

MAP No.

105-B-1
104-0-16(B.C.)

ASSESSMENT REPORT
N. M. E. A. P.
CONFIDENTIAL
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TYPE OF WORK:

Geol, Geophy,
Geochem

REPORT FILED UNDER	Cone Mountain Mines Ltd.	DOCUMENT NO.	061043
DATE PERFORMED	1970 and 1972	DATE FILED:	June 26, 1973.
LOCATION - LAT.	60° 00'N	AREA:	Tootsee Ridge area, Yukon
LONG.	130° 28'W		and British Columbia.
CLAIM NO.	LUCK 2,4 39693 & 39695		
	7-22 Y29466-81		
	25-28 39700-03 in B.C.		
VALUE \$	CONE 1-6 50770-75 in B.C.		
WORK DONE BY	D. Parent		
WORK DONE FOR	Cone Mountain Ms L.		
REMARKS	Five mineral zones located on a biotite quartz monzonite (Cassiar Batholith). A trial magnetometer survey was conducted in 1970 and located lamprophyre dikes. A soil geochem survey (1972) for copper, lead, zinc & silver gave anomalous lead and zinc values.		

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INTRODUCTION AND LOCATION

This report is written at the request of Cone Mountain Mines, Ltd. of 8167 Main Street, Vancouver, B.C. concerning their Luck Claim Group located in Northern British Columbia and Southern Yukon, and is a follow-up on my previous report of 12 October, 1970 in which I recommended certain work to be performed to further study the Luck Claim Group.

Two consecutive days, Sept 30 and Oct 1, 1970, were spent in a field examination of the Cone Mountain mineral claims known as the Luck Group.

These claims are situated in the Tootsee Ridge area of the Yukon and British Columbia at approximately the following geographical location:

130° 26' to 29' West Longitude

59° 59' to 60° 01' North Latitude

ACCESS

At mile 706 on the Alaska Highway a branch road and bridge spans the north easterly flowing Rancheria river; this road and bridge were built to service the Canadian National Telecommunication Microwave tower located on Lot 13 approximately one mile south of the Alaska Highway. From the C.N.T. road, a branch road has been built by Cone Mountain Mines following southerly the east bank of Freer Creek east branch to the Northern limit of the L claim group; at this point one branch goes up the ridge that lies between Freer Creek and Freer Creek east branch to service the Ida Ore Mines property and the southern extension of this same road leads to the Cone Mountain Mine "ridge" showings; the lower branch follows Freer Creek east branch and ends as only a trail in open alpine country to the Cone Mountain valley showings.

From the highway to the Valley showings is about 7 miles. Watson Lake, 71 miles east of the group is the main center of supply for the area; it is serviced by schedule air line flights of the C.P.A., which makes regular connections with Vancouver, Edmonton and Whitehorse.

PROPERTY

Cone Mountain Mines property consists of 28 contiguous claims of which 16 are situated in the Yukon and 12 in B.C. to form a more or less rectangular block. Numerous claim posts were seen and examined, all found conforming to staking regulations of the Yukon and British Columbia. Metal tags remain to be affixed to posts in the Yukon.

<u>CLAIM NAME</u>	<u>LOCATION</u>	<u>STAKED</u>	<u>RECORD #</u>
Luck 2,4.	B.C. Liard, M.D.	31/Aug/69	39693 & 39695
Luck 7-14	Yukon Watson Lk. M.D.	24/Aug/69	Y 29466-473
Luck 15-22	Yukon, Watson Lk M.D.	7/Sept/69	Y 29474-81
Luck 25-28	B.C. Liard M.D.	31/Aug/69	39700-703
Cone 1-6	B.C. Liard M.D.	24/July/70	50770-775

- (1) Six claims were dropped in B.C. Liard M.D. in 1972. Luck 1-39692, Luck 3-39694, Luck 5-39696, Luck 6-39697, Luck 23-39698 Luck 24-39699.
- (2) With the exception of Cone 1-6 all these claims were acquired from Bob Bailey and the Cone 1-6 were acquired from Frank Russell, Leonard Trautman, Peter Bekow under an agreement dated July 15, 1970.

The first prospectors in the area were the placer miners of 1898 who bypassed these silver bearing galena veins due to difficulty of access and low metal prices prevalent at time; however with the Alaska Hwy at close proximity, the prospects of a new railroad in the area, improved silver price, a better understanding, enhance the chances of success of a mining venture in these parts.

VEGETATION

The claim group is situated above timberline and very little brush is to be found on the side hills and valleys covered by the claims. A regional bush fire, of some years past, has destroyed the small jackpine that was plentiful between the Alaska Highway and the lower elevation claims.

