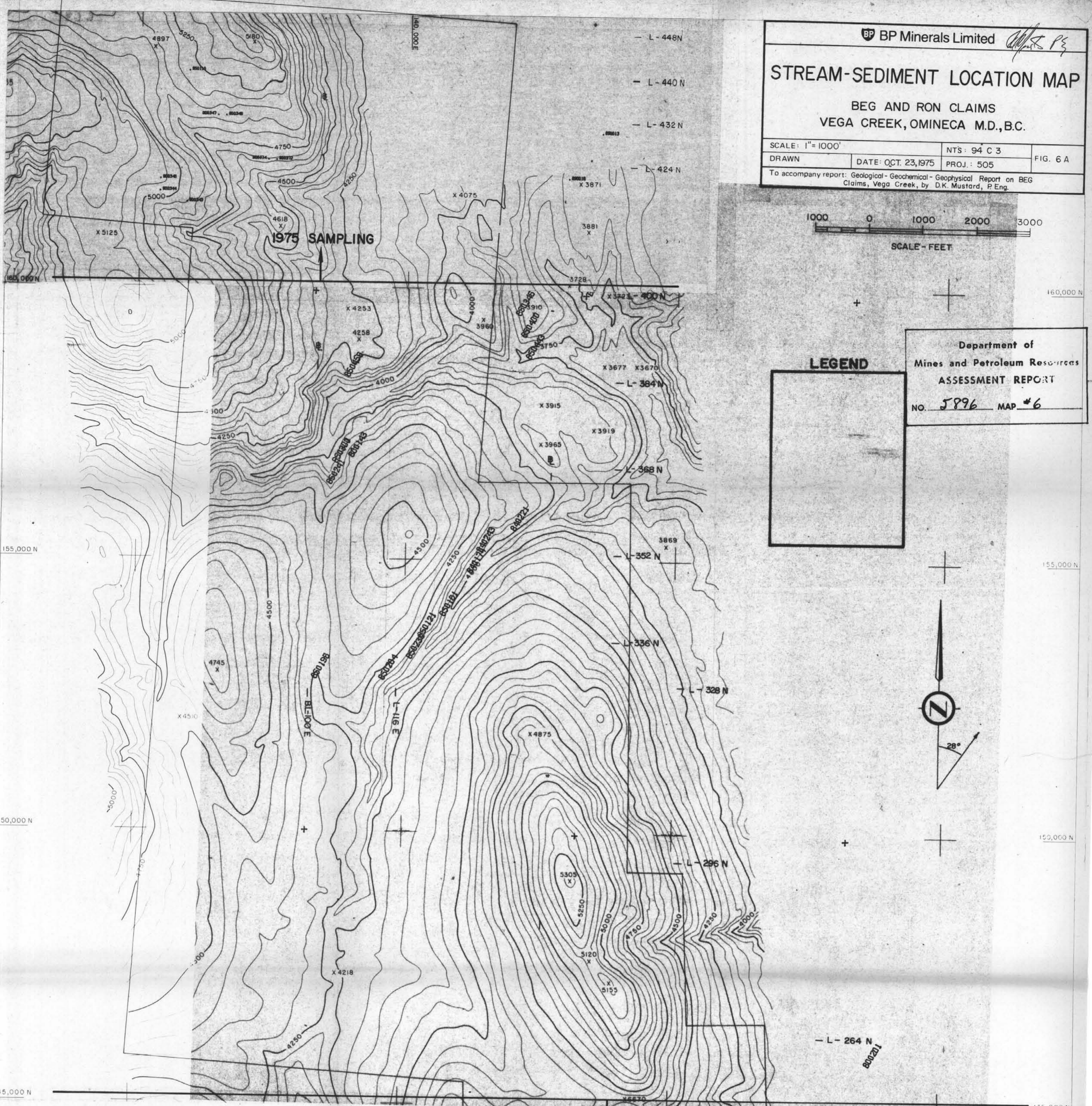
BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1"=1000'	NTS: 94 C 3	FIG. 6 A
DRAWN	DATE: OCT. 23, 1975	PROJ.: 505
To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P.Eng.		



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5896 MAP #6

LEGEND



STREAM - SEDIMENT MOLYBDENUM

BEG AND RON CLAIMS
VEGA CREEK, OMINICA M.D., B.C.

SCALE: 1" = 1000'
DRAWN: DATE: OCT 23, 1975 NTS: 94 C 3 PROJ: 505 FIG. 6 B
To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P.Eng.

