

3279

~~GEOLOGICAL EXAMINATION~~
~~GEOCHEMICAL SURVEY~~
~~MAGNETOMETER SURVEY~~

Jock, Rip, Joy, Mesky
and

Eric Claims

93A/11W, 12E

LEEMAC MINES LTD. (N. P. L.)

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
No. 3279 MAP

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August 25, 1971

INTRODUCTION

During June 1969 some fifty-six claims were staked near the Cedar Creek area in the vicinity of Likely, British Columbia. Along the creek, a few out-crops exhibit mineralization - mostly pyrite with some chalcopyrite. Those claims are well situated in an area where there are many structural disturbances and as a result, there may be some possibilities of mineralized zones of a structurally controlled nature.

PROPERTY

The property consists of some fifty-six contiguous mineral claims as follows:

Rip 1-21 inclusive,	Record # 52845-61, 53744-47
Joy 1-6 inclusive,	Record # 52839-52844
Jock 1-17 inclusive,	Record # 52822-52838
Mesky 1-6 inclusive,	Record \$ 53748-53753
Eric 1-6 inclusive,	Record # 53483-88

The above claims are recorded at the Mining Recorder's Office in Quesnel, British Columbia.

LOCATION AND ACCESS

The property is situated approximately six miles east, south-east of the village Likely, British Columbia. Likely is some fifty-two miles from the One Hundred and Fifty Mile House, by a good gravel road. The Property is accessible

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by a fair dirt road from Likely and it leads to the Cedar Dam, which is situated at the southern end of this property. Cedar Creek runs along the center of these claim groups.

TOPOGRAPHY AND VEGETATION

Elevation encountered on the property would be from 3000 feet to 3500 feet above sea level. The property lies in a valley between the Spanish Mountain on the east and Mount Warren on the west. The area of the property is forest-covered with sub-commercial and commercial fir, pine and alder. The climate is temperate, with a fairly heavy seasonal rainfall.

GENERAL STATEMENT AND REGIONAL GEOLOGY

The Cariboo mining division has attracted many prospectors to search for rich gold placer deposits for more than a century. Many placer gold deposits were found and operations were carried out successfully. Even today, small scale gold placer-operations are being carried out. But in the very recent years, mining companies and prospectors are moving into this area, with a slightly different object of finding copper prospects. Properties with a low, economically feasible grade and large tonnage, have taken the shape of producing mines in past few years in British Columbia. The steady increase in the price and demand for copper has induced many prospectors to look for such copper deposits and it is believed from the regional geology that the Cariboo division is best suited for this new venture. Many of the old workings in this area reveal copper mineralization, but since the copper value was very insignificant, it completely escaped the attention of the "Old Timers".

The regional geology of this area is not simple. Multiple deformation has rendered most of the rocks schistose and tightly compressed in complex repetitive fold. Due to high metamorphism and by the intensity of hydrothermal alteration, many rock types have changed their original texture, structure and composition. Poor rock exposure in this area is the major reason for the difficulties in obtaining more information from geological mapping.

The south-eastern part of Cariboo district is underlain by complex metamorphic rocks of precambrian to the mesozoic era. Rocks of upper triassic to upper jurassic are predominant. Majority of the type of rocks in this area are the basic variety, of which dark green pyroxene-rich andesites of different textures are very common. It is believed that during the latter part of jurassic, rocks of acidic and intermediate character intruded these older formations along the plane of weakness and fault zones.

Structure in this area is highly complex but in general a broad antichinorium is reported. The axis thereof trends north-west and runs for several miles. Numerous drag folds are believed to be present in this area. The major fault systems trend north-west, which has developed many minor cross faults and fractures perpendicular to it.

GEOLOGY

A great majority of this property is covered by an overburden of varying depths. Outcrops are scarce, but when noticed, they are mostly of volcanic andesitic group of rocks, believed to be of middle or upper jurassic age. This group consists of dark green pyroxene bearing andesitic agglomerate, breccia and minor tuff. These andesites are chloritized with an abundance of secondary epidote, which are mostly rich in

pyroxenes. Chloritic schists and argillites were noticed in limited exposures along the Cedar Creek bed.

