'78- #364 - #6935

Report on

the

PESO CLAIMS

(Likely Group; Peso, Peso B, and Peso E Claims)

near

Likely, B. C.

Cariboo Mining Division

(Latitude 52°37'N., Longitude 121°35'W.)

For

LONGBAR MINERALS LTD.

Results of Field Work

August 30 - September 6, 1977

By

A. L. Littlejohn, Geologist,

September 30, 1977

Delta, B. C.

TABLE OF CONTENTS

INTRODUCTION

This report summarizes the field work done on Spanish Mountain, near Likely, B. C. during the first week of September 1977 and presents a brief outline of the regional geology and past history.

A total of 81 claim units were staked. These are the the Peso, Peso A to Peso F claims. Work was centered on the Peso Claim and this report is submitted for consideration for assessment work credits on the Likely Group (Peso, Peso B and Peso E Claims).

Recommendations for further exploration are given.

CLAIMS INFORMATION

Claim Name	Units	Record No.	*Anniversary Date
Peso	9	487	September 21, 1977
Peso B	18	488	" "
Peso E	6	491	" "

* before assessment work credits

SUMMARY AND CONCLUSIONS

1. Gold is found in two types of quartz vein on Spanish Mountain. Narrow, discontinuous gash veins strike at right angles to a major fault. Visible gold is common in these. Massive quartz veins strike approximately parallel to the major fault. Gold can be panned from these.

2. The main country rock is dark grey, fine grained phyllite. Quartzite occurs in places. These rocks belong to the Cariboo Group of Palaeozoic age which are host to gold deposits 30km to the north. Alteration by carbonatization and pyritization is widespread and pervasive throughout the area.

3. Soil geochemistry shows that analysis for gold will indicate gold-bearing quartz veins. High background values may indicate gold-bearing zones in the country rock.

4. The gash quartz veins appear to be too small and widely spaced to be economic. The more massive veins would require rehabilitation of the old adits and controlled sampling before an evaluation could be made.

5. There is potential for zones of replacement within the country rock since:

(a) Phyllite is a suitable host rock

(b) A major structural break occurs in the area which may be related to the known gold showings.

(c) Alteration is widespread, particularly the introduction of pyrite.

(d) The phyllites appear to be geochemically anomalous with respect to gold and contain visible gold where altered adjacent to quartz veins.

(e) Gold is associated with pyrite in the placers of Cedar Creek and Spanish Mountain. Gold was seen to be contained in (oxidized) pyrite.

6. It is recommended that a soil sampling program be conducted to search for replacement type gold deposits and further quartz vein systems. Soils should be analysed for gold, silver, copper and lead. Whether there is a correlation

between gold and other elements could first be tested on the samples already collected. In view of the association of gold and pyrite, anomalous areas should be surveyed by IP methods to delineate conductors. The field time would be two months.

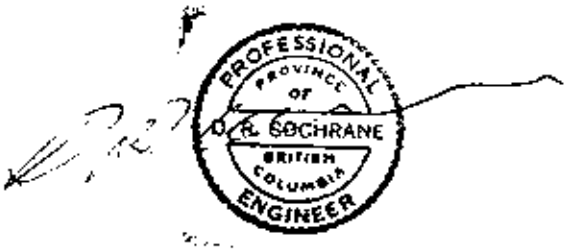
Respectfully submitted

A. L. Littlejohn, Geologist,

September 30, 1977,

Delta, B. C.

Under the direction of



BACKGROUND

The area of interest is covered by N.T.S. map sheet 93A/11W and is approximately 10km southeast of Likely, B. C. (52° 37'N, 121° 35'W) on Spanish Mountain.

Small placer operations were carried out in this area during the 1860's but no large scale mining was done. Interest revived in the 1920's with production from Spanish Creek to the north and Cedar Creek to the south. Desultory placer work has continued to the present, including some workings on Spanish Mountain.

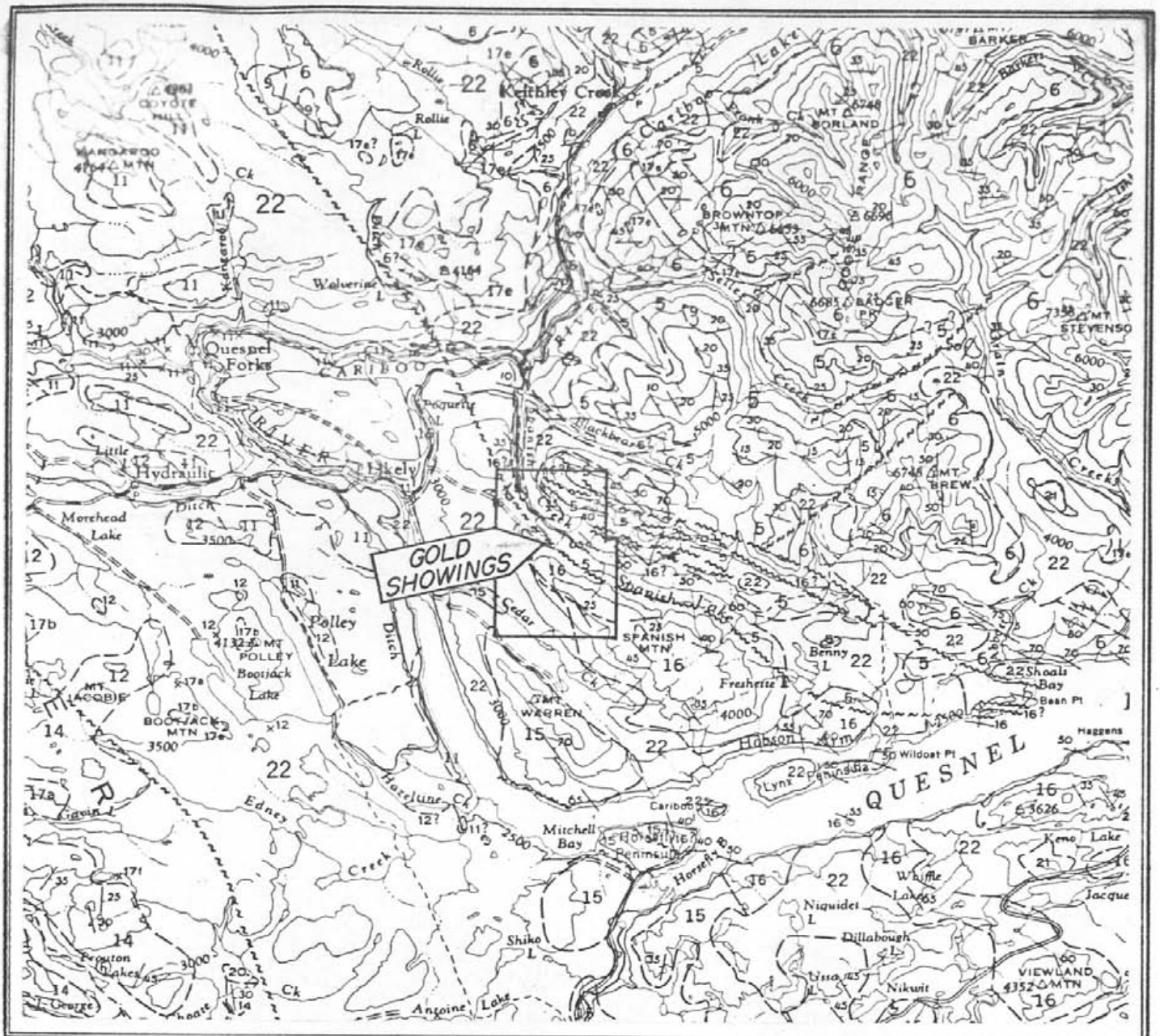
In the Cedar Creek and Spanish Mountain Camps the gold is coarse and well worn although in places it is rough. It occurs in Tertiary gravels lying on the plateau which have been only partially reworked by glacial action and recent stream action. The pay gravel is characterized by the presence of small cubic pseudomorphic crystals of limonite after pyrite. This is a feature of all the rocks observed on Spanish Mountain by the writer and suggests that the source may not be far away.

