82-#712-10842

Assessment)

GEOLOGICAL REPORT

On the

LONE SILVER CLAIM

NELSON MINING DIVISION

British Columbia

117° 15'W Longitude; 49° 3'N Latitude

Owner: L. D. DeKock

Operator: Walter E. Bergmann

Consultant: E. Percy Sheppard, P.Eng.

Author: E. Percy Sheppard, P.Eng.

Date: June 4, 1982

N.T.S. 82F/3W

Lone Silver Claim

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LONE SILVER CLAIM
Rosebud Lake, Salmo
Nelson M.D., B.C.

INTRODUCTION

The following report has been prepared at the request of Mr. Walter Bergmann of Burnaby, B.C., and his associates. Data for the report were obtained during an examination of the property on May 17-20, 1982, supplemented by pertinent Government reports. The writer was accompanied by Mel deQuadros, Geologist, and Mr. Jack Lee, one of the associates. Mr. Lee had opened up two of the portals and it was possible to inspect adits No. 3 and No. 5.

Current Owner: Mr. L.D. DeKock

Operator: Walter E. Bergmann

LOCATION & ACCESS

The Lone Silver Claim is located east of Rosebud Lake, approximately 17 km south of Salmo, B.C.

Access is by a good all-weather gravel road off the Salmo-Nelway road.

The claim is situated on a steep north-facing slope, heavily overgrown. Pack-trails criss-cross the claim and give access to the six portals, humerous excavations and waste dumps. Most of the trenches have sloughed-in.

PROPERTY

The Lone Silver Claim, consisting of 1 unit, was

PROPERTY - cont.

recorded by Mr. L.D. DeKock on May 9, 1965. Record No. 8611 (5)

Much of the adjoining ground is presently staked and under option to Mr. Walter Bergmann and associates.

HISTORY

The property has been worked since the turn of the century and has been known as the Hope, Mascot and Lone Silver. It was explored by four adits and six carloads of high-grade gold-silver-copper ore were shipped before the mine was shut down in 1915. In 1935 it was re-named the Lone Silver and worked until 1939. Two more adits were excavated and a few shipments of high-grade ore were made. In 1963 the property was re-staked by the present owner and a few shipments were made. It appears to have remained dormant since 1964, apart from Mr. Weymark's geological work in 1969.

Assays taken at the property and the record of shipments (Tables 1 & 2) show the rich but narrow and limited ore zones explored by the six adits.

GEOLOGY

The area of the claim has been mapped by Fyles and Hewlett (1959) and is shown to be a series of Paleozoic sedimentary rocks consisting of the following formations:

1. Active Formation (Ordovician)
   Mainly black argillites, but including minor grey limestone, argillaceous limestone, dolomite, dolomite breccia and siliceous argillites and limestone.
2. Nelway Formation (Cambrian)
   Mainly limestones and dolomites.
3. Upper Laib Formation (Cambrian)
   Phyllites, schists, micaceous quartzites and minor limestone.

cont...

Table 1 - PUBLISHED ASSAYS

Fyles & Hewlett, 1959

Sample No.	Gold	Silver	Copper	Lead	Zinc	Description
	Oz. per Ton	Oz. per Ton	Per Cent	Per Cent	Per Cent	
1	Trace	16.0	0.3	Trace	0.5	Face of drift, No. 4 level; 5-inch quartz vein with copper stain along hangingwall.
2	Trace	1.0	*Nil*	*Nil*	*Nil*	Face of drift, No. 4 level; 5 feet of brecciated limestone in footwall of No. 1.
3	Trace	2.4	*Nil*	*Nil*	*Nil*	Roof of drift at collar; 4.5 feet of brecciated limestone excluding 8 inches of quartz at hangingwall.
4	0.01	71.0	8.3	7.0	9.5	3 inches of sheared limestone showing copper stain.
5	0.12	5.0	0.1	*Nil*	3.0	14 inches of shattered limestone below No. 4.
6	0.90	33.5	1.2	3.0	3.0	9 inches of quartz with galena and copper stain lying on 2 inches of gouge below No. 5.
7	0.01	15.4	0.19	2.77	4.7	No. 5 adit, 4-inch quartz vein near west end of small stope.
8	*Nil*	*Nil*	*Nil*	0.19	*Nil*	No. 5 adit, across 5 feet of brecciated dolomite including quartz veinlets at east end of small stope.
9	0.04	16.8	0.24	1.79	2.1	Portal of No. 1 adit, sorted quartz-sulphide ore on dump.