The structure in this area is characterized by the north-westerly trends of the major fault systems. The north-east boundary of this property is flanked by the major fault system in this area. There are few indications of less well developed fracture-systems striking north-east. These fractures could be contemporaneous to the major fault systems in this general area. Both, the government airborne magnetic map 1533-G and the ground magnetometer survey of the property which coincides with the Cedar Creek. To sum up, Cedar Creek could be the expression of the existing fault. Since the mineralizations are mostly noticed along the creek bed, this fault and the adjacent areas could be of some economic interest.

MINERALIZATION

Some of these outcrops are heavily mineralized with pyrite. Mostly pyrite is disseminated, but sometimes cubes of 3/4" are also noticed. Fair amounts of chalcopyrite are associated with pyrite. Small valves of gold are present in some of the samples. These mineralizations appear to be structurally controlled as they are present along the shear zones, slips and joint planes. In places, pyrite is highly oxidized and appears rusty.

Some five miles east of these claims is situated the Cariboo Bell Mines Ltd. (N.P.L.), who have come up with a substantial tonnage with approximately 0.515% copper. Ardo Mines Ltd. (N.P.L.) is situated some five miles north-west and the recent drilling on their property has indicated good potentials.

GEOCHEMICAL SURVEY

Geochemical samples were taken at every 100 foot interval along the previously cut grid lines. The samples were taken by means of a stainless steel auger at a depth of 10 to 14 inches from the surface in order to consistently sample the "B" Horizon. The samples were placed in a manila bag, air dried, catalogued, and dispatched to Chemex Labs Ltd. in Vancouver for geochemical assay. The samples were analysed by means of hot acid extraction and by atomic absorption method. The results thus obtained have been plotted on the enclosed map and contoured. The background values on this survey appear to be about 50 parts per million copper. Minor anomalous zones with the intensity of approximately 2 to 4 times above the background were indicated. On line 80N. 10E. copper values to 600 parts per million have been recorded. This zone is about 500 feet long and 400 feet in width. This anomalous zone appears to strike northwest-southeast. Values up to 100 parts per million were recorded in many places and almost all of the anomalous zones appear to have the definite shape of northwest-southeast.

Because of the high overburden in this area it is possible that the anomalous zones could not be outlined more clearly.

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MAGNETOMETER SURVEY

A magnetometer survey using the fluxgate Mf.1 instrument was carried over the pre-cut grid lines on this property.

Readings were taken at every 100 feet intervals. These readings were plotted, contoured and submitted to Mr. Dick Crosby Geophysicist, of Seigel Associates Ltd., for his interpretation and comment, which is attached with this report.

CONCLUSION AND RECOMMENDATIONS

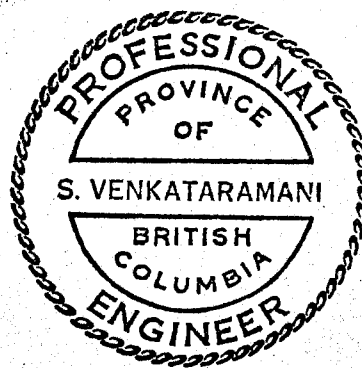
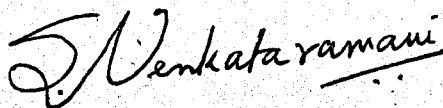
From the GSC reports and by the personal visit to the area, this property is well situated lithologically and structurally. The geochemical survey revealed some distinctive anomalies and they have to be followed by bulldozer trenching. Because of fairly heavy overburden, much information could not be obtained from the geochemical survey. Moreover, the ponds and muskegs within this property have badly hindered a complete reconnaissance survey throughout the property. The magnetometer survey has revealed us very little structural information. In order to assess this property's economical potential, bulldozer trenching has to be done. This should be followed by a detailed geological mapping at 1"=400' scale. An Induced Polarization survey may be carried out to outline mineralized zones. This exploratory work would involve an expenditure of approximately \$27,500.00 as outlined below:

Bulldozer Stripping	\$ 8,000.00
Geological Mapping	\$ 5,000.00
Induced Polarization Survey	\$ 6,000.00
Camp Supplies	\$ 3,000.00
Engineering	\$ 3,000.00
Contingency	\$ 2,500.00
	<u>\$27,500.00</u>

Depending upon the results of this program, the property may be drilled to evaluate its economical potential.

