

83 #663 - 11784  
7/84

REPORT ON  
P1 & P2 MINERAL CLAIMS  
CARPENTER LAKE AREA  
LILLOOET MINING DIVISION, B.C.

NTS 92J/15  
50°53'50" North Latitude  
122°36' 5" West Longitude

Preliminary Geological and Geochemical Report

FOR:

MID MOUNTAIN MINING LTD.  
600 - 885 Dunsmuir Street,  
Vancouver, B.C.

BY:

G. C. SINGHAI, P.Eng.

October 26th, 1983

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11784

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                  Chemex Labs Ltd.

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1. Location Map
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4. Geochemical map with values.

REPORT ON  
P1 and P2 GROUP MINERAL CLAIMS  
CARPENTER LAKE AREA  
FOR  
MID MOUNTAIN MINING LTD.

INTRODUCTION

The P1 and P2 group of mineral claims are located about 180 air kilometers N.N.E. of Vancouver, 155 air kilometers W.N.W. of Kamloops and about 12 air kilometers northwest of Lillooet, on the north shore of Carpenter Lake in the Mining Division of Lillooet, B.C. This report is based on the work carried out during the period of July 15th to 22nd, 1983. The programme is comprised of geological mapping and silt sampling of drainage and soil sampling of the area.

PROPERTY AND OWNERSHIP

The property consists of two groups of mineral claims. These claims are acquired by Mid Mountain Mining Ltd., 600 - 885 Dunsmuir Street, Vancouver, B.C., by Bill of Sale dated the 14th day of February, 1983, from Paul Schiller of

211 - 543 Granville Street, Vancouver, B.C. The details of these claims are as follows:-

<u>Name of Claim</u>	<u>Recording No.</u>	<u>Date of Recording</u>
P1 (10 units)	2066	July 27th, 1983
P2 (10 units)	2067	July 27th, 1983

These claims are in good standing and located in accordance with the Mineral Act of the Province of British Columbia.

#### LOCATION AND ACCESS

The property is located about 12 air kilometers North West of Lillooet, and about 18 air kilometers North East of Gold Bridge on the north shore of Carpenter Lake in the Mining Division of Lillooet, B.C. It is centred about 50°53'50" North Latitude and 122°36'5" West Longitude.

The property is accessible by 516 kilometers of Highway #1 and #12 from Vancouver to Lillooet and thence about 80 kilometers of Lillooet-Gold Bridge all-weather gravel road. It can also be reached from Vancouver via Squamish and Pemberton in summer only by four-wheel drive vehicles.

Water is available from the Carpenter Lake and Tyaughton Creek.

### TOPOGRAPHY, VEGETATION AND CLIMATE

The property is located on the relatively steep southwestern slope of Marshal Ridge which rises from the north shore of Carpenter Lake. Elevation varies from approximately 650 meters to 1650 meters above sea level. In some parts of the area topography is rugged and intersected by small south flowing streams.

The area is timbered by coniferous forest of fir, spruce, and cedar with minimum of undergrowth. Rock outcrops are limited in the extent and number and are generally exposed along the main road, adjacent to creeks, and cliffs.

The climate of the area is moderate for the greater part of the year. Rainfall is heavy but very similar to the coastal regions. The winter is moderate and temperatures often go below freezing in the area. The snowfall on higher elevations is fairly heavy in comparison to the lower elevations. The exploration and mining can be carried out year round. The supplies can be available from Lillooet and Gold Bridge.

### PROGRAMME

During the period of July 15th - 22nd, 1983, the following programme was carried out by the writer and

Mr. Gary Matthews, the Geologist employed by Singhai Engineering International Ltd.:

1. The national topo sheet #92J/15 was enlarged to the scale of 1:10,000.00 for the mapping of geology and locations of soil and silt samples.
2. The geology of the area was mapped at a scale of 1:10,000. The outcrops were marked on the map.
3. These silt, soil and rock samples were assayed for copper, zinc, silver, and arsenic in parts per million, and gold in parts per billion.

