GEOLOGICAL AND GEOCHEMICAL INVESTIGATION

OF

THE MoS_2 CLAIM GROUP

SKEENA MINING DIVISION, BRITISH COLUMBIA

56° 00' N. - 128° 00' W.

11 Miles East of Stewart, B.C.

for

ERIN EXPLORATIONS LTD. (N.P.L.)

by

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

Cordilleran Exploration Corporation Ltd.

June 1 to July 30, 1967.

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INTRODUCTION

This report describes a program of geological mapping and geochemical surveys carried out in 1967 under the writer's supervision, by Erin Explorations Ltd., on the MoS_2 property near Stewart, B.C. It is submitted to the British Columbia Department of Mines to satisfy assessment work requirements on 40 "MoS_2" claims for a period of three years.

Appended to this report are 4 geological and geochemical maps, a certified statement of expenditures and the writer's certificate of qualifications.

The MoS_2 property was staked in 1965 on the basis of molybdenite discoveries at MacAdam Point. Some trenching and drilling was carried out in the same year. No work was done in 1966.

PROPERTY (see figure 1)

Claim Name	Record No.	Current Expiry Date
"MoS_2" #51 to #66 incl.	26555 to 26570 incl.	June 17, 1968
"MoS_2" #68 to #72 incl.	26571 to 26575 incl.	" " "
"MoS_2" #74 to #87 incl.	26577 to 26590 incl.	" " "
"MoS_2" #89	26592	" " "
" #91	26594	" " "
" #93	26596	" " "
" #94	26597	" " "
" #96	26599	" " "

Record Date - June 17, 1965.

A map of the claim group is included in the appendix.

LOCATION AND ACCESS

The property is located on the N.E. edge of Bromely Glacier at the head of Bitter Creek, 12 miles east of Stewart, B. C.

Elevations range from 2400' to 6000' A.S.L.

Access is by helicopter from Stewart.

WORK DONE

The geology of the property was mapped in detail at a scale of 1" = 400'. The results of this are shown on the enclosed map and cross section.

A geochemical survey was carried out in selected areas on the basis of geological mapping. 263 geochemical samples were taken and analyzed for copper, molybdenum and zinc. The results are appended on 3 geochemical maps. A detailed description of field and laboratory methods and procedures is included in Appendix B (Geochemistry by W.F. Bondar).

Control for the geological and geochemical surveys was provided by a base map, at 1" = 400' with contour intervals of 25' produced from air photographs.

Field work was carried out from three camps located on the property. The operation was serviced by helicopter.

Personnel and Contractors

1. Employees of Erin Exploration Ltd.

Julian Berkosha, Manager,
1350 Broughton St., Vancouver, B.C.

Tony Retvedt,
1920 Atlin Ave., Prince Rupert, B.C.

Personnel and Contractors (cont'd.)

2. Geological Consultants -

Cordilleran Exploration Corporation Ltd.,
400, 837 W. Hastings Street, Vancouver, B.C.

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

K.L. Daughtry, B.Sc., geologist

Robt. Watson, field assistant.

3. Geochemists -

Bondar-Clegg & Company Ltd.,
1500 Pemberton Ave., North Vancouver, B.C.

W.F. Bondar, B.Sc., geologist

D. Evans, B.Sc., geologist

D. Boyle, field assistant.

SUMMARY OF RESULTS

Detailed results of geological and geochemical investigations are appended as follows:

Appendix "A" - Geology - by K.L. Daughtry

Appendix "B" - Geochemistry - by W.F. Bondar

1. Geology (see figure 2)

The MoS_2 property is underlain by tightly folded metasedimentary rocks and a younger, less severely deformed group of felsic volcanics. Both trend in a NW direction.

The above rocks are intruded by a plutonic complex composed of granodiorite and horneblende porphyry.

Molybdenite mineralization is associated with the intrusive contacts. This association occurs at three locations in the area:

a) on the south edge of Lost Mt.

b) at MacAdam Point

c) on Gold-slide Creek between 4800' and 5000'.

A projection of the above contacts shown on the enclosed cross section suggests that they represent the roof of a common magma chamber. This roof contact is estimated to be flat topped with rounded, steeply dipping sides, and may be likened to a loaf of bread

1. Geology (cont'd.)

plunging southward at an angle of approximately 15°. This concept may be reasonably attacked, however, the observed attitudes and relative elevations of the contacts, their geochemical similarity and fracture development strongly support this as the best basis on which to proceed with further investigations.

Molybdenite is associated with fractures, shears and vein systems adjacent to the intrusive contact. The mineralization is sparse in most areas, however it is difficult to make valid estimates of grade because of intense surface oxidation.

A shear zone at MacAdam Point is heavily mineralized with MoS_2 accompanied by high gold values for a width of about 25'. A diagram of this section is included in Appendix C. The results of previous sampling (Hurley River 1965) show a 28' sample including this section averaging .023% MoS_2 and .25 oz. gold/T. Visual estimates suggest a much higher MoS_2 value.

There are a number of other pyritic shear zones on the property which may also carry significant gold values. In addition, a talus block near MacAdam Point carries coarse free gold.

The ice of Bromely Glacier, opposite MacAdam Point, is estimated to have a maximum thickness of 450'.

2. Geochemistry (see figures 3, 4 and 5)

Summarily, the results of geochemical sampling are as follows:

a) A large area coincidentally anomalous in Cu. and Mo. occurs in the cirque basin at the head of Gold-slide Creek. This anomaly generally outlines the hornblende porphyry intrusive and the MoS_2 occurrences recently discovered on its contact.

b) A second Mo anomaly occurs along the edge of the glacier at MacAdam Point. This outlines the previously known MoS_2 occurrences and confirms the effective application of geochemistry in this area.

c) Bondar suggests that much of the fresh Mo sulphide has been leached from the surface of mineralized outcrops at the head of Gold-slide Creek. Such leaching is promoted by acidic ground water derived from oxidizing pyritic rocks in the area.

CONCLUSION

The results of geological mapping and geochemical survey on the MoS_2 claim group work have developed new exploration targets apparently related to the original molybdenite discoveries at MacAdam Point.

