

Welland

800282

82 F/GW

WELAND MINING LIMITED

HOLE 1 - 63°

- 0 - 58 Brecciated silicified chert with skarn minerals and granodiorite fragments - well mineralized with chalcopyrite, pyrrhotite, pyrite, molybdenite and pentlandite. Some potash feldspar. Average = 0.325 Cu, 0.089 MoS₂.
- 58 - 83 Limy brecciated chert with some pyrite and chalcopyrite. ✓
79 - 88 assayed = .04 Cu, .05 MoS₂.
- 88 - 118 Limy brecciated chert skarn sections with some sulphides. ✓
- 118 - 127 Limy brecciated chert, well mineralized with pyrrhotite. ✓

HOLE A - 45°

0 - 11

Casing

11 - 60

Brecciated augite porphyry feldspathic with stringers of orthoclase.

43 - 48 massive pyrrhotite.

Water lost @ 60', returned through Hole No. 8.

HOLE 2 - 54°

0 - 2

Casing

2 - 97

Brecciated silicified limy chert with skarn minerals
chalcopyrite, pyrrhotite and molybdenite.
Average = 0.742 Cu, 0.228 MoS₂.

97 - 133

Feldspar porphyry.
97 - 117 assayed = .01 Cu.

133 - 142.5

Chert silicified, some skarn and minor pyrrhotite.

HOLE 3 - 45°

- 0 - 3 Casing
- 3 - 60 Limy brecciated silicified chert with some skarn. Minor amounts of pyrrhotite, chalcopyrite, pyrite and molybdenum. ✓
- 60 - 127 Skarn with pyrrhotite and chalcopyrite, brecciated rock could be chert or feldspar porphyry originally. Granitic texture. ✓

HOLE 4 - 37°

G - 250

Brecciated feldspathic augite porphyry, some stringers of
orthoclase and some pyrrhotite.

1' lamprophyre @ 97'.

Silicious 116 - 119' - sampled.

HOLE 5 - 30°

- | | | |
|-----------|--|---|
| 0 - 28 | Limy volcanics. | |
| 28 - 32 | Lamprophyre dike. | |
| 32 - 243 | Limy volcanics with skarn patches and scattered sulphides. | ✓ |
| 248 - 252 | Feldspathic siliceous volcanics, some skarn patches. | |
| 252 - 280 | Very limy rock, brecciated, altered and looks like red granite, well mineralized with disseminated chalcopyrite and molybdenite. | ✓ |
| 280 - 291 | Mixture of red granite and brecciated volcanics - less mineralization, disseminated. | ✓ |
| 291 - 325 | Red granitic appearing limy sediments. | |
| 325 - 345 | Similar rocks becoming darker. | |

HOLE 6 - 30°

- 0 - 63 Cherty argillite porphyry agglomerate pyrite, very limy in parts. Brecciated areas of skarn.
- 63 - 169 Limy brecciated volcanics - granitized pyrrhotite and chalcopyrite in low grade patches. ✓
- 169 - 253 Feldspar porphyry.
- 253 - 264 Siliceous brecciated limy agglomerate skarn 253 to 265.
- 264 - 346 Brecciated limy volcanics - 50% red granitic skarn - well mineralized in patches - copper and molybdenite well disseminated. ✓

HOLE 7 - 30⁹

- 0 - 179 Feldspar porphyry, altered in places with sulphides.
- 179 - 316 Limy siltstone, some silicified areas with chalcopyrite and pyrrhotite. ✓
- 316 - 330 Limy granitized (augite porphyry ?), some disseminated pyrrhotite.
- 330 - 393 Feldspar porphyry.