#### HISTORY OF THE AREA.

The Bridge River Goldmining Camp was located immediately adjacent to the south of this property, which was flooded by Carpenter Lake for a B.C. Hydroelectric hydropower project. The Bridge River Camp includes the famous Bralorne-Pioneer Mine which alone produced 8,000,000 tons of Gold Ore averaging 0.52 ounces of Gold per ton.

The Minto Mine is located less than 6 kilometers from the property and which had produced 16,997 ounces of Gold and 98,000 ounces of silver (averaging 0.23 ounces per ton gold and 1.1 ounces per ton silver) during three years operation.

The Quinto Mining Corporation has "Q" Groups of Mineral Claims which adjoin the eastern boundary of P1 Group Mineral Claims. On this ground four underground adits are found. The Company has collected channel samples from the workings and the assay returned as follows:-

U.M.T. Adit average assay returned over the width of 15 cm to 5 cm as 0.222 oz/ton Gold, 0.76 oz/ton Silver, and 5.54% Zinc. U.M.T. #11 Adit assayed 1.16 oz/ton Silver, 0.144 oz. ton Gold, and 8.45% Zinc.

The occurrence of massive sulphides is along the sheared contact zone of Ferguson argillite and massive andesitic volcanic formation.

The Airborne VLF-EM and Magnetometer Survey, followed by I.P. Survey, Ground Magnetometer Survey, and Geochemical Survey was completed during the period of 1981 and 1982. As a result of this programme, a number of anomalous zones were outlined. One of these, known as "Q" anomaly, is about 600 meters long and 450 meters wide. This zone continues towards the north, beyond the samples area.

GEOLOGY      (A) Regional Geology

The study of Geological Survey of Canada Map

#92/J indicates that the entire property is underlain by the Bridge River (Ferguson) Group of Triassic or older age consisting of a varied assemblage of greenstone, basalt, chert, argillite, phyllite, and minor limestone which have been intruded in places by serpentinized ultra basic rocks. The rocks are highly contorted and altered and are cut by strong faults, some of which are filled with quartz calcite veins carrying sulphide mineralization and variable Gold-Silver values.

There are number of known mineral occurrences in the Ferguson rocks, the most notable of which is probably the Minto Mine which was a successful Gold and sulphide mineral producer for a number of years, the mineralization occurring in a quartz-calcite fissure vein. Other mineral occurrences which are or have been under active exploration are the Peerless property, containing fissure veins with Gold, Silver, Lead and Zinc; a large disseminated zone of pyrite, chalcopyrite and sphalerite occurring on the Wayside property of Carpenter Lake Resources; and the Dauntless prospect, which consists of a quartz vein in argillite carrying variable Gold values.

#### (B) Geology of the Area

The area under study is underlain by the interbeds



of argillite and thin beds of chert. These argillites are calcareous and intruded by ultra basic rocks and dioritic dykes. These intrusives are bedly metamorphosed and altered and form a serpentinized greenstone. The occurrence of limestone in some places is also noticed, but the southeast part of the property is mostly underlain by the limestone. The argillite and limestone are the part of Ferguson Group of rocks. These rocks are highly contorted and altered and are subjected to the faulting and shearing. Some of these faults are filled with thin quartz calcite veins and system of veinlets. Sometimes these veinlets carry minor sulphides, and pyrite in particular. No significant mineralization is noticed during the period of geological mapping.

#### GEOCHEMICAL SURVEY

A very preliminary geological survey was conducted, which was comprised of silt sampling from dry and/or running creeks, soil samples at random, and rock chip samples in absence of soil or silt. The locations are marked on the geological map.

#### GEOCHEMICAL PROFILE

Three soil profiles were taken at three locations over the property along road and on slopes of hill, and the

different horizons of soil were established.

The topsoil, or "A" horizon, consists of light greyish-brown to grey colour with organic material, sand, pebbles, and angular fragments of rocks. At places a distinct layer of pine needles and organic material of dark brown and black colour of 3 cm to 10 cm thick was noticed.

The "B" horizon of soil was composed of sandy clay which was light brown to dark and reddish brown in colour. It contained angular rock in all cases and in some cases slightly oxidized.

