

990

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

ON

DEN GROUP MINERAL CLAIMS

(Den 13-22, 31-35, 37-38, 48, 72, 75-76, 78-80 M.C.)

Highland Valley Area, Kamloops M.D., B.C.

50° 121° NE

by

Charles A. R. Lammle, P.Eng.

Adera Mining Limited

Claims held by

Adera Mining Limited

Vancouver, B.C.

Work performed between Aug. 15 - Oct. 30, 1966



LOCATION MAP  
**DEN GROUP**  
KAMLOOPS M.P., B.C.

1" = 10 mi.





TABLE OF CONTENTS

		<u>Page</u>
# 1	<u>LOCATION MAP</u> 1" -- 10 mi. . . . .	faceplate
# 2	<u>PROPERTY MAP</u>	
#	<u>GEOLOGICAL REPORT</u>	
	Introduction . . . . .	1
	Summary and Conclusions . . . . .	1
	Recommendations . . . . .	2
	Property . . . . .	3
	Location and Access . . . . .	3
	Program and Employees . . . . .	4
	General Geology . . . . .	4
	Local Geology . . . . .	5
	Rock Types . . . . .	5
	Structures . . . . .	6
	Mineralization . . . . .	7
	 <u>GEOCHEMICAL REPORT</u>	
	Introduction . . . . .	8
	Sampling and Analytical Details . . . . .	8
	Determination of Threshold Values . . . . .	9
	Results and Interpretations . . . . .	9
	Copper . . . . .	9
	Molybdenum . . . . .	10
	 <u>GEOPHYSICAL REPORT</u>	
	Introduction . . . . .	11
	Instrument and Field Procedure . . . . .	11
	Factors Influencing the Earth's Magnetic Field . . . . .	12
	Results and Interpretations . . . . .	12
	 <u>CORRELATIONS</u> . . . . .	13
	 Statement of Expenditures Incurred . . . . .	14
	 <u>ATTACHMENTS:</u>	
# 5	Map 1 DEN GROUP GEOLOGY 1" -- 400'	
# 3	Map 2 DEN GROUP GEOCHEM 1" -- 400'	
# 4	Map 3 DEN GROUP MAGNETICS 1" -- 400'	

Vancouver, B. C.  
March 31, 1967.

ADERA MINING LIMITED  
DEN GROUP MINERAL CLAIMS

Kamloops M.D., B.C.

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

by

Charles A. R. Lammle, P. Eng.

GEOLOGICAL REPORT

INTRODUCTION

During the interval of Aug. 15 - Oct. 30, 1966, Adera Mining Limited carried out a preliminary exploration program on a portion of its wholly owned DEN GROUP of mineral claims in the Highland Valley area of the Kamloops M.D. The work consisted of line cutting and geological, geochemical and geophysical surveys over approximately 24 claims of the 80 claim copper prospect. The work was designed to detect large areas of possible low grade copper mineralization and was performed as part of a continuing evaluation project on all of the claims of the group.

SUMMARY AND CONCLUSIONS

The southernmost portion of the DEN GROUP mineral claims, 28 miles S.E. of Ashcroft, B.C., covers a portion of the northerly trending contact between the Beaver quartz diorite and the younger Bethlehem quartz diorite. Portions of the northern edge of the mapped area are underlain by Tertiary volcanic flows. Small amounts of bornite and chalcopyrite mineralization occurs in both granitic rock types, chiefly along tight NE joints but also as weak disseminations near similar joints,

and NE trending linear features are therefore considered favourable prospecting guides.

The geochemical work has yielded low general results for Cu and Mo, but several areas of higher Cu concentrations are of interest, particularly those coinciding with magnetic features. Two north trending magnetic lows over Bethlehem rocks, with adjacent geochemical highs are considered as favourable indications, and an easterly to northeasterly magnetic lineament with some nearby geochemical highs is also considered favourable.

These favourable indications are sufficient to encourage investigation of their respective anomalies and to encourage continued preliminary evaluation of the whole property.

#### RECOMMENDATIONS

- 1 - Continue the preliminary evaluation project of the whole claim group by geologic, geochemical and magnetometer surveys. Fractional mineral claims found during the surveys should be staked as they are discovered.
- 2 - Investigate by bulldozing the several magnetic lows with associated geochemical highs as described in this report. Additional access roads to other parts of the property should be constructed as well.
- 3 - Once a preliminary evaluation of all or most of the claim group is finished, reconnaissance induced polarization profiles should be carried out over promising areas, the results of which should be used to determine the nature of future work on the property. Minimum annual expenditures to maintain the property will be in the order of \$10,000.

Respectfully submitted,



CHAS. A. R. LAMMLE, P. Eng.

March 31, 1967

PROPERTY

The property, consisting of 84 Den Claims and 2 Elk Claims, was purchased in May, 1965 by Adera. Eighty of these claims were maintained in good standing in 1966 by an assessment program of bulldozer trenching. Location lines run northwesterly and northeasterly in prospector fashion and consequently numerous fractions exist between the claims, but most of these have now been, or are in the process of being, staked by Adera. Details regarding the original claims are tabulated below and the portions of the claims surveyed are shown on the attached maps.

