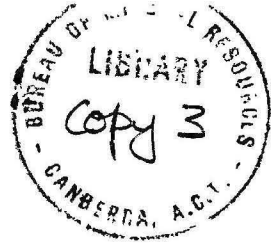


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REPORT ON GEOCHEMICAL SURVEY AT MANTON

DAM PROSPECT, N.T.

by

A.H. Debnam

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The survey was carried out in May 1955, over the centre of a large intense self-potential anomaly located by the geophysicists. One costean, around which the work was carried out, had previously been bulldozed to expose the bedrock.

Analytical methods were those of Bloom and Crowe (U.S. Geol Survey, Open File Report), involving a hot concentrated nitric acid digestion of the sample. This method was found necessary owing to the presence of only very low order anomalies. The commonly used method involving a cold dilute acid extraction of the sample gave negative results.

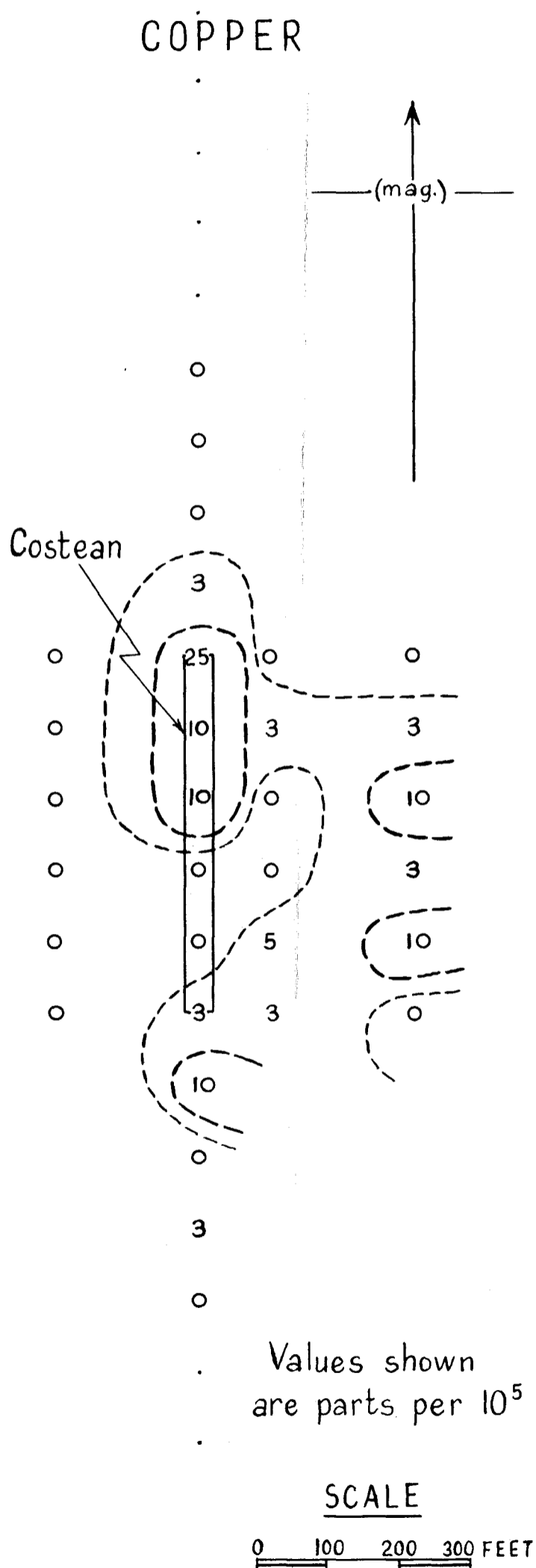
Samples were collected from the "B" soil horizon, usually at a depth of 18", with the aid of hand operated post-hole diggers.

The results are presented on Fig.1. A weak lead anomaly, with only one high spot, extends over most of the area. A weak copper anomaly, with several high spots extends in an easterly direction from the costean.

When compared with the extremely high results obtained in similar surveys in the N.T., such weak anomalies appear insignificant, and would normally be disregarded. However the geophysical work indicates the source of the self-potential anomaly to be at a depth of perhaps 400 feet. If lead mineralization occurs at this depth, without substantial mineralization at higher levels, and it is in the oxidized zone (there would be no geophysical anomaly if it were not), then a surface expression in the form of a weak geochemical anomaly would be possible. Alternatively we may be dealing with the primary dispersion halo of a lead orebody, in which case a lead anomaly at the surface would be most likely. Similar remarks apply to the presence of the copper anomaly at the surface.

All zinc results were either very low or negative.

In my opinion the geochemical survey has answered the problem which it was set; the geophysical anomaly could be due to copper and lead mineralization at depth. The results may not appear to be very conclusive but one cannot expect to obtain a great amount of information from such a limited survey.



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