The "C" horizon of soil was grey to brownish-red and consisted of fine sand with varying amount of clay and angular fragments of rocks. There was a definite inter-mixing of the "B" and "C" horizons.

#### SOIL AND SILT SAMPLING TECHNIQUE

Seventeen soil samples were collected from "B" soil horizon by auger and pick wherever possible. The auger was driven into the "B" horizon and pulled out. The soil was collected from the grooves of the auger, or a pick was dug to the "B" horizon and soil was collected and kept in the karft waterproof paper soil bags where they remained until analysis.

The silt was collected from dry and/or running streams and kept in the karft waterproof paper soil bags.

The chip samples were collected wherever the soil was not present and the outcrop of formation were found. The chips of rocks were treated as soil.

All samples were delivered to the Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. where drying, seiving and analysis was carried out under the supervision of a professional chemist. All soil and silt samples were analysed for copper, zinc, arsenic, silver and gold. The rock chip samples were analysed for silver, arsenic and gold. The results of all these samples were returned in parts per million, except for gold in parts per billion. These samples were digested in hot acid solutions and assayed by atomic absorption.

All the values of gold are less than 10 ppb, therefore they are insignificant and are not considered, but the values for Cu, Zn, Ag, and As, are plotted on the geological map (see map #3). Intensities ranged from 19 to 174 ppm for Copper; 82 to 235 ppm for Zinc; 0.1 to 5 ppm for Silver; and 1 to 11 ppm for Arsenic. These values are plotted on a graph paper to conduct a histogram to find out the background for each metal to know the anomalous values. Backgrounds for Copper 70 ppm; Zinc 230 ppm;

Silver 0.25 ppm; and Arsenic 7.5 ppm, were established. Most of the values show high background considering the depth of overburden and slope of the area. The overburden is about 10 centimeters to 4 meters and slope is moderate to steep.

The mobilization of Copper, Zinc, and Arsenic ions will be more than Silver and Gold. It seems that the anomalous values of these elements are occurring in the same area as indicated by high values in streams which are draining north east part of the area.

#### CONCLUSIONS

The property discussed in this report is underlain by the Bridge River Group of Ferguson Group of formations of Middle to Permian Age. The Ferguson Group of Rocks are a varied assemblage of greenstone, basalt, chert, calcareous argillite with lenses of crystalline limestone. These rocks are so badly folded, contorted and altered that the attitude of rocks cannot be recognised. They are intruded in places by serpentized ultra basic rocks and affected by faults and shears which are filled with thin quartz-carbonate veins carrying minor sulphides, which is very insignificant.



# SINGHAI ENGINEERING INTERNATIONAL LTD.

OFFICE  
VANCOUVER, B.C.  
669-6341

RESIDENCE  
562 CLEARWATER DRIVE  
RICHMOND, B.C.  
277-8117

## COST OF PROGRAMME

G.C. Singhai: 4 days (July 19th-22nd, 1983) @ \$350.00/day .....	\$1,400.00
Gary Matthews: 9 days (Geologist) (July 15th-22nd, 1983) @ \$100.00/day .....	\$ 900.00
Hotel .....	\$ 141.93
Gas .....	\$ 215.90
Meals .....	\$ 150.50
Telephone .....	\$ 23.90
Assaying .....	\$ 628.60
Truck rental: 8 days @ \$35.00/day .....	\$ 280.00
Car Mileage @ \$0.25/mile .....	\$ 150.50
Field Supplies .....	\$ 23.91
Map (topo) Enlargement .....	\$ 38.20
Report .....	<u>\$1,350.00</u>
 Total Cost of Programme	 <u><u>\$5,303.44</u></u>



## C E R T I F I C A T I O N

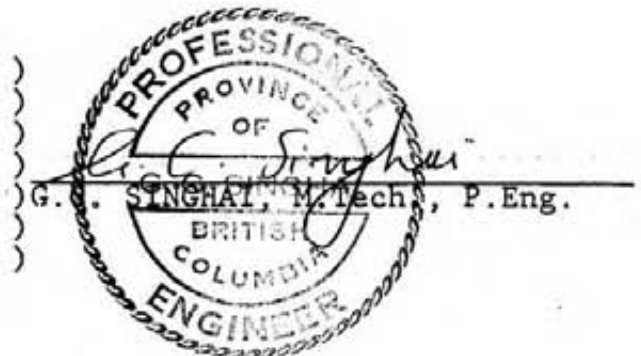
I, Gyan Chand Singhai, of 5620 Clearwater Drive, Municipality of Richmond, British Columbia, do hereby certify that:

