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R E P O R T

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on

THE "Mo" MINERAL CLAIMS

VANCOUVER MINING DIVISION

BRITISH COLUMBIA

to

HOGAN MINES LTD.

301, 550 Burrard Street,

Vancouver, B.C.

by

Albert F. Reeve, P.Eng.,
Geological Engineer

Vancouver, B.C.

February 15, 1967

REPORT

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TABLE OF CONTENTS

INTRODUCTION

This report has been prepared on behalf of Hogan Mines Ltd. at the request of Mr. S.W. Wright. It describes the Mo mineral claim group, with respect to its exploration potential; and is based on an examination of the property by the writer on February 11th and 12th, 1967.

Diagrams and the writer's certificate are appended.

PROPERTY

Record No.	Claim Name	Tag No.	Record Date	Owner
13126	Mo # 9	695535	Dec. 13,1966	G.A. Bleiler 1430 Walnut Street, Vancouver, B.C.
27	10	36	"	"
28	11	37	"	"
29	12	38	"	"
30	13	39	"	"
31	14	40	"	"
32	15	41	"	"
33	16	42	"	"
34	17	43	"	"
35	18	44	"	"
36	19	429253	"	"
37	20	54	"	"
38	21	534334	"	"
39	22	35	"	"
13147	Mo #23	36	Dec. 20,1966	"
48	24	37	"	"
49	25	38	"	"
50	26	39	"	"
51	27	40	"	"
52	28	41	"	"
53	29	42	"	"
54	30	43	"	"
55	31	679791	"	"
56	32	92	"	"
57	33	93	"	"

PROPERTY (cont'd)

Record No.	Claim Name	Tag No.	Record Date	Owner
13158	Mo #34	679794	Dec.20,1966	G.A. Bleiler 1430 Walnut Street, Vancouver, B.C.
59	35	95	"	
60	36	96	"	"
61	37	97	"	"
62	38	98	"	"
63	39	99	"	"
64	40	679800	"	"
65	41	679787	"	"
66	42	88	"	"
67	43	89	"	"
68	44	90	"	"
69	45	782283	"	"
70	46	84	"	"
71	Mo # 1	782235	Jan. 9,1967	"
72	2	36	"	"
73	3	37	"	"
74	4	38	"	"
75	5	39	"	F. Giaque, 1238 Peardonville Rd., Abbotsford, B.C.
76	6	40	"	
77	7	41	"	"
78	8	42	"	"

The above information was confirmed at the Vancouver Mining Recorder's Office on February 10, 1967.

On February 11th and 12th, 1967

I examined claim posts and lines on the property and found them to be properly located according to the records.

Albert F. Reeve, P.Eng.,
Geological Engineer

February 15, 1967

LOCATION (See Fig. 1)

The property is located at St. Vincent Bay on Jervis Inlet, about 50 miles northwest of Vancouver and 27 miles east of the community of Powell River.

123 55' West Longitude

49 50' North Latitude

0000' to 2000' A.S.L.

ACCESS (See Fig. 1)

St. Vincent Bay is accessible from Vancouver by sea, road, and air.

The auto route is as follows:

Vancouver

10 miles via Trans Canada Highway

Horseshoe Bay

50 minutes on auto ferry

Langdale

53 miles north via Highway 101

Earls Cove

50 minutes on auto ferry

Saltry Bay

10 miles on logging roads WNW (Summit 2200' A.S.L.)

St. Vincent Bay

CLIMATE

The climate at sea level is moderate with an extreme annual temperature range of about +10° F. to +90° F. Precipitation is heavy, occurring principally during the fall and winter months. The Precipitation figures from three points near Powell River are as follows:

Elevation	Period	Average Annual Precipitation	Average Annual Snowfall
55' ASL	6 years	45"	13"
120' ASL	5 years	46"	16"
400' ASL	12 years	47"	23"

The snow line was at 1700' A.S.L. on February 12, 1967.

LOCAL GEOGRAPHY

The topography is typically coastal, Moderate to steep slopes are heavily wooded with fir, balsam and cedar. In the immediate vicinity of the property the highest hilltop is about 4,000' A.S.L.

