GEOLOGICAL REPORT

- on the -

NOEL PROPERTY

LILLOOET MINING DIVISION,
BRITISH COLUMBIA

- for -

Mr. Nathan Saunders,
#6 - 320 Powers Road,
KAMLOOPS, B. C.

COVERING: NOEL #1 (20 UNITS); NOEL #2 (20 UNITS)

WORK PERFORMED: July 15, 1980 to December 5, 1980

LOCATION:
(1). 50°40' N; 122°54' W
(2). NTS MAP 92J/10W
(3). 13 km. SSW of Bralorne, B. C.

Prepared By

J. M. Dawson, P. Eng.
and

October 27, 1980
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INTRODUCTION

This report describes an investigation of the Noel claims which included prospecting, geological mapping and sampling.

The results of this investigation are detailed on maps accompanying this report.

SUMMARY AND CONCLUSIONS

(1). Volcanogenic stratiform zinc - lead - copper - gold - silver mineralization occurs over a large area on the Noel property.

(2). Exploration in the past has been limited to trenching and a small amount of diamond drilling in 1941 and earlier.

(3). Narrow layers of high grade mineralization can be traced for significant distances along strike and lower grade mineralization is exposed over widths of up to 30 meters.

(4). The host rocks are tightly folded at least locally and perhaps displaced by faulting. The understanding of the structural control of mineralized zones will be essential for further exploration.

(5). The setting is very similar to the setting of many volcanogenic, massive sulphide deposits and an exploration programme to fully explore the property for this type of deposit is certainly warranted.
PROPERTY

The property consists of two contiguous 20 unit native claims as follows:

<table>
<thead>
<tr>
<th>Claim Name</th>
<th>Record No.</th>
<th>Record Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noel # 1</td>
<td>1187</td>
<td>January 23, 1980</td>
</tr>
<tr>
<td>Noel # 2</td>
<td>1491</td>
<td>August 1, 1980</td>
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</tbody>
</table>

LOCATION AND ACCESS

The property is located in southwestern British Columbia, about 13 km south-southwest of the village of Bralorne and about 70 km west of the town of lillooet. Present access is by helicopter although the Hurley River road is located only 4 km northwest of the western edge of the claim block.

PHYSIOGRAPHY AND VEGETATION

The claims are centered about a divide between the headwaters of Noel Creek and Ault Creek in steep, fairly rugged terrain. Elevations vary from 7600 to 8000 feet a.s.l. along the ridgetops down to between 5500 to 6000 feet a.s.l. in the upper reaches of the valleys of Noel and Ault Creeks.

The bulk of the property is above treeline. The only significant vegetation is an area of scrubby alpine spruce along the west facing slope of Ault Creek.
PREVIOUS WORK:

The first record of activity on what is now the Noel claims was in the mid 1930's, when mineralization was apparently first discovered. In 1941, Bralorne Mines Ltd. held the Ault Group under option and completed 1110 feet of diamond drilling. Cohen (1962) mentions reports of two holes being drilled near Ault Creek in 1941. A number of hand trenches, blasted in bedrock were presumably put in during this earliest phase of work.

In 1962 the ground was held by Hurley River Mines Ltd. and was examined by Harvey H. Cohen on behalf of Amalgamated Resources Ltd. In his subsequent report Mr. Cohen recommended a programme of geological mapping and diamond drilling, however, it does not appear that this work was ever done.

The current Noel #1 & #2 claims were staked on behalf of Mr. W. A. Cook of Lillooet in 1980.

GEOLOGY

The property is underlain by Upper Triassic metavolcanics and metasediments of the Hurley Formation surrounded by granitic intrusives of the Coast Crystalline Complex.

Rocks of the Hurley Formation consist predominantly of quartz-sericite schist, phyllite and chert. These rocks grade into one another with increasing amounts of sericite or silica and are sometimes slightly to moderately calcareous. Where unaltered they are usually fine grained and light brown to gray in colour. However in most of the outcrops shown on figure 222-20 they are stained to various shades of light yellow and dark brown because of the high pyrite content and ubiquitous limonite staining.
Minor layers of chlorite schist and quartz–chlorite–sericite schist are present, particularly towards the southwest contact with the granitic rocks where the whole sequence becomes somewhat hornfelsed.

