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PRELIMINARY REPORT ON
ANOMALY "A"
Moore's Valley

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MICROFILMED

Prelim. Rep. Anomaly 'A' (2 copies)
Moore's Valley

L.E.S. 9/3/59

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To: Mr. G.F. Hudspeth.

9th March, 1959

Preliminary Report on Anomaly "A", Moore's Valley

The presence of a conductor in the south western portion of the grid on Baseline No. 1 was indicated by the strike and dip of the natural fields. The measurements made on all of the lines between 20N and 52N gave dip angles toward the southwest; in addition, the maximum field strength was always in the NE-SW direction.

In order to locate the conductor, its widespread influence indicated that it was long, the baseline was extended to station 8S. The AFMAG profile along the baseline showed a "crossover" at about 11N on the low frequency. The high frequency continued to be relatively featureless, as it had been on the rest of the grid. The shape of the curve indicates that the source does not come to the surface, but does have considerable depth extent. The general character of the curve is typical of that to be expected from large scale geologic shears and faults.

In an attempt to determine the approximate strike of the zone, AFMAG measurements were made along an open ridge about 1000' west of the baseline. The presence of dense bush prevented measurements of the complete curve; however, enough data was obtained to give a rough idea of the crossover location. This information indicates that the conducting zone probably strikes somewhat north of west on the grid.

More information was obtained by surveying the baseline with the induced polarization equipment. The resistivity results reveal a distinct

low which correlates exactly with the AFMAG anomaly. There is a moderately high induced polarization anomaly associated with this feature, indicating the presence of metallic minerals.

The use of very small electrode spacings for part of the work showed that the source of the IP anomaly is under some cover. The best estimate is a depth of 200' which fits well with the postulated thickness of the Tertiary sediments. The resistivity data also suggests that the conducting zone has a considerable depth extent.

At present, it is planned to investigate further Anomaly A by surveying lines parallel to the baseline. The first two are being put in 500 feet east and west. The AFMAG and IP results along these lines will better determine the strike of the conductor. They will also reveal any possible changes in the character of the zone east and west of original location on the baseline.

P.G. HALLOF
McPHAR GEOPHYSICS

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GENERAL

To: Mr. G.F. Hudspeth.

31st March, 1959

Activities of the McPhar Crew - March, 1959

During the final month of the McPhar's participation in the geophysical program, the work of the crew was concentrated in Moore's Valley. The majority of the time was spent in carrying out a detailed induced polarization survey in the vicinity of Anomaly "A".

The following is a daily record of the activities of the crew.

Separate reports covering the geophysical results have been filed.

- March 1 I.P. Survey on Baseline 1, 200' spreads.
- 2 Rain.
- 3 I.P. Survey on Baseline 1, 200', and line 12+00 N, 400' spreads.
- 4 I.P. Survey on Line 12+00 N, 400' spreads, prepare electrode sites on southern extension of Baseline 1.
- 5 Move equipment to southern extension Baseline 1, cut line on 5+00 W. Rain.
- 6 Rain. Hallof travel to Queenstown.
- 7 Rain. Hallof demonstrating AFMAG to Rio Tinto Group.
- 8 Rain. AFMAG demonstration to E.Z. Group in Rosebery,
- 9) Rain. Report writing in Queenstown.
- 10)
- 11 Return to Moore's Valley, line cutting and preparing electrodes on line 5+00 E.
- 12 I.P. Survey on southern extension of Baseline (800' spreads); AFMAG at night, low field and no progress made.
- 13 I.P. Survey on Line 5+00 E (400' spreads); AFMAG at night, low field and no progress made.
- 14 Prepare electrodes on line 5+00 W and 10+00 W, no I.P. due to helicopter breakdown; no AFMAG fields at night.

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- 15 I.P. Survey on line 5+00 W (400' spreads).
- 16 I.P. Survey on line 10+00 W (400' spreads).
- 17 I.P. Survey on line 10+00 E (400' spreads).
- 18 Line cutting and preparing electrodes on L15E.
- 19 I.P. Survey on Line 15E.
- 20 Chopper down, no way to move gear. Preparing electrodes on southern extensions of Baseline, 5E, 10E and 15E.
- 21 I.P. on Baseline south at 400' spreads.
- 22 I.P. on line 5E.
- 23 Rain.
- 24 I.P. on Line 10E.
- 25 I.P. on Line 10E and 15E.
- 26 Packing equipment, travelling to Birch.
- 27 Travelling Birch, Queenstown.
- 28 Preparing equipment for work on Corridor anomaly.
- 29 I.P. on Corridor Anomaly, 100' spreads.
- 30 I.P. on Corridor anomaly, 100' spreads.
- 31)
 - April 1) Packing.
 - 2)
 - 3 Travelling/packing.

P. Hallof
McPhar Geophysics Ltd.