TOPOGRAPHY

The massive Cassiar Batholith of moderately rugged topography underlying the claim group had been strongly sculptured by alpine glaciation, ice moved in a N.N.W. direction; maximum relief is about 2,000' and the highest peak to the east of the group is 6,500'.

Today, Freer Creek 1st and 2nd branches now occupy two strongly indented areas, no doubt zones of weakness in the batholith, suggesting strong sheer zones, the intervening fingers of quartz monzonite are now generally covered with arcose sand gravel and frost heaved angular blocks from the ridge to the valley floors except those steep areas where eluvial sediments cannot remain.

AEROMAGNETIC SURVEY-GROUND SURVEY

An airborne magnetic survey was made of the area in 1961 by the Geological Survey of Canada and covers the claim area from the Yukon-B.C. border north only and is presented on aeromagnetic series map 1304 C "Spencer Creek" with weak magnetic trends in a N.N.W. direction; this condition is to be expected in viewing the area as a whole. The writer made a short one line ground survey using an A.E.M. pocket magnetometer to test an area in the valley bottom under Freer Creek 1st branch with very good response.
(see plan)

The highly incised valleys of Freer Creek have been suspected to be zones of weakness accounting for their rapid erosion by glaciation; the magnetometer reveals an anomalous zone under the creek which may be a shear zone accompanied by a dyke. This test shows that the magnetometer has usefulness in areas such as the above where no bedrock is exposed and certain geological unknowns suspected to exist, requiring confirmation. Time did not permit testing those areas where lamprophyre dykes exist due to difficult access to those areas at the time of the examination.

GENERAL GEOLOGY

The claim group is wholly underlain by massive, homogeneous, medium-to-course - grained, grey biotite quartz monzonite known as the Cassiar Batholyth and is of Jurassic and or Cretaceous periods.

The batholyth in the claim group area is very highly jointed with a most prominent horizontal parting and subsidiary east west and north south fracture pattern. The quartz monzonite weathers in place rapidly to form a mantle of argosic sand even extending over the ridges; frost heaved boulders are everywhere. Rock outcrops are numerous on the ridges and a few were seen in the valleys. The Cassiar Batholyth has a N.W.W. - S.E.E. trend and extends 200 miles. At the position of the claim group, this batholyth has a width of 12 miles; whereas the group is 4 miles inside the batholyth from its eastern edge.

A large northerly striking lamprophyre dyke was seen on the steep bluff east side of the east branch of Freer Creek; much similar rock is found, as float, in the Freer east branch valley. Another similar lamprophyre dyke is reported to be located in claim 23 or 25 on the B.C. side, by Mr. Robert Bailey, who accompanied me on the trip and acted as guide.

LAMPROPHYRE DYKES

The Tootsee Ridge area appears to have been intruded by lamprophyre dykes favoring certain northerly striking joint planes and a pattern of these dykes is most conspicuous on the Sandy, L and Luck Groups. These dykes vary in width from a few inches to 10-20 feet wide and appear to have extensive north south dimensions.

MINERALIZED ZONES

Argentiferous galena, sphalerite, chalcopyrite and possibly tetrahedrite at times form lenses of massive sulphides and at other times are found as dissemination in quartz veins. The placement of these lenses or veins appear to have a genetic relationship to the lamprophyre dykes and all mineralized zones seem to favor east-west fractures or sheer zones with steep northerly or southerly dips. If this is the case, then the task is greatly simplified in the search for the extension of known zones and the location of buried zones not now known but suspected by the presence of mineralized float. Similarly the interpretation of future soil and geophysical anomalies will also be more easily understood. Certain topographic features of the area also hint at favorable prospecting sites.

MINERAL SHOWINGS

Five (5) mineral zones were examined and sampled. The weather at the time of the examination was cold, gusting winds and some 2" of new fallen snow drifting in places, this did not hamper the examination however.

ZONE " O "

Located on the top of the ridge between the first and second east branches of Freer Creek at about 5,500' elevation and about 140' south of IDA ORE MINES LTD., NO 1 Post claim Y27946-47; the final posts of the Luck 11 and 12 are also at this claim line position.

The zone " O " consists of a strong shear zone in quartz monzonite in which narrow quartz stringers are found carrying galena in blebs and disseminations, width 18", strike 46° N.E., dips 77° N.W., exposed in a 10' long bulldozer trench. It is reported that there are other parallel quartz stringers in the immediate area.