HOLE 8 - 67°

- 0 - 180 Feldspathic augite porphyry, some skarn areas, some pyrrhotite, pyrite, and chalcopyrite. ✓
- 180 - 360 Silicified chert and skarn, almost barren of sulphides.
- 360 - 414 Augite porphyry with some disseminated pyrrhotite and pyrite. ✓

HOLE 9 - 45°

- 0 - 35 Feldspar porphyry.
- 35 - 61 Augite porphyry with skarn well mineralized with pyrrhotite, ✓
chalecopyrite, molybdenite and pyrite.
- 61 - 90 Augite porphyry silicified.
- 90 - 143 Felspathic augite porphyry.

HOLE 11 - 72°

- | | | |
|-----------|---|---|
| 0 - 167 | Skarn well mineralized with chalcopyrite, pyrrhotite, pyrite and molybdenite.
Brecciated altered chert.
Limy in part. | ✓ |
| 167 - 175 | Quartz carbonate zone. | |
| 175 - 210 | Brecciated feldspathic augite porphyry. | |
| 210 - 270 | Brecciated chert altered to skarn, good sulphides. | ✓ |
| 270 - 287 | Feldspathic augite porphyry patches, well mineralized skarn. | ✓ |
| 287 - 377 | Limy fine grained augite porphyry patches of low grade skarn mineralization. | ✓ |

HOLE 13 - 45°

0 - 34

Augite porphyry boulders with one granite boulder.

34 - 94

Broken chert.

HOLE 14 - 45°

- | | |
|---------|----------------------------|
| 0 - 43 | Limy dark hornfels. |
| 43 - 45 | Feldspar porphyry dike. |
| 45 - 90 | Limy brecciated sediments. |

MAMMOTH CLAIM GROUP

NELSON AREA, B.C.

INTRODUCTION

Welland Consolidated Mining Ltd. (N.P.L.) hold a block of mining claims in the Nelson Mining Division of British Columbia, the subject claims being known as the "Mammoth Group".

The claim group was originally located for purposes of investigation of a prominent gossan zone that occurred over an extensive area. Subsequently trenching magnetometer surveying and diamond drilling operations were carried out on the claims.

The claims are located on a prominent north-south striking ridge and are at an elevation of approximately 6,150 feet above mean sea level. There is little overburden coverage on the main showing but overburden and talus conditions increase in a northerly direction. The most northerly showing occurs about 1,300 feet north of the main showing and at this point the elevation is approximately 5,500 feet above mean sea level.

GEOLOGY

The main area where gossan is in evidence can best be described as a metamorphic complex. Surface examination and diamond drilling indicate the effects of an igneous intrusion into sedimentary rock types.

Material encountered would grade from grano-diorite, through various types of skarn to altered sediments. There was little material that did not show pronounced metamorphic alteration. Various occurrences of porphyry were also present. Silicification was pronounced throughout all core holes drilled on the main showing that existing along the base line from 400 feet south of the shaft area to 400 feet north of the shaft.

There were numerous slips in evidence but no indication of any pronounced fault action. A number of pronounced scarp faces were present in all areas surrounding the main ridge containing the gossan deposit.

MINERALIZATION

The sulphide minerals are quite prominent in the gossan area and in the diamond drill core. These comprised chalcopyrite, pyrrhotite, pyrite, molybdenite and pentlandite. Outside the main mineralized zone the amounts of molybdenite and chalcopyrite decreased substantially.

EXPLORATORY WORK

1. Trenching

A number of hand trenches were sunk both on the main mineralized showing and at some more remote points to the north, south and south-easterly directions. Those on the shaft-zone area showed localized

concentrations of molybdenite and chalcopyrite. The limited depth (about 20 feet) to which the shaft could be examined also showed fair molybdenite and chalcopyrite mineralization.

The trenches 1300 feet north of the shaft showed a limited amount of chalcopyrite but no molybdenite.

2. Geophysical - Magnetometer

A magnetometer survey was carried out over the portion of the ridge extending from 700 feet south of the shaft to a distance 500 feet north. Fairly pronounced anomalous conditions existed south and, to some extent, easterly from the shaft. This is understandable since these areas represent the main zones of gossan accumulation and would therefore be the areas of heavy iron sulphide concentration.