Table 2 - REPORTED PRODUCTION

1909-1916	86 tons	Gold 22 oz. Silver 13,461 oz. Copper 12,051 lb.	(Fyles & Hewlett 1959)
1936-1941	106 tons	Gold 64 oz. Silver 8,850 oz. Lead 11,639 lb. Zinc 8,141 lb.	" " "
1963	44 tons	Gold 44 oz. Silver 7,623 oz. Lead 5,842 lb. Zinc 3,727 lb.	(Weymark, 1969)
TOTALS:	236 tons	Gold 130 oz. (0.551 oz/ton) Silver 29,934 oz. (126.84 oz/ton) Copper 12,051 lb. Lead 17,481 lb. Zinc 11,868 lb.	

GEOLOGY - cont.

At the property, the rocks of the Nelway Formation are recumbently folded along a NE-SW trending axis and overturned steeply to the northwest. Along the northern edge, the Nelway Formation is separated from the Active Formation argillites by the NE-SW trending Black Bluff Fault. Paralleling the Black Bluff Fault are numerous minor faults and shears which have been mineralized.

The Lone Silver mineralization appears to consist largely of two types:

a. Mineralized dolomite breccia in the Nelway limestones, characterized by angular fragments of dolomite, and the presence of tetrahedrite and minor galena, sphalerite, and by low sulphide content; and

b. mineralized faults and shears in the argillite, characterized by high sulphide content with pyrite, sphalerite, galena, chalcopyrite and gold values, white quartz in the gangue mineral.

The dolomite/tetrahedrite mineralization is found in the No. 1 and No. 2 adits and in the trenches around them. This explains the high silver and copper values in the early shipments of the 1909-1916 mining period. Later work in the 1930's and 1960's collared the adits in the Active Formation argillites and stoped the narrow shears in them. Shipments from these gave high values in gold, silver, lead and zinc.

PROPERTY EXAMINATION

The mine dumps were examined and were found to consist largely of argillite with some limestones and dolomites. The sulphide content, apart from a few fragments of black argillite with pyrite crystals, was very low. It was obvious that the previous operators carefully "high-graded" the mine. Composite samples of the dumps were taken at the request of the operators.

cont....

PROPERTY EXAMINATION - cont.

Exploration of the surface revealed few outcrops, and most of the trenches were filled in. The No. 1 and No. 2 adits appear to be caved in for significant distances from the portals due to proximity to the surface. The dolomite trenches have partial outcrops which appear to be brecciated, with copper staining and possibly tetrahedrite. In the past samples of these outcrops gave significant silver values and they were resampled, though the total sulphide content was less than 0.5%.

The No. 3 portal had been opened and it was possible to wade through about 2½ ft. of water to the dry drifts at the south end. Examination of the workings showed that the miners had followed a shear zone 0.3 to 0.6 metres wide. In this zone the gouge and breccia were mineralized, as shown by copper staining, though again the total sulphide content was perhaps 1%. Two minor shear zones in argillite in the crosscut showed narrow zones with very high sulphide content similar to No. 5 adit.

The No. 5 adit had collapsed for the first 12.2 metres but it had been reopened. Examination revealed that the main drift followed a narrow (0.3-0.9 m) mineralized shear. Small cross-cutting mineralized fractures were seen and some were wide enough to be stoped. The adit had obviously been very carefully cleaned out.

Twelve chip samples were taken. Assay results are shown on Table 4 and in the Appended certificate.

