ANNUAL REPORT FOR EL 8603

(NORTHWEST BREADEN)

SE 52 - 15 (4859)

G Doust

July 1995
SUMMARY

Compilation of previous exploration results resulted in the recognition of several highly ranked exploration targets within EL 8603. Reconnaissance sampling in 1984 affirmed the prospectivity of the property to contain significant gold mineralisation.

A RAB drilling programme comprising 2895 metres in 108 holes was undertaken in 1995 to test the targets generated. Results have downgraded the immediate potential of the property to contain a significant near-surface gold orebody. However, the areas enclosing two gold anomalies obtained during the programme require a limited surficial follow-up to determine if any further drilling targets remain in the licence area.
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1. **INTRODUCTION**

Exploration Licence 8603 of 35 blocks was granted to Glengarry Mining NL on 20 May 1994 for a period of six years. This tenement was subsequently included in a joint venture with Tanami Gold NL, known as the Tanami General Joint Venture (50% Glengarry, 50% Tanami; Glengarry manager).

On 8 May, due to the inability of a drilling contractor to undertake the planned RAB programme, a Variation of Covenant was applied for to obtain an extension of time (until 30 June 1995) to complete the proposed exploration. An extension of time (until 31 July 1995) to submit this report was also requested. The RAB programme was eventually completed on 22 June.

This report summaries the work carried out on the Exploration Licence between 20 May 1994 and 30 June 1995. Details of the RAB drilling programme are included in the accompanying report by S Lipple.

2. **CONCLUSIONS**

The weak, sporadic gold anomalies located by the exploration programme provide limited encouragement for the occurrence of more substantial mineralisation in close proximity either laterally or vertically.

A follow-up programme (which would include re-sampling of individual metre samples within the anomalous 5 metre drill sample composites as an initial activity) is warranted.

3. **PROPOSED PROGRAMME 1995 - 1996**

(i) Re-sampling and analysis of anomalous drill intervals.

(ii) Gridding followed by:

(a) detailed ground magnetometer traverses in the vicinity of known anomalies to assist in locating potentially mineralised structures; and

(b) auger geochemical sampling in the vicinity of known anomalies and known or potential structural sites.

The cost of this programme is likely to be a maximum of $10,000. Continuance of exploration will depend on the results of this follow-up.

4. **LOCATION AND ACCESS**

The tenement is located approximately 85 kms northerly from the Tanami Mine. Access is via graded station tracks from Suplejack Downs Station, approximately 45 kms to the east (refer Figure 1).
5. **1994 - 95 WORK PROGRAMME**

Compilation of exploration results by previous explorers was undertaken to produce a geological interpretation based mainly on magnetic and geochemical data (refer Figures 2, 3, 4).

A helicopter-assisted reconnaissance sampling programme was undertaken during July 1994 to establish the nature of the terrain and to substantiate geochemical anomalies obtained by previous explorers. Results were incorporated into the compilation to assist in planning of a RAB drilling programme. The property contains geological elements which appear to be remarkably similar to those hosting The Granites gold mine, so that it was given a high exploration ranking despite the paucity of major gold anomalies.

The rationale, conclusions and recommendations relating to this work are included in the accompanying report by G Doust, October 1994 (Appendix 1).

A rotary airblast (RAB) drilling programme of 2985 metres in 108 holes was undertaken during June 1995. The holes were sited to test the targets generated by Doust, 1994 and almost all were declined at 60 degrees in order to sample as much stratigraphy as possible. Holes 98 to 108 were sited to test structural targets generated while on site. Drill holes were sampled at 1 metre intervals and splits from these were aggregated into 5 metre composites for initial analysis. All samples were assayed for gold by AAS and bottom of hole samples were analysed for a suite of elements which commonly indicate mineralisation and some to assist lithologic identification.

Ground magnetic traverses were undertaken to locate the aeromagnetic target and an adjacent "trough" (potential shear zone) beneath the New Grid. Other traverses were made on the Main Grid to establish if an apparent shear zone had magnetic expression.

Details of the drilling programme, including magnetic and analytical results, are presented in the accompanying report by S L Lipple.

6. **RESULTS**

Results of the 1994 reconnaissance included an assay of 165ppb Au from a ferruginous quartz-veined sheared dolerite and two weak Au values (3ppb) on the Main (PNC) Grid (refer Table 1).

Weak sporadic gold anomalies (up to 47ppb Au/5m) have been obtained by RAB drilling in three areas of the Main Grid. Arsenic and other pathfinder elements also exhibit variable low order anomalism.