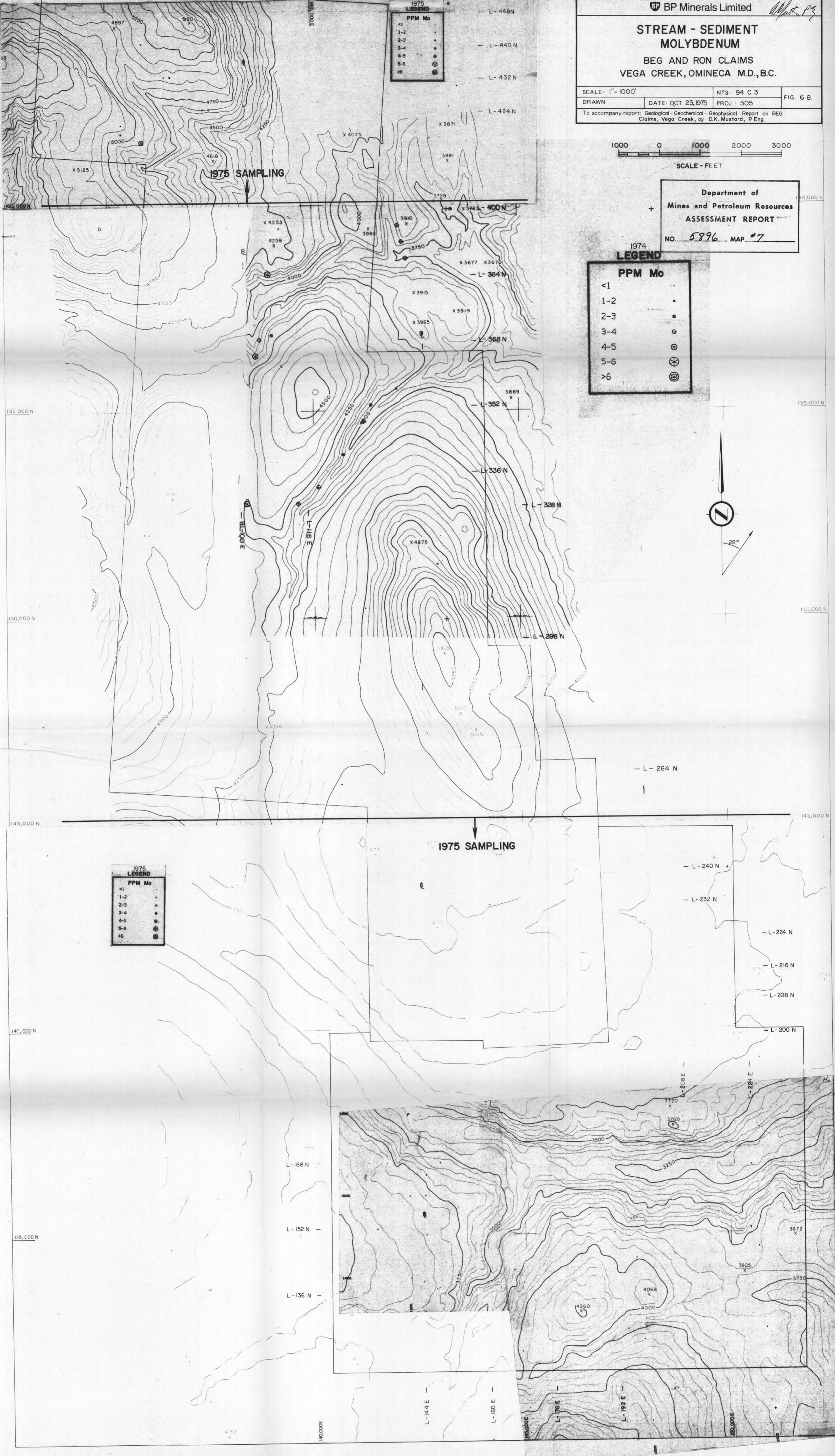


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5896 MAP #7

1974 LEGEND

PPM Mo	
<1	.
1-2	•
2-3	•
3-4	⊙
4-5	⊗
5-6	⊗
>6	⊗

1975 LEGEND	
<1	.
1-2	•
2-3	•
3-4	⊙
4-5	⊗
5-6	⊗
>6	⊗



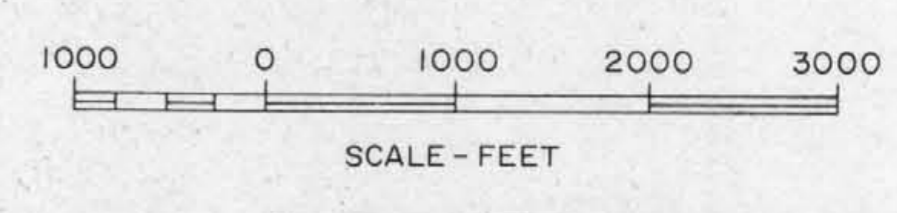
1975 LEGEND	
<1	.
1-2	•
2-3	•
3-4	⊙
4-5	⊗
5-6	⊗
>6	⊗