ESTIMATED COST OF EXPLORATION PROGRAM

Geological mapping & sampling:	
Geologist - 20 days @ $200/day	$4,000
Assistant - 20 days @ $100/day	2,000
Trenching & Blasting	
20 trenches	3,000
Room & Board	
20 days @ $20/day (2 men)	4,000
Supplies, transportation, etc.	1,600
Consulting - 8 days @ $300/day	2,400
Reports	1,000
Contingencies	2,000
Total	$20,000

CONCLUSIONS

The Lone Silver property contains high-grade mineralized zones of limited tonnage and continuity which have not been explored down-dip. The property has not been subjected to detailed mapping, and the scarcity of outcrops has prevented exploration for further mineralized shear zones.

Earlier assays of copper-stained dolomites indicate the possibility of a larger lower grade dolomite-breccia-hosted silver zone, and further work is warranted.

RECOMMENDATIONS

It is recommended that no attempt be made to "high-grade" the present workings, as the No. 3 and No. 5 adits show that the exposed ore-zones were largely cleaned out. However, a program of approximately $20,000 may be undertaken to include mapping and sampling of the dolomite-breccia zones and determine the location of other shear zones within the argillite. The potential of the property could then be evaluated.

E. P. Sheppard

E. Percy Sheppard, P.Eng.
Consulting Geologist

June 4, 1982

E. P. Sheppard

C E R T I F I C A T E

I, E. PERCY SHEPPARD, of the City of Vancouver, in the Province of British Columbia, hereby certify THAT:

I am a Consulting Geologist, at 1606-M, 1600 Beach Avenue, Vancouver, B.C., V6G 1Y7;

I am a graduate of Dalhousie University, with a B.Sc. in Geology, and have been active in mining exploration and geophysics for over forty years;

The data for the accompanying report was obtained during an examination of the property on May 17-20, 1982, and a study of pertinent Government and unpublished reports;

I have no direct or indirect interest in the property covered by this report, and do not expect to receive any such interest as a result of writing this report;

I am a member of the Professional Engineers Association of British Columbia, the American Institute of Mining Engineers, and a Fellow in the Geological Association of Canada.

DATED AT VANCOUVER, B.C., this 4th day of June, 1982.

E. P. Sheppard.
E. Percy Sheppard, P.Eng.

Permission is hereby granted to have the material in the foregoing report used in a Prospectus or Statement of Material Facts.

E.P. Sheppard
E. Percy Sheppard, P.Eng.
Consulting Geologist

E P Sheppard

LIST OF REFERENCES

1936: Minister of Mines Annual Report, pp E 16-E 18

1937: L.R.Leslie, M.E., "The Lone Silver Mine" - Unpublished.

1938: Minister of Mines Annual Report, pp E 17-E 18

1959: J.T. Fyles & C.G.Hewlett, "The Salmo Lead-Zinc Area", B.C.Dept. of Mines Bull. 41, pp 130-131

1969: W.J.Weymark, P.Eng., "Preliminary Report on the Lone Silver Property" - Unpublished.

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Note: The surface mapping done by Dr. Mel deQuadros on the Lone Silver Claim determined the presence of brecciated mineralized dolomite, and his underground mapping and sampling greatly aided in the compilation of this report.

E.P.S.