Claim	Record No.	Assessment Date
Den 3 - 12	- 51019 - 28 -	Aug. 6, 1967
Den 13 - 18, 37 - 38	- 49711 - 16, 49717 - 18 -	May 3, 1967
Den 19 - 36, 63 - 68	- 49864 - 81, 49882 - 87 -	May 10, 1967
Den 40, 42, 44, 46	- 50568, -70, -72, -74 -	June 18, 1967
Den 47 - 52, 75 - 76	- 50353 - 58, 50359 - 60 -	June 4, 1967
Den 53 - 60	- 51997 - 52004 -	Oct. 1, 1967
Den 61 - 62	- 52310 - 11 -	Oct. 18, 1967
Den 59 - 74	- 50784 - 89 -	July 5, 1967
Den 78 - 82	- 50242 - 46 -	May 28, 1967
Den 83 - 85	- 50827 - 29 -	July 14, 1967
Elk 1 - 2	- 54434 - 35 -	Mar. 31, 1967

LOCATION AND ACCESS

The property is located between elevations of 4000' and 6000' on the eastern and southern slopes of South Forge Mountain in the Highland Valley area of British Columbia. The north-eastern part of the claim group adjoins parts of the old Transvaal property and parts of the South Seas property. Ground held by Cominco and Bethlehem Copper Corporation lie immediately to the east, and ground held by Cominco, Noranda, and Lornex lie to the south. The Bethlehem ore zones are 6 miles SE of the Adera claims and the Lornex mineralized zones lie 12 miles to the south.

Access to the property is 28 miles SE of Ashcroft, B.C. via the paved Highland Valley Road. The southern parts of the claims may be reached directly from this paved road, and the central and northern portions of the claims may be reached by jeep roads branching westerly from the Trojan and Novak

roads. The westernmost claims are not presently accessible by road.

PROGRAM AND EMPLOYEES

The exploration program was carried out on the southeastern parts of the property and was designed to detect large areas of low grade copper mineralization. The work consisted of 36.3 miles of line cutting including 1.9 miles of NS base line and 34.4 miles of EW crossline at 400' intervals, all crosslines being picketed to 100' stations. The geologic map was prepared by study of outcrop along these crosslines and the geochem and magnetic work was done by taking samples and readings at each station where possible on the crosslines. The work was carried out between August 15 and October 30, 1966, and the office work was deferred until this time to utilize the summer season fro other field projects.

Employees and/or contractors were Am. Drazdoff, J. W. Kastor, G. A. Webster, and A. C. Webster, all of Princeton, B.C., and all under the author's direct supervision. Time distribution of the field work in days was as follows:

	Lammle	Drazdoff	Kastor	G.Webster	A.Webster
Linecutting	5	Contract	Contract	-	-
Geology	15	-	-	-	-
Geochemistry	2	-	-	-	30
Magnetometer	2	-	-	30	-

GENERAL GEOLOGY

The disseminated orebodies and numerous mineral occurrences of the Highland Valley area occur near the center of the Guichon batholith which generally consists of quartz diorites and granodiorites. The major copper deposits occur in areas of complex igneous geology. The Bethlehem orebodies are near the north trending contact of the Guichon quartz diorite and the younger Bethlehem quartz diorite in an area ribboned, brecciated and altered by irregular bodies and dykes of various porphyritic intrusive rocks. There the copper minerals, chalcopyrite, bornite and their carbonates, are associated with strong sericite kaolin, chlorite, epidote, feldspar and quartz

alterations, and in places some low grade molybdenite mineralization is present. Smaller deposits peripheral to the general Bethlehem-Lornex area are frequently associated with local faulted-altered zones or with contacts between different granitic rock types.

Small pendants of hornfelsic rocks are known to occur within the Guichon batholith, and a large portion of the northern portion of the batholith is unconformably overlain by post mineral Tertiary flows and sediments. These younger rocks probably cover other important mineral deposits.

#### LOCAL GEOLOGY

The portion of the Den Group described by this report covers a vague northerly trending portion of the contact between the Beaver quartz diorite and the younger Bethlehem quartz diorite-quartz monzonite, both of which contain small aplite and/or quartz porphyry dykes. The quartz diorite at the northern limit of the map area is overlain by Tertiary andesitic flows. These rock types are described in more detail below, in order of their age, oldest to youngest.

#### Rock Types (See Map 1)

Beaver Quartz Diorite This rock type occupies the eastern portion of the surveyed area and extends northerly under the cover of the Tertiary volcanic flows. It consists of a fresh, medium grained, gray to slightly pink hornblende quartz diorite. Feldspar, chiefly plagioclase, makes up about 60% of the rock, quartz 15%, hornblende 15% and biotite 10%. Accessory minerals in small amounts are magnetite and sphene. The hornblende occurs in two separate fashions, largely as fresh equidimensional anhedral crystals and partly as larger ragged and clotted grains which at times impart a vague porphyritic aspect to the rock. The massiveness and strong jointing and sheeting of the unit causes prominent, blocky outcrop. Small amounts of bornite were found in tight joints in the rock at the northern extremity of the mapping.

#### Bethlehem Quartz Diorite - Quartz Monzonite

This rock unit



underlies the western portion of the mapped area. It is a fresh medium grained, gray to pink quartz diorite grading to quartz monzonite. It is richer in orthoclase than the Beaver quartz diorite and the hornblende-biotite mafic content is variable, but generally less than that of the Beaver quartz diorite. Near its suspected contact with the earlier granitic rock it is somewhat crushed and oxidized and in places weakly mineralized with disseminated chalcopyrite and bornite. Outcrops are generally smaller and more subdued than in the Beaver rocks, but they too are well jointed and sheeted, especially near the contact.

#### Aplite Dykes

Several small dykes ranging in width from a few inches to a few feet, and in composition from aplite through granite to quartz porphyry, were found in both principal rock units. In the Beaver quartz diorite these dykes are all fine grained pink aplites, they are all narrow and quite short, and they all trend WNW with near vertical dips. In the Bethlehem rocks the same type of aplites are present but several larger dykes of quartz porphyry are also present; all seem to trend NNE with near vertical dips. No mineralization was found in any of the dykes.

