AUSTRALIAN GEOPHYSICAL PTY. LIMITED

RESULTS OF PROSPECTING AT MULBANGA'S PROSPECT (A.P. NO. 1326) BARROW CREEK, N.T.

C O N T E N T S

P L A T E S

INTRODUCTION

This report describes prospecting operations carried out over Mulbanga's Prospect (A.P. No. 1326) on the Western edge of A.P. No. 1305, of 50 square miles held by this Company to investigate extension to the Home of Bullion Mine.

The prospect is located about 6 miles west of the old Home of Bullion Mine, is about 18 miles N.E. of Barrow Creek which is in turn about 176 miles from Alice Springs on the Stuart Highway.

The topography is typical of this portion of Central Australia with the arenaceous rocks forming ridges 500-800ft. above the surrounding country with the softer rocks filling the valleys and largely covered by "sheet" flood alluvium and fine wind blown sand, the combination of the two referred to as "Bulldust".

During the course of intiial work in A. to P. 1305 in April this year three aboriginals brought this showing to the Company's attention. A grab sample assayed 1.56% copper. It was considered of interest to run a line of I.P. over this showing during the course of the Home of Bullion investigation and an option agreement was signed with the three aboriginals. Conditions of this option were £100 for two years, a second £100 for another two years and £10,000 if the option were ever exercised.

The Mulbanga Prospect was considered worth investigating because of the limited exposure in the vicinity which may have buried extensions and also because of the association of magnetite similar to the Tennant Creek ore bodies.

GENERAL GEOLOGY

Arunta Complex

The Home of Bullion Mine is located in quartz muscovite schists which strike at about 290°-300° and dip northwards at 60-70°. In the vicinity of the mine itself biotite and andalusite occur in the schist especially near the hanging wall of the ore body. To the east of the mine a N.W.-S.E. schistosity becomes imposed leaving the original 290°-300° schistosity preserved as relict jointing. To the east of line 90E the schists appear to be more arenaceous and dip 60° southwards suggesting a fault parallel to the stream along line 90E (Plate V). To the N.E. and S.E. of the mine occur dioritic dikes or sills which are intrusive into the schists.

To the west of the mine occurs a large "Bulldust" plain out of which inselbergs of schist protrude. At the western boundary of A. to P. No. 1305 the schists which are again well exposed are intruded by dioritic dikes, sills and masses. The Mulbanga prospect occurs within a large mass of diorite and consists of hematite, magnetite with some malachite and chalcocite associated with a more basic zone within the diorite.

Two thin sheared granite dikes cutting the schists were mapped, one at the southern end of line 100W, the other on line 316W peg 20N.

Hatches Creek Group

Arenaceous rocks of the Hatches Creek Group are exposed in a downfaulted block in the south east of the area. They consist of light grey to white quartzites, arkoses and some shales which show some shallow water features.

They were considered of little interest and were not examined in detail.

Upper Proterozoic

The Arunta Complex is unconformably overlain by a series of Reddish argillaceous sandstones and arkoses which are considered by the Bureau of Mineral Resources to be of Upper Proterozoic age although still portrayed on the Alice Springs 1:1000,000 sheet as lower Cambrian. These rocks form prominant ridges to the south and northwest of the mine as well as thin coverings to the schists on the plain. They strike E.-W. and dip 15-20° southwards and consist of interbedded reddish, argillaceous shallow water features such as cross bedding, ripple marking and mudcracks.

An interesting feature was a limestone or calcareous breccia which occurred near the base of this sequence.

Pleistocene to Recent

Wind blown sand, sheet flood alluvium and rudites (containing mainly upper proterozic sandstone, boulders and pebbles) overlie the older rocks. To the east of the area the covering becomes complete and is dominantly wind blown sand.

This valley hill material is known colloquially as "Bulldust".

RESULTS OF PROSPECTING

A single line of I.P. (line 316W) was carried out over the prospect but failed to show any anomalous values (Plate I).