A well developed system of bush roads service current logging operations in the area.

There is a wide gravel beach at St. Vincent Bay, and the bottom grades rapidly into deep water a short distance from the shore line.

BACKGROUND

The earliest known report of molybdenite mineralization occurred in the early summer of 1966. The mineralized zone as it is presently known was found in early November 1966 by Bleiler and Giaque while doing aerial reconnaissance and prospecting traverses on foot from the sea coast.

The Mo mineral claims were staked between late November and early January. Detailed prospecting and a limited amount of rock trenching was done by the owners in January.

In late January and February the mineral occurrence was examined by several geologists and engineers representing interested exploration companies.

GEOLOGY

Regional

The geology of the Jervis Inlet area is described in British Columbia Department of Mines Bulletin #39, and accompanying map, by W.R. Bacon, 1957.

Eighty per cent of the exposed rocks are plutonic members of Coast Range complex. Bacon describes four intrusive phases of felsic to intermediate composition, The remaining twenty per cent are pendant remanents of metavolcanic and sedimentary rocks. These range from small xenoliths to steeply dipping lenticular bodies several miles in length.

GEOLOGY (cont'd.)

Local

The Mo claims are underlain by batholithic rocks composed principally of diorite to granodiorite. It is medium grained; the mafic minerals are hornblende and biotite, and quartz content is about ten per cent (10%). Some phases are more siliceous, finer grained and almost entirely devoid of mafics. MoS_2 mineralization appears to favour this phase.

Remanents of metavolcanics and sediments varying in size from a few inches to several tens of feet in diameter are embedded in the intrusive mass.

There are three principal planes in which the local structural fabric has developed:

1. Strongest - Az 340° to 350° and steeply dipping: Shearing, fracturing, jointing and faulting of variable intensity is well developed in this plane.

2. Moderate fracturing and jointing occurs at Az 260° to 285° steeply dipping

3. Weakly developed jointing of variable strike dips at 25° to 30°.

GEOLOGY (cont'd.)

Local (cont'd.)

A well-defined fault which crosses claims No #8 and #6 has a trend of about 340° and dips steeply westward.

Zones of hydrothermal alteration have developed irregularly in rocks seen along the lower road, apparently associated with structural plane (1) above. It consists of patchy pink to greenish discolouration of feldspar, destruction of mafic minerals and granular texture, and sometimes silicification. This feature is most intense along the fault shown in Fig. 2.

Two outcrops of felsite porphyry were seen. It is not known whether these represent late intrusion or undigested host rock remanents.

ECONOMIC GEOLOGY AND MINERALIZATION (See Figs. 2 & 3)

The mineralization lies between 1200' and 900' A.S.L. on a moderate west-facing slope overlooking St. Vincent Bay. The zone of interest, as it is presently known, occupies a NNW trending area of about 1000' x 3000'. The mineralization consists of molybdenite emplaced along fracture planes in the intrusive mass.

The preferred fracture orientation is steeply dipping, Az 340° to 350° and Az 260° to 285°, steeply dipping.

Heavy concentrations of molybdenite occasionally occur in lenticular quartz veins 2" to 8" in thickness. MoS_2 is frequently accompanied as fracture coatings by quartz and pyrite. The hydrothermal alteration previously noted favours zones of shearing and faulting within the area of interest but is not a consistent associate of MoS_2. Traces of chalcopyrite and malachite are erratically distributed.

MoS_2 occurs most frequently as paper-thin coatings in very tight fractures. On weathered outcrop surfaces such fractures appear as thin, rusty lines and hair-like joint cracks with no directly apparent evidence of MoS_2. The results of rock trenching suggest that much of the molybdenite has been leached out of these fractures to a depth of at least two feet.

ECONOMIC GEOLOGY AND MINERALIZATION (cont'd.)