**STREAM-SEDIMENT
COPPER**

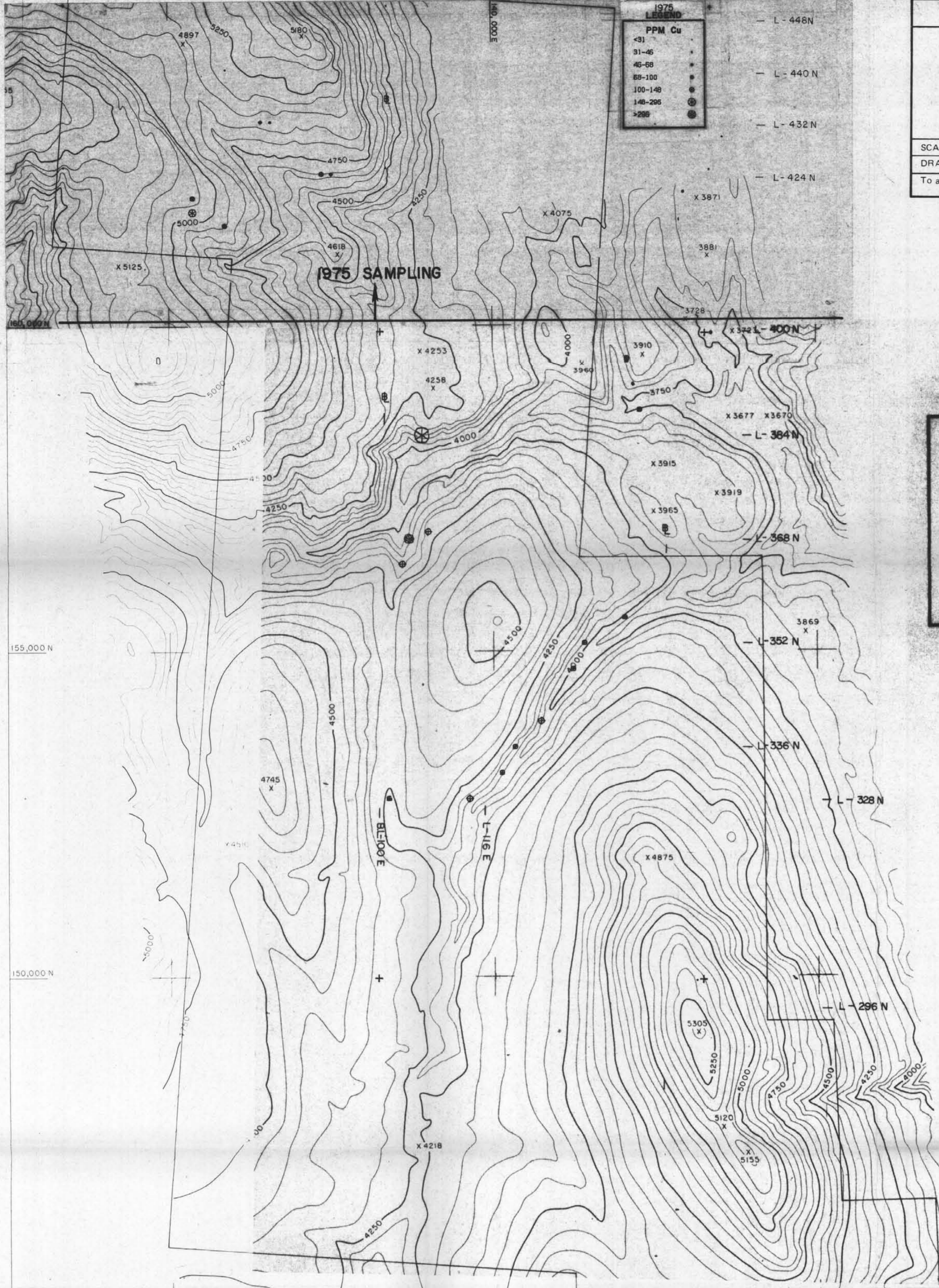
BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1" = 1000'	NTS: 94 C 3	FIG. 6 C
DRAWN	DATE: OCT 23, 1975	PROJ.: 505

To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P. Eng.