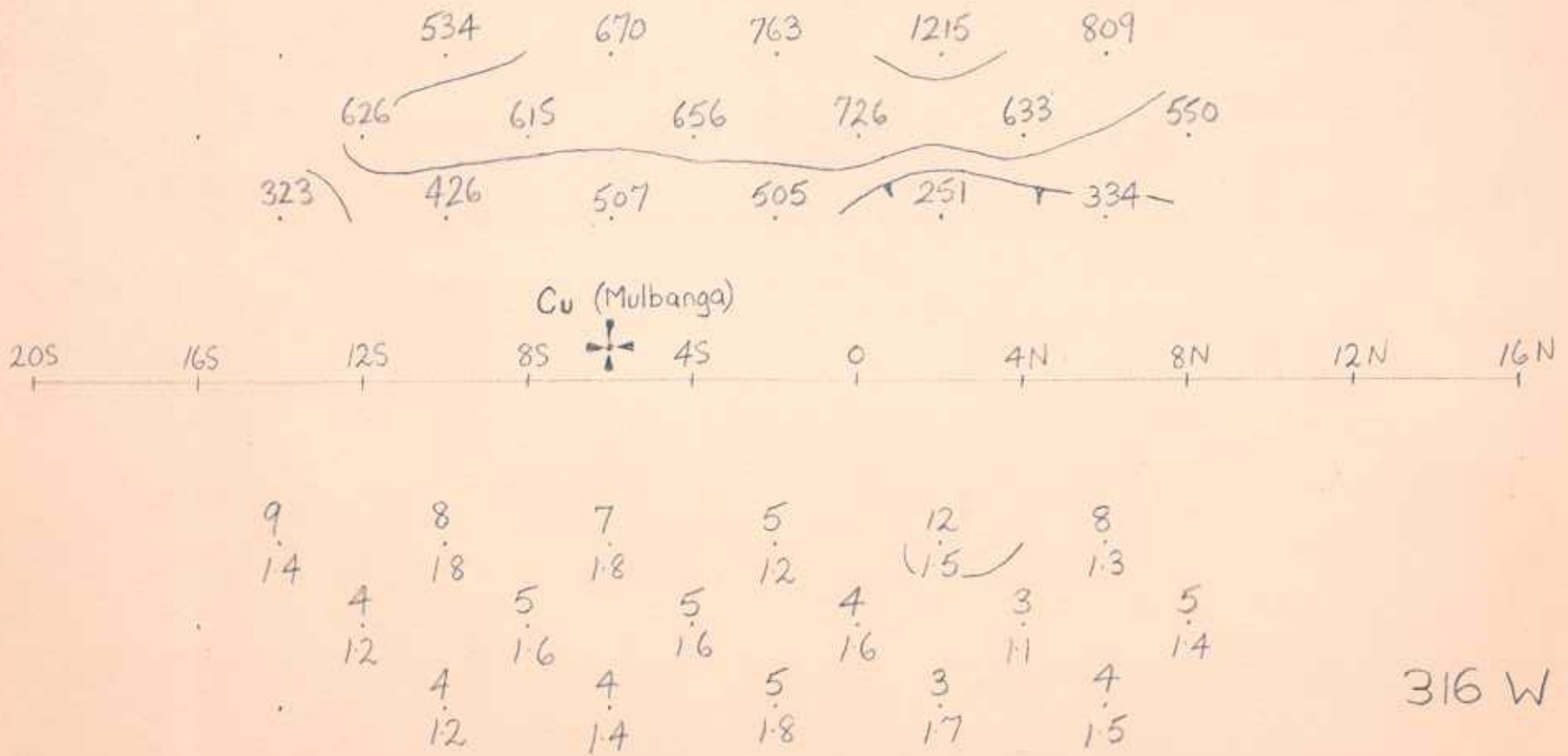
The apparent resistivity of the underlying formation is portrayed above the line and the metal factor and frequency effect below the line. The apparent resistivity (400-800 ohm meters) is what would be expected over the country rock of schists and diorite. However, neither the frequency effects or metal factors increase in any way over the prospect. This indicates that there is little or no sulphide mineralization at depth.

CONCLUSIONS AND RECOMMENDATIONS

The negative results from the I.P. work indicate that no further work is warranted and that the option be relinquished.

INSET A

A.P. Nº 1326 (N.T.).



316 W

PLATE I