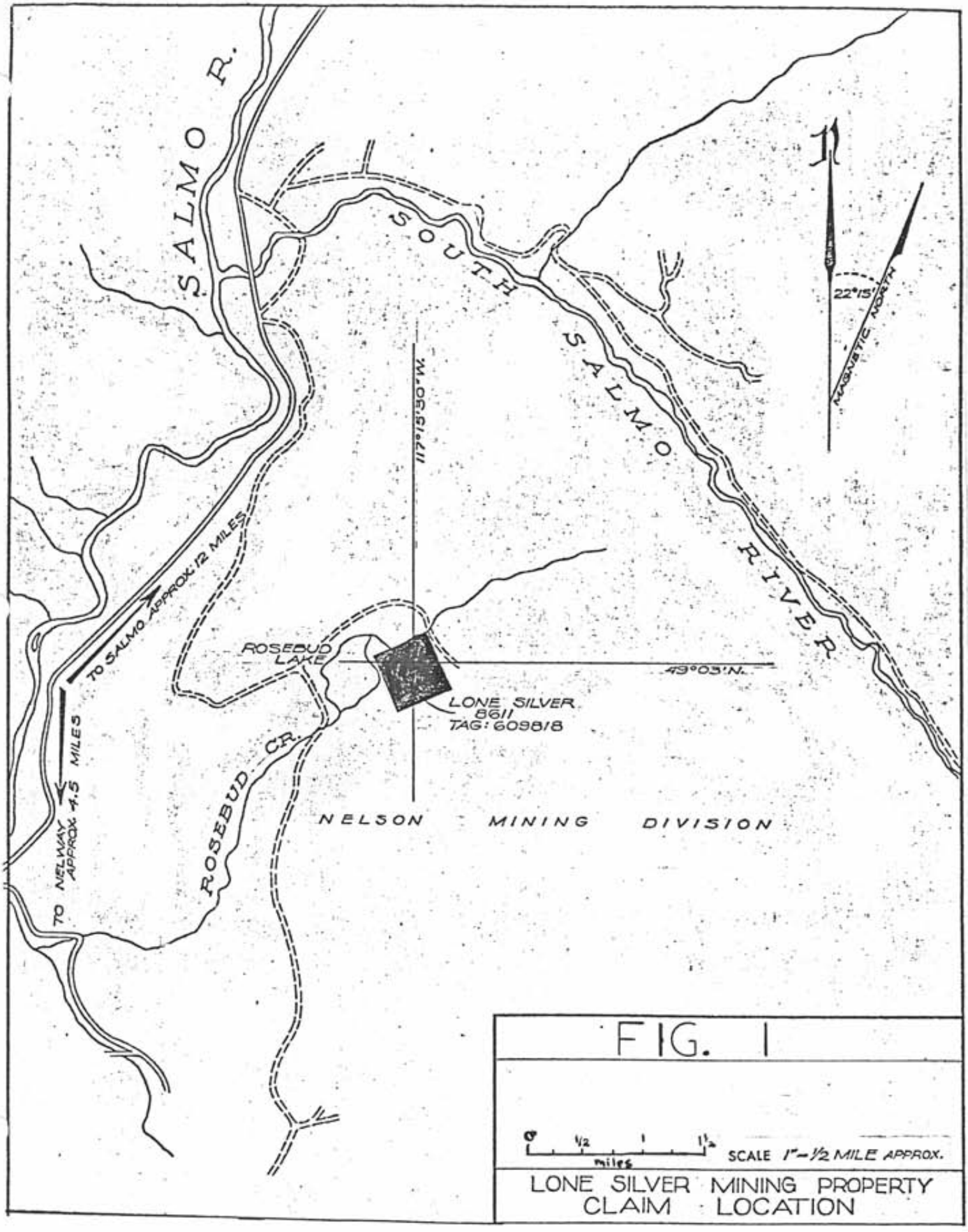


FIG. 1