No sampling was done by the writer. Some assay results of samples taken by others are as follows:

	Sample	Location	% MoS_2	% Mo.	Source
*	20' chips	lower road	.006	.019	J.F. Allan
	7' "	" "	.058	.031	Amax
	10' "	upper road		.03	R. Seraphim
	grab, quartz vein	?		.37	G. Bleiler
	Chip sample	upper road		.10	J.W. MacLeod McIntyre Porcupine

The above results are presented only to convey numerical confirmation that significant MoS_2 does occur on the property.

* This result indicates that Mo is present in a form other than MoS_2, probably an oxide.

SUMMARY AND CONCLUSIONS

1. Molybdenite mineralization on the Mo claim group was discovered during the past year and has been prospected in a preliminary way.

2. The property is located within sixty miles of Vancouver on the sea coast. It is readily accessible by road, sea and air, and there is a well-developed system of logging roads on the property. The climate is moderate with a very short and irregular snow season. Exploration work could be carried out on a year round basis at reasonable cost.

3. Preliminary prospecting has revealed a considerable number of MoS_2 occurrences in an area 3000' x 1000'. The mode of emplacement suggests that a substantial mineralized "zone" may exist in this area. Presently the average grade of the known exposures appears to be very low. However, on account of surface leaching and limited exposure of fresh material, large scale mechanical methods would be required to provide reasonable sampling results.

4. Molybdenite mineralization occurs within a very large dioritic pluton and favors a mafic poor, high quartz phase. The grade of mineralization as it is

SUMMARY AND CONCLUSIONS (cont'd.)

presently known is largely a function of fracture density. High grade quartz veins might be expected to contribute in a very minor way. Disseminated MoS_2 appears to be entirely lacking.

5. Hydrothermal alteration suggests that major shears and faults having a trend of NNW are probably the channels by which mineral bearing solutions were delivered to the area. For this reason, areas adjacent to such faults, particularly the one which crosses the property should be regarded as targets for further broadly based exploration and prospecting.

6. A comprehensive phased exploration programme is justified to investigate the economic potential of the Mo property and adjacent areas.

It is very important that broadly based investigations of the entire property and adjoining areas be carried out at an early stage before or during detailed localized work in the discovery area.

RECOMMENDATIONS

The following exploration programme is suggested:

Phase I

1. Establish ground control for detailed and broadly based exploration work:
   a) Prepare a 1" = 400' contour map of the entire property from existing air photographs.
   b) Cut a picket line grid on claims Mo #1 to #8.
2. Do a broad preliminary geochemical soil and silt sampling survey over the entire property.
3. Investigate the continuity of mineralization in the discovery area by mechanical stripping.

Stripping should be done on at least two E-W sections between the upper and lower roads. Some cuts should also be made on the steep side hill below the lower road on Claims #4 and #2.

Geological mapping should be done as the mechanical work proceeds.

Phase II

Contingent upon the success of Phase I;

1. Sample the mineralized zone by boring a section of large diameter diamond drill holes according to the results of stripping.

RECOMMENDATIONS (cont'd.)

Phase II (cont'd.)

2. Prospect, in detail, any targets revealed by Part 2 of Phase I.

Phase III

Contingent principally upon the success of Part 1, Phase II. If reasonable results are obtained by initial drilling, a third phase would consist of additional drilling and limited bulk sampling from surface cuts.

Respectfully submitted,

CORDILLERAN EXPLORATION CORPORATION LTD.

Albert F. Reeve, P.Eng.

Geological Engineer

February 15, 1967

A P P E N D I X A

ESTIMATED COST OF THE RECOMMENDED EXPLORATION PROGRAMME

Phase I

1. a)	Preparation of topographical map		$ 2,000
b)	Line cutting 20 miles @ $100		2,000
2.	Geochemical sampling:		
	30 man-days @ $25	$ 750	
	Analysis 1200 samples @ $1.00	1200	1,950
3.	Mechanical stripping:		
	D-8 or equal tractor with blade and rippers 200 hrs. @ $27.00	$5400	
	Mobilization	600	6,000
	Field supervision and geological mapping		
	geologist 30 days @ $50 . . .		1,500
	Camp operation - 1 month		
	Kitchen	$1500	
	Fuel, equipment and miscellaneous supplies . .	1000	2,500
	Vehicle (rental) 1 month		500
	Travelling expenses - hotels, meals, fares, etc. . .		2,000
	Miscellaneous expenses - maps, fees, office, assaying, licence		1,000
	Sub total:		$ 19,450
	Contingency allowance:		1,550
	TOTAL - Phase I		$ 21,000