In the Spanish Creek camp the gold occurs in resorted gravels and is rather fine.

Gold-bearing quartz veins were discovered on the northeast side of Spanish Mountain in 1933. The veins vary from a few centimeters up to 0.8 metres in width. One sample from a vein 20 centimetres wide assayed 0.10 oz per ton in gold and 1.4 oz per ton in silver. This is comparable to the assays obtained on the present survey.

Fairly extensive work has been done on this area since 1933. Two adits were driven into sparsely mineralized quartz veins which are 2 - 5 metres thick. Up to 1947 several hundred feet of diamond drilling had been carried out in the area in search of mineralized quartz veins. The only significent mineralization was found in the narrow quartz veins which have been exposed by trenching at several places. Assays of <u>selected</u> samples of this type of vein gave values up to 5.88 oz. per ton in gold and 32 oz. per ton in silver. A 4 ton shipment of <u>selected</u> ore from surface cuts returned 8 oz. of gold, 40 oz. of silver, 32 lb. of copper.

No significant work has been carried out since 1947 although local residents report intermittent activity.



JURASSIC

16 Green andesitic tuff, agglomerate, and flows; minor argillite, chert, and conglomerate

CAMBRIAN

5 MIDAS FORMATION: black, quartzose phyllite, slate, argillite, and siltstone; northwest of Cariboo River includes unit 4 where that unit is thin and discontinuous

Fault (defined, approximate, assumed) . . . . . ~~~~~ ~~~ ~~~

LONGBAR MINERALS LTD.

Peso Claims Spanish Mtn. near Likely, B.C.

N.T.S. 93A/11 & 12. Cariboo Mining Division

REGIONAL GEOLOGY FIGURE 2

From G.S.C. "Quesnel Lake" sheet.

Scale 1: 250,000

0 5 10 km

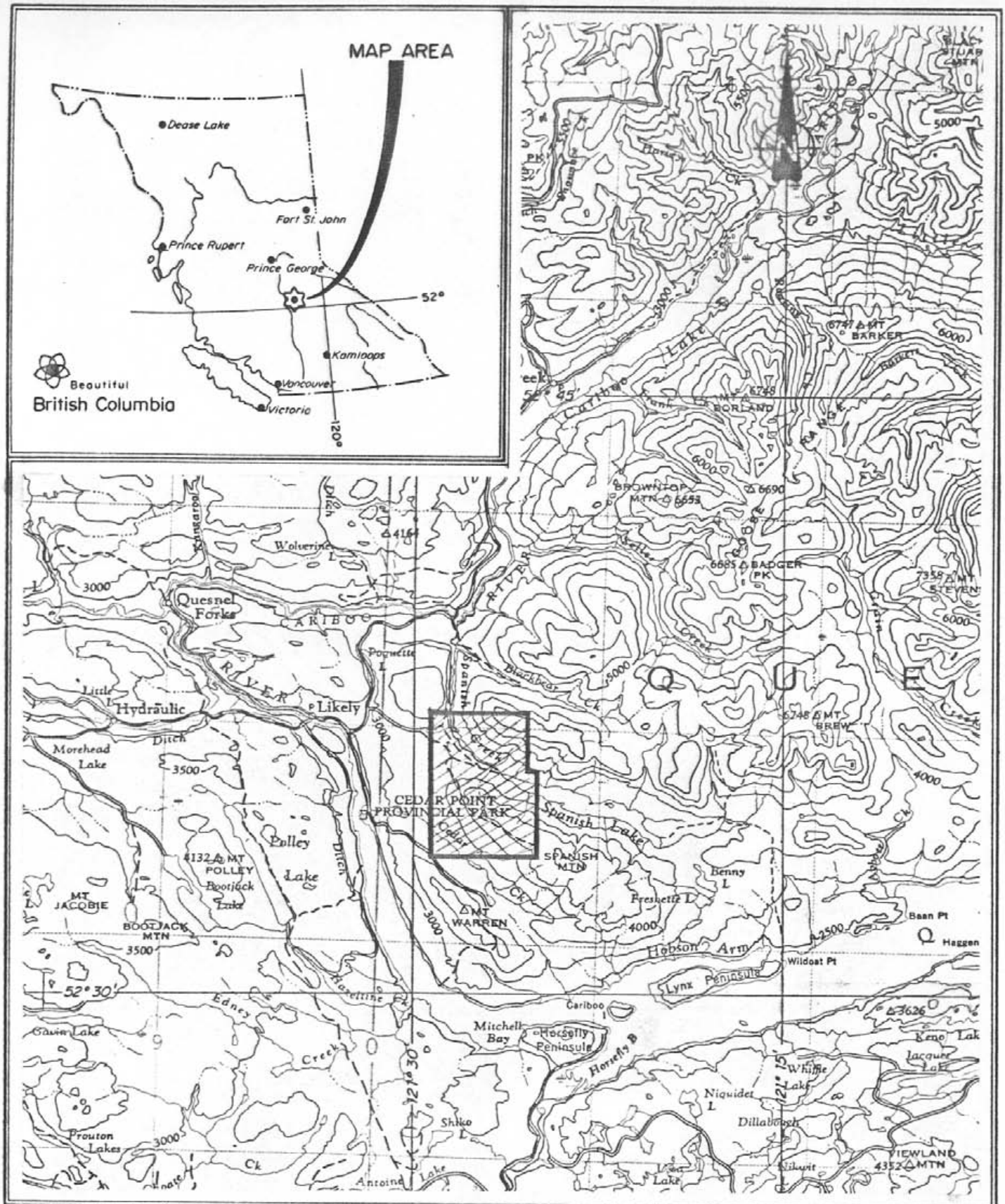
B.A.C., Oct. '77.

