GEOPEKO LIMITED

Black Angel Area
Tennant Creek

REPORT ON EXPLORATION ASPECTS

by

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with Appendix comprising copies of
Peko Drill Hole Logs

SYDNEY

18th January, 1968.
INTRODUCTION

The two accompanying plans show the results of ground magnetic surveys completed by A.G.G.S.N.A. during 1937 and by Peko Mines N.L. during 1957.

The plan showing the latter also shows the positions of,
4 diamond drill holes completed by Peko Mines in 1957 and
5 diamond drill holes completed by Aurous Development in 1964.

Copies of the Drill Logs for the Peko drill holes are included as an Appendix.

The Peko drill holes B.A.1 and B.A.2 were planned to test the two major anomaly bodies. The hole B.A.3 was planned to test the "intersection of grit bed with the main shear". The hole B.A.4 was planned to test the "extension of mineralised zone beneath the Black Angel workings".

The Aurous Development drill holes A1 to A5 were planned to test scattered areas of geochemical anomaly, within the oxidised zone only.

The Peko drill hole B.A.1 encountered considerable magnetite-rich material within the depth range 417'-6'' to 634'. Only 14 feet of this material was assayed for copper. No gold assays were made.

The drill hole B.A.2 intersected a magnetic body at depth 550'-655'. 35 feet of this material was assayed for gold. Four feet of a smaller magnetite body found at depth 672'-680' was also assayed for gold. The best assay result from drill hole B.A.2 was 0.6 dwt per ton, at depth 645'-650'.

The Peko drill hole B.A.3 intersected scattered magnetite-rich material below the depth 310½ feet. Twenty-three scattered assays were made for gold only. The total length of hole assayed was 51½ feet from positions between the depths 161 feet and 468 feet. Three bands of quartz magnetite, of total thickness 37 feet, were not assayed. The best assay results were

17.7 dwts per ton at 427'-428½', and
6.5 dwts per ton at 429½'-431½'.

The Peko drill hole B.A.4 was assayed for gold in 5 feet sections from 285' to 330' and at 3 other positions. The best result was 0.8 dwts.

It is understood that the Aurous Development drill holes gave only very low assay results.
DISCUSSION OF GEOPHYSICAL AND DRILLING RESULTS

The characteristics of the Anomaly No. 1 reveals the existence of a long line of possible interest which might extend still further, north-easterly, beyond the area covered by our geophysical survey.

The Anomaly No. 2 also has substantial length and it might extend further, north-westerly, beyond the area covered by geophysical survey.

The Anomaly No. 3 and the one of minor strength at the western end of the geophysical grid could be of interest.

Thus the geophysical work completed to date establishes the existence of a major prospect area.

The 4 drill holes completed by Peko do not adequately test the anomaly environments present and, furthermore, the assays made on the drill core obtained from those holes appears to be insufficient.

The diamond drill holes completed by Aurous Development add some useful exploration information. It is possible that their geochemical results warrant further study.

RECOMMENDATIONS

Extension of the geophysical survey in several parts is favoured.

Three diamond drill holes are recommended, as an immediate first step in the further exploration of this prospect area. Particulars of the recommendations are given below:

Drill Hole B.A.5. Drill in the direction 330° (A.G.G.S.N.A. Grid) to intersect the point 600 feet vertically below the grid position 1880E/570N (A.G.G.S.N.A. Grid).

Drill Hole B.A.6. Drill in the direction 360° (A.G.G.S.N.A. Grid) to intersect the point 600 feet vertically below the grid position 380W/100N (A.G.G.S.N.A. Grid).

Drill Hole B.A.7. Drill in the direction 180° (A.G.G.S.N.A. Grid) to intersect the point 700 feet vertically below the grid position 4800E/300N.
The collar positions for the drill holes B.A.5 and B.A.6 could be located relative to the two A.G.G.S.N.A. Pipe Beacons, one on Traverse 1800E and the other on Traverse 400 W. Magnetometer work might be needed to re-establish the Peko 1957 pegging for locating the collar position of drill hole B.A.7.

It is suggested that the "Mine Grid" used for co-ordinates of drill holes B.A.1 to B.A.4 be abandoned and the A.G.G.S.N.A. Grid adopted for all further work. We shall give attention to the re-establishment of that grid on the ground as early as possible.

(L. A. Richardson)

18th January, 1968.