Chip sample #075 across 18" returned:

Gold	Trace
Silver	Trace

PIT # 1

Located on the same ridge as zone " O " and about 1500' south of zone " O " at approximate elevation 5,800'. This zone has been exposed by bulldozer trenching for some 120' along strike of 64° N.E., the depth of the trench was 6' and exposed sheared and hydrothermally altered quartz monzonite in which stringers of quartz carry galena as blebs and disseminations. More bulldozer work will have to be performed here to fully expose the shear zone which at the time of the visit was somewhat sluffed in and only a six foot width of zone exposed and chip sampled.

Chip sample # 076 across six feet returned:

Gold	Trace
Silver	0.1 oz

A specimen of float, sample # 086, consisting of white quartz, sheared and mineralized contained galena as blebs and returned:

Gold	Trace
Silver	1.5 oz
Lead	6.70%

ZONE # 2

Was exposed lightly where the tote road was put through along the crest of the ridge but not opened up due to mechanical failure with the tractor. Much quartz float, carrying galena, was found in the arcose sand and gravel covering the zone.

Strike of Zone 62³ N.E., elevation about 5,850. This zone was not sampled except for some specimens of float gathered from the area and consisted of white quartz with blebs and disseminations of galena and also some dyke rock (dark grey fine grained silicious).

Specimen sample # 081 returned:

Gold	Trace
Silver	18.2 oz
Lead	8.38%

ZONE # 3

Also exposed on the top of the same ridge as "0", 1, 2, ... The best view of the zone is from the West cliff side which is quite precipitous and drops off into the second east branch of Freer Creek.

This zone consists of a main vein having a strike of 79⁰ N.E., 64⁰ N. dip and width of 30"; in the footwall of this vein a lower vein breaks out which has a strike of S 86 E, dip of 47 and width of 18". The branch fork vein is about 40' long and its upward extension resumes the dip of the main vein but has a strike of S 86⁰ E., and width of 52".

Sample # 077 across 4" from the main zone hanging wall side consisted of quartz and sphalerite which returned:

GOLD	TRACE
SILVER	0.20 oz
ZINC	.08%

Chip sample # 078 across 26" from the footwall zone which consisted of sheared quartz monzonite altered with local stringers of sphalerite and gouge returned:

GOLD	TRACE
SILVER	TRACE
ZINC	.2%

CHIP sample # 079 across a width of 52", cut from the vertical branch vein consisted of sheared quartz monzonite with sphalerite stringers returned:

GOLD	TRACE
SILVER	0.2 oz
ZINC	.04%

Specimen sample # 080 is float from the crest of the above #1 branch zone which consists of waxy white quartz to 3" thick pieces, iron stained (pyrite) and medium coarse grained silene returned:

GOLD	TRACE
SILVER	1.7 oz
LEAD	27.18%

ZONE # 5

This zone is on the east flank of the valley approaching the basin at the head of Freer Creek 1st east branch and about one mile length south of the Yukon-E.C. border at elevation 5,500' approximate. Massive fine grained galena float was seen in the arctic sand, gravel and boulder overburden.

Three horizontal trenches, in a step pattern, were commenced but due to permafrost did not reach bedrock to expose the zone. To the east precipitous bare rock cliffs a height of 5,500' elevation, and in line with the bulldozed zone a strong fracture zone is visible striking S 62 E, and dipping 65N.E., that has a

width of about 100' at top of crest and about 60' wide where talus cover appears. Specimen material float consisting of very fine massive galena with some malachite stain, sample # 082 was gathered and returned:

GOLD	.01 oz
SILVER	122.4 oz
LEAD	11.45 %

Grab sample #081 consisted of arenaceous sand exposed in the upper trench east face and gathered over a width of 42' returned:

GOLD	TRACE
SILVER	2.0 oz

Grab sample # 084 consisted of arenaceous sand bulldozed out of middle trench and gathered on the brow across a width of 84' returned:

GOLD	TRACE
SILVER	1.1 oz

Grab sample # 085 consisted of arenaceous sand bulldozed out of lowest trench and gathered on the brow across a width of 60' returned:

GOLD	TRACE
SILVER	0.3 oz

PROPERTIES IN THE AREA

THE ONE NINE LTD. adjoins Care Mountain Mines to the north and northwest, own some 38 mineral claims upon which they are presently developing and making test shipments of hand coked massive galena which also contains some sphalerite and chalcoprite. It is reported that they shipped 25 tons to Seattle during summer 1975.