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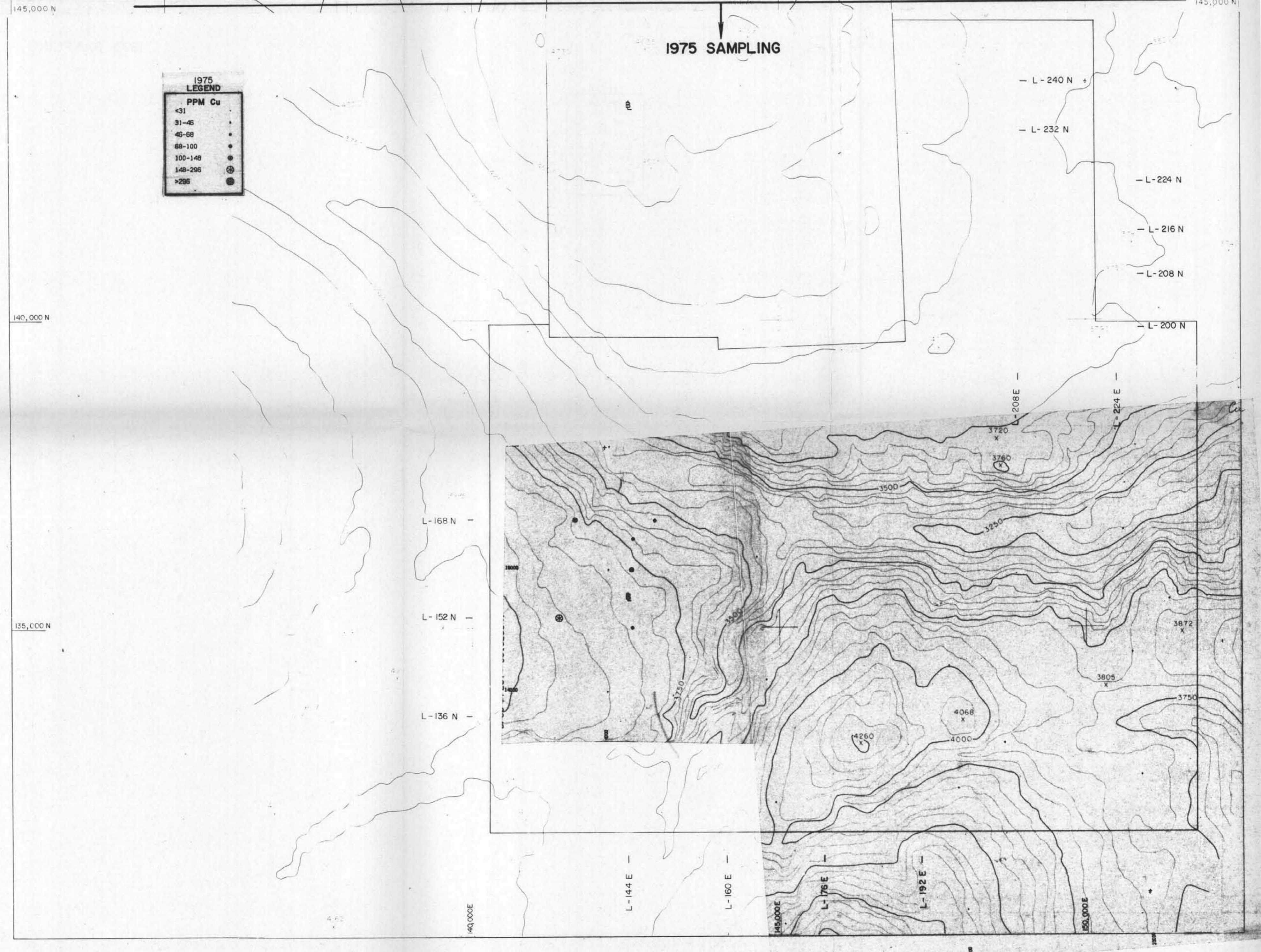


1975 LEGEND

PPM Cu	Symbol
<31	•
31-46	•
46-68	•
68-100	•
100-148	•
148-296	•
>296	•

1974 LEGEND

PPM Cu	Symbol
<31	•
31-46	•
46-68	•
68-100	•
100-148	•
148-296	•
>296	•



1975 LEGEND

PPM Cu	Symbol
<31	•
31-46	•
46-68	•
68-100	•
100-148	•
148-296	•
>296	•

STREAM SEDIMENT ZINC

BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1" = 1000'	NTS: 94 C 3	FIG. 6 D
DRAWN	DATE: OCT. 23, 1975	PROJ.: 505