1. Additional molybdenite mineralization has been mapped 5000' north of the original showings, in the cirque basin at the head of Gold-slide Creek.

2. The "new" mineralized area is related to the contact of an intrusive stock which has been mapped in an area of 1500' x 5000'. In addition to observed outcrops mineralized with molybdenite along the SW contact of the stock, geochemical sampling indicates higher than average Mo and Cu values over the entire intrusive exposure and contact areas.

3. It appears that the area between the mineralized granodiorite at MacAdam Point and the newly outlined hornblende porphyry outcrop 5000' northward, may be occupied by an intermediate intrusive body covered by a "roof" of metasedimentary rocks averaging not more than 400' in thickness.

The nature of the MoS_2 mineralization, as it is presently known, suggests that this buried contact may represent an extensive exploration

Conclusions (cont'd.)

target. This is subject, in a modest way, to the usual hazards of geological projection and will require additional confirmation.

4. There are a number of shear and fracture zones on the property, heavily mineralized with pyrite. These may be regarded as targets for gold prospecting which is of secondary importance.

A second phase of exploration consisting principally of diamond drilling is justified to sample and explore newly discovered MoS_2 mineralization and investigate the geological controls suggested by preliminary work.

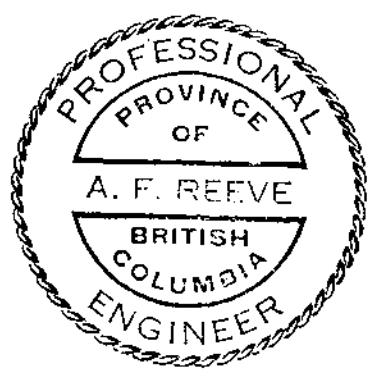
RECOMMENDATION

A program of diamond drilling has been recommended to explore the area between MacAdam Point and the head of Goldslide Creek. This work is presently in progress.

Respectfully submitted,

CORDILLERAN EXPLORATION CORPORATION LTD.

A. F. Reeve



November, 1967.

APPENDIX "A"

GEOLOGY - by K.L. Daughtry

INTRODUCTION

This report was prepared to accompany a geological map of part of the MoS_2 group of mineral claims, owned by Erin Explorations Limited, near Stewart, B.C.

Two men, a geologist and an assistant, performed mapping in the field between June 9 and July 2, 1967. Data were plotted on a 1 inch = 400 feet topographic base map, using compass, altimeter and an enlarged air photograph for determination of position.

Mapping was handicapped by inaccessible terrain at several parts of the property, and by heavy snow cover.

GEOLOGY

General

The property is underlain by rocks of three distinct ages. Older metasedimentary and metavolcanic rocks (1) are steeply folded into a north-plunging anticline which is overturned to the east. These rocks are unconformably overlain by a sequence of massive salic volcanic rocks (2, 3) which strike northwest and dip gently northeast.

Intrusive rocks are the youngest present. A stock of porphyritic granodiorite intrudes the metamorphic rocks at McAdam Point, and a stock of hornblende porphyry intrudes the rhyolites in the cirque at the head of Goldslide Creek. These stocks are thought to represent the extreme upper part of a larger intrusive body of variable composition.

Dykes and sills of hornblende porphyry, aplite, lamprophyre and minor fine-grained diorite intrude the above rocks.

Unit 8 This group of calcareous metasedimentary and metavolcanic rocks, the oldest on the property, comprise quartzite, metamorphosed siltstone, argillite, banded metatuff, and minor chert, limestone, conglomerate and rhyolite.

GEOLOGY (cont'd.)

Unit 8 (cont'd.)

In general these rocks strike northwest and dip steeply. Groves (BCDM Annual Report 1965) believes them to be on the overturned east limb of a north-plunging anticline. Drag folds in the lower gorge of Goldslide Creek plunge NNW at 25°, and would appear to support Groves' view.

Later intrusive activity has apparently caused low grade metamorphism of these older rocks. The intensity of this metamorphism appears to increase toward the intrusive contact of the granodiorite stock where the country rocks are intensely silicified, distorted and broken.

Unit 2 Massive, fine-grained white to light grey rhyolite overlies Unit 8 with angular unconformity. Minor beds of rhyolitic tuff and andesite are present. These rocks strike 130° and dip 25° to 30° northeast. They are characterized by rusty weathering due to the presence of pyrite in fractures.

Unit 3 An attempt was made to differentiate a unit of andesite and andesitic tuff within Unit 2. The rock is a greenish-grey fine-grained tuffaceous andesite, and was mapped along the south contact of the hornblende porphyry stock. It may represent a contact phase or altered halo of the stock.

GEOLOGY (cont'd.)

Unit 4 A stock of pale green hornblende porphyry occupies the floor of the cirque at the head of Goldslide Creek. The rock appears to be of intermediate composition, with up to 35% medium-grained euhedral green hornblende phenocrysts in a fine-grained white or gray feldspathic matrix. A smaller body of this rock crops out on the southwest slope of the ridge above McAdam Point, and several narrow, discontinuous sills were seen on the top of the ridge.

Near the contact, the porphyry is darker green and, in places, gabbroic. Grain size decreases toward the contact. The stock is flat topped and dips gently to the southwest. The western contact is steep dipping.

Unit 5 A stock of medium-grained white to pinkish biotite granodiorite with large (< 3 inches) K-spar phenocrysts intrudes rocks of Unit 1 at McAdam Point. The composition is approximately as follows:

white plagioclase	45%
pinkish K-spar	30%
biotite	15%
quartz	10%
molybdenite, pyrite, chalcopyrite, apatite	Trace

The K-spar occurs in grains 3 mm. in diameter, and as irregularly distributed phenocrysts. Biotite crystals are euhedral and 2 mm. in diameter.

GEOLOGY (cont'd.)

Near the contact the rock is fine-grained and bleached (biotite absent) and more siliceous than the main body. This phase has been called aplite. Many short dykes of aplite cut the surrounding country rocks, and inclusions of country rock are seen in the granodiorite near the contact. A zone, up to 100 feet wide, in which many dykes and inclusions characterize the contact, has been termed the Contact Zone, and was mapped as Unit 5a.