Assay returns:

80 ounces	Silver/ton
56.1	Lead/ton
92	Zinc/ton
0.62	Copper/ton

The trench from which the above was shipped is about 1300' North of the One Mountain "O" zone, has a strike of $S 85^{\circ} E$, steep dip and trenched about 100' long. The company own their equipment which consists of motor vehicles, trucks, bulldozers, air compressor, drill, trailer cranes etc. Adjoining and to the west of the One Mine Ltd., Robert Kelley and Bruce Powell own a block of 44 claims which straddle the Yukon-A.C. border and upon which numerous argentiferous galena veins are exposed. The vein structure of this area also conforms to a pattern of east west veins with steep dip to the E. or S., similar to the One and One Mountain Mine vein structure.

WORK RECOMMENDED IN 1970

That the geology of the area be plotted using air photos to trace fracture patterns and help in locating structures such as veins, dykes, faults, etc. That geophysical methods be used to trace the buried dikes since that it was found that these dikes reacted on a magnetometer; that an electromagnetic survey be made since the important veins in the area are massive sulphides of tabular shape and steep dipping attitude, and these can be located by such an instrument cheaply and quickly.

That diamond drilling and underground development work be done only on the completion of the above recommended survey, after an evaluation is made of results of such a survey.

WORK PERFORMED IN 1971

Clay E. White, Geophysical Consulting and Services, Ltd., conducted a geophysical survey on the top lode # 8, 10, 12, 13, 17, 19, 21, 25 and 26 claims during the period August 15-22, 1971. This work consisted of placing two north-south control lines, one along the north-south ridge and the other in the valley along East Frost Creek which also trends north-south. The grid lines were turned off at intervals of 500' to 1,000' in an east-west direction to cover the area to be well sampled. The base and grid lines were chained and flagged at 100' intervals.

The above grid area was well sampled using hand augers to retrieve a sample of the "E" horizon which was subsequently analyzed for copper, lead, zinc and silver. The analysis were made by atomic absorption. Some 211 soil samples were analyzed as well as 1 rock chip sample.

RESULTS OF 1977 WORK

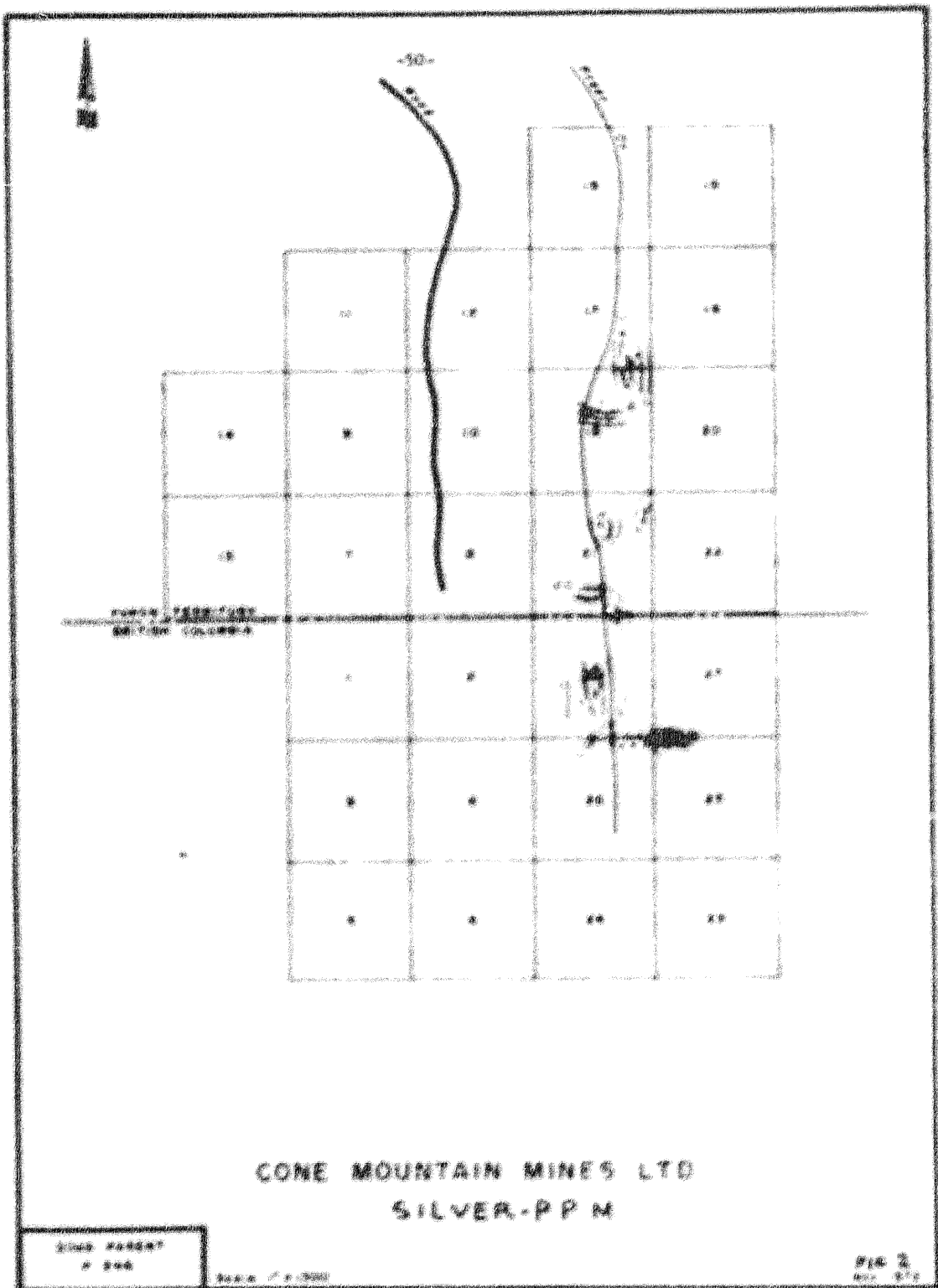
The survey has outlined strong geochemical responses in lead, zinc and silver along the eastern Fray Creek section with interesting anomalous lead zinc areas on the west ridge area. Best of all was the 16 south line that shows high anomalous values in all the four metals analyzed for.