1. I am a member of the Association of Professional Engineers of British Columbia since 1969, and a member of the Canadian Institute of Mining and Metallurgy.
2. I am a post-graduate in Applied Geology (1959) from the University of Saugor, Sagar, Madhya Pradesh, India, and have been practising my profession since that time.
3. I was teaching in the University of Suagor, Sagar, and Ravishankar University, Raipur, India, and practised my profession in India, Canada, West Indies, Mexico, Peru, and United States of America.
4. This report is based as a result of the exploration work carried out during the period of July 15th-22nd, 1983.
5. I have no interest either directly or indirectly in the property described herein, nor in any other properties nor in the securities of Mid Mountain Mining Ltd.

DATED AT:

901-675 West Hastings Street  
Vancouver, British Columbia.

October 26th, 1983



## B I B L I O G R A P H Y

- CAIRNES, C.E. 1937 Geology And Mineral Deposits of  
Bridge River Mining Camp British  
Columbia.  
G.S.C. Map #213.
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Victoria Branch C.I.M.M.,  
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Canada Department of Mines;  
Memoir #130.
- RODDICK, J.A. AND HUTCHISON, W.W.
- 1978 Geolgoical Survey of Canada,  
Paper 73-17;  
Pemberton (East-Half) map area,  
British Columbia.



A P P E N D I X



# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

TELEPHONE: (604) 984-0221

TELEX: 043-52597

## CERTIFICATE OF ANALYSIS

TO : SINGHAI ENGINEERING

#901-675 WEST HASTINGS STREET  
VANCOUVER, B.C.  
V5Y 3E1

CERT. # : A8312946-C01-A

INVOICE # : I8312946

DATE : 29-JUL-83

P.C. # : NONE

Sample description	Prep code	Cu ppr	Zn ppm	Ag ppr	AS ppm	AU-AA ppb	
83 S 08	201	95	135	0.1	7	<10	--
83 S 09	201	68	88	0.1	4	<10	--
83 S 10	201	68	95	0.1	6	<10	--
83 S 11	201	100	135	0.1	7	<10	--
83 S 12	201	100	140	0.1	6	<10	--
83 S 13	201	98	140	0.1	7	<10	--
83 L 15	201	100	165	0.2	9	<10	--
83 L 16	201	19	97	0.1	2	<10	--
83 L 17	201	21	100	0.1	3	<10	--
83 L 18	201	18	82	0.1	2	<10	--
83 L 19	201	107	168	0.1	9	<10	--
83 L 20	201	21	113	0.1	4	<10	--
83 L 21	201	38	109	0.1	3	<10	--
83 L 22	201	23	115	0.1	3	<10	--
83 L 23	201	105	165	0.1	9	<10	--
83 L 24	201	23	125	0.1	3	<10	--
83 L 25	201	93	165	0.2	9	<10	--
83 L 26	201	24	120	0.1	3	<10	--
83 L 27	201	20	118	0.1	3	<10	--
83 L 30	201	100	98	0.1	4	<10	--
83 L 31	201	99	90	0.1	3	<10	--
83 L 32	201	100	95	0.1	3	<10	--
83 L 33	201	102	95	0.1	3	<10	--
83 L 34	201	165	220	0.4	11	<10	--
83 L 35	201	174	235	0.4	11	<10	--
83 L 36	201	164	215	0.5	11	<10	--
83 L 37	201	170	210	0.5	10	10	--