#### Andesite Flows

A few scattered, rounded outcrops of fine grained to porphyritic, gray, porcelaneous andesite with flow textures, part of a more extensive layer, were mapped at the northern limit of the survey area. These rocks belong to the Tertiary Kamloops Group which in places contains some sediments. They are not mineralized, their age post dating the age of mineralization in the granitic rocks. It is possible and quite likely that they cover mineralization in places in the underlying granites. Exploration for such deposits under the volcanics would be difficult and risky, but possible by geophysical means where the rocks are shallow.

#### Structures

Jointing and sheeting are the two most prominent structural features in the granitic rock. In the Beaver quartz diorite the principal jointing belongs

to a steeply dipping set of NE and NW fractures. A subsidiary system of E-W joints dips at moderate to steep angles to the south. In the Bethlehem rock the main jointing strikes northerly with dips ranging from steep to moderate to the east, and a subsidiary set strikes NE and NW with moderate dips.

Sheeting is prominent in both granitic rock types especially within a claim length of the interpreted contact between the two. East of the contact the sheeting strikes consistently NNE with the dips varying between 15°W and 45°W.

A small, vertical NNE trending fault was mapped on Den 38, but otherwise no indications of strong faulting were observed.

Flow banding in one outcrop of andesite strikes northerly and dips 25°E.

#### Mineralization

Weak mineralization occurs in three general areas of the portions of the claims mapped: scattered grains of bornite with malachite along tight, steep NE joints on Den 76; weak disseminated chalcopyrite and bornite with malachite near NE joints on Den 38; and weak disseminated bornite in and along NE joints on Den 13 and 15. On Den 38 the granitic rock is crushed and oxidized but otherwise there is little pervasive deuteric or hydrothermal alteration. Principal control of mineralizing fluids appears to have been in NE trending joints and further exploration might be best directed along prominent linear features, joints or faults, conforming to this direction.

## D E N   G R O U P

### GEOCHEMICAL REPORT

#### INTRODUCTION

Adera carried out a geochemical survey on the south portion of the DEN CLAIMS as part of the preliminary exploration program. The object of the work was to elucidate the distribution of copper and molybdenum in the soils with the hope that the results would indicate possible areas of Cu - Mo mineralization in bedrock. It was also hoped that the data would permit useful correlations with results from the other surveys.

#### SAMPLING AND ANALYTICAL DETAILS

During the survey some 1780 soil samples were taken by A. C. Webster, Princeton, B. C., under the writer's supervision. The samples were taken at 100' intervals where possible on 26 east-west lines spaced at 400' intervals. The soils on the property are thin, generally only a few inches deep on the low ridges, but thicken generally in flatter areas, and consist of brown sandy to slightly gravelly, alluvial soil, capped by a thin "A" horizon derived from the forest floor. In places near swamps and streams, this humus-rich "A" horizon has developed to depths exceeding several feet. All samples were taken from what was presumed to be the top of the "B" soil horizon, and hence the sampling depth varied with the thickness of overlying black soils. The samples, however, were generally taken between depths of 3" and 12" and where the black soil thickness exceeded 12" no samples were taken. The actual material sampled was a fine brown sandy to slightly gravelly soil of glacial and alluvial origin. Holes from which samples were taken were dug with garden trowel and geologic pick, and the actual sample was taken by hand, placed in waterproof bond paper geochemical sample bags labelled appropriately, stapled shut and forwarded to Technical Service Laboratories, Vancouver for analysis.

The analytical technique consisted of drying the sample by suspending the sample bag in an electrical, fan-driven dryer, then screening the sample on 80 mesh nylon and performing the actual analysis on a small portion of the under-size. Metal ions were extracted from the screened soil by hot HCl digestion, and the copper content was determined by atomic absorption spectrophotometer, the molybdenum concentration by the dithiol method.

#### DETERMINATION OF THRESHOLD VALUE

The copper threshold value, that is, the concentration of copper separating the background population from the higher, presumably anomalous population, was determined statistically by two methods -- a frequency distribution plot and a logarithmic probability plot of all the analyses. The frequency distribution shows two separate populations overlapping in part at the copper concentration of 20 p.p.m., and the log probability plot shows a distinct break at the same concentration. Hence a threshold value of 20 p.p.m. was chosen, and the higher population, 18 percent of the samples, is assumed to be anomalous. This is an unusually low threshold for copper, much higher thresholds being common in other parts of the province, and it is surprising coming from the periphery of the Bethlehem-Lornex area.

A common practice in interpreting geochemical anomalies is to consider only those anomalies with concentrations exceeding twice the threshold value as significantly anomalous. Five percent of the samples taken from the surveyed area exceed this "significantly anomalous" value of 40 p.p.m.

The bulk of the molybdenum concentrations were reported as less than 0.5 p.p.m. and there were essentially no samples with strong concentrations. A figure of 3 p.p.m. could be used as an empirical threshold value.

#### RESULTS AND INTERPRETATION (See Map 2)

Copper The general copper content of soils on Den Group is comparatively low, the bulk of the samples containing less



than 20 p.p.m. copper. Five percent of the samples contain more than 40 p.p.m. and about half of these are scattered, evidently at random, about 1/4 are systematically patterned along the lower reaches of a small creek, and the remaining 1/4 occur in a general area near Den 48 and Den 33. Five percent of the samples have copper concentrations between 20 p.p.m. and 40 p.p.m. and some of these are grouped in three general areas of the southwestern portion of the mapped area: along the stream, on Den 16 and Den 18 claims, and between 8W and 12W on the southernmost four lines.