CONCLUSIONS

The East Fray Creek area shows the greatest response to the geochemical survey so it is of all interest to complete the job by confining the area with a grid spacing of 500'. That the new grid also be soil sampled, analyzing for silver, lead and zinc and that a magnetometer and an electromagnetic survey be made of this area to position the lines and locate any sulphide veins that underlie the area.

Upon the completion of this work it will be possible to lay out a program of surface drilling.

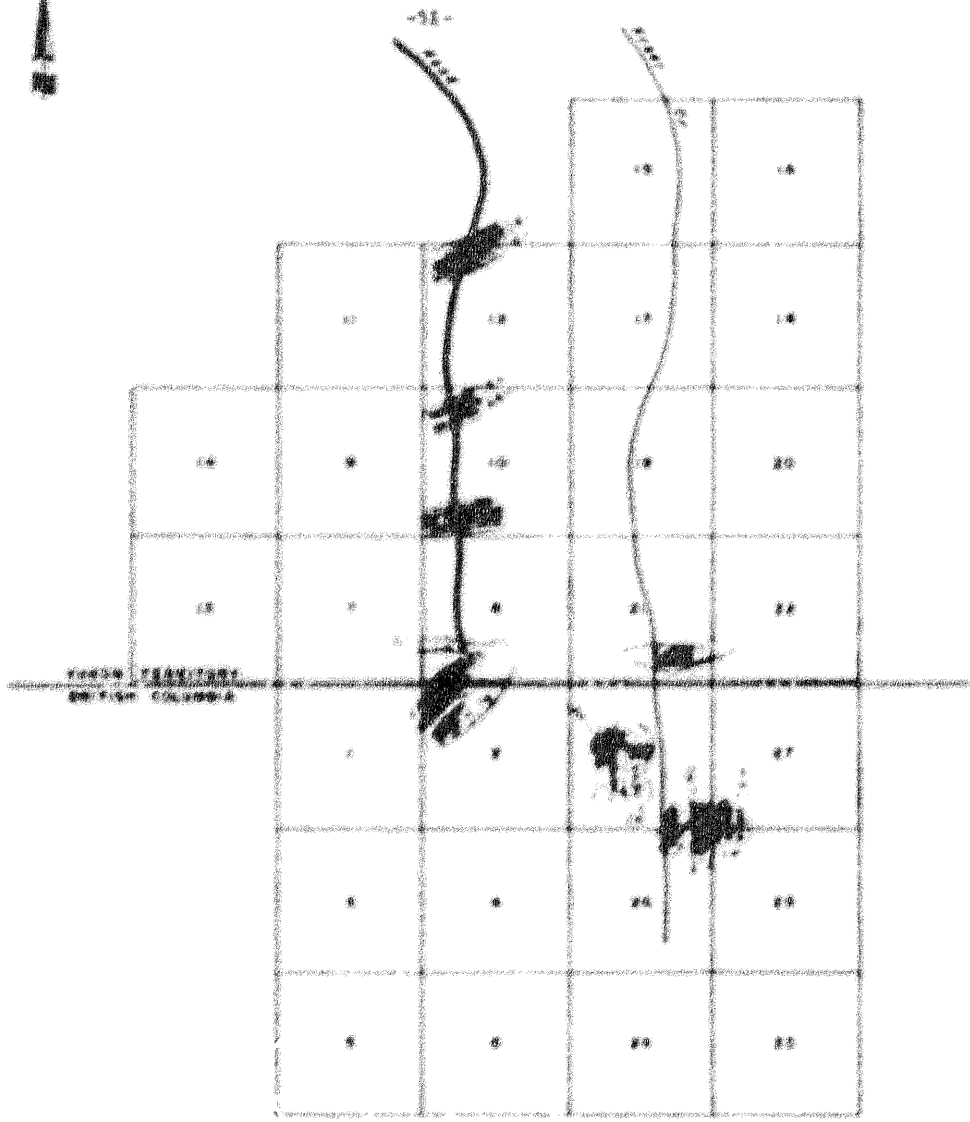
This further grid layout, soil sampling, magnetometer and electromagnetic survey would be best done with work beginning in the first week of July, 1978 at which time the area will be clear of snow.