REGIONAL GEOLOGY

The main feature of this area is a major fault trending NW - SE, parallel to the main fold axis. At the west end of Spanish Lake this fault swings to a WNW - ESE trend and parallels the lake along the northeast flank of Spanish Mountain. A number of smaller faults are parallel to the latter section of the major fault on it's northeast side.

The fault separates Middle Jurassic or Cretaceous andesitic tuff, argillite, chert and conglomerate from Cambrian phyllite, slate and argillite. The latter lie on the north side of the fault and form part of the Cariboo Group which underlies the goldfields of the Yanks Peak area 30km to the north.

The gold showings on Spanish Mountain are found in the area where the major fault changes strike.



LONGBAR MINERALS LTD.

Peso Claims Spanish Mtn. near Likely, B.C.

N.T.S. 93A/11 & 12. Cariboo Mining Division

LOCATION MAP FIGURE 1

From N.T.S. "Quesnel Lake" sheet.

Scale 1: 250,000

0 5 10 km

B.A.C., Oct. '77.

LOCAL GEOLOGY

The main rock type on Spanish Mountain is a dark grey, fine grained phyllite which is interbedded with impure quartzite horizons of varying thickness and extent. The strike is parallel to the major fault and the rocks dip moderately to the south. Dolomite occurs towards the crest of Spanish Mountain ridge. A medium-grained quartz-felspar dyke, striking NE - SW across the phyllites, was observed in a trench at 4,000 ft. elevation.

There are two systems of quartz veins. At 3,900 ft. elevation a vein varying in thickness from 1 to 5m can be traced for 250m along the strike. It strikes E-W and dips 60 degrees south. A second vein lies 30 ft. below this and may represent a faulted portion of the main vein, since both are highly fractured, have the same mineralogy and the country rock at the contacts is highly sheared. The veins contain scattered patches of cubic pyrite (often altered to limonite) in open spaces and muscovite. Minor galena is also present. Most of the mineralization is at the contacts.

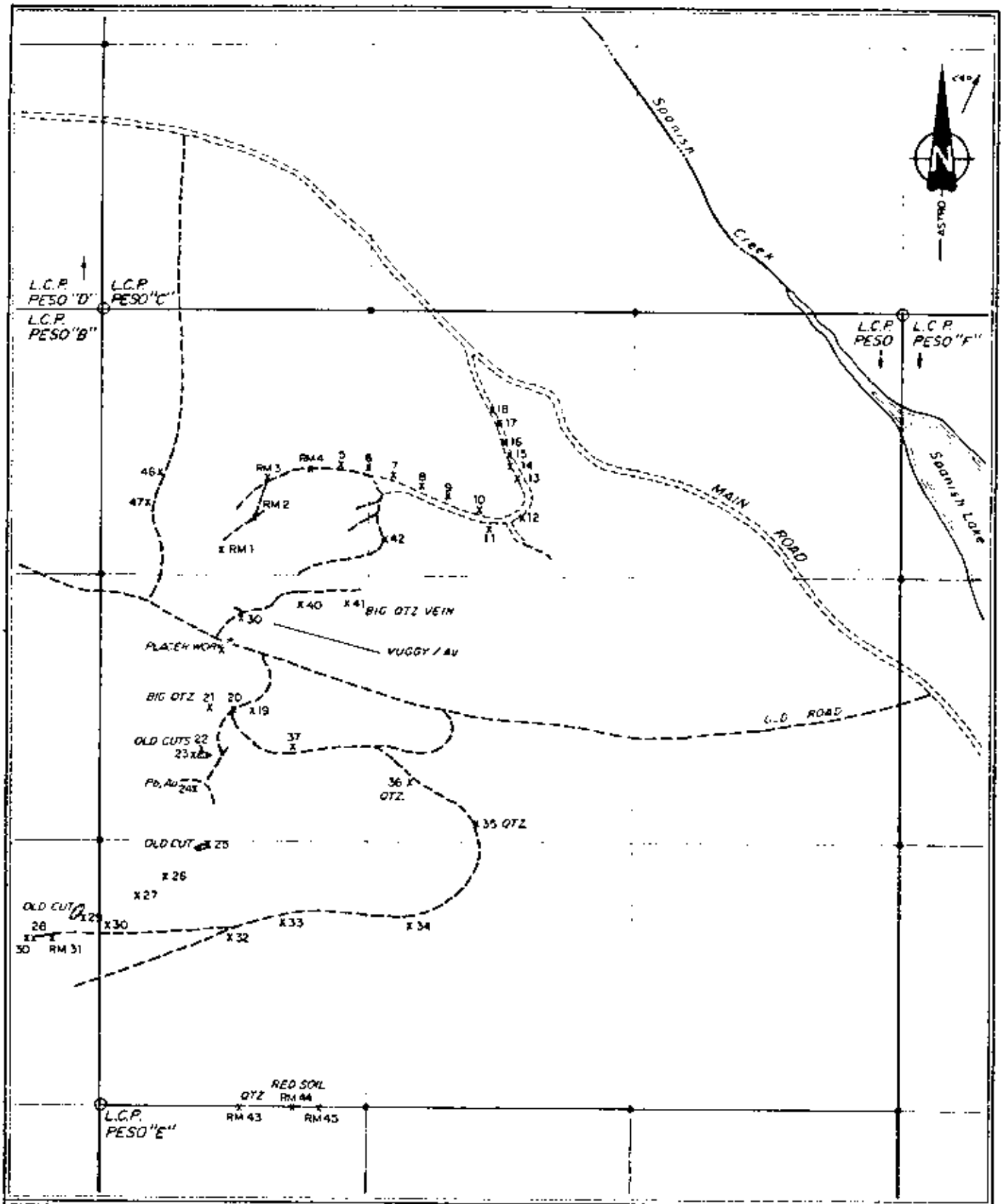
Gold was panned from this vein system, although none was observed. Two adits (now inaccessible) have been driven into these veins. At 4,200 ft. elevation there is another massive quartz vein exposed (partly by trenching) for 30m. It is about 8m thick and strikes NW - SE. It's attitude could not be determined. It is highly fractured and shattered and is sparsely mineralized with pyrite.