LONE SILVER MINING PROPERTY
CLAIM LOCATION

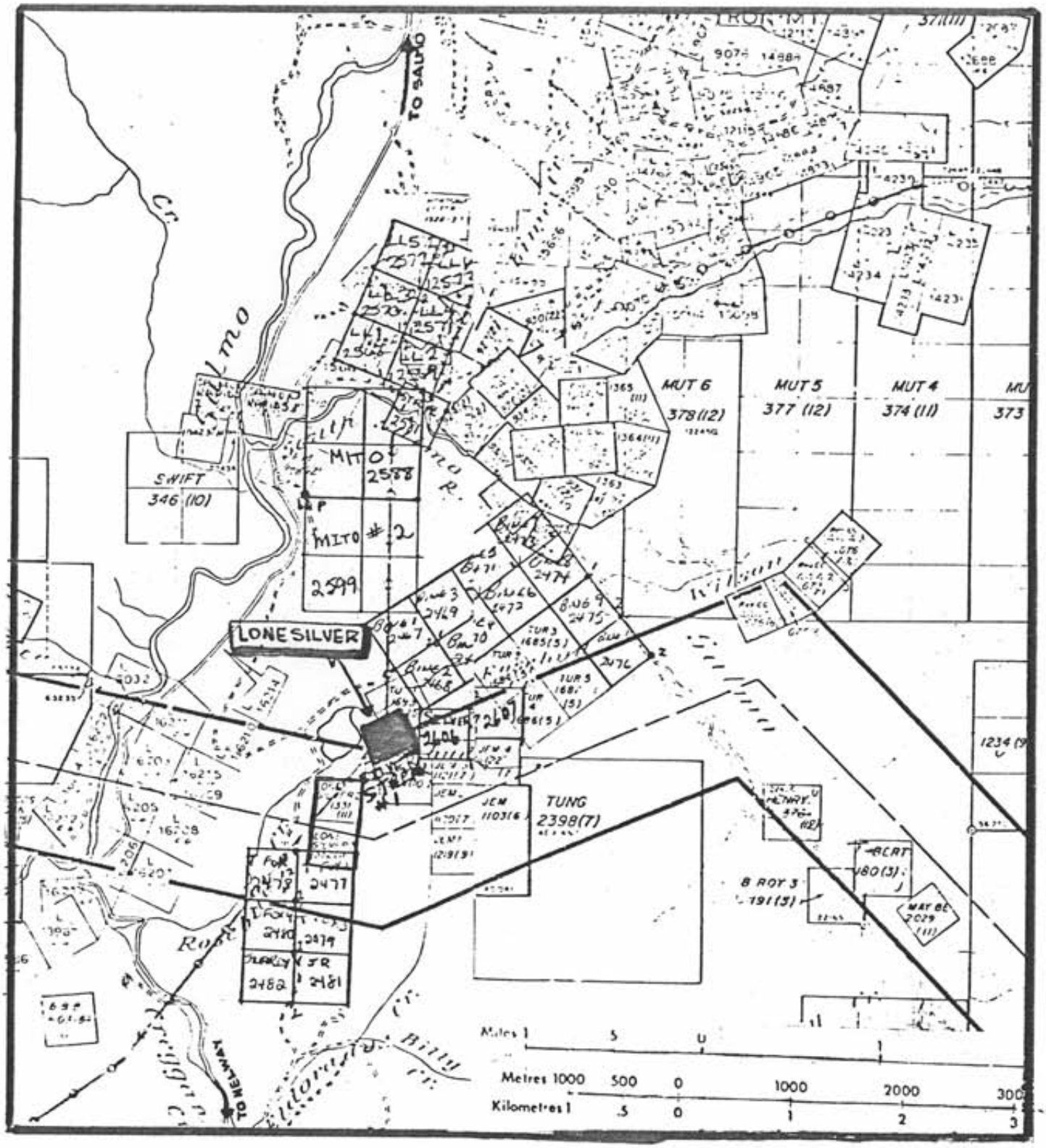