Weak disseminated bornite and chalcopyrite occurs in fresh rocks along the west side of the creek near line 8S and probably accounts for the weak copper anomaly downstream from this point. Two smaller anomalies upstream could be caused by similar mineralization or by normal ground water transport and accumulation at the places where the water table reaches surface. There is presently no explanation for the larger anomaly spanning Den 16 and 18; it is, however, situated some 2000' downslope from known copper mineralization on Den 15. There is no explanation for the several high concentrations in the general area of Den 33 and 48. Little significance can be attached to those concentrations that are randomly scattered in areas of low background.

Molybdenum            The molybdenum concentrations, like the copper, are very low, and there is no clear relationship between copper and molybdenum in individual samples. Most of the samples with high copper have less than 0.5 p.p.m. molybdenum. Very few samples contain more than 3 p.p.m. molybdenum and these are widely scattered. Generally speaking the soils of the northeast portion of the mapped area contain slightly more molybdenum than those of the remainder of the area. The molybdenum does not indicate any areas of particular exploration interest.

## D E N   G R O U P

### G E O P H Y S I C A L   R E P O R T

#### I N T R O D U C T I O N

Adera carried out a magnetometer survey of the south portion of the Den Group as part of the preliminary exploration program. The object of the work was to gather data that might assist in outlining rock types, bedrock structures or areas of alteration, and it was hoped that the data would permit useful correlations with results from the other surveys.

#### I N S T R U M E N T   A N D   F I E L D   P R O C E D U R E

The instrument used in the survey was a McPhar M500 direct reading fluxgate magnetometer, an instrument designed to measure the vertical component of the earth's magnetic field. It can measure a range in magnetic intensity of 300,000 gammas, either positive or negative, by using 6 selector ranges. Its sensitivity changes with the selector range used; the sensitivity being 20 gammas per scale division for most the readings, and 50 gammas per scale division for a few of the readings (those exceeding 1000 gammas).

The operation of the instrument at each station consists of establishing and maintaining a constant instrument-operator-magnetic field orientation to minimize extraneous magnetic influences, hand levelling, and reading the direct reading galvanometer to the nearest one-half scale division. Readings at 100' intervals on lines 400' apart were carried out on all the lines of the survey in this fashion. Correlations for diurnal variations were facilitated by reading the instrument three times daily at a fixed point, and adjusting all readings so as to be relative to the assumed reading at that point.

## FACTORS INFLUENCING THE EARTH'S MAGNETIC FIELD

1. Variations in the amount of magnetic minerals in bedrock.
2. Variations in the amount of detrital magnetic minerals in overburden.
3. Concentrations of magnetic minerals.
4. Depth to the center of influence of an anomalous magnetic material.
5. Alteration and/or destruction of magnetic minerals.
6. Combinations of the above.

## RESULTS AND INTERPRETATIONS

Results of the survey are plotted and contoured on Map 3, attached, which shows an overall magnetic intensity relief of about 4000 gammas, the general relief being considerably less, about 1000 gammas. The general magnetic trend over the granitic rock is northerly, but near the northern portion of the surveyed area, the trend changes in direction to easterly. Generally, the magnetic susceptibility of the Beaver quartz diorite is higher than that of the Bethlehem quartz diorite.

Looking at the results in more detail, the northerly trend of several magnetic lows overlying Bethlehem rocks is interrupted by a distinct east trending low along lines 52 and 56N, beyond which the northerly trend of magnetic lows seems to redevelop. The east trending magnetic low continues easterly, swinging in arcuate fashion to the north and seems to deteriorate into a narrow, NE trending magnetic lineament. This lineament can be interpreted as being caused by a fault, for in the Highland Valley, the argillic alteration along faults would result in narrow, elongate magnetic lows.

The larger of the several magnetic lows overlying the Bethlehem rocks might be interpreted as areas where the normal mafic mineral content has been destroyed by alteration; the smaller ones might reflect normal variation of mafic mineral content within the rock. The general higher magnetic susceptibility of the Beaver rocks is due no doubt to the larger mafic mineral content in these fresh rocks.

CORRELATIONS

The north trending magnetic low extending from Line 36N to 4N at the west edge of the surveyed area coincides in part with the best copper geochemical anomaly developed by the survey. It extends southerly from a zone of weak mineralization exposed on Den 15. This particular combination of results is regarded as favourable.

The NNE trending magnetic low extending from Den 17 to Den 30 and 32 lies near the contact between Bethlehem and Beaver rocks and may reflect alteration near the contact. It lies upslope from a copper soil anomaly along the creek. The position of this low with respect to the contact, the possibility of it's having caused the geochemical anomaly, and its trend are considered as favourable indications.

A northeast trending swamp at 72N, 29E correlates well with the inferred fault along the narrow NE trending magnetic low, and adds credence to this interpretation. The stronger copper concentrations in the soils occur on the NW side of the lineament; some weaker but still anomalous concentrations occur on the opposite side however. The possibility of the fault, and the scattered copper concentrations can be interpreted as favourable indications.

Respectfully submitted,



CHAS. A. R. LAMMLE, P.Eng.

March 31, 1967



STATEMENT OF EXPENDITURES INCURRED

DEN GROUP, KAMLCOPS M.D., B.C.