The second quartz vein system consists of a series of narrow (0.1 - 0.8m) veins which strike NE - SW (approximately at right angles to the major fault) and dip 50 - 70 degrees to the west. Where exposed along road cuts and in trenches they are seen to be rather discontinuous, although one was traced over a length of 120m. They are generally spaced several metres apart and the thicker ones are tens of metres apart. At least 15 such veins were found over a 40,000 square metre area. The veins themselves represent a tiny fraction of this area. The veins appear to be gash veins, filling fractures in the country rock. Often they are highly fractured themselves.

The veins are mineralized with gold, silver, pyrite, galena and tetrahedrite. Pyrite occurs in cubic and prismatic aggregates which have usually weathered out to produce a honeycomb structure. This feature is particularly evident at the contacts and extends into the wall rock for a few centimetres, especially if the rock is argillaceous. Many of the cavities are lined with quartz on which the pyrite striations have been imprinted. Thin flakes of gold are found within these cavities and occasionally gold can be seen embedded in limonite. Gold and silver can be panned from the quartz. Alteration in the area is pervasive and has affected all rock types. Pyrite cubes up to 3cm in diameter give the rocks a mottled appearance, especially the lighter coloured quartzites. In the phyllites, pyrite also forms small pods and stringers. Pyrite mineralization does not appear to favour one particular rock type. This type of mineralization is widespread, being found in argillites on the north side and east end of Spanish Lake. The association of gold and pyrite is evident in the quartz veins and in the placer workings of Cedar Creek. Pyrite usually has a thin coating of red haematite and more often than not is completely oxidized to limonite. The presence of quartz linings in

the pyrite cavities suggests that some silicification has occured in association with the quartz veining, but this appears to be local.

A second type of alteration is carbonatization. Ankerite occurs as discrete, brown grains with oval or diamond - shaped cross-section in dolomite and quartzite and in the intrusive dyke. It adds to the already mottled appearance of the rocks. Carbonate minerals also occur in patches within the rock groundmass. It is suspected that rock noted as dolomite in the field, may in fact be highly altered quartzite or intrusive. A mariposite-like green mineral occurs in scattered patches, noticeable in the lighter coloured rocks.



LONGBAR MINERALS LTD.

Peso Claims Spanish Mtn. near Likely, B.C.

N.T.S. 93A/11&12. Cariboo Mining Division

PESO CLAIM FIGURE 3

SOIL SAMPLE LOCATIONS (x)

Scale: 1 10,000 *Base map from sketch map by R.E.M., Sept.'77*

0 100 200 300 400 500m

B.A.C., Oct.'77

SAMPLING:

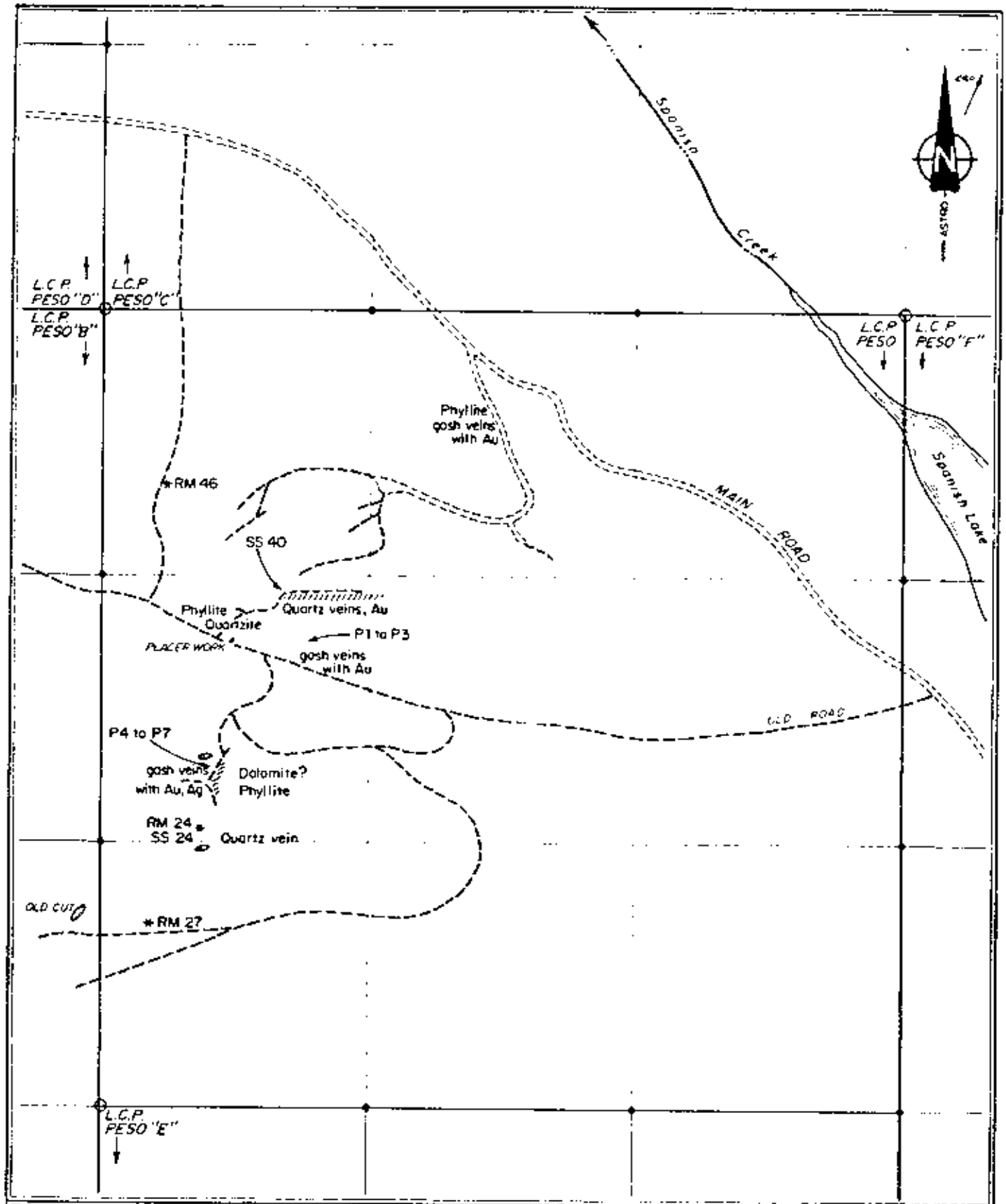
Eight (8) rock samples were taken and assayed for gold and silver. One (1) rock sample was assayed for gold only. Five (5) rock samples were geochemically analysed for gold. Sixty (60) soil samples were taken, 13 were analysed for gold and silver, the remainder were analysed for gold only. Five (5) samples of narrow quartz veins and 3 samples of phyllite were taken by the writer. A further 6 rock grab samples were taken by R. M. Mickle. Table One lists the results.