In several outcrops near the more massive sulphide horizons there are layers of what appears to be foliated, felsic tuff or agglomerate (mill rock). It is generally found on the northeast side (hanging wall) of the sulphide horizons (see figure 222-20).

The foliation of these rocks trends approximately northwest with dips vertical to steeply northeast. This is also the attitude of the main sulphide layers and conformable bands of foliated agglomerate or mill rock. However, locally there is spectacular small scale isoclinal folding in areas of thin bedded chert and quartz–sericite schist. It is probably that much of this small scale folding is due to penecontemporaneous deformation.

MINERALIZATION

Pyrite is widely distributed as disseminated grains in the rocks of the Hurley Formation on the subject property and accounts for the prominent gossan associated with this roof pendant. However it is particularly abundant within a northwest trending zone about 200 meters wide paralleling a northwest flowing tributary of Ault Creek. Here it occurs as discrete laminae, layers and bands in sericitic and chloritic phyllites believed to be metamorphosed tuffs; as disseminated grains and blebs in both phyllites and cherty beds and as heavy concentrations of sulphides in tuffaceous (agglomeratic) and cherty horizons.

Locally chalcopyrite, sphalerite and galena may occur separately or in various combination with bands and stringers of pyrite. Generally it seems that chalcopyrite favours sericitic horizons whereas galena and sphalerite are more common in cherty bands.
Usually the base metal sulphides occur in very thin layers, a fraction of a centimeter to about 2 centimeters wide, however there are several layers which vary from about 5 cm to 50 cm wide.

In general these layers or laminae cannot be traced for more than a few meters, however the zone itself can be traced for about 600 meters along upper Ault Creek. Along strike it is overburden covered to the northwest and disappears under an icefield to the southeast (see figure 222-20). At least 20 occurrences of base metal mineralization are found over this strike length in old trenches and ice scoured natural exposures. The width of the mineralized zones varies from a few meters to over 30 meters and they sometimes occur en échelon to one another. The overall grade of mineralization in these zones is low however individual layers of foliated tuff and chert may contain high grade concentrations of galena, sphalerite and chalcopyrite. At least one of these layers can be traced intermittently for about 300 meters along strike and has been tested by a number of pits and at least one diamond drill hole. This layer varies from 10 to 50 centimeters wide and usually consists of a band of massive to semi-massive pyrite with local disseminated to massive concentrations of galena and sphalerite and lesser chalcopyrite.

Microscopic examination of a sample of high grade mineralization from a siliceous and calcareous, tuffaceous band showed the texture to be an interlocking mosaic of galena, sphalerite, pyrite, chalcopyrite, quartz, calcite and feldspar, with a sulphide content of about 50%. Heavier concentrations of sulphide minerals occur in crude bands up to 2 cm wide, and a distinct lamina of a very fine grained, black, metallic mineral, presumably galena was noted. Subrounded fragments of quartz up to 8 mm. in diameter were also noted.

Cohen (1962) collected four chip samples across pyrite-chalcopyrite mineralization exposed in trenches at the northwest end of the zone (see figure 222-20) in the area of the old Bralorne drilling. These samples assayed as follows:
One of the authors (K. L. Daughtry) collected two chip samples, representative of high grade mineralization in narrow, tightly folded cherty layers, from an outcrop at least 200 meters southeast of the above area (see figure 222-20). The assays were as follows:

<table>
<thead>
<tr>
<th>Width</th>
<th>Au (oz/t)</th>
<th>Ag (oz/t)</th>
<th>Cu (oz/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6m (2 ft)</td>
<td>0.01</td>
<td>0.20</td>
<td>0.03</td>
</tr>
<tr>
<td>2.1m (7 ft)</td>
<td>0.01</td>
<td>0.20</td>
<td>0.10</td>
</tr>
<tr>
<td>0.6m (2 ft)</td>
<td>0.015</td>
<td>0.35</td>
<td>0.35</td>
</tr>
<tr>
<td>3.0m (10 ft)</td>
<td>0.05</td>
<td>0.55</td>
<td>1.45</td>
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</table>

The first sample was from the apex of a tight fold in a cherty band with sphalerite, galena, pyrite and chalcopyrite. The second sample was from a 10 cm. wide siliceous band with heavy galena mineralization.