The anomalies could represent the "fringe halo" above deeper ("blind") more significant mineralisation, or they could simply represent a "volatile front" related to the adjoining granitic intrusion. Channelling of these volatiles along structural weaknesses could produce gold orebodies.
GLENGARRY MINING N.L.
TANAMI JOINT VENTURE
NW BREADEN PROJECT
GEOCHEMICAL COMPILATION
Compiled: G. Doust Date: Oct. 1994 Figure: 3
The potential for significant gold mineralisation in the vicinity of the interpreted northeasterly-trending major shear appears to have been minimised. The weak gold anomalies adjoining its trend (eg in holes 87 to 91) are considered to relate to hydromorphic dispersion and precipitation of gold at the convergence of two drainages.

The highest value (20 - 25m @ 47ppb Au in hole 69) could relate to fracture-controlled mineralisation. Further surface sampling in its vicinity could be warranted to establish its likely significance. The second highest value (20ppb Au, 20 - 25m in hole 47) was obtained from the same doleritic unit which had previously returned 165 ppb Au from outcrop nearby (refer Table 1). This affirms the existence of gold in the vicinity and encourages further testing along the strike of this rather competent unit. Structural observations by Lipple (1995) suggest that the gold anomalies occur along the flank of a regional fold structure, rather than in its core as initially suggested by Doust, 1994. Detailed auger geochemical sampling and ground magnetic traverses across the fold closure could comprise a valid follow-up in this area.

The magnetic anomaly underlying the New Grid has been found to relate to abundant magnetite, rather than sulphides as had been hoped. The paucity of gold and "indicator element" anomalism also suggests that this target has been adequately tested.

7. EXPENDITURE

Expenditure of $110,098 has been incurred in exploration of Exploration Licence 8603 up until 30 June 1995. This includes $1,586 which is an apportionment of the cost of developing the regional synthesis and target generation. Details are presented in Table 2.
# TABLE 2
EXPLORATION EXPENDITURE
EL 8603
YEAR ENDED 30 JUNE 1995

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| SUB TOTAL                                | 95,737  |

| Administrative Overheads @ 15%           | 14,361  |

| TOTAL                                    | 110,098 |
APPENDIX 1
GLENGARRY MINING NL

NORTH WEST BREADEN

E8603

COMPILATION AND WORK PROPOSAL

G Doust

26 October 1994
NORTH WEST BREADEX - E8603 (Northern Territory)

GENERAL JOINT VENTURE - Glengarry Mining NL 50%, Tanami Gold NL 50%

1. LOCATION

The property is located approximately 220 Km ESE'ly from Halls Creek and is 85 Km northerly from the Tanami mining centre in central western Northern Territory.

2. CONCLUSIONS

2.1 Four ore target zones have been identified within the EL on the basis of geological interpretation in conjunction with geochemical and magnetic data.

2.2 The low absolute levels and poor coherence of the Au geochemical anomalies suggest that they could originate in weak Au mineralization which could form a primary halo to more substantial "blind" ore zones.

2.3 More detailed evaluation of the magnetic data and testing of bedrock geochemistry will be necessary to establish drill targets.

3. RECOMMENDATIONS

RAB bedrock sampling at 100 m spacing should be undertaken over the four target zones with a closer spacing (50 m) over selected portions. This will require approximately 4,000 metres of drilling for approximately 300 samples and projected cost of $100,625 as detailed in Appendix 1.

4. EXPLORATION HISTORY

1986-1989  PNC Exploration carried out geological mapping, airborne and ground magnetic and radiometric surveys, geochemical sampling and RAB drilling (4 holes).

1992-1993 Delta Gold undertook ground magnetic and auger drilling traverses and a BCL gold geochemical survey.

5. **1994 RECONNAISSANCE (Tanami Joint Venture).**

Eleven rock chip and nine ferruginous LAG samples were collected from the property to check results of previous surveys and to provide more regional geochemical information. Results affirm the As and base metal LAG anomalies, and may indicate the presence of some previously undetected low level Au values on the PNC grid. A limonitic quartz vein from a sheared dolerite immediately north of the PNC grid returned an assay of 165 ppb Au.