Unit 5a is present along the base of the cliff east of McAdam Point for over 3000 feet, and is also seen at the north-east point of Lost Mountain. The attitude of this contact zone suggests that the granodiorite stock is also flat-topped and dips gently southwest. The western contact of this stock is steep dipping.

A dyke of aplite up to 5 feet wide strikes north-east along the creek west of the ice falls and is exposed for several hundred feet.

Unit 6 Fine-grained, pale green to dark greenish-grey lamprophyre dykes are found everywhere on the property. They are usually less than 10 feet wide, of sinuous outcrop pattern, and are discontinuous along strike. They occasionally have up to 10% hornblende phenocrysts, and appear to be a very fine-grained diorite.

GEOLOGY (cont'd.)

Sequence of Events

1. Deposition of older rocks. A thick sequence of thinly laminated to massive sandstone, greywacke, siltstone, chert, shale, limestone conglomerate, tuff and rhyolite were deposited.

2. Folding These rocks were folded along an axis striking and plunging northwest. The metamorphic rocks on the property occupy the east limb of an overturned anticline.

3. Erosion

4. Deposition of rhyolite and andesite

5. Folding The rhyolites are folded into open folds.

6. Intrusion of hornblende porphyry The stock and lesser bodies of hornblende porphyry were forcefully intruded into the folded rocks. The country rocks are distorted and broken near the contact, and in one place a 2-foot breccia zone marks the contact.

7. Shearing An early stage of shearing is indicated by mylonitized zones in the hornblende porphyry which have been sealed by later quartz veins.

GEOLOGY (cont'd.)

Sequence of events (cont'd.)

8. Intrusion of Granodiorite The stock of granodiorite was intruded forcefully into the folded rocks, accompanied by intense fracturing of the country rock.

9. Hydrothermal activity. Mineralized and barren quartz veins cut the granodiorite, sedimentary and volcanic rocks, and the hornblende porphyry. There appears to have been at least two stages of hydrothermal mineralization:

   a) quartz and pyrite
   b) fracturing and shearing
      molybdenite, pyrrhotite, chalcopyrite

10. Lamprophyre dykes

11. Shearing A late stage of shearing, accompanied by quartz and carbonate veining, appears to be the latest activity, and cuts all other rock types and structures.

GEOLOGY (cont'd.)

Economic Mineralization

Minerals of economic interest seen on the property include molybdenite, native gold, chalcopyrite, pyrite, arsenopyrite, pyrrhotite, spalerite, hematite and siderite.

Molybdenite demonstrates several modes of occurrence as follows:

1. As fine-grained disseminated grains in granodiorite and aplite.

2. As disseminated grains and aggregates in the walls of quartz veins cutting the granodiorite.

3. As disseminated grains in indistinct sericite - quartz - pyrite veins cutting the granodiorite.

4. As disseminated grains in quartz - K spar veins cutting the granodiorite.

5. As more or less continuous "strings" along the margins of quartz veins cutting granodiorite, aplite, hornblende porphyry, metamorphic and younger volcanic rocks.

6. As disseminated grains in the above veins.

7. As "paint" along dry fractures in all rocks.

GEOLOGY (cont'd.)

Economic Mineralization (cont'd.)

8. Disseminated in dry fractures.

9. Along slip faces in shear zones.

10. As "clots" of fine-grained material in altered rock.

A quartz vein stockwork is developed in the country rock near the contact of the granodiorite. Molybdenite mineralization is widespread in this stockwork within 100 feet of the contact. A less well-defined stockwork is present near the western contact of the hornblende porphyry stock.

Large shear zones containing higher-grade molybdenite mineralization have been exposed by trenching at MacAdam Point. Stringers of almost pure molybdenite up to 1/2 inch thick are present in one shear zone exposed in the number 2 trench.

Gold - Native gold was seen in veins in large blocks of talus between MacAdam Point and Base Camp. The veins were variably composed of quartz, carbonate, pyrrhotite, pyrite, chalcopyrite, and gold. The rock apparently belongs to Unit 1.

GEOLOGY (cont'.d)

Economic Mineralization (cont'd.)

Chalcopyrite - Was seen in massive sulphide lenses in the large shear zones, and as disseminated grains in various places on the property.

Pyrite - Pyrite mineralization is widespread and pervasive. All rock types contain pyrite as disseminated grains, in veins and fractures, and as large crystals up to 1 inch in diameter. In the large quartz-filled shear zones the pyrite appears to carry gold values.

Arsenopyrite - Was tentatively identified in a few places near the granodiorite contact.

Pyrrhotite - Appears to replace pyrite near the granodiorite contact.

Others - Massive sulphide veins and lenses occur irregularly in the shear zones in different places on the property. Pyrrhotite, sphalerite, chalcopyrite and pyrite appear to be the only minerals present.

Hematite and siderite were observed in veins.

GEOLOGY (cont'd.)

Hydrothermal Alteration

There does not appear to be any widespread or well-developed pattern of alteration on surface. The rocks surrounding the granodiorite stock have been silicified, and this silicification becomes very intense near the contact.

Also, toward the contact, the pyrite in the rocks of Unit 1 appears to be replaced by pyrrhotite.

Intense kaolinization and bleaching of the intrusive rock near the large shear zones at MacAdam Point appears to be the result of action by hydrothermal solutions.

Mineralized Float and Talus

Quartz monzonite and pink quartz-eye granite float, containing molybdenite and chalcopyrite were seen on Drunken Point, and along the moraine north of MacAdam Point.

Float containing molybdenite and chalcopyrite was seen on the medial moraine of Bromley Glacier, presumably coming from Lost Mountain.

Talus containing molybdenite was seen in the gorge of Goldslide Creek, along the west end of the ridge between the creek and MacAdam Point, and along the base of the cliffs on both sides of MacAdam Point.

GEOLOGY (cont'd.)