Respectfully submitted

S. Venkataramani M.Sc. P.Eng.



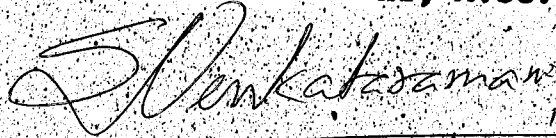
C E R T I F I C A T E

I, S. Venkataramani, of Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geologist with my office located at #630 - 890 West Pender Street, Vancouver 1, B. C.
2. I am a graduate geologist with a Master of Science Degree from the University of Madras, India.
3. I am a member of the Association of Professional Engineers of the Province of British Columbia.
4. I am a certified professional geologist belonging to the American Institute of Professional Geologists, Golden, Colorado, U. S. A.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. I have been practicing my profession for over 10 years.
7. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly in this property or the securities of Leemac Mines Ltd. (N.P.L.)
8. This report is based on my personal visit to the area and from previous reports on the property and the published geological literature.

Vancouver, British Columbia

S. Venkataramani, M.Sc. P. Eng.



PRIMAC EXPLORATION SERVICES LTD.

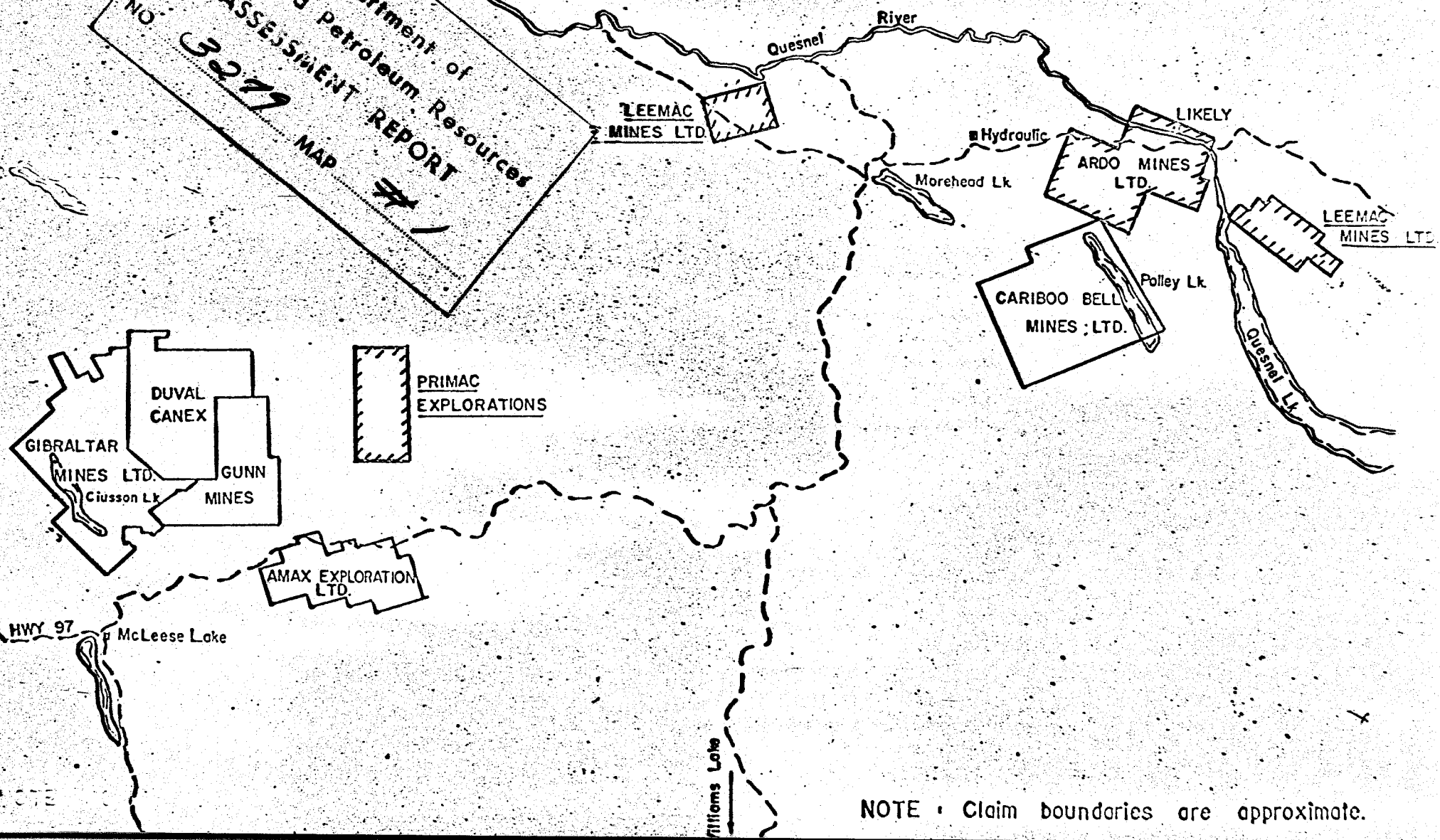
CLAIM LOCATION MAP

CARIBOO MINING DIVISION 23

Scale : 1" = 4 miles

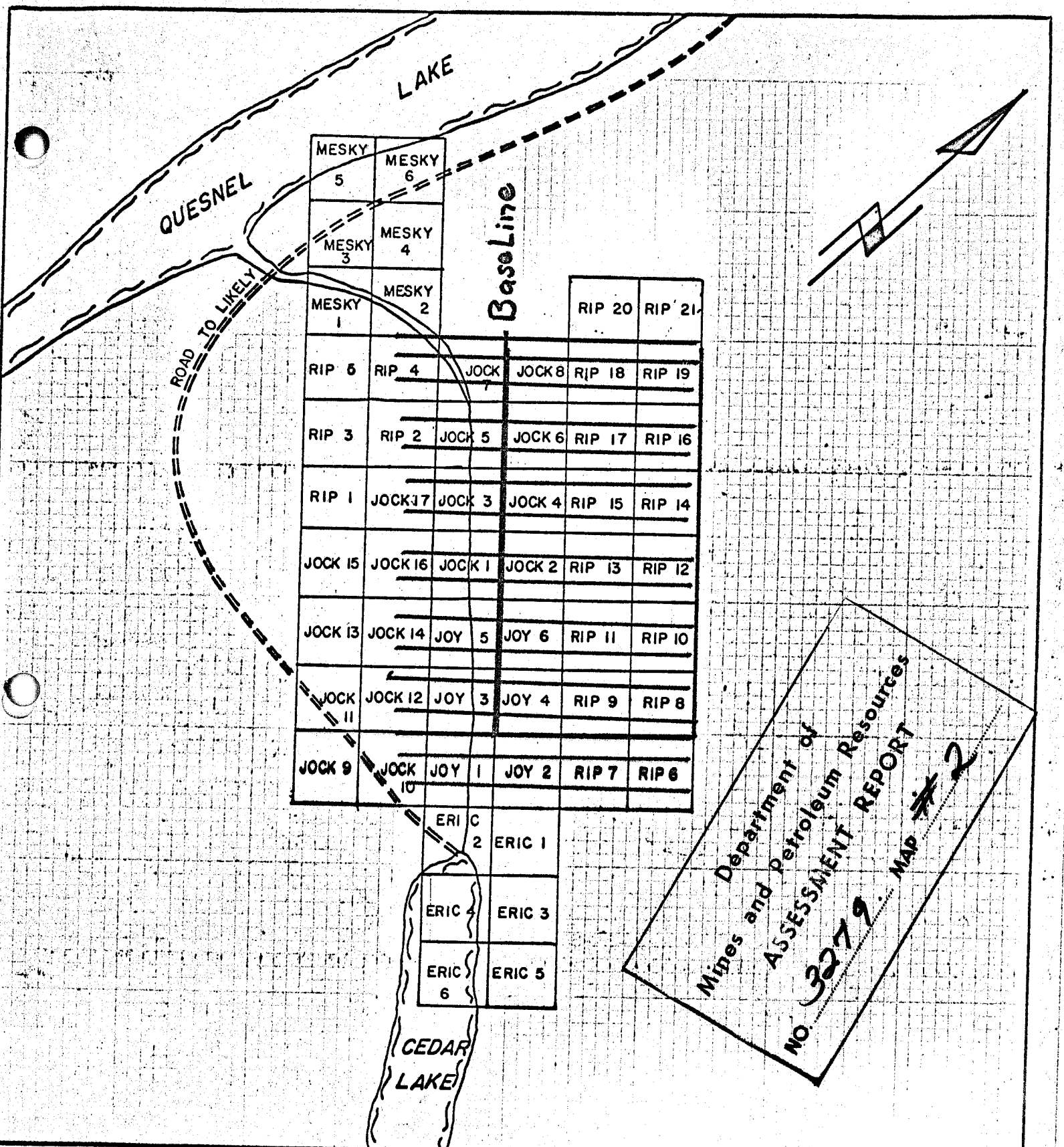


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MAP



NOTE

NOTE • Claim boundaries are approximate.



