59 June 24/05 June 24/05 Hom: Barney Bouren (Hom: Barney Bouren

SUBMITTAL REPORT

Snowdrift **Property:**

None **Owner:**

Area of interest unstaked **Claims:**

Commodities: Mo, Cu

Location:

Area

Co-ordinates

NTS

104 I / 5E

58° 18' N

129° 35' W

Dease Lake, British Columbia, Canada

Author: B. K. Bowen, P. Eng. Consulting Geologist Surrey, B.C.

Date:

September 26, 2002

BHP Billiton World Exploration Inc. For: Vancouver, B.C.

ATTACHMENTS

FIGURES

- FIGURE 1 LOCATION MAP Scale 1:12,500,000
- FIGURE 2 INFRASTRUCTURE MAP Scale 1:5,000,000
- FIGURE 3 LOCAL TOPOGRAPHY Scale 1:30,000
- FIGURE 4 IP CHARGEABILITY Scale 1:30,000
- FIGURE 5 MO SOIL GEOCHEMISTRY Scale 1:30,000
- FIGURE 6 CU SOIL GEOCHEMISTRY Scale 1:30,000

TABLE

TABLE 1 HISTORIC DRILL HOLE SUMMARY

SUBMITTAL REPORT

SNOWDRIFT MO PROPERTY

Location and Access: The property is located approximately 1,100 km NNW of Vancouver, B.C. and 25 km SE of Dease Lake, B.C. (Figure 1). Access is via helicopter based year-round in Dease Lake.

Infrastructure: The property lies about 17 km east of the Stewart-Cassiar Highway, which connects to tidewater at Stewart, B.C. over a distance of about 330 km (Figure 2). Dease Lake, population 400, is serviced twice weekly by passenger aircraft from Terrace, B.C. It is not connected to the B.C. Hydro power grid but has instead a local supply of hydro-electricity operated by an aboriginal band. The nearest B.C. Hydro power line is at Meziadin Junction on the Stewart-Cassiar Highway, 40 km east of Stewart.

Owner/Claims: The area of interest is currently unstaked.

Topography, Vegetation and Climate: The main Mo target area lies above tree-line and slopes gently to the east in the elevation range of 1,640 m to 1,450 m (Figure 3). It is mostly drift-covered, with overburden depths of 3-6 m generally and up to 15 m locally. The terrain immediately to the west is more rugged, with elevations up to 1,860 m. Weather in the area is typified by long, cold winters and relatively short, mild summers.

History and Development:

<u>1973:</u> Kennco Explorations Limited carried out a work program consisting of geological, geophysical and geochemical surveys and 3 diamond drill holes totaling 304.8 m.

<u>1975-76:</u> Utah Mines Ltd. completed a program of geological mapping and diamond drilling (3 holes totaling 274.6 m).

1978: Noranda Exploration carried out prospecting in the area

<u>1979:</u> Canadian Superior Exploration did geological mapping and rock geochemical sampling.

<u>1981-82:</u> Serrana Resources Ltd. carried out extensions to Kennco's soil geochemical survey.

From the early 1980's to present, the property appears to have sat dormant.

Geology and Mineralization: In the area of interest, Upper Triassic andesitic volcanic rocks are intruded by the Middle to Late Jurassic Snowdrift Creek pluton which is comprised mainly of biotite-hornblende granodiorite further intruded by leuco feldspar porphyry dikes and plugs as well as micro-diorite and diabase-textured dikes (Figures 4-6).

Quartz veining and local stockworks occur over a large area within exposed portions of the granodiorite. Associated with the veining are occurrences of pyrite, molybdenite and lesser chalcopyrite.

Within the volcanic rocks, a prominant zone of quartz-sericite alteration up to 400 m wide strikes northwesterly and dips steeply to the northeast. Outcrops within it are leached but locally carry up to 5% pyrite.

Volcanic rocks are variably chloritized and carry occasional pyrite and chalcopyrite fracture-fillings.

IP Chargeability: Kennco completed IP chargeability and resistivity surveys over most of the area shown in Figure 4. Their work identified a 1 km^2 PFE (percent frequency effect) chargeability anomaly within volcanic rocks immediately adjacent to the pluton. The anomaly remains open to the west and south. Over the drift covered area to the northeast, the survey detected only only a few, very weak, scattered PFE anomalies.

Soil Geochemistry:

<u>Mo in soils</u>: A compilation of Kennco and Serrana's Mo soil survey results is shown in Figure 5. Several large anomalies are present and likely reflect widespread molybdenite mineralization associated with quartz veining and stockworks within the granodiorite pluton. The easternmost anomaly, which measures approximately 1,400 m by 700 m and remains open to the northeast, locally contains very high Mo values up to 500 ppm. The Mo in soils response at Snowdrift is similar in size and magnitude to the soil responses of several known Mo porphyry deposits in the Canadian Cordillera.