CONE MOUNTAIN MINES LTD
SILVER-PPM

Scale 1/4" = 1000'

FIG 2
REV. 1/72



CONE MOUNTAIN MINES LTD
LEAD - PPM

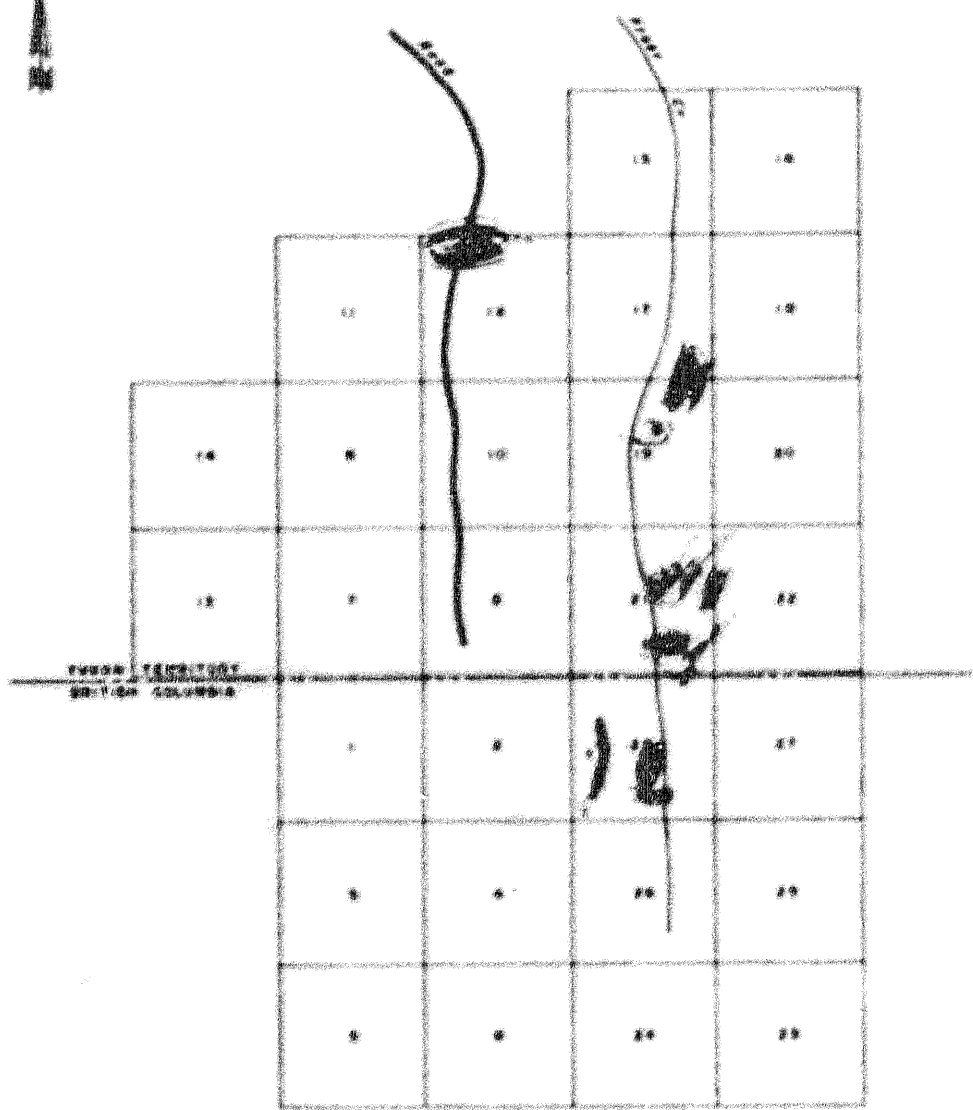
5044 PARENT
P. END

Scale 1" = 1000'