			<u>Sub Total</u>
<u>Linecutting</u>	contract - Kastor, Drazdoff		
	baseline 1.9 miles @ \$90/mi.	\$ 171.00	
	crosslines 34.4 miles @ \$80/mi.	2,752.00	
	supervision (Lammle) 5 days @ \$38/day	190.00	
	laths, ribbon, misc.	<u>39.27</u>	\$ 3,152.27
<u>Geology</u>	Lammle 15 days @ \$38/day	570.00	
	Drafting, report 6 days @ \$38/day	228.00	
	Maps, colouring	10.30	
	Typing	<u>20.00</u>	828.30
<u>Geochem</u>	Sample bags, misc.	47.50	
	Analyses, Technical Service Laboratories	3,285.20	
	A. Webster 1 mo. @ \$400/mo.	400.00	
	Supervision (Lammle) 2 days @ \$38/day	76.00	
	Drafting, report 10 days @ \$38/day	380.00	
	Maps, colouring	<u>31.00</u>	4,219.70
<u>Mag</u>	Instrument rental 6 wks. @ \$8.50/day	357.00	
	G. Webster 1 mo. @ \$425/mo.	425.00	
	Supervision 2 days @ \$38/day	76.00	
	Drafting, report 8 days @ \$38/day	304.00	
	Maps	<u>5.20</u>	1,167.20
<u>Camp</u>	140 man days @ \$6.00/ man day	840.00	840.00
			<hr/>
	Total Expenditures Incurred		\$10,207.47

NOTE: As a small portion of the work was inadvertently carried out on ground other than that covered by Den Group, assessment credit of only \$8,000.00 is applied for

Declared before me at the  
*city* of *Vancouver*, in the  
 Province of British Columbia

*Chas A. R. Lammle*  
 CHAS. A. R. LAMMLE, P. Eng.

this *19* of *April*, 1967, A.D. Sub-mining Recorder

QUALIFICATIONS OF GEOPHYSICAL OPERATOR  
DEN GROUP, KAMLOOPS N.D., B.C.

THIS IS TO CERTIFY THAT GORDON A. WEBSTER, PRINCETON,  
B. C., MAGNETOMETER OPERATOR ON THE DEN GROUP:

1. IS A HIGH SCHOOL GRADUATE
2. IS A CONSCIENTIOUS, RELIABLE PERSON
3. WAS TRAINED TO OPERATE THE MCPHAR M500  
MAGNETOMETER BY MYSELF PERSONALLY
4. HAS CARRIED OUT SEVERAL MAGNETOMETER SURVEY  
JOBS COMPARABLE TO THAT ON THE DEN GROUP  
DURING THE SUMMER OF 1966 UNDER MY SUPERVISION,  
AND
5. IN MY OPINION IS A CAPABLE AND QUALIFIED  
MAGNETOMETER OPERATOR.

*Charles A.R. Lammle*

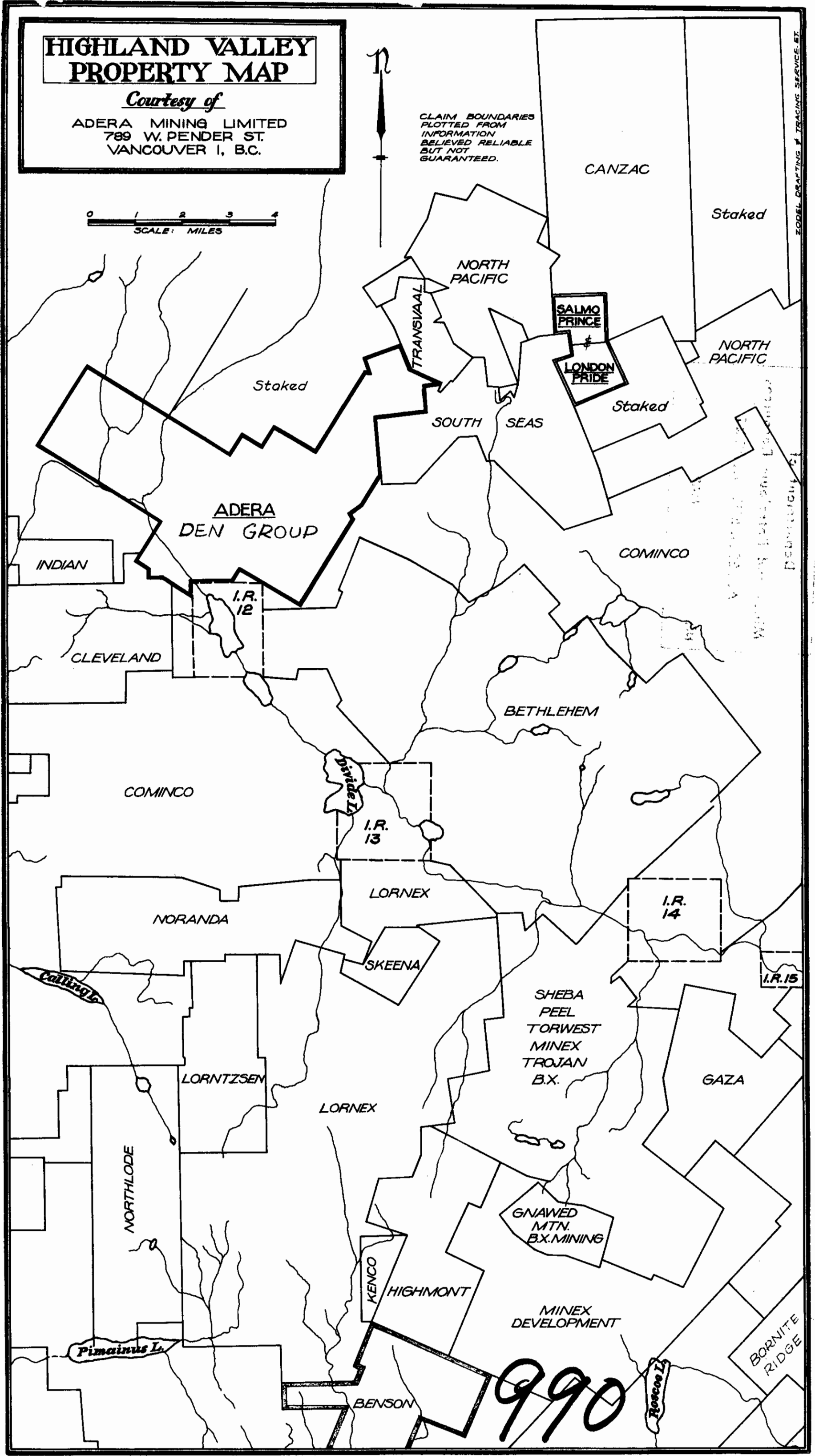
CHARLES A.R. LAMMLE P. ENG.

