

*Cyprus Exploration Corporation
Courtesy Julian Berkosha
Robert Hutchings*

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THE MOS₂ MINERAL CLAIMS

ERIN EXPLORATIONS LTD.

REPORT

ON

THE MoS₂ MINERAL CLAIMS

SKEENA MINING DIVISION

BRITISH COLUMBIA

TO

ERIN EXPLORATIONS LTD.

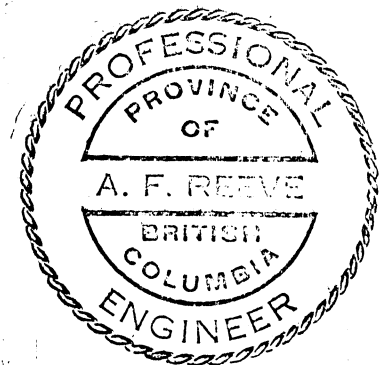
by

Albert F. Reeve, P.Eng.

Geological Engineer

Vancouver, B.C.

January 20, 1967



INTRODUCTION

This report has been prepared on behalf of Erin Explorations Ltd. at the request of Messrs. R. Hutchings and J. Berkosha. It describes the "MoS₂" mineral claim group, and is based on a study of exploration records and literature published by the B.C. Department of Mines and Petroleum Resources.

The property was not visited.

Three diagrams and a list of references are included in the appendix. The writer's certificate and an affidavit verifying claim locations by a qualified witness are also appended.

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PROPERTY

Fifty claims are included in the MoS₂ group. The effective area is reduced to about 40 claims by overstaked property held by others.

(See Fig. 3)

<u>Claim Name</u>	<u>Record No.</u>	<u>Assessment Anniversary</u>
MoS ₂ # 51	26555 to	June 17, 1968
to #100	26604	
inclusive	inclusive	

Recorded holder - Hurley River Mines Ltd.

Locater - R. Hutchings

Record date - June 17, 1965

The above information was obtained from the Vancouver Mining Recorder's Office on January 12, 1967.

According to Mr. Hutchings, an option held by Hurley River Mines Ltd. on the property, expired on October 15, 1966 and the claims will be conveyed to Erin Explorations Ltd. of #3, 425 Howe St., Vancouver, B.C.

LOCATION

The MoS₂ property is located about 11 miles east of Stewart, B.C., on the east side of Bromley Glacier, approximately at 55° 57' north latitude, 129° 45' west longitude, and 3,000' to 5,000' A.S.L.

The community of Stewart is 110 miles north of Prince Rupert, B.C.

ACCESS

Stewart is accessible from the City of Prince Rupert by air and sea.

From Stewart present access to the property is by helicopter.

A foot trail extends 12 miles along Bitter Creek from the Stewart - Cassiar Road to the property.

CLIMATE

Annual precipitation is heavy in this area. The snow-free season on the property extends approximately from mid June to October.

TOPOGRAPHY

In this region the Coast Range Mountains rise from 4,000 feet to 7,000 feet above sea level.

The property lies in the northwest part of a 300 square mile glacial complex known as the Cambria Ice Field.

The area of interest, on the property, consists of steep rock bluffs and talus slopes along the northeast edge of Bromley Glacier and on the southwest flank of Red Mountain.

The surface of the glacier slopes gently but is dissected by numerous deep crevasses.

HISTORY

The Stewart area, including that part in which the "MoS₂" claims are situated, has been prospected since the early 1900's. The molybdenite occurrence on this property is relatively "new" however. It was discovered in rock outcrops recently exposed on the edge of a receding glacier.

Events associated with the discovery and subsequent exploration of the property are as follows:

- June 11, 1965 - Molybdenite mineralization was discovered by prospectors J. Berkosha, R. Hutchings and R. Gilroy and the "MoS₂" group of claims were staked.
- July, 1965 - The "MoS₂" property was optioned to Hurley River Mines Ltd.
- July 1965 to October 1965 - Alrae Explorations Ltd. conducted the following exploration programme for Hurley River Mines Ltd:
1. Prospecting
 2. Plane table mapping (1" = 40 ft.) in the vicinity of the discovery showings.
 3. Rock trenching - 11 shallow trenches were excavated for a total length of 500'.
 4. Drilling - 1 Ax diamond drill hole was bored for a length of 229 ft.
- Oct. 15, 1966 - Hurley River Mines forfeited their option in lieu of making a substantial cash payment to the vendors.