Phase II

1.	Diamond Drilling - 10,000 feet - BX (minimum) sized drill holes. 2500 feet @ $12.00 per foot including operational overhead and associated costs	$ 30,000
2.	Additional prospecting, geological and geochemical investigations	8,000
	Sub total:	$ 38,000
	Contingency allowance:	2,000
PROJECTED TOTAL - Phase II		$ 40,000

Phase III

Detailed exploration and development, drilling and limited bulk sampling from surface cuts.	$ 80.000

The total cost of a three-phased success contingent exploration programme would be approximately . . . . . $ 140,000

APPENDIX B

REFERENCES

- British Columbia Department of Mines,
  Bulletin #39 and accompanying geology map
  by W.R. Bacon, 1957.

- Topographic map, 1:50,000 scale
  Advance print NTS #92G - 13-W

- Air photographs,
  British Columbia Department of Lands,
  Forests and Water Resources, 1964.

- Sketches and Assays by:
  G.A. Bleiler

  J.F. Allan,
  Amax Exploration

  J.W. MacLeod,
  McIntyre Porcupine Exploration

  Dr. R. Seraphim, P.Eng.,
  Consulting Geologist.

APPENDIX C

ALBERT F. REEVE, P.ENG.
GEOLOGICAL ENGINEER
400 – 837 West Hastings Street, Vancouver 1, B.C.

ASSOCIATE
RONALD A. GRANGER

Phone 685-0167

WRITER'S CERTIFICATE

JOHN W STOLLERY

I, Albert F. Reeve, of Vancouver, B.C., hereby certify that:

1. I am a geological engineer residing at 702/1275 HARO ST. 2557 West 3rd Avenue, with an office at 400, 837 West Hastings Street.

2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario (1958) and received a Bachelor of Science degree from Michigan Technological University, Houghton, Michigan (1961). ✓

3. I am a certified member of the Association of Professional Engineers of Ontario and British Columbia. ✓

4. I am the author of this report which is based on my personal examination of mineral occurrences of the Mo mineral claims. of the property and information from other sources which are appended in the report.

5. I examined claim posts and lines on the Mo mineral claims and find that they are correctly located according to the claim records. NO

6. I have no beneficial interest, direct or indirect in Hogan Mines Ltd., nor the properties described in this report nor do I expect to receive any. JOSH Creek mines ltd