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LOCATION MAP

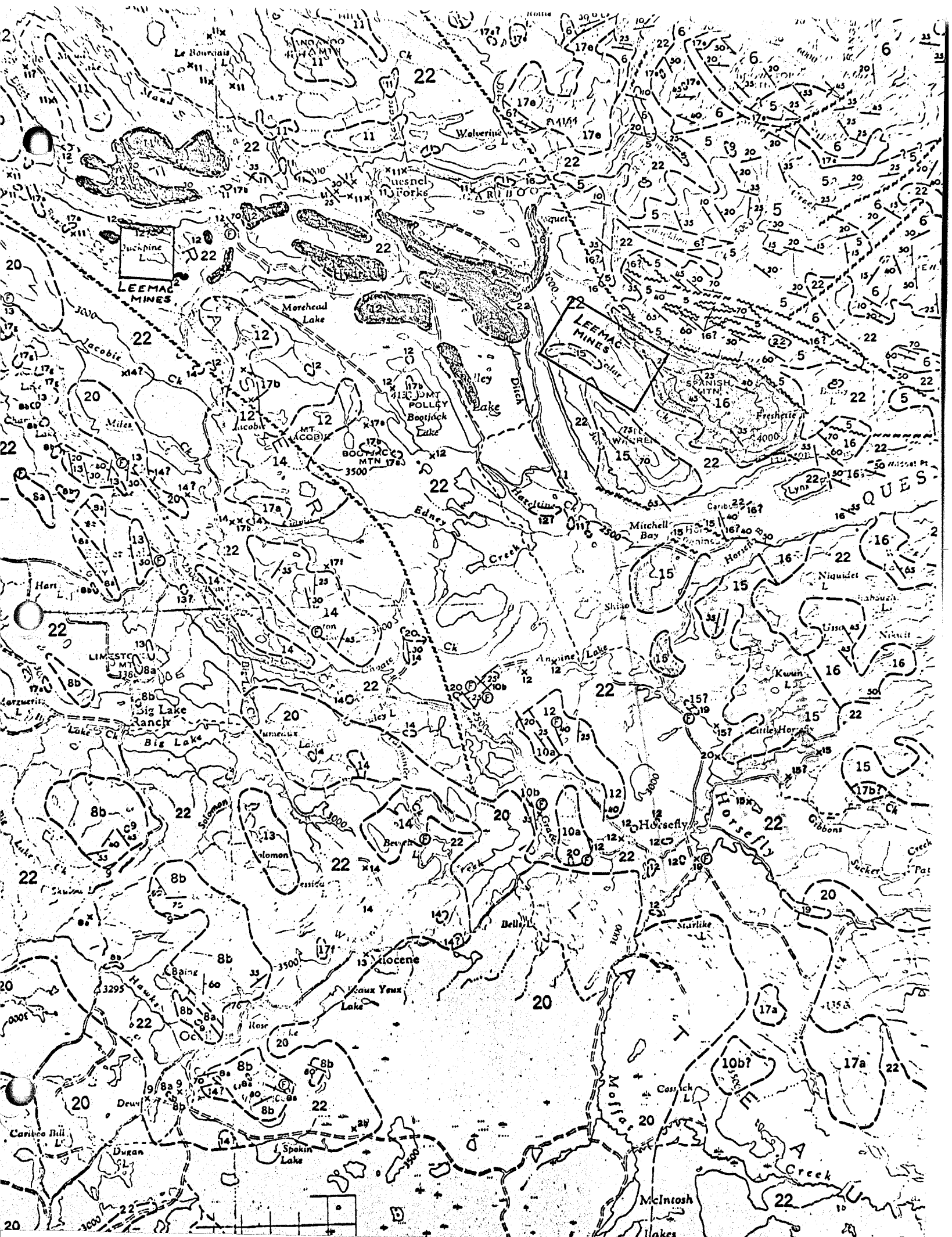
MESKY, JOY, JOCK, RIP & ERIC CLAIMS.