# HIGHLAND VALLEY PROPERTY MAP

*Courtesy of*  
ADERA MINING LIMITED  
789 W. PENDER ST.  
VANCOUVER 1, B.C.

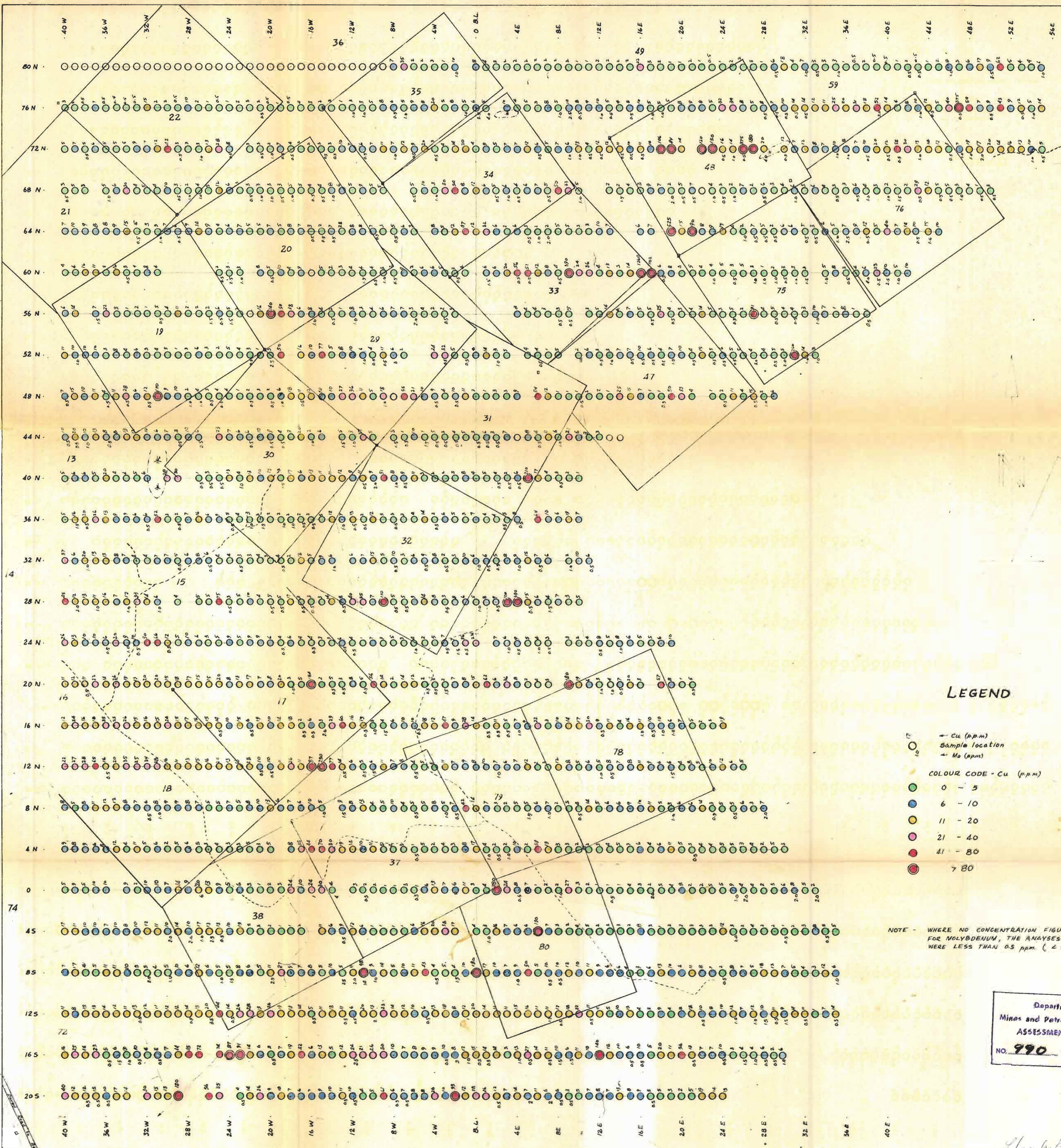


CLAIM BOUNDARIES  
PLOTTED FROM  
INFORMATION  
BELIEVED RELIABLE  
BUT NOT  
GUARANTEED.



ZODEL DRAFTING & TRACING SERVICE, ET.