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1974 LEGEND

PPM Zn	
<62	
62-75	•
75-91	•
91-110	•
110-134	•
134-268	•
>268	•

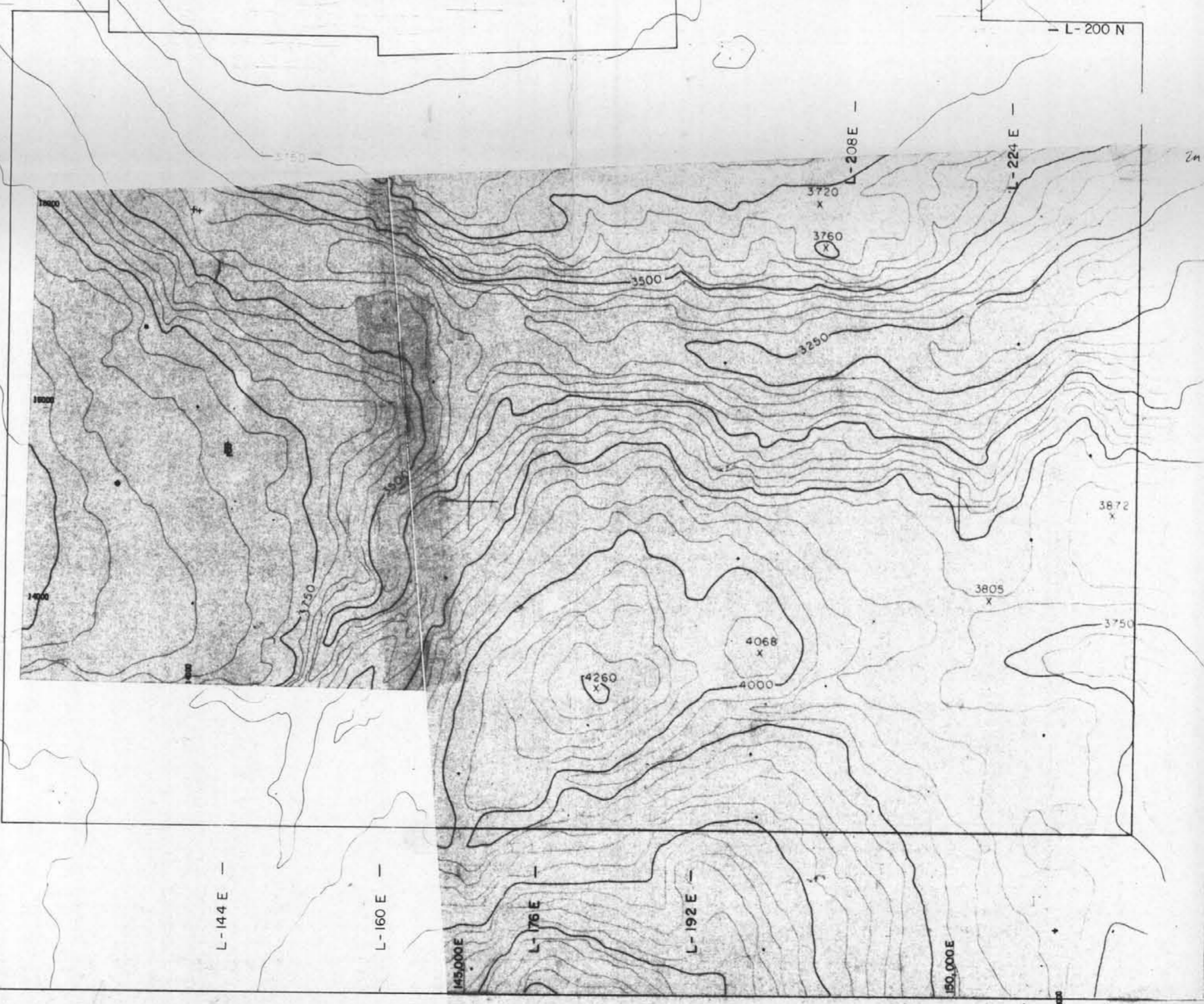


1975 SAMPLING

1975 LEGEND		PPM Zn	
•	<62	•	62-75
•	62-75	•	75-91
•	75-91	•	91-110
•	91-110	•	110-134
•	110-134	•	134-268
•	134-268	•	>268

1975 SAMPLING

1975 LEGEND		PPM Zn	
•	<62	•	62-75
•	62-75	•	75-91
•	75-91	•	91-110
•	91-110	•	110-134
•	110-134	•	134-268
•	134-268	•	>268



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Mo IN SOILS

BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1" = 1000'
DRAWN: DATE: OCT. 23, 1975
NTS: 94 C 3
PROJ.: 505
FIG. 7 B

To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P.Eng.