Certified by *Hart Bechler*



# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

TELEPHONE: (604) 984-0221

TELEX: 043-52597

## CERTIFICATE OF ANALYSIS

TO : SINGHAI ENGINEERING

#901-675 WEST HASTINGS STREET  
VANCOUVER, B.C.  
V5Y 3E1

CERT. # : A8312945-001-A

INVOICE # : I8312945

DATE : 29-JUL-83

P.C. # : NONE

Sample description	Prep code	Ag ppr	AS ppm	AU-AA ppb			
83 R 01	205	0.3	6	<10	--	--	--
83 R 02	205	0.1	1	<10	--	--	--
83 R 03	205	0.1	3	<10	--	--	--
83 R 04	205	0.1	2	<10	--	--	--
83 R 05	205	0.1	2	<10	--	--	--
83 R 06	205	0.1	2	<10	--	--	--
83 R 07	205	0.1	4	<10	--	--	--
83 R 14	205	0.1	2	<10	--	--	--
83 R 28	205	0.1	4	<10	--	--	--
83 R 29	205	0.1	2	<10	--	--	--
83 R 38	205	0.1	3	<10	--	--	--
83 R 39	205	0.1	3	<10	--	--	--
83 R 40	205	0.1	2	<10	--	--	--
83 R 41	205	0.1	3	<10	--	--	--
83 R 42	205	0.1	6	<10	--	--	--

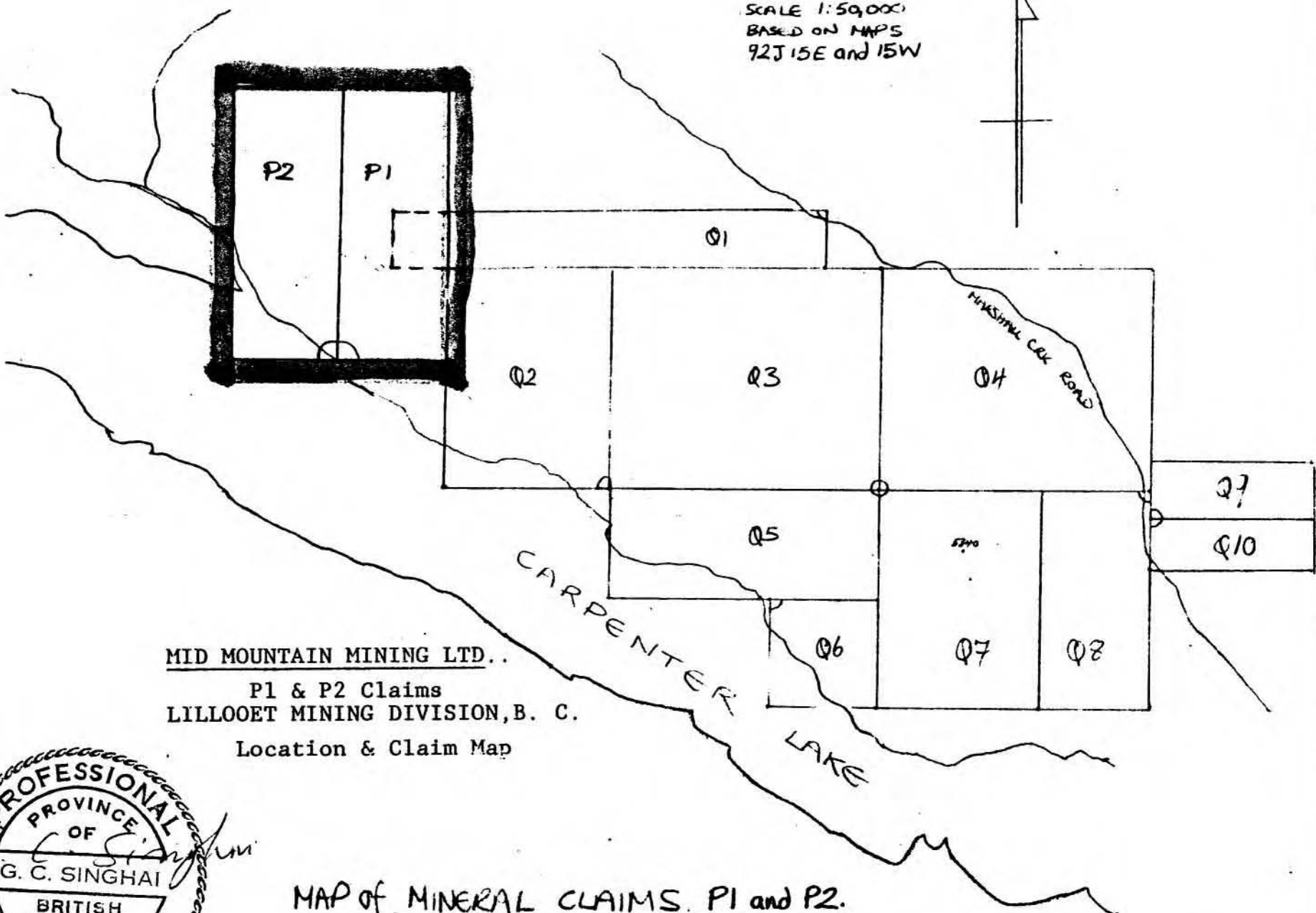
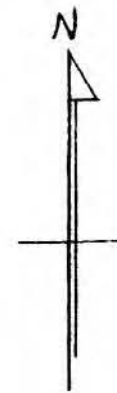