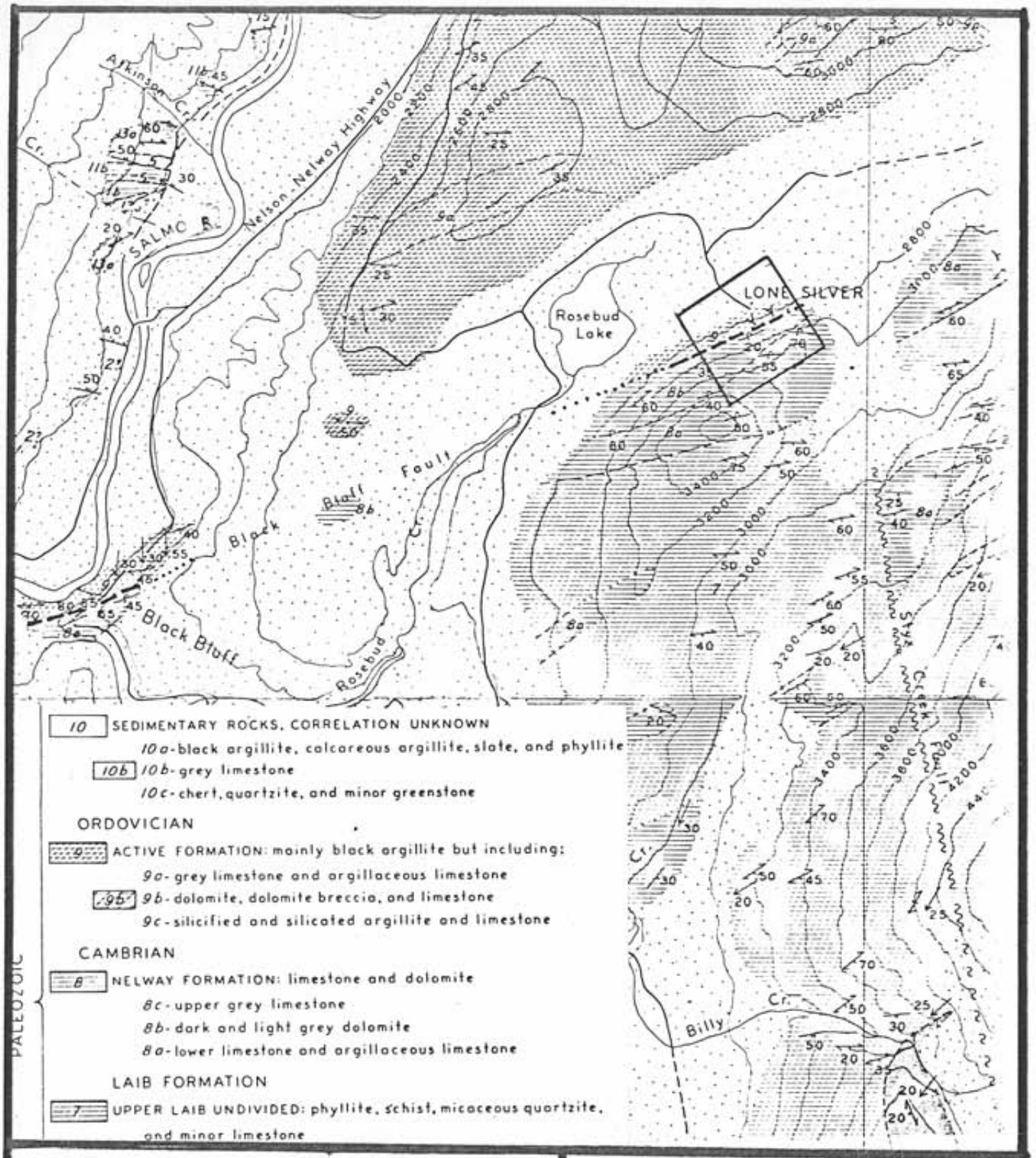