GEOLOGY(a) Regional

The property is situated on the eastern edge of the Coast Range intrusive complex. Meta-sedimentary and volcanic rocks of the Hazelton group and intermediate to granitic plutonic rocks occupy most of the surrounding area.

(b) Local (See Fig. 2)

The claim group is underlain by greenish, thinly laminated quartzites, volcanic tuffs and siltstones which have a general northwest trend. The widespread presence of iron sulphides has produced a bright red weathering product on the surface of these rocks ("Red" mountain). Local zones of shearing, faulting and contortion appear to be relatives of intrusive activity.

A stock of coarse monzonite porphyry intrudes the above rocks. It is largely concealed beneath Bromley glacier and is estimated to be 1/4 mile to 1/2 mile in diameter. A number of dikes ranging in composition from dark lamprophyre to aplite occur in the vicinity of this pluton.

GEOLOGY (cont'd.)(c) Glacial

Bromley glacier has been a critical factor in the discovery and exploration of the MoS₂ property to date. The glacial ice is receding at a relatively rapid rate, 30' vertically and 150' horizontally at the toe per year. (See Fig. 2)

Mineralization on the property, discovered in 1965 was covered with ice in 1960 and it is suspected that additional mineralization is concealed beneath the ice at the present time.

MINERALIZATION AND ECONOMIC GEOLOGY

The zone of interest, as it is presently known, occurs in an area 3000 feet long and a few hundred feet wide at MacAdam Point along the edge of Bromley Glacier.

The contact of a monzonite porphyry pluton, which is largely concealed beneath the glacial ice, appears to have controlled the emplacement of molybdenite mineralization.

Both the intrusive and the adjacent sediments and volcanics are mineralized with pyrite and molybdenite. It occurs in quartz and aplite veinlets, as fracture coatings, and as disseminations in aplitic phases of the intrusive. Significant amounts of gold are occasionally associated with veins variably composed of quartz calcite, siderite, pyrite, pyrrhotite and minor sphalerite and chalcopyrite.

The results of detailed work done by Alrae in an area 1000' x 500' along the intrusive contact are as follows:

1. The fractures which appear to control the MoS₂ mineralization have a preferred trend of N. to NNE.
2. Most of the significant mineralization is confined to within 75' of the intrusive contact.
3. Sampling: the numerical average of 85 chip and core samples, representing about 450 linear feet, is .0475% MoS₂.
The best 10 samples representing a length of 68 feet ranged from .283% to .078% MoS₂.

Gold assays of :	.8 oz/Ton	-	3'
	.9 oz/Ton	-	2'
	1.88oz/Ton	-	2'

were obtained from one trench. Elsewhere gold values are insignificant.

A considerable number of monzonite boulders found in the moraines along both sides of the glacier are mineralized with molybdenite. In addition, mineralized talus occurs at the base of steep cliffs which are inaccessible by ordinary means.

An outcrop of meta-volcanics fractured and mineralized with quartz, epidote and pyrite occurs between 4,500 feet and 5,000 feet A.S.L. in the bed of the creek which flows westward into the glacier about one mile north of MacAdam Point. No molybdenite was seen at this location; however, the rock is similar in character to molybdenite bearing float found down stream. Intermediate intrusive rocks of unknown extent occur in the same general area.

SUMMARY AND CONCLUSIONS

1. Molybdenite occurrences on the "MoS₂" claim group have been known for less than two years and have been explored in a preliminary way.
2. The property is located in a geological setting similar to that in which important deposits of molybdenite have been developed 25 miles to the south at Alice Arm.
3. The local topography is rugged and the only practical means of access is by helicopter. For this reason any future exploration work should be carefully planned and phased to obtain the greatest efficiency per dollar expended.
4. Preliminary exploration work has indicated that a large part of the discovery showings represent material containing .05% MoS₂. This grade is not economically significant. However, the exploration potential of the area in general remains reasonably attractive because of the geological environment and the pervasive nature of the mineralization and

Summary and Conclusions (cont'd.)

because most of the exploration work to date has been concentrated on a small part of the property.