Certified by *Hart Bichler*



MID MOUNTAIN MINING LTD.
PI & P2 MINERAL CLAIMS CARPENTER LAKE AREA LILLOOET MINING DIVISION, B.C.
<b>LOCATION MAP</b>
SCALE IN KILOMETRES 0 50 100 200 300 400
SINGHAI ENGINEERING INTERNATIONAL LTD.

SCALE 1:50,000  
BASED ON MAPS  
92J15E and 15W



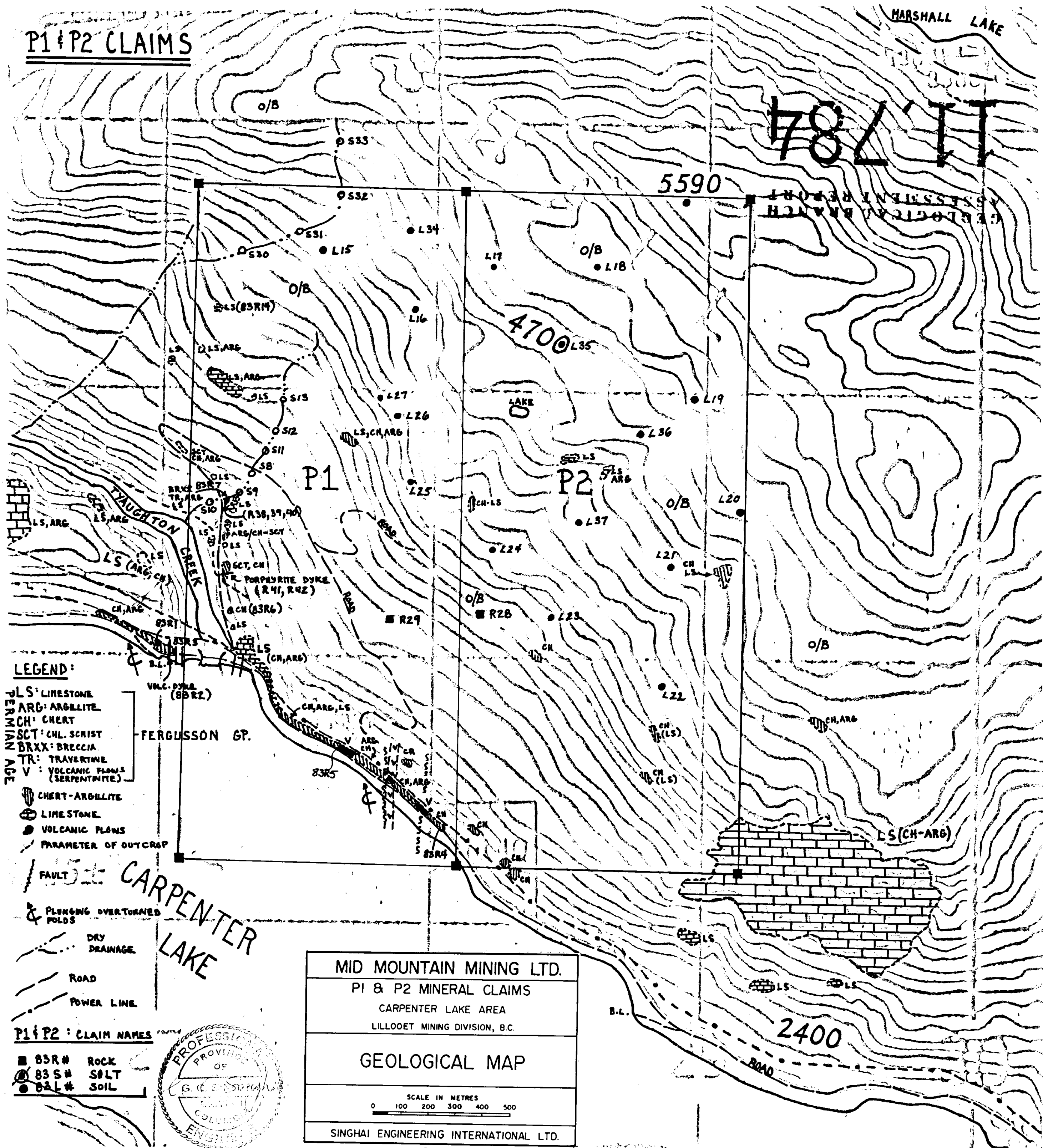
MID MOUNTAIN MINING LTD.  
P1 & P2 Claims  
LILLOOET MINING DIVISION, B. C.  
Location & Claim Map