LEEMAC MINES LTD.

LIKELY AREA
 CARIBOO M.D., B.C.

PRIMAC EXPLORATION SERVICES LTD.

SCALE 1" = 3000'



LEGEND

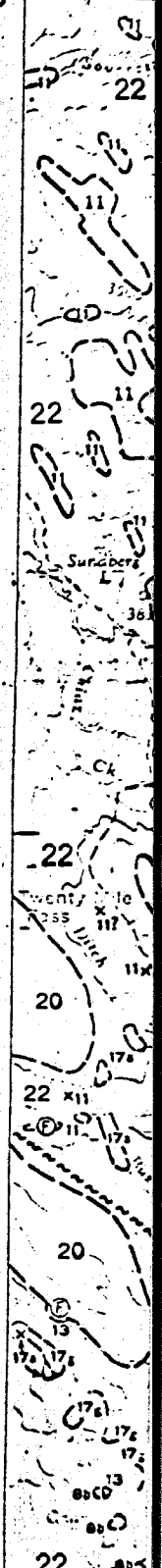
- QUATERNARY**
PLEISTOCENE AND RECENT
 22 Glacial deposits and recent alluvium; till, gravel, sand, silt, and clay; few if any bedrock exposures
- TERTIARY AND QUATERNARY**
PLEISTOCENE AND EARLIER
 21 Basaltic breccia and tuff; minor flows
- TERTIARY**
MIOCENE AND/OR LATER
 20 Basaltic flows; minor tuff, conglomerate, and sandstone
- PALEOCENE (?) TO MIOCENE (?)**
 19 Sandstone, shale, and tuff
- PALEOCENE AND/OR EOCENE**
 18 Brown and buff rusty weathering dacite and rhyolite
- JURASSIC AND/OR CRETACEOUS AND (?) EARLIER**
 17 17a, hornblende-biotite and biotite-quartz monzonite and granodiorite, minor hornblende-biotite syenite and monzonite; 17b, hornblende-biotite syenite and monzonite; 17c, hornblende diorite; 17d, muscovite granite and quartz monzonite including pegmatite; 17e, gneissose biotite granodiorite, altered and gneissose diorite, and augen granite (part of unit 17e may be Palaeozoic); 17f, trachyte porphyry (may be volcanic); 17g, green andesite and fine-grained diorite (may be volcanic)
- JURASSIC (?) AND CRETACEOUS (?)**
MIDDLE JURASSIC (?) TO CRETACEOUS (?)
 16 Green andesitic tuff, agglomerate, and flows; minor argillite, chert, and conglomerate
- JURASSIC**
MIDDLE (?) AND/OR UPPER (?) JURASSIC
 15 Dark green pyroxene-bearing andesitic agglomerate, breccia, and flows; minor tuff; may be equivalent to unit 14
- 14 Green pyroxene-bearing andesitic agglomerate, breccia, and flows; minor tuff, argillite, and limestone; may be equivalent to unit 15
- LOWER JURASSIC (?)**
 13 Purplish brown, brown, and grey pebble and cobble conglomerate and sandstone; soft, friable, black and brown, carbonaceous shale, green shale; minor black limestone
- LOWER JURASSIC**
 12 'Purple' volcanic rocks; purplish brown, dark grey, and rarely green pyroxene-bearing andesitic agglomerate, breccia, and flow; may contain analcite near contacts with units 10 and 11; minor limestone, argillite, and conglomerate
- TRIASSIC AND/OR JURASSIC**
UPPER TRIASSIC AND/OR LOWER JURASSIC
 (may include MIDDLE JURASSIC)
 11 Green pyroxene bearing andesitic flows, agglomerate, and breccia; conglomerate, argillite, and limestone
- TRIASSIC**
UPPER TRIASSIC