5. Gold is not a consistent associate of molybdenite mineralization and cannot be relied upon as an economic "helper" in the development of large volumes of low grade molybdenite mineralization. However, gold bearing shear controlled veins variably composed of quartz calcite, pyrite, pyrrhotite, minor galena and sphalerite are exploration targets of at least secondary importance.
6. The most apparent geological control of molybdenite mineralization are the contacts of intermediate intrusive bodies.
7. Outside of the molybdenite showings as they are presently known, there are two directions in which to pursue potential mineralization:

Summary and Conclusions (cont'd.)

7. (a) Beneath the ice of Bromley Glacier immediately southwest of the showings.
- (b) NNEward across the south end of Red Mountain and into the basin on the upper reaches of the first westward flowing creek north of MacAdam Point.

In the first case, (a), there is strong evidence, in the form of moraine boulders, which suggests that additional MoS₂ mineralization is covered by the ice. This may be an impractical consideration if the glacier is very thick. It is receding at a relatively rapid rate. An accurate estimate of the glacial profile would reduce this type of speculation into mathematical terms.

In the second case, (b), it is reported that this area has been prospected in a very general way. Evidence of favourable geological conditions and mineralized float have been reported in the upper parts of the previously mentioned creek basin. This possibly should be investigated in a systematic way.

Summary and Conclusions (cont'd.)

8. A broadly based programme of geological, geochemical and geophysical investigations is justified to test the exploration potential of the MoS₂ property.

RECOMMENDATIONS

The following exploration programme is suggested. (Refer to Fig. 3)

PHASE I

1. Prepare a topographic contour plan of the exploration area from existing air photographs. (1" = 400') This will provide control for various surveys.
2. Stake an additional 16 claims (2 x 8) along the present north boundary of the MoS₂ group.
3. Prepare a geological map of the entire property at 1" = 400' scale.
4. Conduct a broadly based geochemical survey over that part of the property lying north of the glacial ice, particularly the basin of the creek mentioned in (a) of the Summary and Conclusions. The physical environment is not suitable for a single sampling method. Therefore a combination of soil, rock chips, and stream sediments should be used. Sampling density of about 1 per 10,000 ft.² is suggested. All samples should be analysed for molybdenum and tested for total heavy metals.

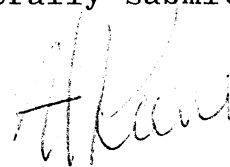
Recommendations (cont'd.)

5. Complete detailed mapping of the discovery zone and inspect newly exposed rock along the glacier's edge.
6. Estimate the profile of the glacial channel immediately adjacent to the discovery showings by running at least three seismic profiles between Red Mountain and Lost Mountain.

PHASE II

Physical work in the form of drilling, trenching and sampling would constitute a second phase if justified by the results of Phase I. Periodic examination of outcrops along the glacier should be made on a long-term basis; the frequency of such examinations would be determined by part 6 of Phase I.

Respectfully submitted



Albert F. Reeve, P.Eng.

Geological Engineer



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ESTIMATED COST OF RECOMMENDED EXPLORATION PROGRAMMEPHASE I (Total elapsed time - 60 days)

1.	Preparation of a topographic control map from air photographs		\$ 1,200
3 & 5.	<u>Geological Mapping and Field Supervision</u>		
	- geologist 2 mo. @ \$1000	= \$2,000	
	- assistant 2 mo. @ 500	= 1,000	
	- instrument rental and miscellaneous field supplies=	<u>250</u>	3,250
4.	<u>Geochemical Survey (contracted)</u>		
	- sampling crew	1,250	
	- analysis 750 samples @ \$1.50	1,125	
	- compilation of results	<u>125</u>	2,500
6.	<u>Seismic Profiles of Glacier</u>		4,000
7.	<u>Operational Overhead</u>		
	General supervision	1,500	
	Cook, 2 mo. @ \$550	1,100	
	Casual labour 15 days @ \$30	450	
	Travelling expense	2,500	
	Camp equipment	1,000	
	Camp operation - 300 man days @ \$4.00	1,200	
	Fuel and miscellaneous supplies	<u>300</u>	8,050
8.	Helicopter 50 hrs. @ \$125/hr		<u>6,250</u>
		Sub total:	\$ 25,250
	Contingency allowance		<u>2,250</u>
	<u>Total Maximum Cost of Phase I</u>		<u>\$ 27,500</u>

Note: Since Item 6 is not an integrated part of Phase I it could be postponed to Phase II for an immediate saving of \$4,000.