Shearing and Fracturing

Large shear zones, presumably related to the intrusive activity, and extending for great distances, occur throughout the property. They exhibit two patterns of distribution:

1. Northeast strike, presumably parallel to the axis of the inferred main intrusive body of which the hornblende porphyry and granodiorite stocks are part.

2. Radial pattern, radiating from a centre somewhere in the hill above Base Camp.

These shear zones are usually deeply weathered, but where exposed they are well-mineralized with some or all of pyrite, molybdenite and massive sulphides.

Intense fracturing of all rocks near intrusive contacts has resulted in broken, blocky ground, with the rock weathering into small blocks bounded on all sides by fracture faces mineralized with pyrite and, near the contacts, with molybdenite and other sulphides.

SUMMARY

A series of metavolcanic and metasedimentary rocks have been folded, eroded and unconformably overlain by salic volcanic rocks. Intrusions of hornblende porphyry and granodiorite have resulted in shattering, shearing, and hydrothermal mineralization of the older rocks.

Molybdenite mineralization is controlled by the contact of the intrusive rocks, and by the fracture system. Molybdenite is always found within a few hundred feet of the intrusive contact, and usually within 100 feet.

CONCLUSIONS

The most favourable area for further exploration is an arcuate band extending from the ice fall to below Goldslide Creek. This band is about one mile wide, with an upper limit extending approximately from Camp 1 to the western portion of the south wall of the cirque, to Camp 2. The lower limit extends from Lost Mountain to the lower waterfall on Goldslide Creek.

The widespread occurrence of molybdenite mineralization the geological setting, suggesting a shallow intrusion blanketed by a quartz vein stockwork, and the fact that the mineralized shears at MacAdam Point widen downward, all suggest the possibility of an economic concentration at depth, and further exploration is warranted to test this possibility.

APPENDIX "B"

GEOCHEMICAL SURVEY - W.F. Bondar

INTRODUCTION

This summary report has been written for Erin Explorations Ltd. at the request of Cordilleran Exploration Corporation Ltd., Consulting Geologists, Vancouver, British Columbia.

It summarizes the methods and procedures used in carrying out a geochemical survey on the MoS_2 Claim Group in the Stewart Area of British Columbia. Results of the survey are discussed and recommendations for further work are offered.

Purpose of the survey was to use geochemistry as a preliminary guide to delimit the more favourable areas of the property for further exploration and/or development. This report is intended to supplement and accompany a detailed geological evaluation of the property as carried out by Cordilleran Exploration Corporation Ltd.

DESCRIPTION OF PROPERTY

The MoS_2 Claim Group of Erin Explorations Ltd. is located approximately 12 miles southeast of Stewart, British Columbia. It is bounded to west and south, and partly overlain by Bromley Glacier, along the western portion of the Cambria Ice Field.

The area covered by the claims has undergone, and is presently being subjected to the effects of active glaciation. As a result, soil cover is absent over much of the property and,where present, soil development is very immature.

Elevations on the property range from approximately 3200 feet A.S.L. at the edge of Bromley Glacier to 6000 feet at the top of Red Mountain. With the exception of the somewhat rounded top of Red Mountain, slopes are very steep to precipitous over most of the property.

In the area sampled, vegetation is absent except for a narrow band of stunted evergreens along the base of Red Mountain, on the first "step" above Base Camp. This is the only portion of the area sampled having sufficient soil cover to support tree growth. The soils here are organic, very immature mountain soils derived from the talus above.

DESCRIPTION OF PROPERTY (cont'd.)

At the time of sampling, (June 17 - June 26 incl.) snow of up to 6 feet deep in places, covered much of the area in the vicinity of Camps 1 and 2 and prevented sampling of the northern part of the property.

Red Mountain, appropriately named, is composed mainly of acid volcanic rocks, mainly rhyolites that have been sheared and severely altered in places. Pyrite is found disseminated and in fractures throughout the rhyolite and has given rise to the pronounced gossan covering the mountains. Near the mouth of the cirque, below Camp 2, the volcanics are intruded by a hornblende porphyry and approximately 2400 feet northeast of the Base Camp an intrusive of granodiorite composition occurs at the edge of Bromley Glacier. Both intrusives are intruded into the rhyolites and their relation to each other is not clear. They may be separate phases of the same intrusive or they may be separate intrusives. Both, however, have molybdenite mineralization associated with them, with minor sphalerite and chalcopyrite. Pyrite, again, is common throughout. Diabase dyke(s) occur in the area just below Camp 2. These dyke(s) cut both the volcanics and the intrusives, and trend NW-SE. Manganese and iron oxides and hydroxides have stained most of the volcanics but this feature is most pronounced on the south side of the cirque area and leading around from this area to Camp 1 at an elevation of 4600 feet A.S.L. up to the top.

SAMPLING PROCEDURES

Because of the nature of the property, a conventional program of soil sampling could not be used to delimit favourable areas. Also, the restricted surface extent of the property in relation to the drainage patterns, obviated the use of stream sediment sampling to broadly define target areas while the use of chip sampling methods to geochemically map rocks of the property was not possible because of the precipitous nature of the slopes.

It was then decided that a program involving the sampling of talus fines, soils where present, dry gulleys and stream sediments could effectively be used to delimit the more favourable areas. A total of 263 samples consisting of 224 talus samples, 33 soil samples, 4 dry gulley samples and 2 stream sediment samples were collected. Talus samples were collected, where possible, along topographic contours or along the lower edges of talus slopes at the base of the steeper mountain sides. Soils were collected along a topographic contour along the flatter "step" above the steep slope above Base Camp, but below the first steep pitch to the top of Red Mountain.

Sample locations were plotted on 1" = 400 feet topographic maps using altimeter readings with

SAMPLING PROCEDURES (con't.)

"tie-ins" to main features for positioning and control. Separate symbols were used to denote the various sample types and indicated on the geochemical maps (in pocket). Data recorded at the time of collection included: sample number, location, drainage slope, soil or sample type, horizon and depth where applicable, colour, texture, and any remarks pertaining to local geology, observed mineralization, possible contamination from moraine material, etc.