3. Diamond Drilling

A total of 15 holes were drilled on the property and represented a footage total of 3,415 feet. The drilling program would have to be described as inconclusive. A number of holes were drilled in random directions, apparently in an effort to establish possible trending directions for mineralized zones. The holes were for the most part, flat angled holes and thus gave shallow penetration.

Holes 1 and 2 were drilled immediately north of the shaft and were located in the vicinity of the main zone of molybdenite mineralization. Results obtained were:

Hole No. 1

Molybdenum 4.5 to 27.5 feet	$\frac{0.185\%}{23.0'}$
Copper 4.5 to 49.0 feet	$\frac{0.39\%}{44.5'}$

Hole No. 2

Molybdenum 12.0 to 34.0 feet	$\frac{0.687\%}{22.0'}$
Copper 12.0 to 79.0 feet	$\frac{0.518\%}{67.0'}$

Hole No. 5 - 100 feet north of shaft

Copper 259.0 to 279.0 feet	$\frac{0.412\%}{20.0'}$
Molybdenum	Negligible

Hole No. A - approximately 400 feet north of shaft

Molybdenum 43.0 to 55.6 feet	$\frac{0.25\%}{12.6'}$
Copper 43.0 to 55.6 feet	$\frac{0.18\%}{12.6'}$

Hole No. 11 - 75 feet northeast of shaft

Molybdenum 0 to 11.6 feet	$\frac{0.88\%}{11.6'}$
Copper 0 to 72.0 feet	$\frac{0.627\%}{72.0'}$

The balance of the holes carried low to insignificant amounts of copper or molybdenum.

GENERAL

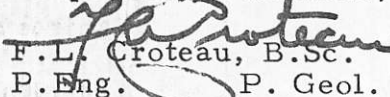
1. The gossan zone on these claims is extensive and locally significant values in molybdenum and copper have been obtained.
2. Localization of values of consequence, in Diamond Drill Holes No. 1, 2, 5 11 and A may be indicative of an east-west trending zone of mineralization rather than the north-south trend that was being pursued.
3. Dump material from the shaft showed a considerable amount of intrusive material of a porphyritic nature. Reports indicate that this rock was from a cross-cut at the bottom of the shaft. The location was inaccessible and while the direction of the tunnel was likely in an easterly direction this is not fully established. The amount of underground work would not, however, be of much consequence, based on the volume of the dump.
4. The formation changes significantly in a northward direction and loses the molybdenite mineralization. Copper is in evidence and seems to be related to shearing and fissures in the rock, which although strongly metamorphosed carries more sedimentary material than the gossan zone area.

5. The specific ridge is pretty sharply defined and is either governed on the east and west sides by formational changes or there may be some fault action.

CONCLUSIONS AND RECOMMENDATIONS

1. The property needs a full and proper exploratory program. The drilling and other work done to date serves a purpose but leaves much to be desired in regard to constructive information.
2. The claims should be geologically mapped, a thorough magnetometer survey made and upon the results of these consideration be given to further diamond drilling.
3. The gossan zone may only be a reflection of the pyrrhotite and pyrite mineralization present in the formation but the volume of chalcopyrite and molybdenite present locally is suggestive of more than a localized pocket.
4. Should the possibility of an east-west zone of copper and molybdenum mineralization exist, one would have to consider the possibility of the existence of a fault or shear zone crossing the normal strike direction of the formation and under such conditions more thorough examination should be made along the east and west shoulders of the ridge which might carry mineralized zones conforming to the areal strike direction.

Respectfully submitted,


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P. Eng. P. Geol.

Vancouver, B.C.
April 30, 1971

WELLAND CONSOLIDATED MINING LTD. (NPL)
MAMMOTH CLAIM GROUP
CLAIM LOCATION MAP

NELSON, B.C.