FIG. 2: CLAIM MAP



PALEOZOIC

10 SEDIMENTARY ROCKS, CORRELATION UNKNOWN

10a - black argillite, calcareous argillite, slate, and phyllite

10b - 10b - grey limestone

10c - chert, quartzite, and minor greenstone

ORDOVICIAN

9 ACTIVE FORMATION: mainly black argillite but including:

9a - grey limestone and argillaceous limestone

9b - 9b - dolomite, dolomite breccia, and limestone

9c - silicified and silicated argillite and limestone

CAMBRIAN

8 NELWAY FORMATION: limestone and dolomite

8c - upper grey limestone

8b - dark and light grey dolomite

8a - lower limestone and argillaceous limestone

LAIB FORMATION

7 UPPER LAIB UNDIVIDED: phyllite, schist, micaceous quartzite, and minor limestone

Scale 1000 0 1000 2000 3000 4000 5000 Feet

Contour interval 200 feet

Geology by J.T. Fyles and C.G. Hewlett 1952-1955

FIG. 3:

GEOLOGICAL MAP

VANGEOCHEM LAB LTD.
1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
CANADA V7P 2S3

TELEPHONE: 988-2172
AREA CODE: 604

• *Specialising in Trace Elements Analyses* •

Certificate of Analyses

–IN ACCOUNT WITH–

Mr. E. Percy Sheppard
4140 Discovery Drive
Campbell River, B.C. V9W 4Y2
Attention:

Report No: 82-01-004 Page 1 of 1
Samples Arrived: May 21, 1982
Report Completed: June 11, 1982
For Project:
Analyst:
Invoice: 6738

Sample Marking	Ag oz/st	Au oz/st				
LS 001	0.10	< 0.005				
002	0.10	< 0.005				
003	1.20	< 0.005				
004	3.03	< 0.005				
005	2.01	< 0.005				
006 ~~007~~-dump	8.05	< 0.005				
007-E'side	6.87	0.012				
008	0.13	< 0.005				
009	< 0.01	< 0.005				
010	0.17	< 0.005				
011	5.85	0.008				
LS 012	1.31	0.142				

REMARKS: One copy sent to Mr. Mel de Quadros

Registered Provincial Assayer Signed: _____

% Mo x 1.6683 = % MoS_2 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per million

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

VANGEOCHEM LAB LTD.
1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
CANADA V7P 2S3

TELEPHONE: 986-5211
AREA CODE: 604

• *Specialising in Trace Elements Analyses* •

–IN ACCOUNT WITH–

Mr. E. Percy Sheppard
4140 Discovery Drive
Campbell River, B.C. V9W 4Y2
Attention:

Report No: 82-01-005 Page 1 of 1
Samples Arrived: May 21, 1982
Report Completed: June 11, 1982
For Project:
Analyst: E.T. & VGC Staff
Invoice: 6738 Job # 82-022

Sample	Marking	W ppm					
LS	001	nd					
	002	5					
	003	nd					
	004	nd					
	005	nd					
	007	nd					#1 open cut E'side
	~~007~~ CO6	nd					dump #3
	008	nd					
	009	nd					
	010	nd					
	011	nd					
LS	012	nd					