ANALYTICAL PROCEDURES

All samples were first dried in infra-red ovens and sieved to -80 mesh. The -80 mesh fraction was used for all determinations (Mo, Cu, Zn.).

Copper and zinc were analyzed by atomic absorption methods after a hot HCL-HNO_3 acid digestion was used to extract the metal. Molybdenum was determined colorimetrically after using a pyrosulphate fusion to extract the metal.

These so-called "total" extraction methods were selected and used on the basis of the expected mode of distribution and dispersion of the metals sought.

EFFECTS OF ENVIRONMENT ON GEOCHEMICAL DISPERSION

Dispersion of molybdenum, copper and zinc on the MoS_2 property is affected by both physical (mechanical) and chemical processes. Subsequent distribution of these elements is controlled by the topography of the area and results in probable concentration of these elements in topographic lows and the base of slopes. As a result, the contouring of iso-values of Mo, Cu and Zn will not be effective due to the efficient and complete dispersion of the metals and their subsequent concentration as indicated above, as well as the very nature of the sampling pattern itself.

Effective chemical dispersion results from the widespread occurrence of pyrite, creating an acid environment in the zone of oxidation. In such an acid environment, leaching of sulphide mineralization by surface waters of copper, zinc and molybdenum sulphides results in downslope migration of these elements and their subsequent deposition by coprecipitation and/or sorption onto the abundant iron and manganese oxides and hydroxides. The dispersion of these sorption products is then further enhanced and affected by the steep slopes and mechanical weathering processes which further aid dispersion. The final result is the accumulation and concentration of Mo, Cu and Zn by iron and manganese oxides and hydroxides in the topographic lows.

EFFECTS OF ENVIRONMENT ON GEOCHEMICAL DISPERSION (cont'd.)

It was originally thought that glacial activity (as outlined by maps) would affect the results at the lower elevations by means of contamination from the transported moraine fines and mineralized boulders present in this moraine material. This has not proven to be the case.

RESULTS OF GEOCHEMICAL SURVEY

The results of the geochemical survey are shown on the three maps in the pocket of this report (figures 1-Cu, 1-Mo, 1-Sn.). Sample location, type and metal concentration is indicated for each element tested. Because of the limited number of clay, soil, gulley and stream sediment samples collected, in relation to the number of talus samples, no statistical analysis or breakdown into their various anomalous categories was attempted, but rather they were placed in the same category as the talus samples for purposes of presentation.

The metal concentration for each element is broken down into four categories, presented graphically as coloured dots of green, brown, blue and red. These may be considered as corresponding to negative, weakly positive, strongly positive and anomalous categories.

Molybdenum

Two areas of interest have been outlined by the molybdenum results. One, the anomalous areas to the south is in the vicinity of the known main molybdenum showing. Of greater interest however, is the larger area indicated to the north, just west of Camp 2. This anomaly coincides with the hornblende porphyry intrusive in that area. One molybdenum occurrence was noted to the north,

RESULTS OF GEOCHEMICAL SURVEY (cont'd.)

up slope from the anomaly and a number of lesser occurrences of molybdenite were observed in the area immediately west of Camp 2. Also to be noted is that this anomalous area to the north can be correlated with the main mineralized shear zone passing through the main Mo-showing to the south.

In general, the Mo concentration of samples from the anomaly to the north is greater than the Mo concentrations of samples from the area in the vicinity of the main showing. At the same time, molybdenite mineralization is less obvious in the area to the north than from the known main showing. This would indicate, and is supported by observations in the area, that much, if not most, of the molybdenite mineralization has been thoroughly leached from the surface exposures of the pyritic rocks adjacent to the intrusive-volcanic contact and within the intrusive itself. This phenomenon then, would suggest the possibility of a stronger mineralized source than is readily apparent from the present indications on the leached, impoverished surface exposures in the vicinity of the hornblende porphyry intrusive.

Copper

The copper results show a good correlation with the molybdenum results, although not quite so

RESULTS OF GEOCHEMICAL SURVEY (cont'd.)

pronounced. Positive to anomalous results were obtained near all known chalcopyrite occurrences. The less pronounced copper anomalies (in comparison to Mo) probably results from its greater mobility in the environment and subsequent removal. A number of weakly to strongly positive copper results extending to the southeast of Camp 2 and coinciding with weakly to strongly positive molybdenum values indicate that coverage should be extended northeastwards from the present area of sampling.

Little or no chalcopyrite was actually observed in the anomalous area west of Camp 2. The anomalous copper values here probably reflect high trace levels of copper in the pyrite associated with the molybdenite mineralization rather than the possibility of economic copper sulphides.

Zinc

The zinc results cannot be considered diagnostic and at best show only an approximate relation to the Cu and Mo results. Because of the high mobility of zinc, coupled with the acid environment present in the zone of oxidized pyritic rocks, it is probable that most of the zinc has been thoroughly removed. Weakly positive anomalous zinc values do coincide quite well with the weakly to strongly positive Cu and Mo results to the northeast of Camp 2, further directing attention to this part of the area.

CONCLUSIONS

The overall purpose of the geochemical survey appears to have been satisfied and the unconventional sampling methods used appear to have been effective in confirming and detecting the area of known mineralization and to directing attention to a heretofore untested new area in the vicinity of Camp 2.

The anomalous molybdenum concentrations in the vicinity of Camp 2 appear to be related to molybdenite mineralization associated with a hornblende porphyry in that area. Allowing for the concentration effects noted earlier, the magnitude of the Mo values suggest more extensive molybdenite mineralization than is readily apparent at present.

APPENDIX "C"

STATEMENT OF EXPENDITURES

APPENDIX "C"

STATEMENT OF ESTIMATED EXPENDITURES

GEOLOGICAL AND GEOCHEMICAL INVESTIGATIONS - 1967

ERIN EXPLORATIONS LTD.