CEC

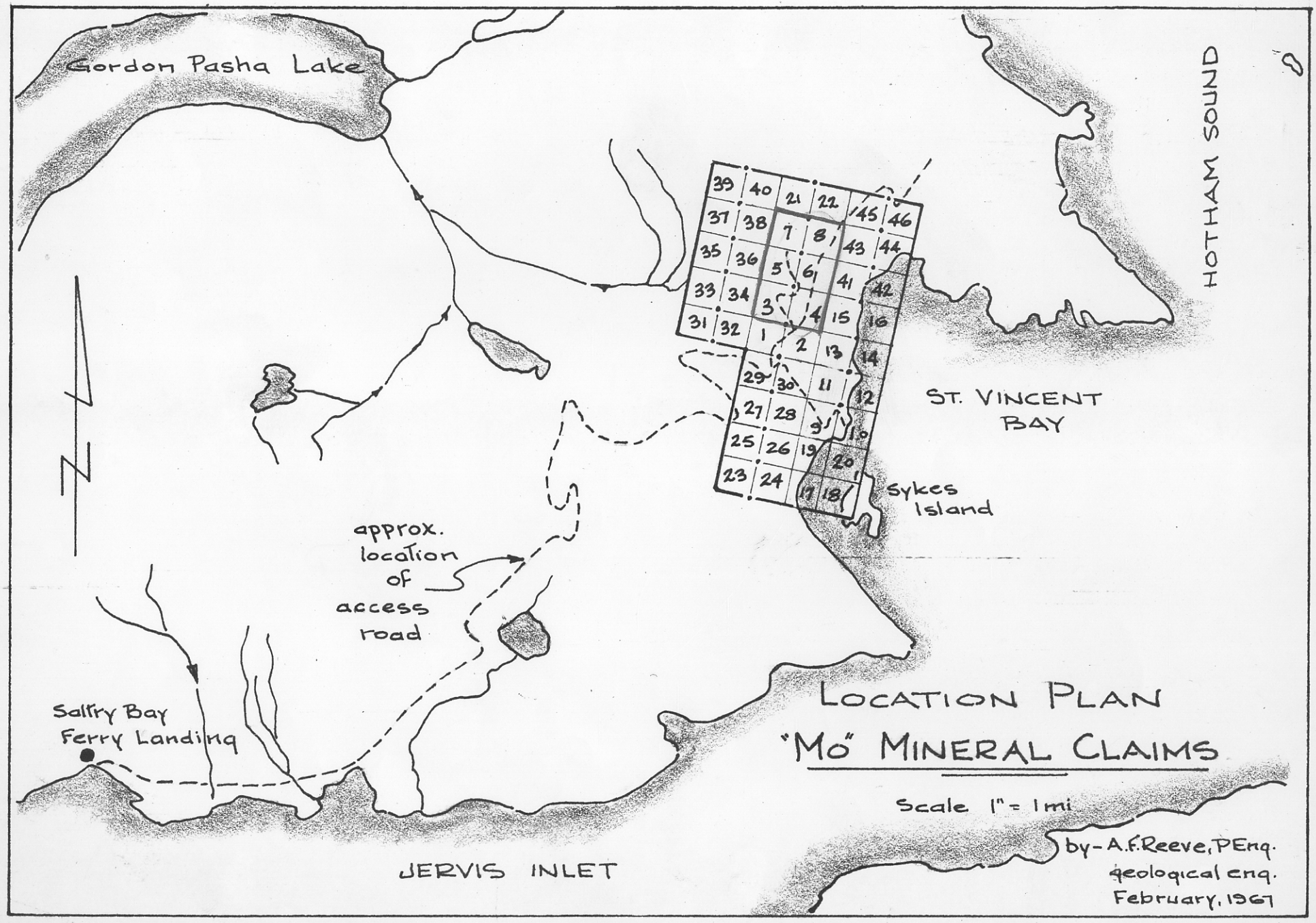
Signed _____
Albert F. Reeve, P.Eng.,
Geological Engineer

JWS

February 15, 1967.

Vancouver, B.C.

APPENDIX D



LOCATION PLAN
"Mo" MINERAL CLAIMS

Scale 1" = 1 mi

by - A.F. Reeve, PEng.
geological eng.
February, 1967

Fig 1

Mo#7

Mo#8

N

fault

lower road

intense frac.

A

felsite porphyry

+ el. 1000' ASL.

Mo#6

Mo#5

55#

qv

A

gouge

+ el. 1200 ASL

B

80

80

qv

Lenco? QT3 diorite

Diorite

q.v.

road

Upper road

A

A

Diorite

Mo#3

Mo#4

felsite porphry

road

A

rusty

+ el. 900' ASL

A

q.v. 2"-8"

Diorite

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

Mo#1

A

Mo#2

Salfry Bay 10 miles

NOTES

- Molybdenite mineralization (fracture filling)
- □ rock trench
- Joints & fractures
- Shear
- A hydrothermal Alteration
- (B) (C) - location reference
- qv - mineralized quartz-vein

GEOLOGY SKETCH

MO CLAIM GROUP

Vancouver Mining Div.
B.C.