Fig 3
Nov 1972



+52-

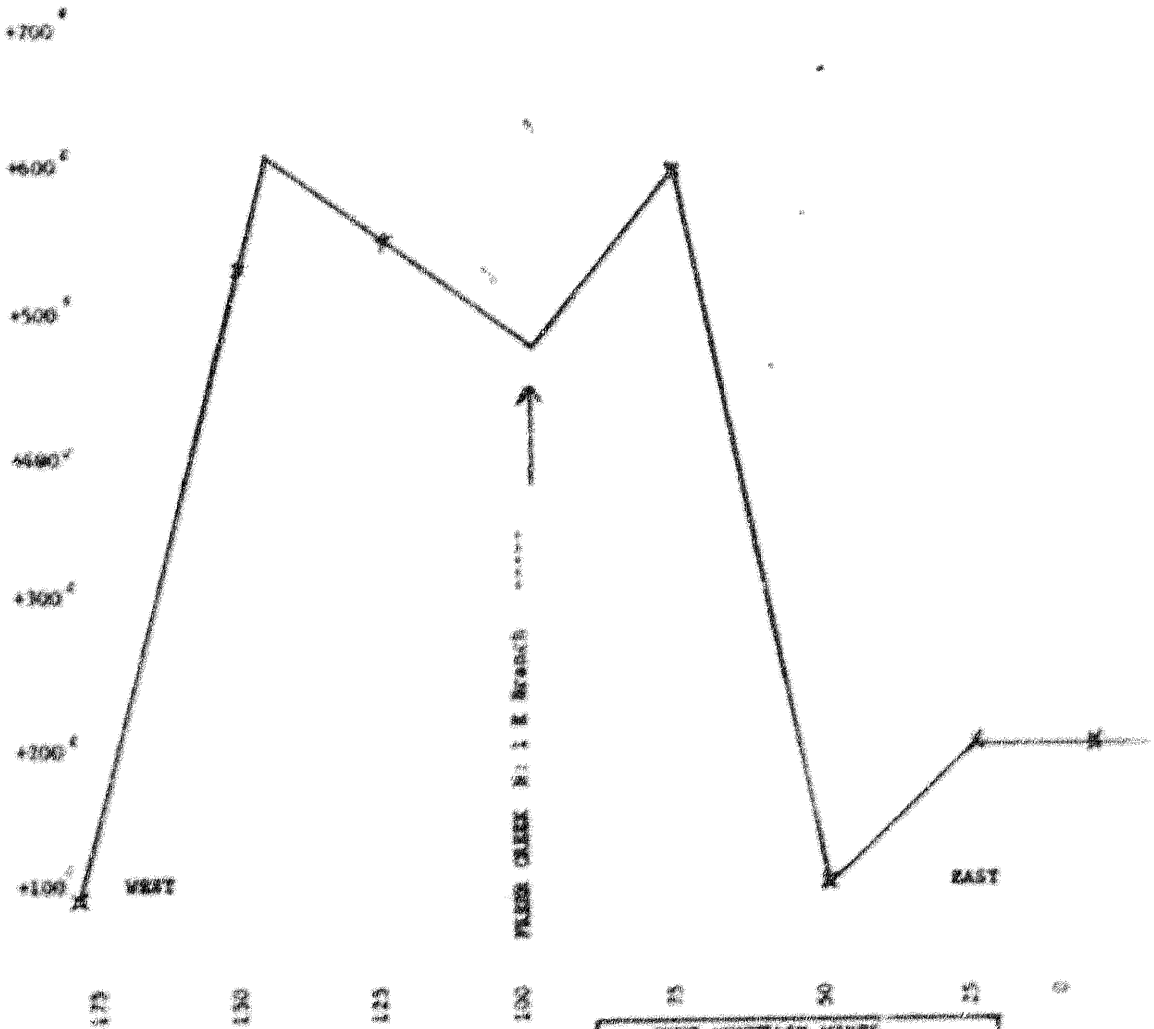


CONE MOUNTAIN MINES LTD
ZINC - P.P.M

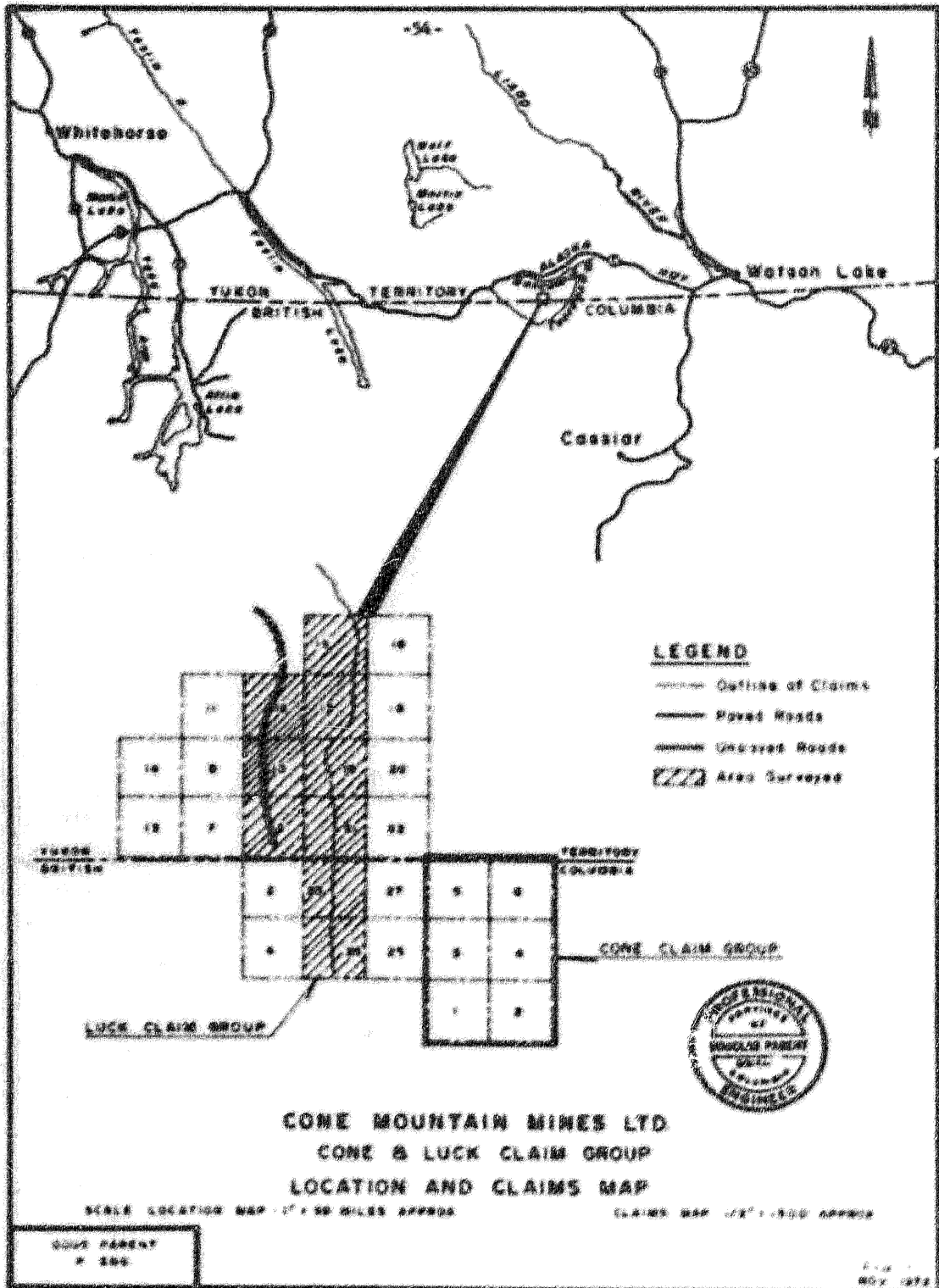
CONE MOUNTAIN
P. 528

Scale: 1" = 1000'

FIG. 4
NOV. 1972



CONE MENTALIS MINES
PROFILE
A.E.M. BAROMETRIC
TRIAL LINE
AT CREEK CROSSING
Scale Vert 1" = 100 Feet
Horiz 1" = 25 feet
Date Oct 1, 1920 D.F.



-54-

Whitehorse

Ward Lake

Half Lake

North Lake

YUKON TERRITORY

TERRITORY

BRITISH COLUMBIA

Worsen Lake

Cassiar

LEGEND

- Outline of Claims
- Paved Roads
- Unpaved Roads
- Area Surveyed

YUKON
DIVISION

TERRITORY
COLUMBIA

CONE CLAIM GROUP

LUCK CLAIM GROUP



**CONE MOUNTAIN MINES LTD.
CONE & LUCK CLAIM GROUP
LOCATION AND CLAIMS MAP**

SCALE LOCATION MAP 1" = 50 MILES APPROX

CLAIMS MAP 1/2" = 1000 APPROX

SOLE AGENT
P. 202

NOV 1973