MoS_2 PROPERTY

1.	**Geological Mapping (Cordilleran Exploration)**	
	Field Crew (Geologist & Assistant) 27 days @ $85	$ 2,295.00
	Supervision Engineer 2½ days @ $100	250.00
	Travelling	300.00
	Miscellaneous expenses (printing, drafting, stenography, etc.)	200.00
		$ 3,045.00
2.	**Geochemical Survey** (Bondar-Clegg & Co. Ltd.)	
	Field Crew (Fieldman & Assistant) 20 days @ $50	1,000.00
	Supervisor Geochemist 2 days @ $100	200.00
	Analysis 260 samples @ $2.00	520.00
	Travelling	300.00
	Miscellaneous expenses (drafting, printing, stenography, etc.)	150.00
		$ 2,170.00
3.	**Topographic Mapping (McElhanney Surveying)**	
	Air photographs, enlargements and 400 scale contour map	$ 900.00
4.	**Helicopter Support**	
	(Hiller SL4) 20 hrs. @ $145	$ 2,900.00
5.	**Miscellaneous Expenses**	
	Manager 2 mo. @ $800	$ 1,600.00
	General labour 2 mo. @ $500	1,000.00
	Camp equipment	1,500.00
	Food supplies	1,000.00
		$ 5,100.00
	Total Expenditures: - - -	$14,115.00

~~$12,000~~ $8,000 as

Apply ~~$12,000~~ to cover assessment work requirements on 40 claims for ~~three~~ two years.

Recorded at Prince Rupert this
16 day of MAY 1968
Receipt No. 20143 E $ 401.00

H. W. HARDING
MINING RECORDER

RECEIVED
MAY 16 1968
M.R. # 20143 $
VANCOUVER, B.C.

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF MINES
AND PETROLEUM RESOURCES

MINERAL ACT
FORM B

Affidavit on Application for Certificate of Work

I, ROBERT HUTCHINGS (Name.) Agent for ERIN EXPLORATION LTD. (N.P.L.) (Name.)

604 – 1445 W. 13th Avenue (Address.)
Vancouver, B.C.

846 W. Hastings Street (Address.)
Vancouver 1, B.C.

Free Miner's Certificate No. 64604

Free Miner's Certificate No. 64603

Date issued MAY 30, 1967

Date issued MAY 30, 1967

make oath and say:—

I have done, or caused to be done, work on the MOS2 51 to 66, 68 to 72, 74 to 87, 89, 91, 93 to 94, 96 Mineral Claim(s)

Record No.(s) 26555 to 26570, 26572 to 26576, 26578 to 26591, 26593, 26595, 26597, to 26598, 26600.

situate at 11 miles East of Stewart B.C.

in the SKEENA Mining Division, to the value of at least $8,000.00 ~~one hundred~~ dollars, since the 1st day of JUNE, 1967

The following is a detailed statement of such work:—
(Set out full particulars of the work done in the twelve months in which such work is required to be done.)

Geological mapping	$ 3,045.00
Geochemical sampling & analysis	2,170.00
Topographic mapping	900.00
Helicopter support	2,900.00
Miscellaneous expenses	5,100.00
TOTAL	$14,115.00

NOTES: (1) Apply $8,000.00 to cover the above 40 claims/or 2 years

(2) Report detailing and describing this work in accordance to Chapter 244 of the "Mineral Act" will be submitted

That I have not and will not use the work declared herein in any way for the purposes of obtaining tax exemption on a Crown-granted mineral claim under the terms of the *Taxation Act*.

SWORN and subscribed to at VANCOUVER

this 16th day of MAY

19 68, before me—

* [illegible]

[illegible]

* This affidavit may be taken by a person empowered to take affidavits by the *Evidence Act* of British Columbia.

C/W 45347
To
45426

APPENDIX "D"

AFFIDAVIT IN SUPPORT OF

STATEMENT OF EXPENDITURES

CANADA
Province of British Columbia
TO WIT:

IN THE MATTER OF the statement of Expenditures for geological mapping of the Hail Mineral Claims in the Skeena Mining Division.

I, ALBERT F. REEVE, Geological Engineer, of 400, 837 West Hastings Street, in the City of Vancouver, in the Province of British Columbia, DO SOLEMNLY DECLARE:

1. THAT the preliminary geological and geochemical investigation of the MoS_2 groups was carried out under my direction.

2. THAT the Statement of Expenditures set out in Appendix "C" of my report "Geological and Geochemical Investigation of the MoS_2 Claim Group", dated June 1 to July 30, 1967, truly represents the amounts expended on geological mapping of the said claim group.

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 the City of Vancouver, in the Province of British Columbia, this 10th day of October, A.D. 1967.

A Commissioner for taking Affidavits for British Columbia.

APPENDIX "E"

AUTHOR'S CERTIFICATE

CERTIFICATE

I, ALBERT F. REEVE, of Vancouver, B.C.,

hereby certify that:

1. I am a geological engineer residing at #4, 2475 West 1st 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.

5. I supervised geological and geochemical investigations of the MoS_2 claim group which are described herein.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. F. REEVE