<u>Cu in Soils</u>: A compilation of Kennco's and Serrana's Cu soil survey results is shown in Figure 6. In general, Cu anomalies appear to be mainly underlain by volcanic rocks except for some areas that are co-anomalous with Mo. The latter may represent an outer Cu-Mo zone partially enclosing a core of molybdenite mineralization within the granodiorite.

Diamond Drilling:

<u>Kennco (1973)</u>: Kennco completed 3 vertical diamond drill holes designed to test the IP chargeability anomaly described above (see Table 1 and Figure 4). Holes 73-1 and 2 cut volcanic rocks containing 5-10% pyrite and minor quartz-molybdenite veins. Hole 73-3 cut granodiorite containing 1-3% disseminated pyrite and more frequent quartz veinlets with molybdenite and chalcopyrite. The three holes averaged about 0.010% MoS_2 over their entire lengths.

<u>Utah (1976)</u>: Utah tested a small portion of the quartz-sericite alteration zone with Holes 76-1 and 2. The holes cut variable amounts of pyrite-hematite-magnetite averaging 2-3%, with minor amounts of specularite, chalcopyrite, sphalerite, galena and lazulite. No molybdenite was noted. Hole 76-3 intersected minor quartz-molybdenite-chalcopyrite veinlets within granodiorite and averaged <0.02% Cu and about 0.01% MoS₂ over its entire length. Minor chlorite, kaolinite and sericite alteration are common throughout the hole.

Conclusions:

- (1) Soil surveys completed to date have identified a main Mo target area which measures approximately 2,100 m by 1,500 m and remains open to the northeast. The target area is mainly drift-covered, is inferred to be underlain by the host granodiorite and is thought to represent a large porphyry system which could carry significant concentrations of molybdenum over large volumes of rock.
- (2) The lack of anomalous IP chargeability response over the main Mo target area is not indicative of the target's economic potential. Two other significant Mo porphyry deposits in the Northern Cordillera, the Endako mine in central B.C. and Quartz Hill in southeastern Alaska, do not have IP chargeability anomalies associated with them. The low sulphide concentration of the ores, averaging about 1%, has rendered IP an ineffective exploration method for outlining drill targets.
- (3) Previous drilling by Kennco and Utah has not adequately tested the main Mo target area. Only two holes, 73-3 and 76-3, tested favourable granodiorite host rocks and these returned grades in the 0.01-0.02% MoS₂ range. The low grades encountered in these holes are not surprising, given their locations on the fringes of the main target area.

Recommendations:

It is recommended that:

- (1) a sufficient number of claims be staked to cover the main Mo target area and adjacent areas suitable for mill facilities, waste dumps and tailings disposal areas;
- (2) a limited amount of soil sampling be completed in order to fully delineate the easternmost Mo anomaly; and
- (3) an 8-10 hole diamond drilling program be carried out within the main Mo target area to test initially for an open-pitable, porphyry-style molybdenum ore deposit. Holes should be widely-spaced and drilled vertically to an average depth of 200 m.

(eg. 400m)

Table 1

Snowdrift Mo Property

Historic Drill Hole Summary

| <u>Year</u> | Company | Hole # | Dip | Azimuth | Total Depth | Average % MoS2* |
|-------------|--------------------------|--------|-----------|------------|-------------|---------------------------------------|
| | | | (degrees) | (degrees) | (metres) | |
| | | | | | | |
| 1973 | Kennco Explorations Ltd. | 73-1 | -90 | | 106.7 | 0.009 |
| | | 73-2 | -90 | | 106.7 | 0.004 |
| | | 73-3 | -90 | | 91.4 | 0.019 |
| | | | | Sub-total: | 304.8 | · · · · · · · · · · · · · · · · · · · |
| 1976 | Utah Mines Ltd. | 76-1 | -45 | 230 | 89.9 | n/a |
| | | 76-2 | -45 | 230 | 71.3 | n/a |
| | | 76-3 | -60 | 230 | 113.4 | 0.008 |
| | | | | Sub-total: | 274.6 | |
| 1973-76 | | | | Total: | 579.4 | |
| * average | % MoS2 over entire hole | | | | | |





Snowdrift Mo Property - Infrastructure Map - Northwestern B.C.



Snowdrift Mo Property - Local Topography











Molybdenum Geochemistry:

20 to 49 ppm Mo in soil

50 to 500 ppm Mo in soil

Proposed 2005 soil geochemistry

Serrana soil grids (1981-82)

Kennco soil geochemistry & IP (1973)

Proposed 2005 drill holes: - 9 vertical holes @ 200 m TD = 1,800 m

Historic drill holes:

- Utah Mines (1976) - 3 holes totaling 275 m

- Kennco (1973) - 3 holes totaling 305 m

_1500 - Elevation in meters (contour interval = 20 m)

Limit of >5 PFE (percent frequency effect) -see IP chargeability map, Figure 4, BHP report

Granodiorite - andesite contact

1000 m

scale 1:25,000

Figure 2

MO Claims **Compilation Map**