**LEGEND**

- Sample location
  - Cu (ppm)
  - Mo (ppm)
- COLOUR CODE - Cu (ppm)
- 0 - 5
  - 6 - 10
  - 11 - 20
  - 21 - 40
  - 41 - 80
  - > 80

NOTE - WHERE NO CONCENTRATION FIGURE IS SHOWN FOR MOLYBDENUM, THE ANALYSES REPORTED WERE LESS THAN 0.5 ppm. (2 0.5 ppm)

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 990 MAP 3

*Chas. A. R. Lawmle*  
March 31, 1967

CLAIM OUTLINES BASED ON PACE AND COMPASS TRAVERSES FROM NEAREST STATIONS ON PICKET LINES

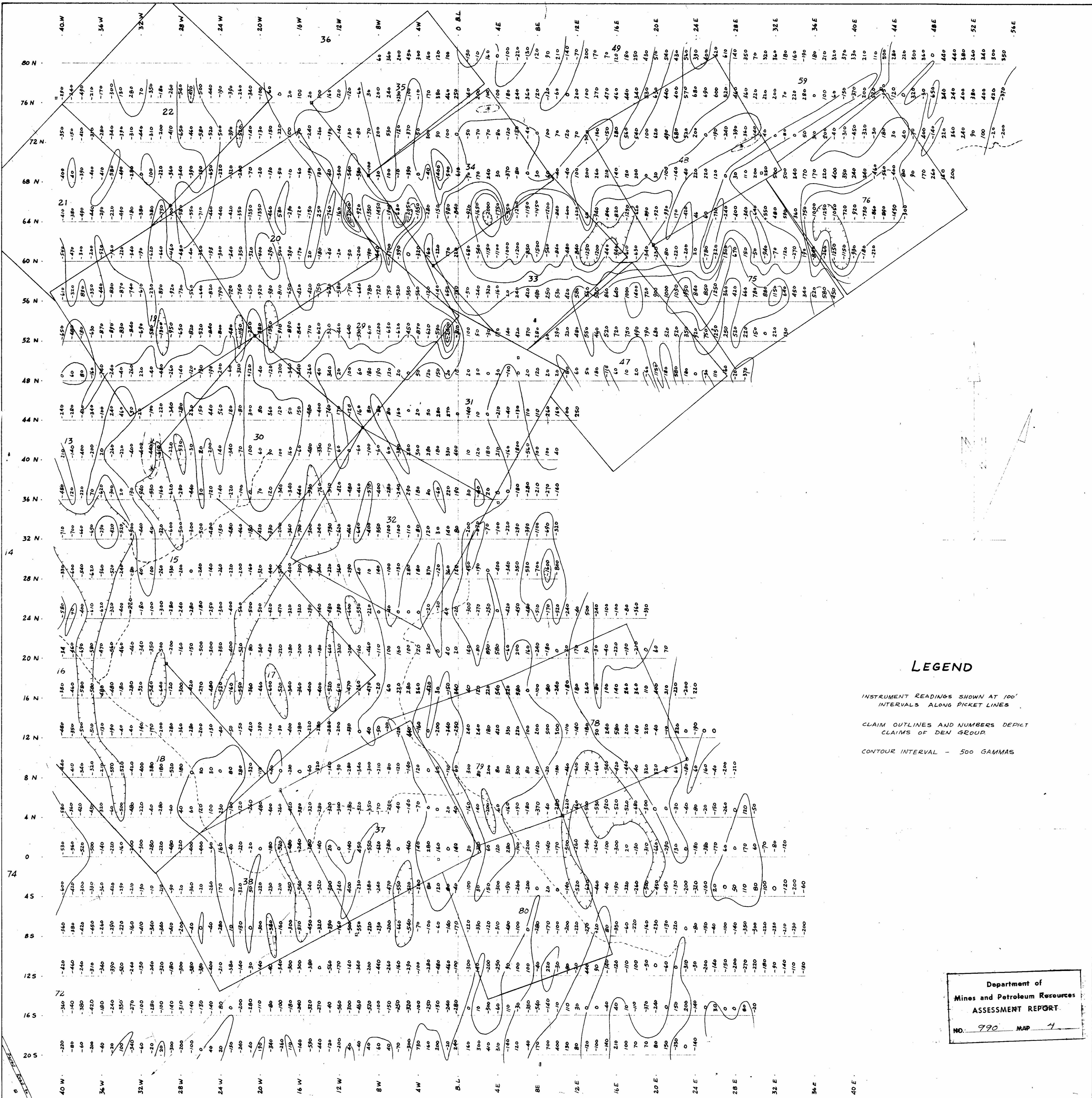
ANALYSES - TECHNICAL SERVICE LABORATORIES, VANCOUVER  
EXTRACTION BY HOT HCl DIGESTION, COPPER DETERMINATIONS BY ATOMIC ABSORPTION SPECTROPHOTOMETER, MOLYBDENUM DETERMINATIONS BY THE DITHIOL METHOD

TO ACCOMPANY REPORT ON DEN GROUP, KAMLOOPS MD, B.C. BY CHAS. A. R. LAWMLE, P. ENG.

990

ADERA MINING LTD. DEN GROUP			
BC Kamloops MD	SOIL GEOCHEM. Cu & Mo		
SCALE 1" = 400'	DATE	DRAWN A.L.	MAP NO 2





**LEGEND**

INSTRUMENT READINGS SHOWN AT 100' INTERVALS ALONG PICKET LINES  
 CLAIM OUTLINES AND NUMBERS DEPICT CLAIMS OF DEN GROUP  
 CONTOUR INTERVAL - 500 GAMMAS