Signed: _____

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

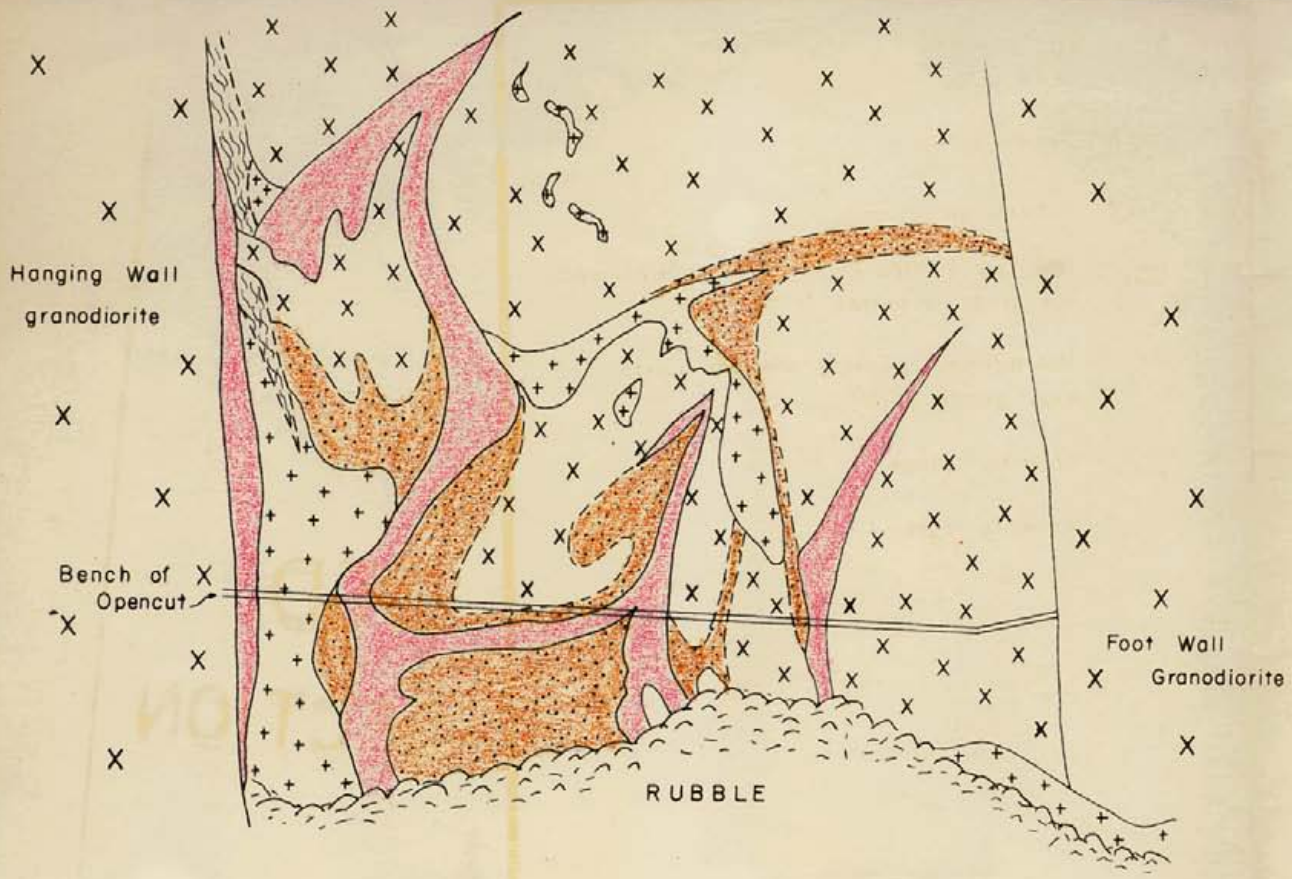
November, 1967
Vancouver, B.C.

APPENDIX "F"

M A P S

Appendix "F"

Figs. 1 & 2.



LEGEND:

- Granodiorite
- Altered gd.
- Intensely altered rock - bleached & sheared - low grade or barren in MoS_2
- Molybdenite bearing sheared quartz - high grade in MoS_2
- Chloritic gouge
- Andesite dyke

ERIN EXPLORATIONS LTD.

GEOLOGY SKETCH OF TRENCH No. 2
LOOKING NORTH AT CLIFF FACE
(HURLEY RIVER, 1965)

MoS_2 MINERAL CLAIMS

SKEENA MINING DIVISION
BRITISH COLUMBIA

SCALE: 1" = 6' approx.

GEOLOGY BY: K. L. DAUGHTRY
CORDILLERAN EXPLORATION CORP. LTD.
JULY 15, 1967

PROFESSIONAL ENGINEER
A. F. REEVE
BRITISH COLUMBIA

TO ACCOMPANY A REPORT BY
A. F. REEVE P. Eng. DATED JULY 30, 1967.

FIGURE I.

ERIN EXPLORATIONS LTD.

CLAIM LOCATION MAP

TRANSPARENT OVERLAY FOR GEOCHEMICAL AND GEOLOGICAL MAPS

SKEENA MINING DIVISION
BRITISH COLUMBIA

400 0 400 800 1200
SCALE IN FEET

CORDILLERAN ENGINEERING LTD.
400-837 W. HASTINGS S.E., VANCOUVER 1, B. C.
JULY 18, 1968.

LEGEND:

- 6 — LAMPROPHYRE DYKES
- 5 — GRANODIORITE 5a CONTACT PHASE
- 4 — HORNBLENDE PORPHYRY
- 3 — ANDESITIC ROCK
- 2 — WHITE RHYOLITE, MINOR ANDESITE
- 1 — MAINLY METASEDIMENTS, MINOR VOLCANIC ROCKS

- DIP AND STRIKE OF BEDDING
- DRAG FOLD SHOWING DIRECTION OF PLUNGE
- SHEAR ZONE
- TRACE OF BEDDING - FROM AIR PHOTO
- MAJOR LINEAMENT - PROBABLY SHEAR ZONE - FROM AIR PHOTOS
- MORAINE
- TALUS
- X MINERALIZED FLOAT (Mo) Cp - CHALCOPYRITE Au - GOLD
- MoS2 IN PLACE
- LIMIT OF RECENT VALLEY GLACIATION
- PHOTO POINT
- GEOLOGICAL CONTACT DEFINED
- GEOLOGICAL CONTACT APPROXIMATE
- GEOLOGICAL CONTACT ASSUMED
- BLANK AREAS SNOW COVERED

RED MOUNTAIN

TREE LINE

CAMP 1

CAMP 2

CAMP 3

BASE CAMP

Mo

Cp

MoS2 - bearing float abundant in this area

Porphyritic Quartz Monzonite float bearing Mo and Cp abundant here

MoS2 - bearing float and talus abundant in this area

Mc ADAM POINT

LOST MT.

GLACIER

BROMLEY GLACIER

ICE

A

B

Section A-B along line through photo points 33 and 7

Looking S.E

Scale: Hor. & Vert. 1 inch = 400 feet

TOPOGRAPHY COMPILATION NOTE

Compiled in April 1967 by McElhanney Surveying and Engineering Ltd. from aerial photography flown in April, 1965 at an approximate scale of 1 inch = 2500 feet
Job No. 5142

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. F. REEVE

ERIN EXPLORATIONS LTD.