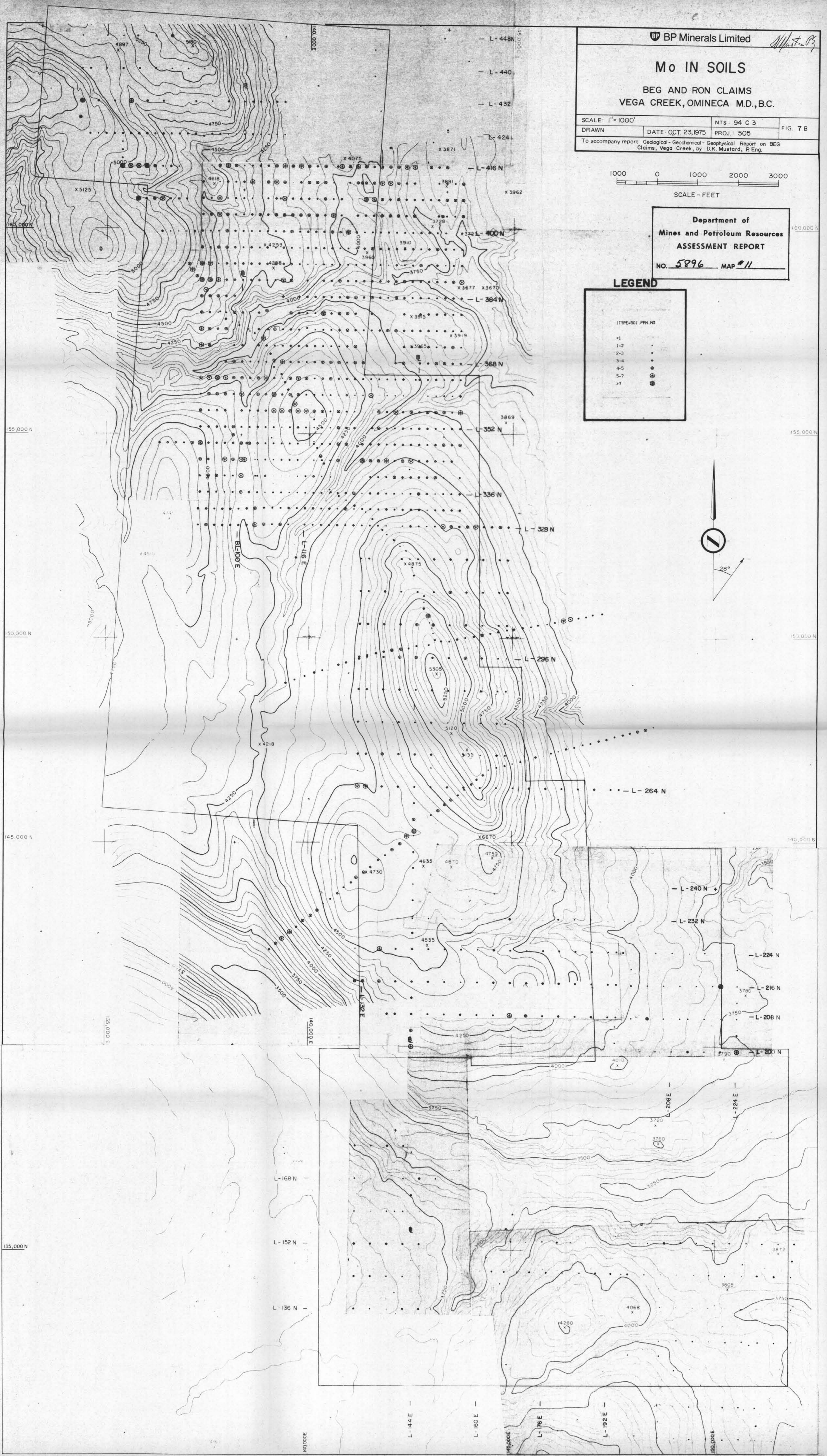


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LEGEND

(TYPE=50) PPM MO

<1	•
1-2	•
2-3	•
3-4	•
4-5	•
5-7	•
>7	•



Cu IN SOILS

BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1"=1000'	NTS: 94 C 3	FIG. 7 C
DRAWN	DATE: OCT. 23, 1975	PROJ.: 505
To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P. Eng.		



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LEGEND

(TYPE=50) . PPM. CU

- <23
- 23-36
- 36-55
- 55-87
- 87-135
- 135-270
- >270



Pb IN SOILS

BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1" = 1000'
DRAWN: DATE: OCT. 23, 1975
NTS: 94 C 3
PROJ: 505
FIG. 7 D

To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P. Eng.