Total Minimum Cost of Phase I \$ 23,500

PHASE II

If the results of Phase II are encouraging a follow-up programme of exploratory drilling, trenching and sampling would be required at a cost of approximately \$75,000.

The total cost of an exploration programme including preliminary surveys and a physical follow-up work would be approximately \$100,000.

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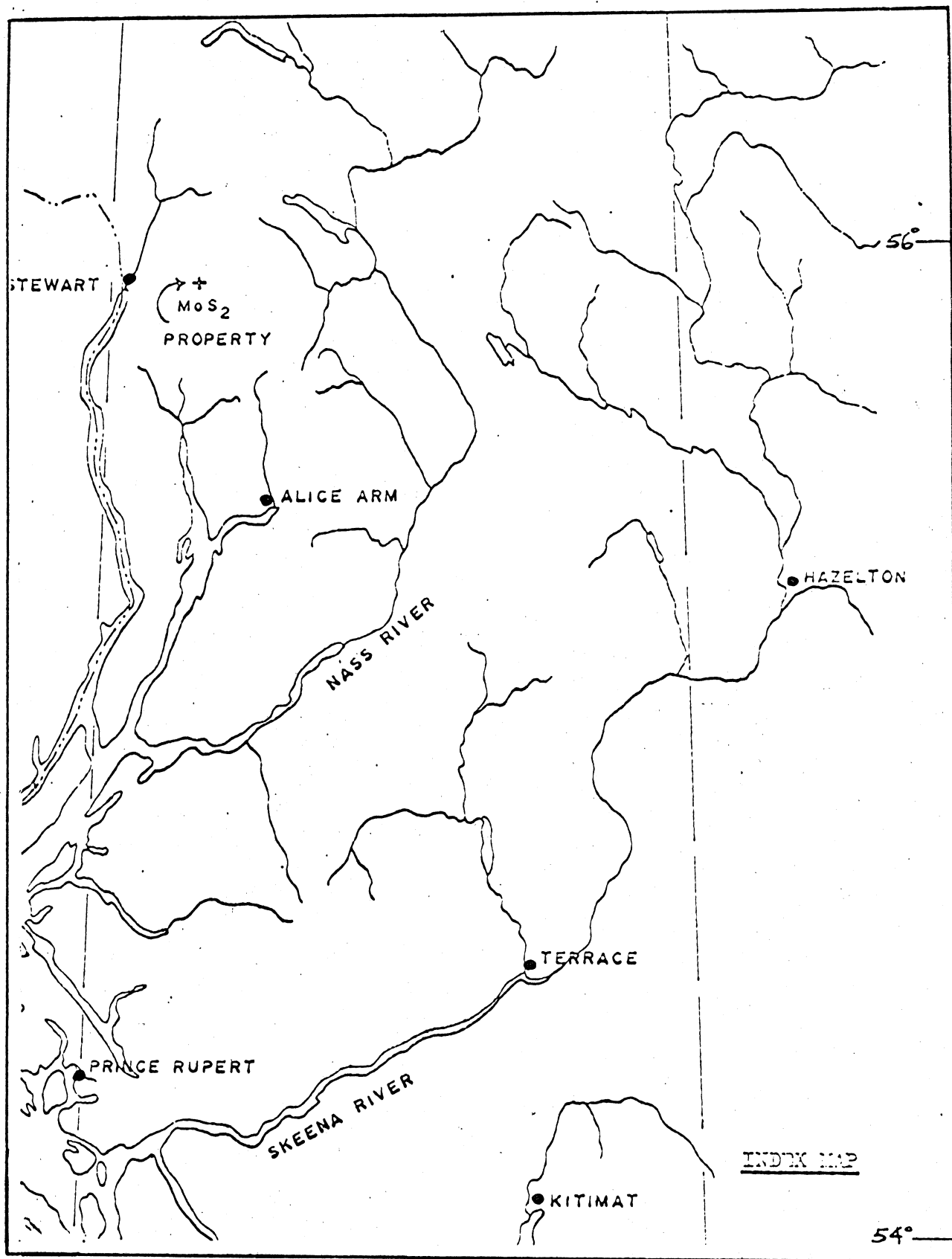
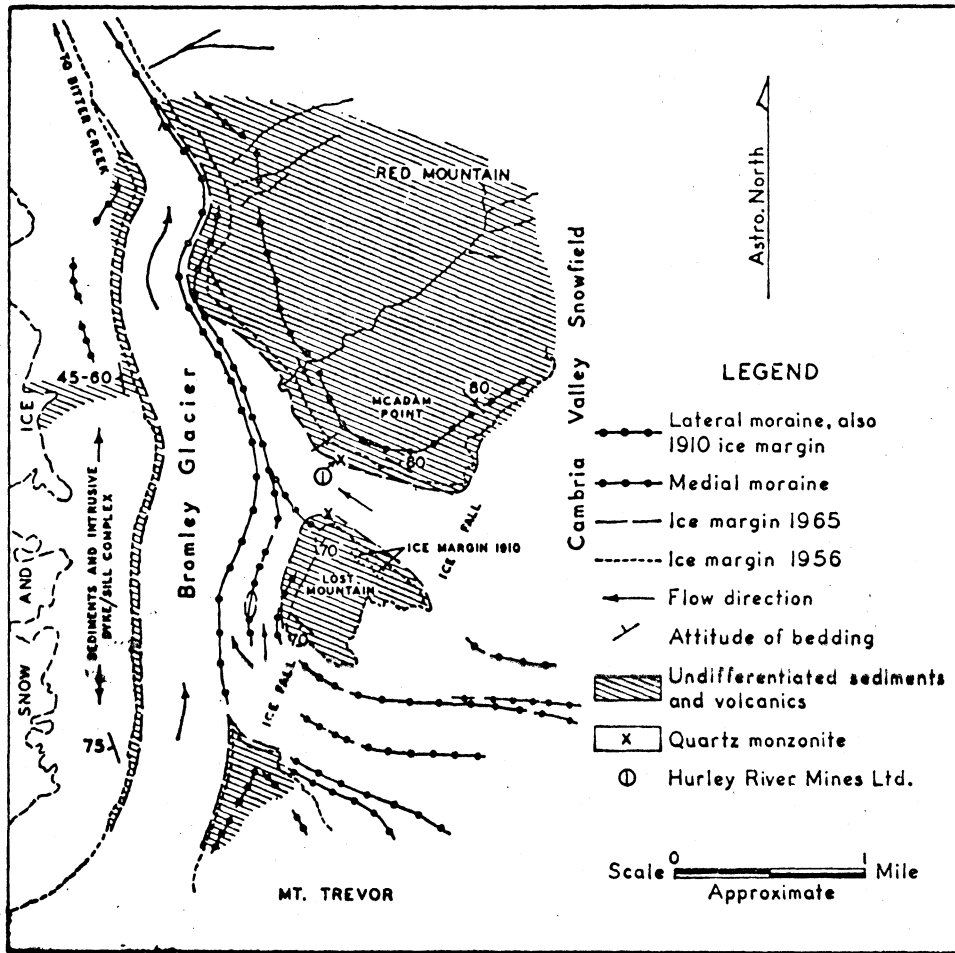