EXPLORATION POTENTIAL

The setting of this mineralization strongly resembles many volcanogenic, stratiform and strata-bound polymetallic deposits and as such it has the potential for the development of local massive sulphide pods over short distances along strike and down dip.

This mineralization is largely untested along strike and down dip and has certainly not been investigated by modern geophysical methods.
There is excellent potential for the discovery of typical deposits of volcanogenic massive and disseminated sulphides and further work is certainly warranted.
APPENDIX A

PERSONNEL
## PERSONNEL

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Dates and Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Cook</td>
<td>Prospector</td>
<td>July 19, 1980 (1 day)</td>
</tr>
<tr>
<td>M. Dawson</td>
<td>Prospector</td>
<td>July 21, 1980 (1 day)</td>
</tr>
<tr>
<td>R. Henderson</td>
<td>Prospector</td>
<td>July 21, 1980 (1 day)</td>
</tr>
</tbody>
</table>
APPENDIX B

STATEMENT OF EXPENDITURES
COST STATEMENT

1. PERSONNEL:

J. M. Dawson, P. Eng.,
   2 days @ $250.00/day $500.00
K. L. Daughtry,
   1.9 days @ $250.00/day 475.00
E. Cook,
   1 day @ $115.00/day 115.00
M. Dawson,
   1 day @ $115.00/day 115.00
R. Henderson,
   1 day @ $115.00/day 115.00

$1,320.00

2. EXPENSES AND DISBURSEMENTS:

   (a). Helicopter Charter;
        3.6 hrs. @ $350.00/hr. $1,260.00
   (b). Truck Rental;
        1 day @ $30.00/day  $30.00
        330 mi. @ 0.30/mi.  99.00
        129.00
   (c). Assays; 37.00
   (d). Drafting  60.00
   (e). Secretarial, xerox, stationery,
        telephone, etc.  100.10

1,586.10

TOTAL HEREIN $2,906.10
APPENDIX C

REFERENCES
REFERENCES

British Columbia (1941): Annual Report of the Minister of Mines - 1941 - P58


STATEMENT OF QUALIFICATIONS

I, James M. Dawson of Kamloops, British Columbia do hereby certify that:

(1). I am a geologist employed by Kerr, Dawson and Associates Ltd. of Suite 206, 310 Nicola Street, Kamloops, B. C.

(2). I am a graduate of the Memorial University of Newfoundland - B.Sc. (1960) M.Sc. (1963), a fellow of the Geological Association of Canada and a member of the Association of Professional Engineers of B.C. I have practised my profession for 18 years.

(3). I am the co-author of this report which is based on prospecting, mapping and sampling of the subject property by myself and by others under my supervision.

November 2, 1981
Kamloops, B. C.
STATEMENT OF QUALIFICATIONS

I, KENNETH L. DAUGHTRY, of R.R.#4, Vernon, British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geologist in mineral exploration.

2. I have been practising my profession for fifteen years in Canada, the United States, and Ireland.

3. I am a graduate of Carleton University, Ottawa, with a Bachelor of Science degree in Geology and Chemistry.

4. I am a member of the Association of Professional Engineers of British Columbia, Ontario, and Yukon Territory, and a Fellow on the Geological Association of Canada.

5. This report is based upon a personal examination of the property on September 22, 1980, and upon a review of available data from private files and publications.

6. I have no interest, direct or indirect, in the NOEL property, nor do I expect to receive any interest at any time.

7. Permission is hereby granted to Mr. Nathan Saunders to use this report to satisfy requirements of regulatory bodies.

Vernon, B.C.
October 27, 1980


K. L. Daughtry & Associates Ltd.

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APPENDIX E

MAPS