

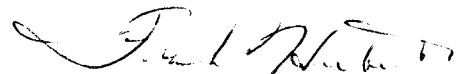
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CORPORATION FALCONBRIDGE COPPER

MOUNT SICKER PROJECT
DUNCAN, BRITISH COLUMBIA

FIXED SOURCE TIME-DOMAIN
EM SURFACE SURVEY

Respectfully submitted,



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INTRODUCTION:

During early November, 1983, a fixed loop time-domain EM survey was conducted on the Mt. Sicker property, near Duncan B.C. on Vancouver Island.

Crone Geophysics Limited used their PEM system in the DEEPEM configuration. One transmit loop was laid out E-W, 800m. long and 325-375m. wide. It extended from L5W to L3E, and southward from 2+00S. The east part of the grid was covered using a smaller loop, laid out E-W from L4E to between L7E and L8E, and between 2+00S and 6+00S.

Ramp time for the current shut-off in the loop was fixed at 1.5ms. and the system was operated on the 10.8ms. time base. Receiver sensitivity was fixed at 50% full gain for the entire survey.

RESULTS:

The main conductor detected by this survey is associated with the mineralization which extends through the region to the south, where the shafts from previous operations are located. This conductor responds only on the first 2 channels, indicating a poorly conductive source. Best anomaly definition is observed from L2W @7+50S, to L1E @8+00S. This conductor is interpreted to lie at a 75m. depth, and dip to the north.

A small outlying extent to the main zone is evident on L5W @8+00S. The response from this line is not as strong nor as well developed as those obtained further to the east. A depth of 50m. is interpreted along with a dip to the north.

On L4W, at the north end of the line (ie. 5N), a small 8 channel anomaly is developing. It persists over a number of stations and, therefore, seems to be legitimate. No further evidence for this zone is observed. Lines to the west did not extend far enough northward to cover a possible extension to the west.

A very broad anomaly trends from L2W @2+00N, to L1E @0+50N. Here again, only a 2-3 channel response is evident. Unfortunately, some short and sharp features are superposed on the broader, more subtle anomalies. This makes true anomaly recognition very difficult. A certain degree of stacking can be observed in the profiles. However, a number of explanations are possible:

1. A single, poorly conducting bedrock source at a depth of 150m.
2. Two poorly resolved sources at some indeterminate but shallower depth.
3. Conductive surficial material distributed along a steep topographic slope.

RECOMMENDATIONS:

The best response is obtained at 8+00S from L1W to L1E. It is known that previous development and production occurred in the vicinity of this conductor. Therefore, careful assessment of the extent of the previous workings, and also close geological correlation should precede any further drill investigation. On L5W @8+00S, a possible target is present. However, the rather small size of the response suggests that the source conductor does not extend very significantly in any direction.

The difficult evaluation involves the "conductor" just north of the baseline, between L2W and L1E. Normally, this type of response would not be recommended as a legitimate drill target. However, based upon the limited responsiveness observed elsewhere in the area, this feature appears to warrant some consideration. If the single, poor conductor interpretation can reasonably be accepted, a valid target may be present at a depth of 150m. on L2W, @2+00N.

(All preceding target depths represent interpreted depths to the TOPS of the conductors.)

The northwest corner of the grid warrants extended coverage to the north, based upon the developing anomaly obtained on the north end of L4W.