TABLE 1

Sample No.	Au oz/ton	Au ppb	Ag oz/ton	Rock Type
P 1	0.275	------	0.10	Quartz vein-0.4m
P 2	0.008	------	0.02	phyllite-2.5m
P 3	0.040	-----	0.11	phyllite-grab, 80m^2
P 4	0.080	-----	0.07	quartz vein-0.4m
P 5	0.101	-----	0.08	quartz vein-0.4m
P 6	0.004	-----	0.08	2 quartz vein-0.4m total
P 7	0.11	-----	0.75	quartz vein-0.2m
†SPLK # 1	0.005	-----	0.08	phyllite-grab, 100m^2
SS # 2	0.005	-----	----	phyllite? grab
RM 24	*3.100	93000	----	large quartz vein?-grab
SS 24	*1.263	37900	----	large quartz vein?-grab
SS 40	*0.086	2600	----	large quartz vein?-grab
RM 46	*0.015	455	----	phyllite?-grab
RM 27	*0.007	225	----	phyllite?-grab

* geochemically analysed - may be errors at high values.

† Taken from north shore of Spanish Lake, all others from Peso Claim



LONGBAR MINERALS LTD.

Peso Claims Sponish Mtn. near Likely, B.C.

N.T.S. 93A/11 & 12. Cariboo Mining Division

PESO CLAIM FIGURE 5

ROCK SAMPLE LOCATIONS (SEE TABLE 1.)