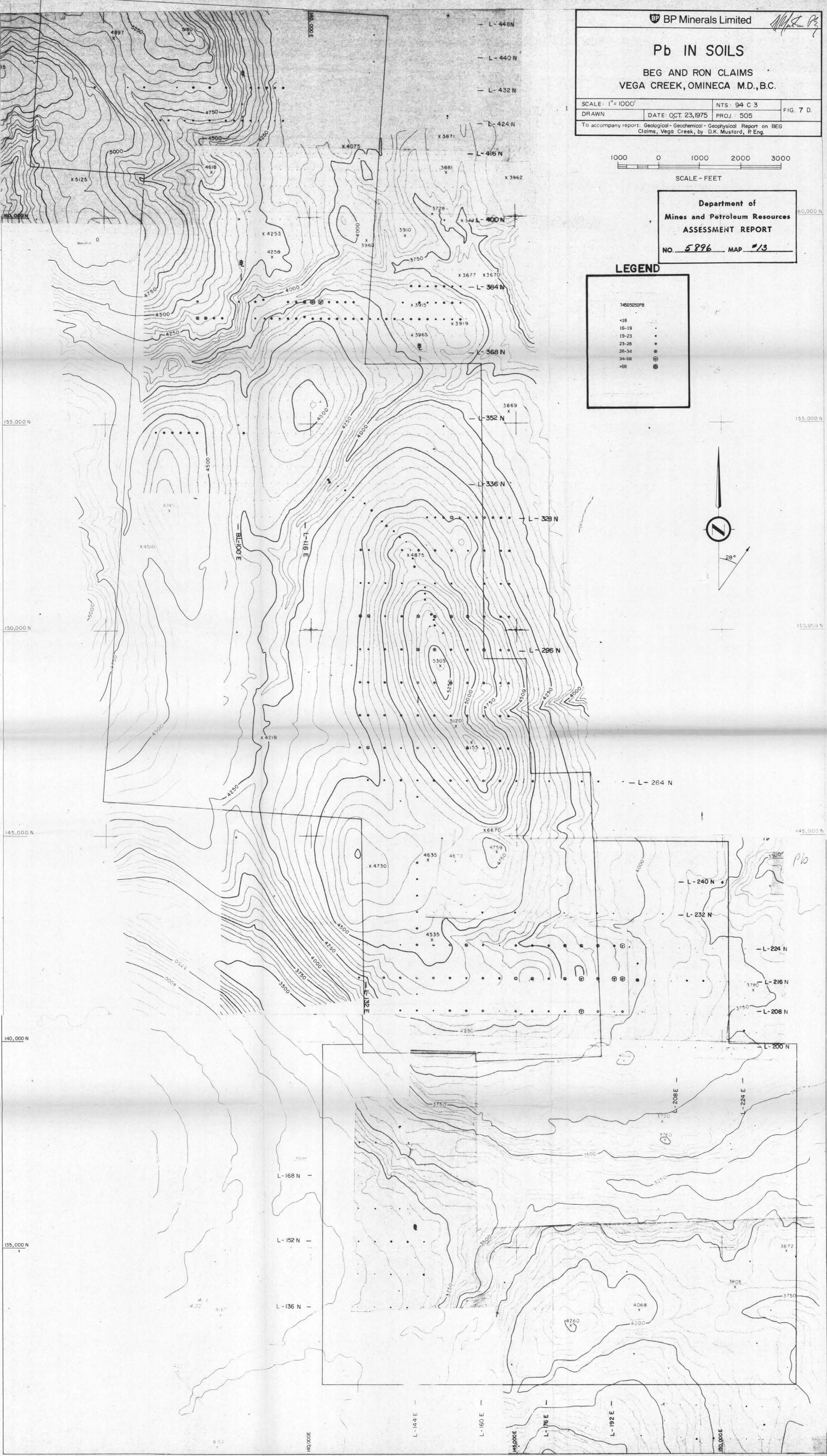


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LEGEND

745050SPB

416	•
16-19	•
19-23	•
23-28	•
28-34	•
34-68	•
>68	•



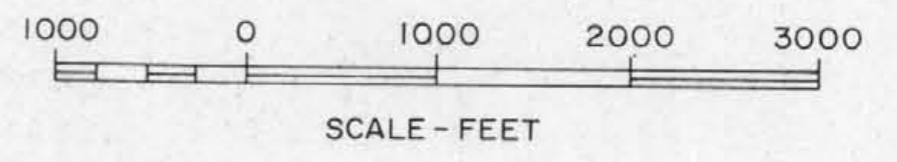
Pb

M.P. P3

Zn IN SOILS

BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

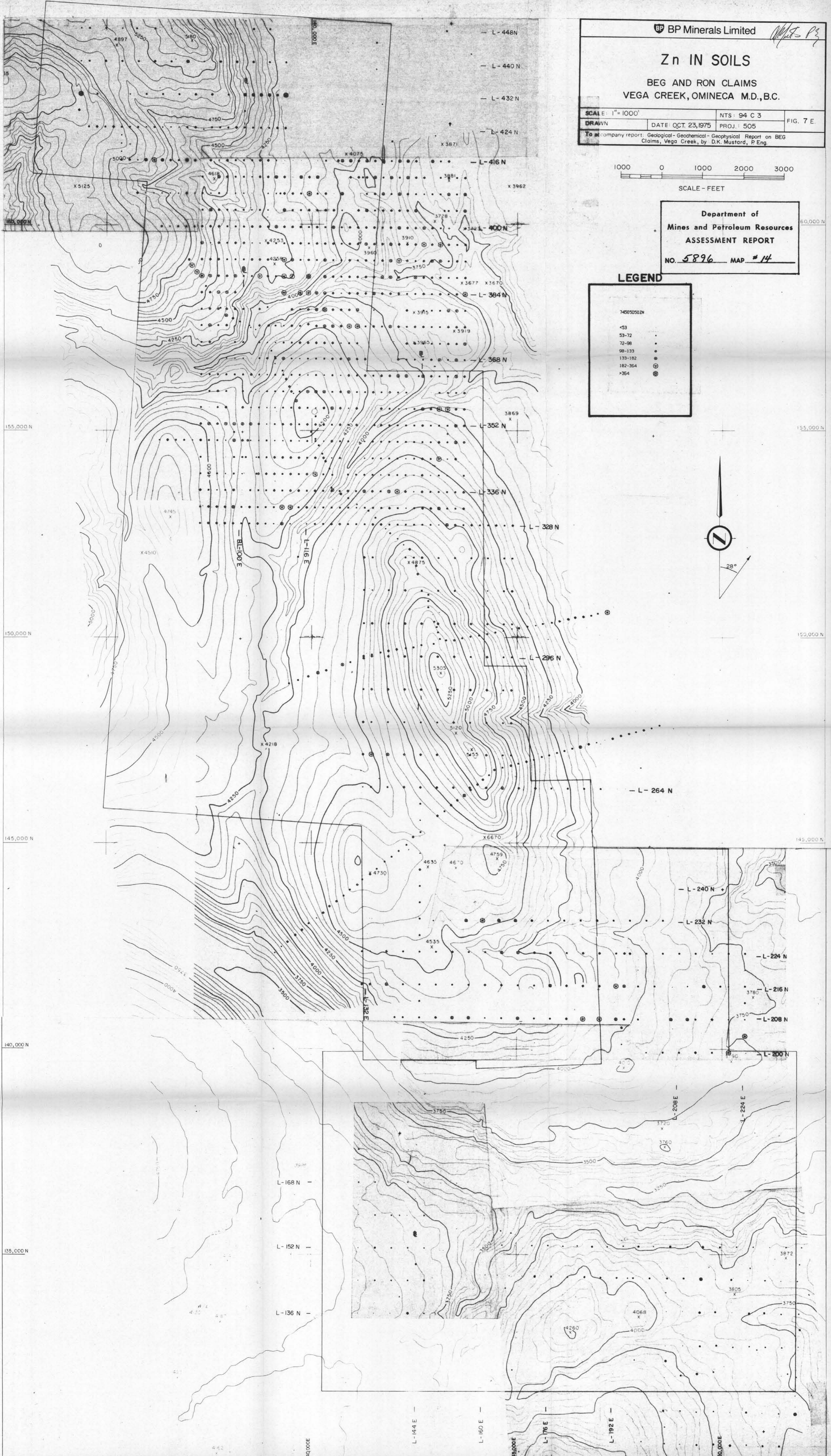
SCALE: 1" = 1000' NTS: 94 C 3 FIG. 7 E.
DRAWN: DATE: OCT. 23, 1975 PROJ.: 505
To accompany report: Geological-Geochemical-Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P.Eng.



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LEGEND

7450502N
<53
53-72
72-98
98-133
133-182
182-364
>364



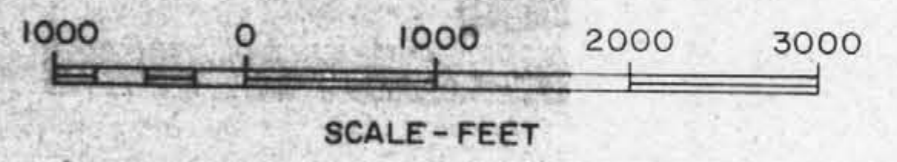
155,000 N
150,000 N
145,000 N
140,000 N
135,000 N
130,000 N
125,000 N
120,000 N
115,000 N
110,000 N
105,000 N
100,000 N
95,000 N
90,000 N
85,000 N
80,000 N
75,000 N
70,000 N
65,000 N
60,000 N
55,000 N
50,000 N
45,000 N
40,000 N
35,000 N
30,000 N
25,000 N
20,000 N
15,000 N
10,000 N
5,000 N
0

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pH IN SOILS

BEG AND RON CLAIMS
VEGA CREEK, OMINECA M.D., B.C.

SCALE: 1" = 1000'	NTS: 94 C 3	FIG. 7 F
DRAWN	DATE: OCT 23, 1975	PROJ.: 505
To accompany report: Geological - Geochemical - Geophysical Report on BEG Claims, Vega Creek, by D.K. Mustard, P.Eng.		



Department of
Mines and Petroleum Resources
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LEGEND

(TYPE-SOIL) (PH-00) PH

<38	●
38-44	⊗
44-48	⊙
48-55	⊘
55-61	⊚
61-66	⊛
>66	⊜

