November 18, 1971.

824923

KING EDWARD PROPERTY

ON SUSAP CREEK

KEREMEOS, B.C.

82E-4W

Min. Inv. No. 3

See GEM 1970 p 395
1971 p 384

Ass. Report 1578

1971 Work = surf + undergd mapping, trenching 15,000 ft.

Introduction:

The King Edward is an old prospect first discovered around the turn of the century. It is situated on the north side of Susap Creek, 3 miles west of the Similkameen River and 7 miles south of Keremeos. The claims are surrounded by Indian Reserve #13 and in part separated by a thin band of Indian Reserve land. The claims adequately cover the known showings. It is reported by the owners of the property that the Indian band would be prepared to negotiate for any additional land required for mining purposes.

The property is presently held by Cro-Mur Mines of Penticton, B.C. This is a private company financed by Sandy Cross of Calgary and managed by Ron Murdock of Penticton. The company office is at 414 Ellis Street, Penticton, B.C. (Phone 493-0002).

Topography is steep in part and in part consists of rounded grass covered ridges. Relative relief is about 1,500' - the maximum elevation at the ridge top above the workings is 5,500', the showings are between 4,000' to 4,500'. Access is from the Richter Highway to a point about 12 miles south of Keremeos, then gravel and four-wheel drive road to the property.

The property was visited on October 20, 1971 by the writer accompanied by Slim Powney, prospector and friend of Ron Murdock. Weatherwas clear and there was no snow to hinder the examination.

History:

First recorded work was back in 1903 when an adit was driven to intersect exposed chalcopyrite-MoS_2 mineralization. In 1918 an attempt was made to mine for MoS_2 - no production is recorded. In 1921 a second adit

was driven about 100' above the first and slightly east. In 1962 Friday Mines started a program of diamond drilling and trenching. In 1963 four short X-ray diamond drill holes were drilled, the upper adit was bulk sampled and geophysical and geological surveys were completed. In 1968 Noranda completed a geochemical survey and ran some E.M. lines. The present owners have put in a road and have started to make a four-wheel drive road to the top of the ridge. Results of diamond drilling, geophysical and geochemical reports were not available for examination.

Geology:

Regionally the area is underlain to the north of Susap Creek by andesitic and basaltic rocks of the Old Tom Formation, to the east by cherts, tuffs and greenstones of the Shoemaker Formation. Intruding these rocks and underlying the area south of Susap Creek is granodiorite. Along the contact between the Old Tom and granodiorite is an east-west elongate syenite intrusion. The mass is about 2 miles long and less than $\frac{1}{2}$ mile wide. Mineralization is associated with this syenite mass where it is well fractured and invaded by quartz-K-feldspar veins (see map 1 for location and regional geology).

The syenite is a medium to coarse grained hornblende syenite. It is cut by quartz, quartz-K-feldspar veins and K-feldspar dykes (Aplite). There is a close relation between the K-feldspar and quartz both spacially and probably genetically. Hornblende is partly altered to chlorite and/or epidote. Most significant mineralization occurs where the greatest concentration of K-feldspar and quartz veins occur. The granodiorite is a medium grained grey rock consisting of 5-8% pink K-feldspar, 12-15% quartz, 10-15% hornblende, 3-5% biotite and the remainder plagioclase. Traces of malachite occur where this rock is near the syenite.

Alteration minerals include K-feldspar, epidote, chlorite and actinolite. Secondary minerals recognized are limonite and ferromolybdite. Quartz veining usually associated with the introduction of K-feldspar is best developed near old showings. Quartz occurs in two ways: as veins intimately

associated with K-feldspar, and as veins independent of K-feldspar. In this latter occurrence the vein is quartz but adjacent to vein walls there is a marked increase in K-feldspar. Not all quartz veins carry mineralization.

From this brief examination it would appear that the locus of intense fracturing and subsequent in-filling by quartz-feldspar and copper-molybdenum mineralization occurs near the two tunnels. Most prominent fracture directions are $0^{\circ}/22\text{-}35^{\circ}E$; $350^{\circ}/80^{\circ}W$; and $300^{\circ}/25\text{-}35^{\circ}SW$. All three may be mineralized.

Mineralization consists of chalcopyrite, pyrite and molybdenite which occur on joint plains, fracture fillings, veins, and as massive pods in quartz and quartz-feldspar veins. Disseminated mineralization is not significant - it occurs adjacent to fractures only. Chalcopyrite is more abundant than molybdenite. It is difficult to estimate grade in a deposit of this nature. It would probably not exceed the equivalent of 0.5% Cu. Mineral is not evident until fresh rock has been exposed - there is little evidence of mineralization on weathered surface. Pyrite occurs sparingly. (See map 2 for geology of property.)

The steep topography precludes the use of open pit methods and as a consequence a grade of 0.8% or better Cu equivalents would be required to make the property interesting as an underground operation. Rock types are not the same, however, the nature of the occurrence of Cu-Mo mineralization in fractures, quartz and quartz-K-feldspar veins is similar to that at Brenda and the grade therefore may be expected to be about the same.

Summary and Conclusions:

Chalcopyrite and molybdenite with minor pyrite occurs as fracture fillings and in quartz and quartz-K-feldspar veins in a well fractured syenite. Mineralization occurs near the southern contact between the syenite and a large granodiorite mass. It appears to be confined to the syenite, however, the limits of the zone are not yet established. Type of mineralization is

similar to that at Brenda and a grade of less than 0.5% Cu equivalent would be expected. Topography is steep, particularly where the best zone occurs (at least 300' of barren cliffs and bluffs can be seen above mineralization), which would make it an underground operation. A grade of 0.8% Cu equivalent or better would likely be needed, and I do not think the deposit could provide this grade. Some areas remain untested but outcrops in these areas are poorly fractured and weakly, if at all, mineralized.

Were it not for the unfavourable topography, the deposit would definitely warrant further work. I cannot, however, justify further work in hopes of achieving an "underground grade". For this reason I do not recommend we pursue this any further at this time.

John C. Lund.