MAP of MINERAL CLAIMS. P1 and P2.

**P1 & P2 CLAIMS**

78/11



**LEGEND:**

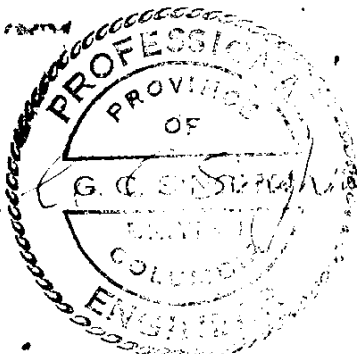
- LS: LIMESTONE
- ARG: ARGILLITE
- CH: CHERT
- SCT: CHL. SCHIST
- BRXX: BRECCIA
- TR: TRAVERTINE
- V: VOLCANIC FLOWS (SERPENTINITE)

- CHERT-ARGILLITE
- LIMESTONE
- VOLCANIC FLOWS
- PARAMETER OF OUTCROP

- FAULT
- PLUNGING OVERTURNED FOLDS
- DRY DRAINAGE
- ROAD
- POWER LINE

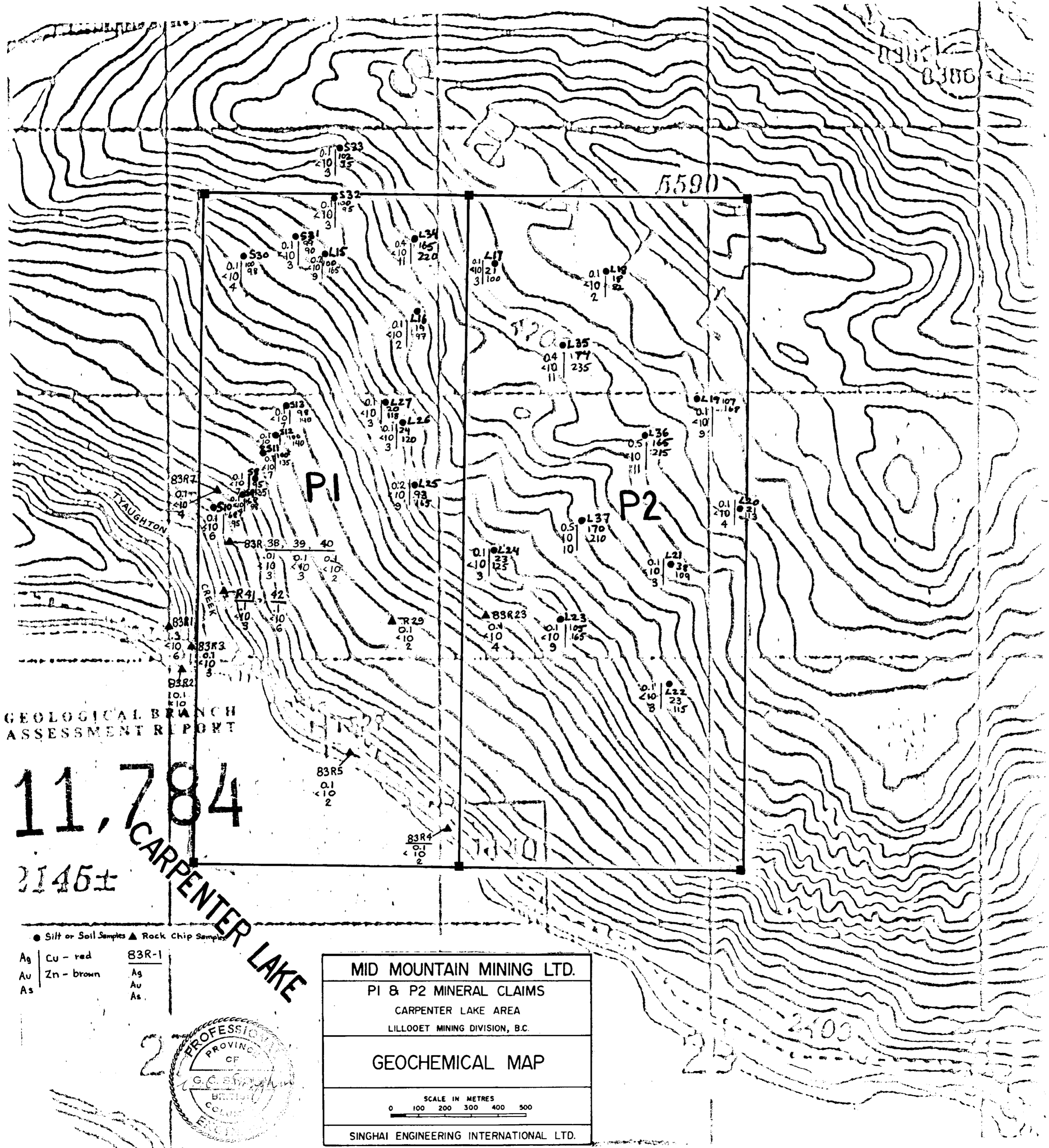
**P1 & P2: CLAIM NAMES**

- 83R# ROCK
- 83S# SOIL
- 83L# SOIL



MID MOUNTAIN MINING LTD.
PI & P2 MINERAL CLAIMS
CARPENTER LAKE AREA