REMARKS: One copy sent to Mr. Mel de Quadros

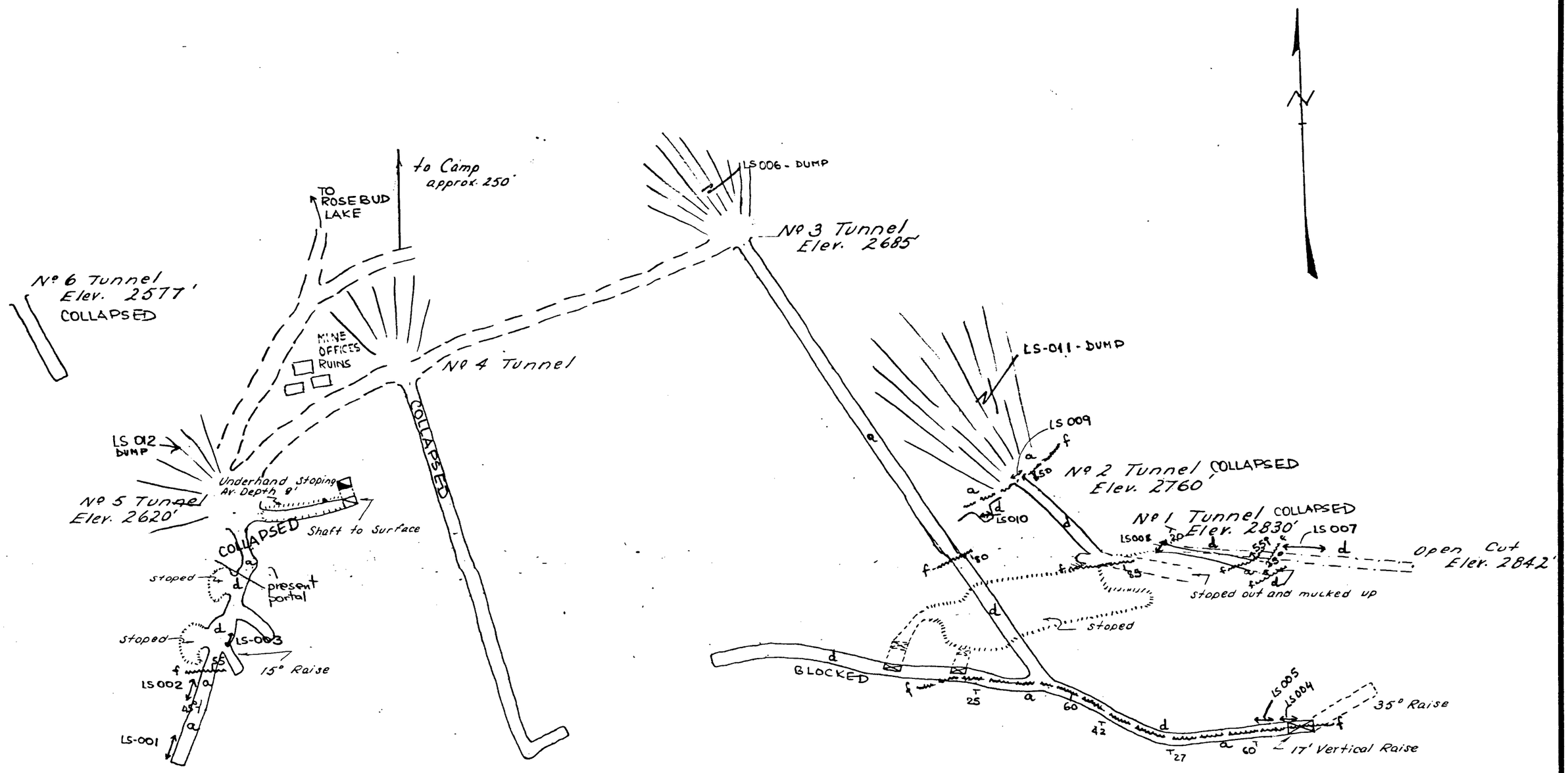
Signed:

% Mo x 1.6683 = % MoS_2 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per millio

All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

Assessment costs claimed for Geological survey dated Fourth June, 1982 on Lone Silver Group M/L #2881.

TOTAL: $2,455.00



LEGEND

Sample Location — LS 002 ↔

Stoping

Stripping

fault or shear; mineralised — min f argillite dolomite

a / d

Elevations probably 250' too low

NO	WIDTH	Au oz/ton	Ag oz/ton	W Geochem.	DESCRIPTION
001	48"	0.10	<0.005	nd	mixed shear/quartz vein with pyrite & chalcopyrite
002	40"	0.10	<0.005	5	
003	24"	1.20	<0.005	nd	
004	30"	3.03	<0.005	nd	shear zone gouge - Fe-stained
005	36"	2.01	<0.005	nd	" " " " "
006	DUMP	8.05	<0.005	nd	largely argillite
007	96"	6.87	0.012	nd	Fe stained brecciated dolomite
008	40"	0.13	<0.005	nd	" " "
009	36"	<0.01	<0.005	nd	" " "
010	48"	0.17	<0.005	nd	" " "
011	DUMP	5.85	0.008	nd	largely argillite
012	DUMP	1.31	0.142	nd	largely argillite

FIG 4 LONE SILVER - A BRUNTON SURVEY

Scale 1" = 40'

40 30 20 10 0 40 80

Base Map from records, B.C. INSPECTOR OF MINES, NELSON, B.C. ANONYMOUS & UNDATED.
GEOLOGY AND ADDITIONS BY E.P. SHEPPARD & A.M. DE QUADROS MAY 1982; SOME DETAILS OF INACCESSIBLE AREAS FROM LYNE AND HEWLETT (1954)