

January 23, 1974

Mr. A. R. Archer  
Archer, Cathro and Associates Ltd.  
Consulting Geological Engineers  
685 Two Bentall Centre  
555 Burrard Street  
VANCOUVER, B. C.  
VFX 1G4

Dear Al:

I've reviewed the Acme claim group data you forwarded. Anvil has no interest in Acme at the present time and I enclose the reports with thanks and a few comments.

The CEM response along the Eocambrian (units 2,3) - Anvil Range Group (units 8a, 8b) contact looks suspiciously like conductive, graphitic slates at the base of the Anvil Range Group chert sequence (8a) per Peter Dean's mapping. A slate unit is known to occur in this interval to the northwest of Acme. If this is the case, no sulfides of economic importance are known to occur in this unit (Permo-Pennsylvanian) along the southern flank of Anvil Arch. Alternatively, the conductor may be related to Lower Ordovician graphitic slates unconformably overlain by the Anvil Range Group or possibly a graphitic phyllite in the Eocambrian pile. The first alternative (8a graphitic slates) is the most probable but it's difficult to say for certain. At any rate, the length and trend of the conductor appeal to me more as a single conductive unit (near surface as inferred from the method and frequency used) rather than an isolated conductor (possibly a sulfide deposit) and an area of conductive overburden as Dean suggests. We observe the presence of a conductor at exactly this stratigraphic interval for 25-30 miles northwest of Acme. These observations do not exclude the possibility of a sulfide deposit in the conductive unit.

The ground magnetic data can be related to the Triassic (?) serpentinite, the Anvil Range Group basalts (8b) and, rudely, to the CEM conductor. The most northerly of the anomalous magnetic belts coincides reasonably well with the CEM conductor. In all probability, the magnetic response is due to disseminated pyrrhotite in graphitic pelites. This still does not rule out the possibility of a massive sulfide deposit with pyrrhotite-rich "margins" c.f. Swim, Vangorda.

The clincher, at least to me, is the weak gravity response over the CEM conductor and Bob Galeski's suggestion that the "low relief residual



(2)

positives are due to local thinning of overburden " i.e. bedrock ridges. Apparently, Dynasty has re-interpretted Galeski's work (see Dean's Appendix IV and Galeski's residual map) to yield the 0.4 milligal Dynasty anomaly. At any rate, the gravity response broadly coincident with the conductor and ground magnetic anomaly is -  
a) not sharp, b) not large, c) areally more extensive than the CEM and magnetic anomalies. It is similar to what might be expected for bedrock topography and does not appear to be related to sulfides of significant dimension as inferred from its areal extent and residual amplitude. Further, the best residual response occurs over Anvil Range Group cherts off the sides of the CEM and magnetic anomalies and is weaker than the response obtained over the Champ deposit. ( $3 - 5 \times 10^5$  tons). Thus, even if the gravity response is related to sulfides, it is doubtful the sulfides would be of economic significance.

Thanks again for your co-operation! We'll look forward to the Joint Venture Boundary map in May.

Yours truly,

D. S. Jennings  
RESEARCH GEOLOGIST

Enclosure