FIGURE - 1

LOCATION MAP - MoS₂ MINERAL CLAIMS

To accompany a report by - Albert F. Reeve, P. Eng.

Jan.-1967



BROMLEY GLACIER AREA
 Showing geology and ice recession

After - E.W. Grove, B.C. Dept of Mines & Pet. Resources, 1965

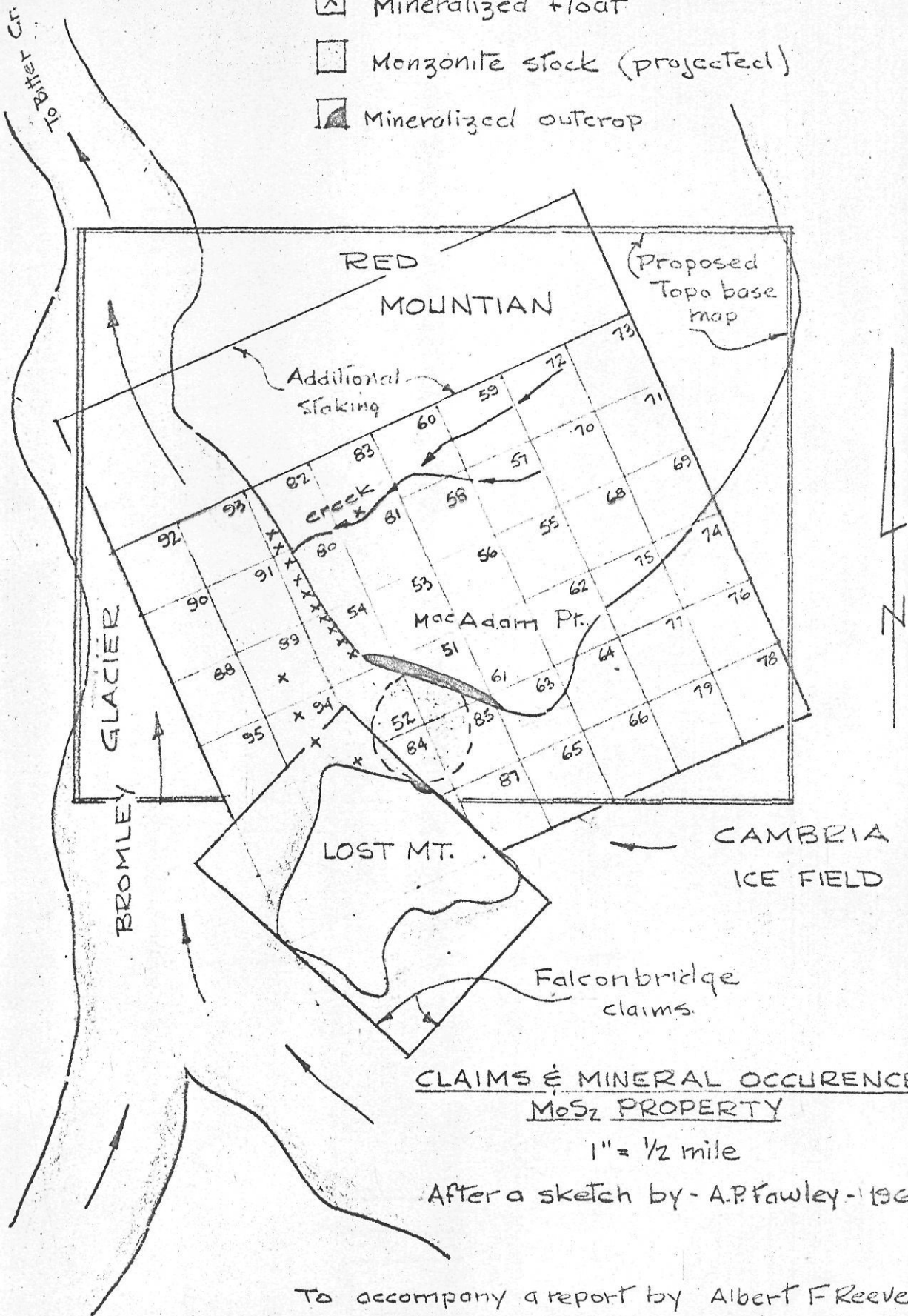
FIGURE 2

To accompany report by - Albert F. Reeve P.Eng.

Jan - 1967

Figure 3.

- Mineralized float
- Monzonite stock (projected)
- Mineralized outcrop



CLAIMS & MINERAL OCCURENCES
MoS₂ PROPERTY

1" = 1/2 mile

After a sketch by - A.P. Fawley - 1965

To accompany a report by Albert F. Reeve
Jan. 1967

A P P E N D I X

C

REFERENCES

- Minister of Mines & Petroleum Resources
Annual Report - Page 52 - 1965
- Report - for Hurley River Mines Ltd.
- by A.P. Fawley, P.Eng. - 1965
- Report - for Alrae Exploration Ltd.
- by Ron Philp, P.Eng. - 1965

Information conveyed verbally by - Mr. C. Ney, P.Eng.,
of Kennco Explorations, based on his examination
of the property in 1966.

Maps

Topographic:

- Nass River, 103P, 1:250,000 scale

Geological

- GSC #307A, Portland Canal Area, 1" = 4 mi. 1935
- GSC #28A, Portland Canal Mining District
1" = 2 mi. 1910

Air Photographs

- By McElhanney Air Surveys Ltd., 1965 -
for Hurley River Mines Ltd.