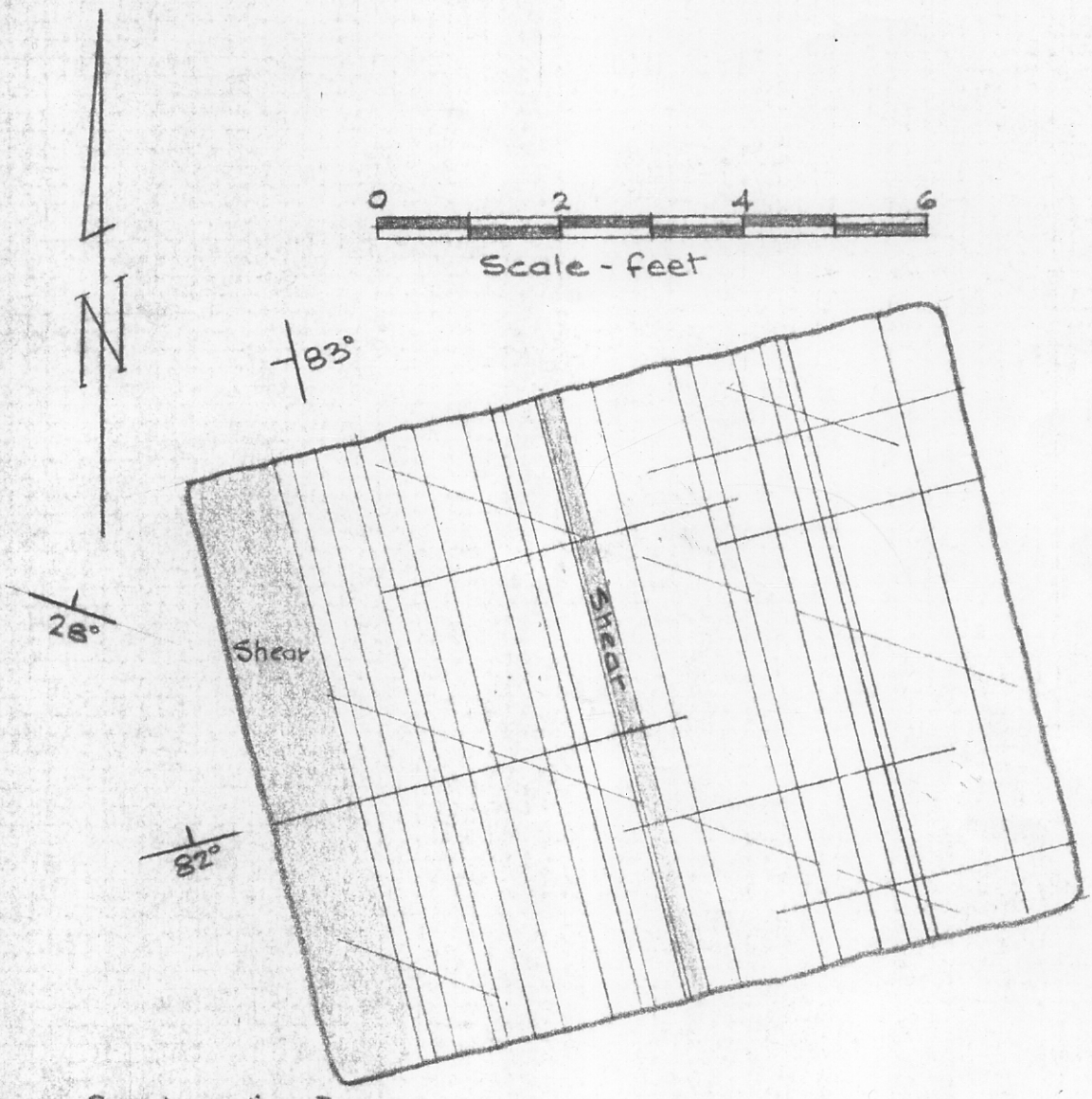
Scale 1" = 400'

by A.F. Reeve, P.Eng
geological engineer

Feb. 1967

Fig. 2

Fig 3



3 major directions of jointing & fracturing shown.

FRACTURE DENSITY SKETCH

ROCK TRENCH LOCATION (B)
Mo #6 CLAIM

Scale 1" = 2'

BY-AF Reeve PEng

Feb. 1967

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. F. REEVE

Looking North

Looking South

Looking North

Looking South.