GEOLOGICAL PLAN & CROSS-SECTION

Mo S2 MINERAL CLAIMS

SKEENA MINING DIVISION
BRITISH COLUMBIA

400 0 400 800 1200 FEET

GEOLOGY BY: K.L. DAUGHTRY
CORDILLERAN EXPLORATION CORP. LTD.
JULY 15, 1967

Fig 2

Appendix "F"

Fig. 3

ASTRONOMIC

LEGEND

○ T-64 (74) — PPM / SAMPLE No.

○ T TALUS SAMPLE

□ SL SOIL SAMPLE

△ DG DRY GULLEY SAMPLE

▽ SS STREAM SEDIMENT SAMPLE

X Mo MINERAL OCCURENCE (MOLYBDENUM)

EDGE OF BROMLEY GLACIER

APPROXIMATE LIMIT OF GLACIAL INFLUENCE

◎ CAMP

MOLYBDENUM CONTENT OF GEOCHEMICAL SAMPLES

- 0 to 30 PPM
- 31 to 60 PPM
- 61 to 100 PPM
- GREATER THAN 100 PPM

ANALYSIS BY BONDAR – CLEGG & COMPANY LTD.
NORTH VANCOUVER , B.C.

ALL SAMPLES DRIED AND SIEVED TO -80 MESH

COPPER AND ZINC WERE DETERMINED DIRECTLY BY ATOMIC ABSORPTION METHODS AFTER A HOT HNO_3 - HCl EXTRACTION.

MOLYBDENUM WAS DETERMINED COLORIMETRICALLY AFTER USING A PYROSULPHATE FUSION TO EXTRACT THE METAL.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — A. F. REEVE

BROMLEY GLACIER

BASE CAMP

CAMP 2

CAMP 1

LAKE

APPROXIMATE LIMIT OF GLACIAL INFLUENCE

EDGE OF GLACIAL ICE

X Mo SHOWING

X Zn Cu

FIGURE 1 - Mo

ERIN EXPLORATIONS LTD.

MOLYDENUM CONTENT OF GEOCHEMICAL SAMPLES

MoS_2 CLAIM GROUP

BROMLEY GLACIER – STEWART AREA

BRITISH COLUMBIA

SCALE: 1" = 400'

BONDAR – CLEGG & COMPANY LTD.
JUNE , 1967

Appendix "F"

Fig. 4

ASTRONOMIC

BROMLEY GLACIER

LEGEND

- T-64 (74) — PPM / SAMPLE No.
- T — TALUS SAMPLE
- SL — SOIL SAMPLE
- DG — DRY GULLEY SAMPLE
- SS — STREAM SEDIMENT SAMPLE
- X Mo — MINERAL OCCURENCE (MOLYBDENUM)
- EDGE OF BROMLEY GLACIER
- APPROXIMATE LIMIT OF GLACIAL INFLUENCE
- CAMP

COPPER CONTENT OF GEOCHEMICAL SAMPLES

- 0 to 200 PPM
- 201 to 400 PPM
- 401 to 600 PPM
- GREATER THAN 600 PPM

ANALYSIS BY BONDAR – CLEGG & COMPANY LTD.
NORTH VANCOUVER , B.C.

ALL SAMPLES DRIED AND SIEVED TO -80 MESH

COPPER AND ZINC WERE DETERMINED DIRECTLY BY ATOMIC ABSORPTION METHODS AFTER A HOT HNO_3 - HCl EXTRACTION.

MOLYBDENUM WAS DETERMINED COLORIMETRICALLY AFTER USING A PYROSULPHATE FUSION TO EXTRACT THE METAL.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — A. F. REEVE

BASE CAMP

CAMP 1

CAMP 2

LAKE

APPROXIMATE LIMIT OF GLACIAL INFLUENCE

EDGE OF GLACIAL ICE

FIGURE 1 - Cu

ERIN EXPLORATIONS LTD.

COPPER CONTENT OF GEOCHEMICAL SAMPLES

MoS_2 CLAIM GROUP

BROMLEY GLACIER – STEWART AREA
BRITISH COLUMBIA

SCALE : 1" = 400'

BONDAR – CLEGG & COMPANY LTD.
JUNE , 1967

Appendix "F"

Fig. 5

ASTRONOMIC

LEGEND

○ T-64(74) — PPM / SAMPLE No.

○ T TALUS SAMPLE

□ SL SOIL SAMPLE

△ DG DRY GULLEY SAMPLE

▽ SS STREAM SEDIMENT SAMPLE

X Mo MINERAL OCCURENCE (MOLYBDENUM)

EDGE OF BROMLEY GLACIER

APPROXIMATE LIMIT OF GLACIAL INFLUENCE

◎ CAMP

ZINC CONTENT OF GEOCHEMICAL SAMPLES

- 0 to 300 PPM
- 301 to 600 PPM
- 601 to 900 PPM
- GREATER THAN 900 PPM

ANALYSIS BY BONDAR – CLEGG & COMPANY LTD.
NORTH VANCOUVER , B.C.

ALL SAMPLES DRIED AND SIEVED TO -80 MESH

COPPER AND ZINC WERE DETERMINED DIRECTLY BY ATOMIC ABSORPTION METHODS AFTER A HOT HNO_3 - HCl EXTRACTION.

MOLYBDENUM WAS DETERMINED COLORIMETRICALLY AFTER USING A PYROSULPHATE FUSION TO EXTRACT THE METAL.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. F. REEVE

BROMLEY GLACIER

BASE CAMP

CAMP 1

CAMP 2

LAKE

EDGE OF GLACIAL ICE

APPROXIMATE LIMIT OF GLACIAL INFLUENCE

FIGURE 1 - Zn

ERIN EXPLORATIONS LTD.

ZINC CONTENT OF GEOCHEMICAL SAMPLES

MoS_2 CLAIM GROUP

BROMLEY GLACIER – STEWART AREA
BRITISH COLUMBIA

SCALE: 1" = 400'

BONDAR – CLEGG & COMPANY LTD.
JUNE , 1967