LILLOOET MINING DIVISION, B.C.
<b>GEOLOGICAL MAP</b>
SCALE IN METRES 0 100 200 300 400 500
SINGHAI ENGINEERING INTERNATIONAL LTD.





GEOLOGICAL BRANCH  
ASSESSMENT REPORT

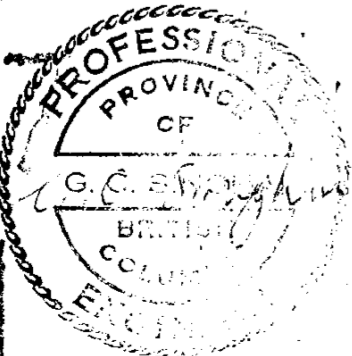
11,784

2145±

CARPENTER LAKE

● Silt or Soil Samples ▲ Rock Chip Samples

Ag	Cu - red	B3R-1
Au	Zn - brown	Ag
As		Au
		As



<p>MID MOUNTAIN MINING LTD. P1 &amp; P2 MINERAL CLAIMS CARPENTER LAKE AREA LILLOOET MINING DIVISION, B.C.</p>
<p>GEOCHEMICAL MAP</p>
<p>SCALE IN METRES 0 100 200 300 400 500</p>
<p>SINGHAI ENGINEERING INTERNATIONAL LTD.</p>