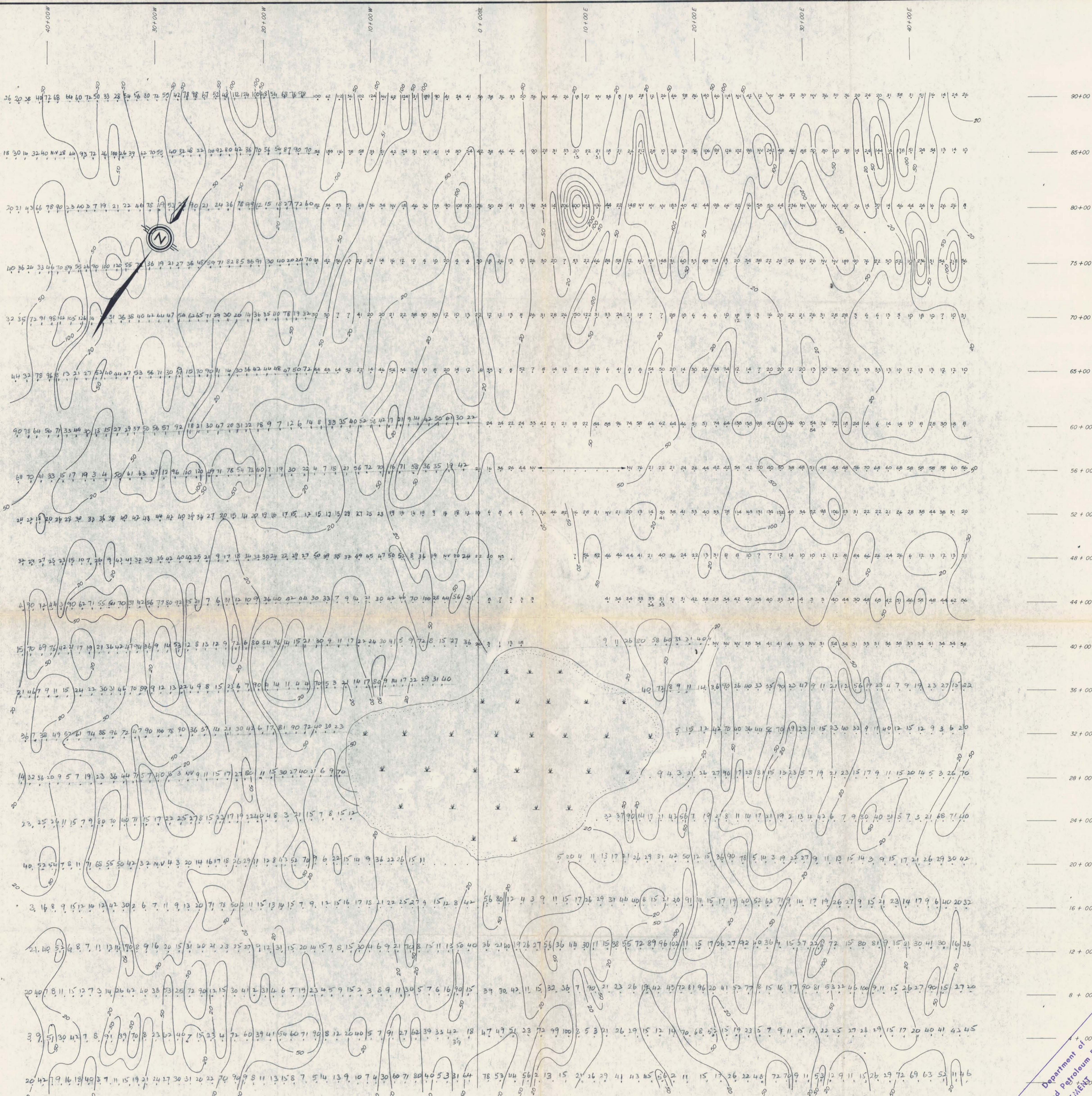
CENOZOIC

MESOZOIC

PRELIM

122° 00'
53° 00'

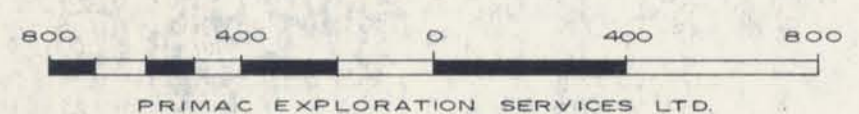




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LEEMAC MINES LTD.
CEDAR CREEK
CARIBOO M.D., B.C.

GEOCHEMICAL SURVEY
(COPPER IN P.P.M.)
SCALE



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