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 990 MAP 4

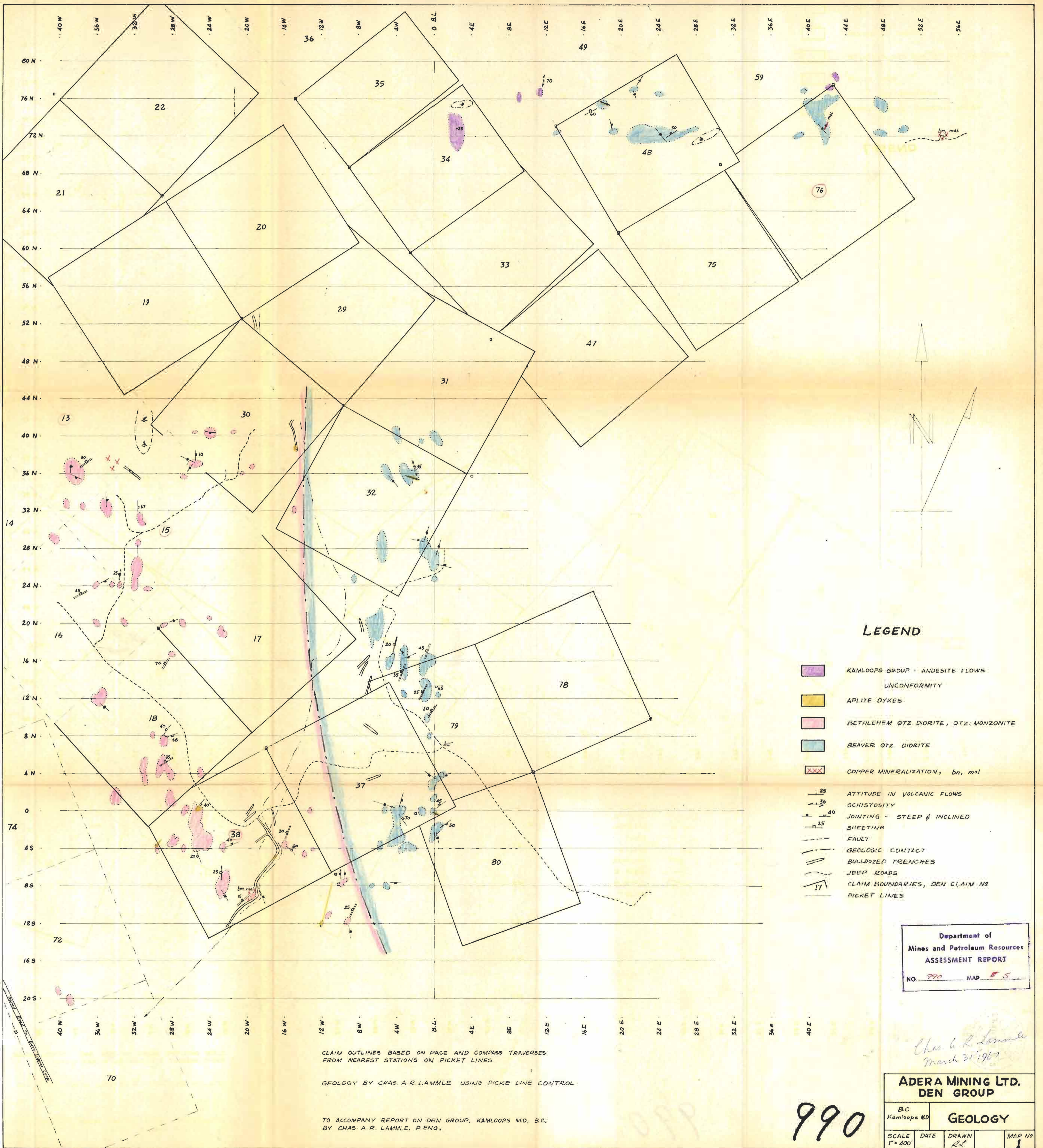
*Chas. A. Lammle*  
 March 31/67

ADERA MINING LTD. DEN GROUP			
BC Kamloops MD	Magnetometer Survey		
SCALE 1" = 400'	DATE R/L	DRAWN R/L	MAP NO. 3

990

CLAIM OUTLINES BASED ON PACE AND COMPASS TRAVERSES FROM NEAREST STATIONS ON PICKET LINES  
 INSTRUMENT - M'PHAR M 500 FLUXGATE MAGNETOMETER, READINGS REPRESENT VARIATIONS IN THE VERTICAL COMPONENT OF THE EARTH'S MAGNETIC FIELD - CORRECTED DAILY FOR DIURNAL VARIATION.  
 OPERATOR - G. A. WEBSTER, PRINCETON, B.C.  
 SUPERVISOR - C. A. LAMMLE, P.E.N.G.  
 TO ACCOMPANY REPORT ON DEN GROUP, KAMLOOPS MD, B.C., BY CHAS. A. R. LAMMLE, P.E.N.G.





**LEGEND**

- KAMLOOPS GROUP - ANDESITE FLOWS
- UNCONFORMITY
- APLITE DYKES
- BETHLEHEM QTZ. DIORITE, QTZ. MONZONITE
- BEAVER QTZ. DIORITE
- COPPER MINERALIZATION, bn, mal
- ATTITUDE IN VOLCANIC FLOWS
- SCHISTOSITY
- JOINTING - STEEP & INCLINED
- SHEETING
- FAULT
- GEOLOGIC CONTACT
- BULLDOZED TRENCHES
- JEEP ROADS
- CLAIM BOUNDARIES, DEN CLAIM NO
- PICKET LINES

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 990 MAP 55

*Chas. A. R. Lammle*  
March 31, 1967

**ADERA MINING LTD.**  
**DEN GROUP**

BC Kamloops MD	<b>GEOLOGY</b>		
SCALE 1" = 400'	DATE	DRAWN <i>R.L.</i>	MAP NO. <b>1</b>

990

CLAIM OUTLINES BASED ON PACE AND COMPASS TRAVERSES FROM NEAREST STATIONS ON PICKET LINES.

GEOLOGY BY CHAS. A. R. LAMMLE USING DICKE LINE CONTROL

TO ACCOMPANY REPORT ON DEN GROUP, KAMLOOPS M.D., B.C., BY CHAS. A. R. LAMMLE, P. ENG.