A P P E N D I X

D

ALBERT F. REEVE, P.ENG.**GEOLOGICAL ENGINEER**

400 - 837 West Hastings Street, Vancouver 1, B.C.

ASSOCIATE
RONALD A. GRANGER

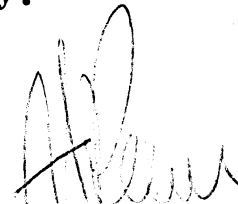
Phone 685-0167

CERTIFICATE

I, ALBERT F. REEVE, of Vancouver, B.C. hereby certify that:

1. I am a geological engineer residing at 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 College of Mining and Technology, Houghton, Michigan, 1961.
3. I am a certified member of the associations of professional engineers in the provinces of Ontario and British Columbia.
4. I am the author of this report which is based on the research of exploration records and published literature.
5. I have no beneficial interest in Erin Explorations Ltd. nor the properties described in this report, nor do I expect to receive any.

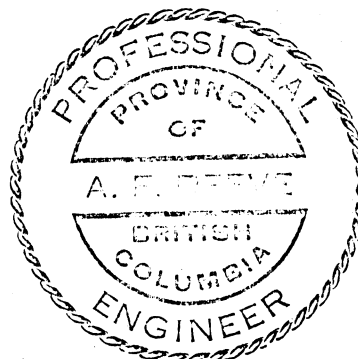
Signed



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

January 20, 1967,

Vancouver, B.C.



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PROVINCE OF BRITISH COLUMBIA)

)

)

TO WIT:)

I, CHARLES S. NEY, Geologist, of 2044 Floralynn Crescent, in the District of North Vancouver, in the Province of British Columbia,

DO SOLEMNLY DECLARE THAT

1. I am a member of the Association of Professional Engineers of British Columbia, and that I am employed by Kennco Explorations (Western) Ltd.

2. That on September 10th, 1966, I examined certain mineral claims known as the MoS₂ Claim Group, located east of Bromley Glacier approximately 12 miles northeast of Stewart, B. C. by R. Hutchings.

3. That I observed a post mounted in rocks approximately 250 feet northeast of the margin of Bromley Glacier and about 1200 feet southeast of an abandoned campsite. This post bore several aluminium identification tags which appeared to be properly inscribed and indicated to me that the said post served as claim post for the following:

- 1) Initial Post for Mineral Claims MoS₂ 51, 52.
- 2) Witness Post for the Final Post of Mineral Claims MoS₂ 51, 52.
- 3) Witness Post for Initial and Final Post of Mineral Claims MoS₂ 80, 81, 82, 83.
- 4) Final Post for Mineral Claims MoS₂ 53, 54.

4. That the bearing of the location line as indicated on the metal tags was North 30° West.

5. That I observed another claim post mounted in rocks approximately 90 feet northeast of the margin of Bromley Glacier and about 4500 feet southeast of the abandoned campsite or 3500 feet southeast of the first mentioned post, and that this post bore several aluminium identification tags which indicated to me that the said post represented the following claim posts:

- 1) Initial Post for Mineral Claims MoS₂ 55, 56; direction of location line North 30° West.
- 2) Initial Post for Mineral Claim MoS₂ 61, 62; direction of location line South 30° East.
- 3) Witness Post for Final Post for Mineral Claims MoS₂ 55, 56; direction of location line North 30° West.
- 4) Witness Post for Final Post for Mineral Claims MoS₂ 61, 62; direction of location line South 30° East.
- 5) Witness Post for Initial and Final Post for Mineral Claims MoS₂ 57, 58, 59, 60; direction of location line North 30° West.
- 6) Witness Post for Initial Post and Final Post for Mineral Claims MoS₂ 63, 64, 65, 66; direction of location line South 30° East.

6. That the surrounding area of the claim post locations referred to herein was partly covered by a glacier to the south and steep terrain prevailed to the north.

AND I make this solemn Declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath, and by virtue of the Canada Evidence Act.

DECLARED before me
 at Vancouver, in the Province *est h.*)
 of British Columbia, this *24th*)
 day of January, A.D. 1967.)

Charles J. King

J. T. Law
 A Commissioner for taking Affidavits
 for British Columbia