Scale 1:10,000 *Base map from sketch map by R.E.M., Sept. '77*

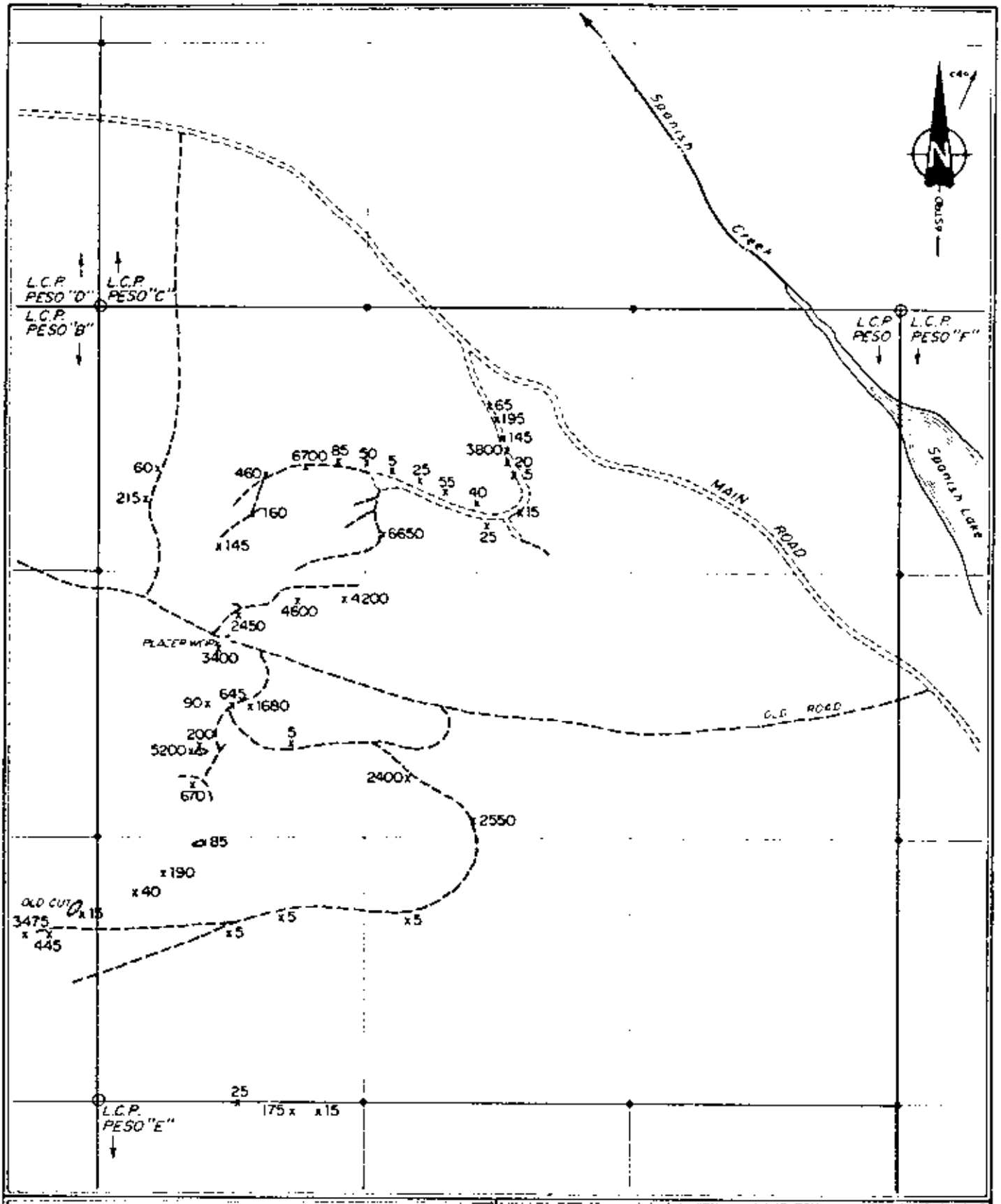
0 100 200 300 400 500m

B.A.C., Oct. '77

The assays from the quartz veins are variable and range from 0.004 to 3.100 oz. per ton in gold and 0.07 to 0.75 oz. per ton in silver. Sampling bias in the large quartz veins is not known so that the high values may not be representative. However it is apparent that good values from the veins can be obtained. The gash-type veins, although they contain visible gold and assay up 0.275 oz. per ton appear to be far too narrow and widely spaced to be mined.

The phyllites are geochemically anomalous with respect to gold and silver. Sample P 3 assayed 0.04 oz. per ton in gold and 0.11 oz. per ton in silver. The lowest values were in sample SPLK #1 which has 0.005 oz. per ton in gold and 0.08 oz. per ton in silver. This sample was taken from the roadside on the north side of Spanish Lake where pyrite stringers and lenses have been introduced into the phyllites. Similar rocks were observed on the road on the south side of Spanish Lake, about 15km to the east of the claims. One or two small colours were obtained from several pans from this area.

Sixty (60) soil samples were taken by R. M. Mickle. His sketch maps are appended. Of these samples, 37 are anomalous (>40ppb) and 12 contain more than 1000 ppb gold. Most of the highly anomalous samples were taken close to old workings or exposed quartz so that high values are not unexpected. The samples which were analysed for silver as well as gold turned out to be non-anomalous (RM 48-60). These were taken away from the known showings.



LONGBAR MINERALS LTD.

Peso Claims Spanish Mtn. near Likely, B.C.

N.T.S. 93A/11&12. Cariboo Mining Division

PESO CLAIM FIGURE 4

SOIL SAMPLE RESULTS (Au - p.p.b)

x Soil sample station

Scale 1:10,000 *Base map from sketch map by R.E.M., Sept.'77*

0 100 200 300 400 500m

B.A.C., Oct.'77

RECOMMENDATION & COST ESTIMATE

In view of the widespread occurences of gold in this area it is recommended that further work be undertaken to extend the gold-bearing zones. There is potential for replacement type deposits as well as additional quartz vein systems. The main target areas would be the areas adjacent (within 1 claim length) to the major fault. A reconnaissance soil sampling survey on 100 X 50 metre grid would provide information on this. Multi-element analysis of soils should be carried out since this is a "new" area and the geochemical characteristics of the soil are unknown. Anomalous areas should be surveyed by IP methods to delineate sulphide zones.

A cost estimate of such a program is given on the following page.

COST ESTIMATE

1.	Linecutting, 30km at $100.00 per km	$ 3,000.00
2.	Soil sampling, assaying for gold, silver, copper, lead. Estimate 1,000 samples at $16.00 per sample.....	$ 16,000.00
3.	Geological mapping, sampling and assaying.....	$ 4,000.00
4.	IP survey of anomalous areas.....	$ 1,500.00
5.	Bulldozer trenching, 100 hr. at $60.00 per hour.....	$ 6,000.00
6.	Camp costs	$ 2,500.00
7.	Supervision and Engineering.....	$ 5,500.00
8.	Transportation & communication.....	$ 2,000.00
9.	Contingencies - 15% of sub-total of $40,500.00.....	$ 6,075.00
	Total.....	$ 46,575.00
	Say	$ 47,000.00

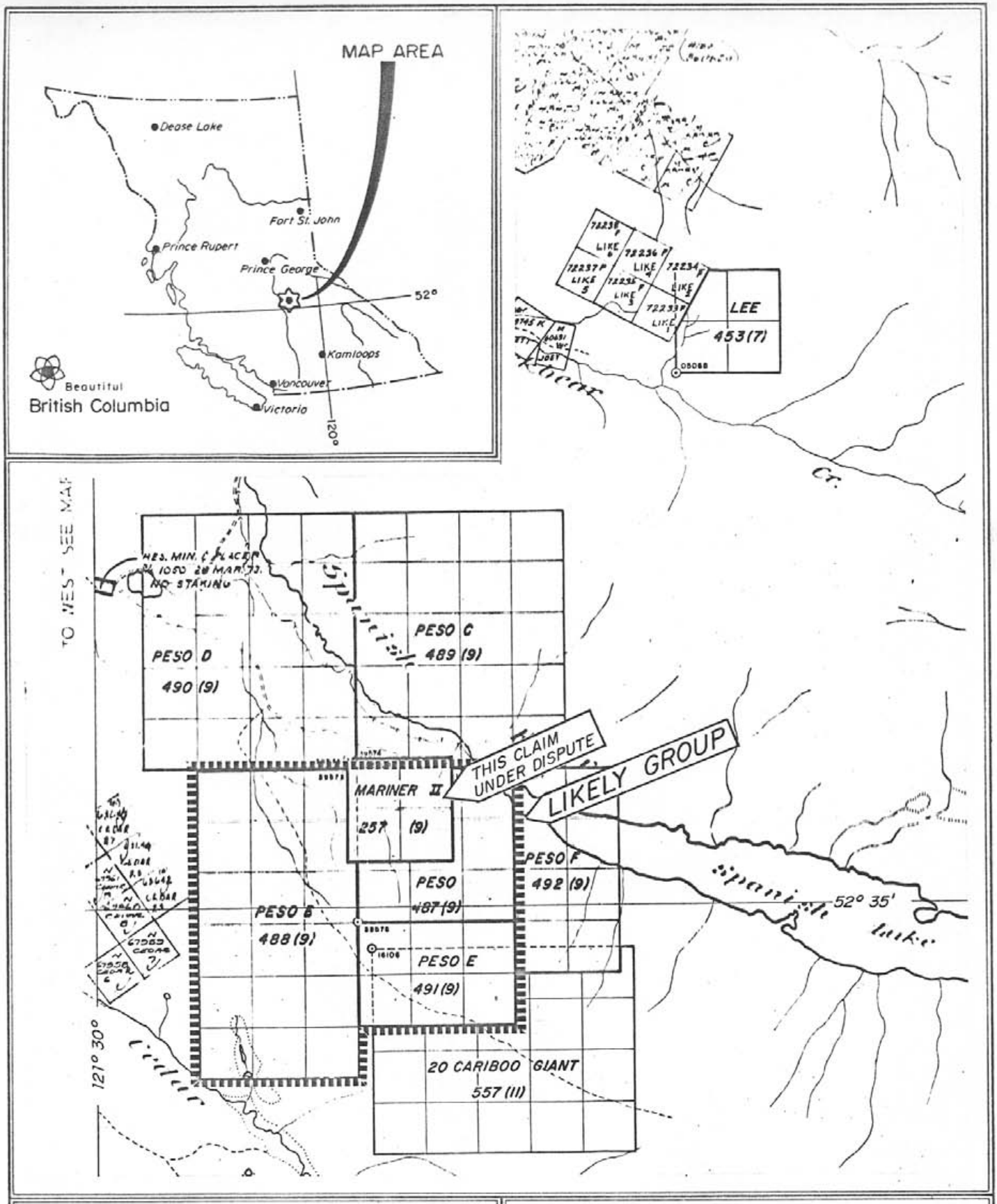
Respectfully submitted

A. L. Littlejohn, Geologist,

September 30, 1977,

Delta, B. C.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
B. R. COCHRANE



LONGBAR MINERALS LTD.

Likely Group Spanish Mtn. near Likely, B.C.

N.T.S. 93A/11 & 12. Cariboo Mining Division

LIKELY GROUP FIGURE 6

(Peso, Peso B, Peso E Claims)

Scale 1 50,000

0 1 2 km

B.A.C., Oct. '78

APPENDIX I

ASSAY & GEOCHEMICAL ANALYSIS SHEETS

COMP: Longyear Minerals

PROJECT N: Recce

ATTENTION:

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

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

PHONE (604) 980-5814

FILE No: 4517

DATE: Sept. 13 1977.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	U ppm	Hg ppb	As ppm	Mn ppm	Au ppb
RM 1												145
2												160
3												460
4												6700
5												85
6												5.0
7												5
8												25
9												5.5
10												40
11												25
12												15
13												5
14												20
15												3800
16												145
17												195
18												65
19												1680
20												645
21												90
22												5200
23												200
24												670
25												85
26												190
27												40
28												3475
29												15
RM 30												80

Regular Minerals

PROJECT No. Recce

ATTENTION:

GEOCHEMICAL ANALYSIS

MIN-EN Laboratories Ltd.

DATE: Sept. 13 1977.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe %	Hg ppb	As ppm	Sb ppm	Au ppb
RM 31												445
32												5
33												5
34												5
35												2550
36												2400
37												5
38												3400
39												2450
40												4600
41												4200
42												6650
43												no sample
44												275
45												15
46												60
RM 47												215
RM24 rock												93000
SS24 rock												37900
SS40 rock												2600
RM 46 rock												455
RM 27 rock												225

D. Pitcairn

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

4516

DATE: Sept. 1977.

ATTENTION:

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Bi ppb	As ppm	Mn	Au
RM 44												25

Bonanza Minerals

GEOCHEMICAL ... DATA SHEET

MIN - EN Laboratories Ltd.

... WEST ... VANCOUVER, B.C. ...

PROJECT N...

ATTENTION: D. Cochrane

DATE Sept. 25 1977.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Sb ppm	Au ppb
RM 55							07					10
56							08					20
57							18					25
58							12					10
59							06					15
RM 60							09					15

GEOCHEMICAL ANALYSIS CERTIFICATE

MIN-EN Laboratories Ltd.

PROJECT

ATTENTION

DATE: Sept. 1, 1977

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe %	Hg ppb	As ppm	Mn ppm	Au ppb
RM 48							21					20
49							39					10
50							15					40
51							06					10
52							06					65
53							09					40
RM 54							08					45

PAGE No. 1

REPORT No. [illegible]

DATE: September 9, 1977

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

1 - 4032 Delta Street
Delta, B.C.
V4K 2X8

Samples submitted: September 7, 1977
Results compiled: September 9, 1977

PROJECT: Longbar Recc.

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	GOLD		SILVER								TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
SB #2	0.005										

Registered Assayer, Province of British Columbia

To: [illegible] Limited Ltd.

PAGE No. 1

REPORT No. [illegible]

DATE: September 16, 1977

I - 4032 Delta Street
Delta, B. C.
V4K 2Y8

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

Samples submitted: September 9, 1977
Results completed: September 16, 1977

PROJECT: Loogbar Minerals

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	GOLD		SILVER								TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
P 1	0.275		0.10								
2	0.008		0.02								
3	0.040		0.11								
4	0.020		0.07								
5	0.010		0.08								
6	0.004		0.08								
7	0.11		0.75								
SPLK #1	0.005		0.08								

Registered Assayer, Province of British Columbia

APPENDIX II

REFERENCES

B. C. Minister of Mines Annual Reports

1923 p. 124 - 130

1924 p. 119 - 126

1933 p. 134 - 135

1947 p. 123 - 127

Campbell R. B. (1961) Quesnel Lake Map Sheet (93A/W)

APPENDIX IV

CERTIFICATE

I, Alastair L. Littlejohn, of Vancouver, British Columbia, do hereby certify that:

1. I am a geologist with an office at 4882 Delta Street, Delta, B. C. V4K 2T8.

2. I am a graduate of Aberdeen University (1969) with a degree in Geology (B.Sc. Hons.) and the University of British Columbia (1972) with a degree in Geology (M.Sc.)

3. I have practised my profession continuously since graduation while being employed by such companies as Canada Tungsten Mining Corp. Ltd. and Amok Ltd.

4. I have no interest, either direct or indirect, in the properties of Longbar Minerals Ltd., nor do I expect to acquire any such interest.

(signed) A. L. Littlejohn,
September 30, 1977
Delta, B. C.

APPENDIX III

ASSESSMENT WORK DETAILS

PERSONNEL:

Mr. Jon Stewart, Supervisor, Sept. 1-7, 1977

Mr. A. L. Littlejohn, geologist, Sept. 1-7, 28 -30, 1977

Prospector, Sept. 1-7, 1977

Fieldperson, Sept. 1-7, 1977

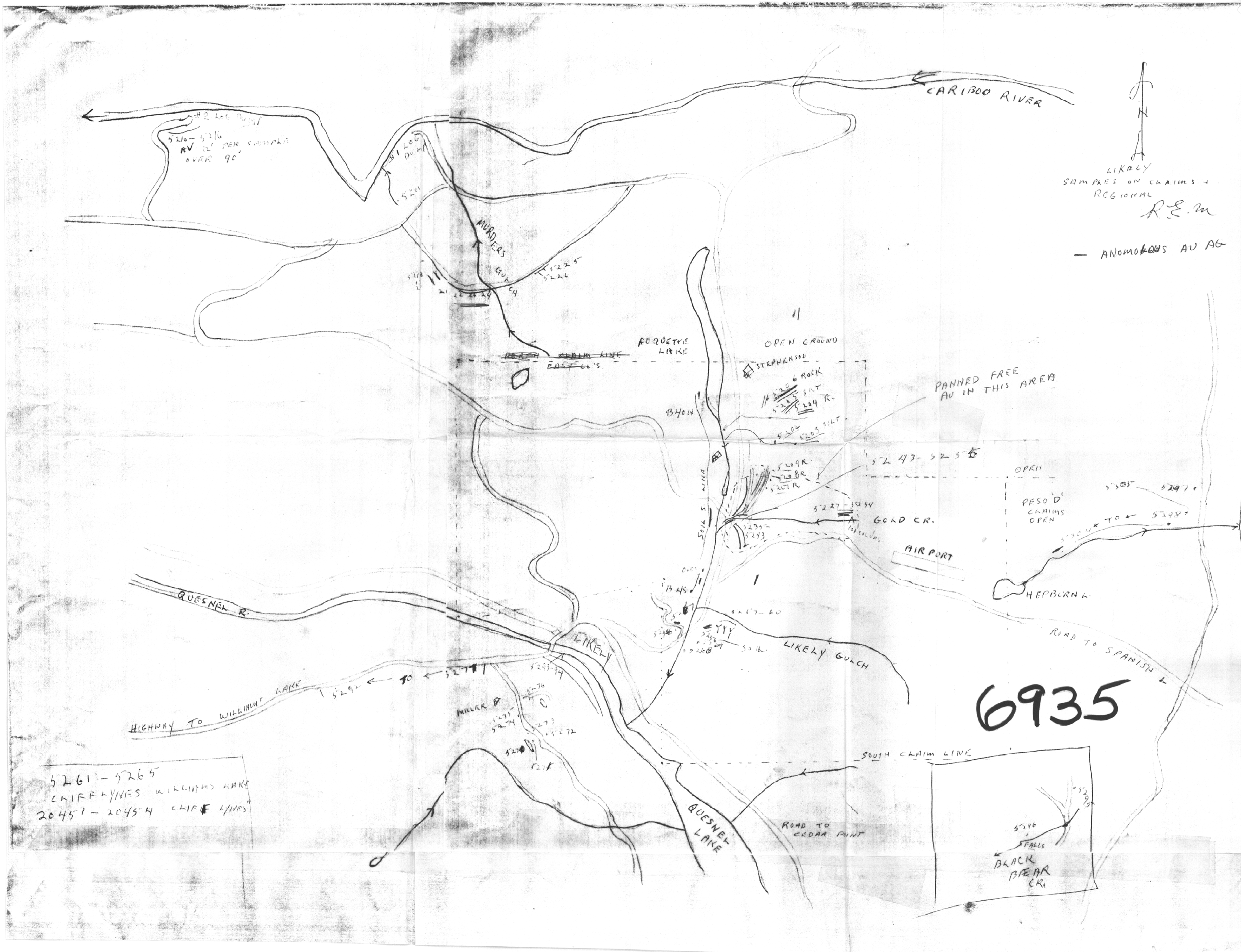
Helper, Sept. 1-7, 1977

Draftsperson, Sept. 28-30, 1977

Typist, Sept. 30, 1977

COSTS

Salaries Expense	$ 2,560.16
Drafting and Reproduction	241.53
Lab Expense	420.00
Meals and Food Expense	76.40
Truck and Auto Expense	470.12
Prov. Sales Tax	32.37
Misc. Expense	94.27
Casual Labour	100.00
Administration Salaries	100.00
Administration Vacation Salaries	4.00
Administration Payroll Tax	6.66
Transportation Expense	56.00
Lodging Expense	372.12
Meals Expense	305.00
Telephone and Radio Expense	8.00
Business Promotion	68.35
Total	$ 4,914.98


CARIBOO RIVER
LIKELY
SAMPLES ON CLAIMS + REGIONAL
R.E.M
— ANOMOLOUS AU AG
5210 - 5216
AV 12' PER SAMPLE
OVER 90'
MURDERS GULCH
5225
5226
PAQUETTE LAKE
CLAIM LINE
OPEN GROUND
STEPHENSON
5206 ROCK
5203 SILT
5204 R.
5203 SILT
PANNED FREE
AU IN THIS AREA
5243 - 5255
OPEN
5209R.
5208R.
5207R
5227 - 5234
GOLD CR.
SOIL S. LINE
5235 - 5243
PESO 'D' CLAIMS OPEN
AIRPORT
HEPBURN L.
ROAD TO SPANISH L.
QUESNEL R.
LIKELY
LIKELY GULCH
HIGHWAY TO WILLIAMS LAKE
MILLER
6935
SOUTH CLAIM LINE
QUESNEL LAKE
ROAD TO CEDAR POINT
FALLS
BLACK BEAR CR.
5261 - 5265
CHIEF LYNES WILLIAMS LAKE
20451 - 20454 CHIEF LYNES