6. **GEOLOGY**

Exploration results from previous surveys have been compiled at 1:50,000 scale (transparencies 1,2). An interpretation of the geology using outcrop, aeromagnetic, and geochemical data is presented in Figure 1. This suggests that the eastern half of the property is underlain by granitic rocks (possibly relating to two intrusive phases) and the central portion by a pyroxenite-cored mafic-ultramafic body. Alternatively, the pyroxenite could be flanked by sediments because banded cherty rocks do outcrop on the grid and graphitic shales also commonly produce Cu and Zn anomalies. The symmetry of the copper (and zinc where analysed) geochemical anomalies suggests either that the ultramafic occupies the core of an isoclinal fold or that it occurs centrally within a composite lenticular body. A distinct NNE'ly-trending magnetic break truncates the prominent magnetic ridge and the parallel geochemical anomalies. This suggests that a major fault transects the property and displaces the magnetic body in a dextral manner.

7. **GEOCHEMISTRY**

RAB drilling by PNC obtained values of 8 and 12 ppb Au, but lacking As support (maximum 14 ppb) from magnetite-chlorite schist in two southerly holes.
Western Mining Corporation completed a "blanket" LAG geochemical survey of the entire property on a 800 x 100 metre grid and analyzed for ppb Au, Cu, Ni, Cr, As. PNC had previously obtained extensive, partially coincident anomalies for As, Cu and Zn along a 6 km more detailed grid covering a central topographic ridge. Anomalous Cr values, which describe a zone parallel to and west of the prominent central magnetic ridge, suggest a pyroxenitic source. Elevated Cu values envelop the Cr anomaly and, on the eastern side are coincident with a significant As anomaly approximately 4 kilometres long. This would appear to indicate the existence of sulphide mineralization in this area.

Low level anomalous LAG Au values (at the detection limit of 1 ppb) occur scattered throughout the property and coincide with all rock types including the Birrindudu Group sandstones. Auger sampling by Delta Gold located Au values up to 4 ppb in the sub-surface pisolithic layer - most of these occur at some distance from the coincident As-Cu (-Zn) anomaly adjoining the central magnetic ridge, but three values exist along its southerly projections, adjacent to the inferred fault structure. Ultra-low level BLEG values, both from surface and auger samples, define a cohesive anomalous pattern within the drainages which coalesce south of the main As anomaly on the LAG-covered ridge. Two LAG samples collected during the 1994 reconnaissance returned values of 3 ppb Au within coincident As-Cu-Zn anomalies on the PNC grid but duplicate samples failed to detect any gold.

The most cohesive positive radiometric trend coincides with the As anomaly just east of the main magnetic ridge, and one of the radiometric peaks occurs between the two Zn maxima within the coincident Cu anomaly.

8. GEOPHYSICS

Imaging of the gridded NTDME aeromagnetic data has been completed and used in general target definition. However, fine details obviously are removed by this process, and a series of stacked profiles of individual flight lines has been commissioned to enable a better structural appraisal of the target area and to guide final siting of some drill holes.
9. DISCUSSION

A real problem in the compilation of the data is that the PNC grid is plotted in different locations and orientations by PNC, WMC and Delta Gold (up to 8° difference). However, the WMC plot fits most closely with the co-ordinates obtained during the 1994 TJV reconnaissance, and therefore has been used to plot the grid results.

The geochemical anomalies for Cu (-Zn) and Cr appear to be related to black shale (and/or mafic) and ultramafic lithologies respectively, rather than to mineralization. The symmetry of the Cu ± Zn anomalies suggests the existence of a tight fold closure to the north of the pyroxenite. This is not inconsistent with the magnetic and Cr geochemical patterns. The As anomaly (and coincident Cu ± Zn anomalies), on the other hand, indicates the existence of a discrete stratabound sulphide mineralized zone lying along a probable "BIF"-black shale unit between pyroxenite (west) and granite (east). This property therefore contains most of the geological elements relating to The Granites-Dead Bullock Soak ore model as proposed in the Tanami Regional Study, and therefore is considered highly prospective for further similar Au ore occurrences.

However, the almost complete absence of Au anomalies within the main As anomaly (an area covered with good, "heavy" ferruginous LAG) seriously downgrades the potential of the property to contain sub-cropping Au mineralization of significant grade. The localisation of the BLEG anomaly in drainages flanking the southern "nose" of the As-anomalous LAG-covered ridge suggests that it is a hydromorphic dispersion related to Au mineralization at some depth. The weak "pisolite in auger" Au anomalies occur in the "flow interface" from the two drainages and could have similar origin. Alternatively, they could suggest a strengthening in tenor of Au mineralization in the zone towards the south. The occurrence of weak Au values only in the two southerly holes drilled by PNC could support this suggestion.

The proximity of these anomalies to the inferred fault could indicate some genetic link between the two, or alternatively that the anomalies relate to the "tail" of a more substantial Au-bearing zone across the fault. In the latter case, the ore target
would lie along the southern margin of the EL at the northeast end of the magnetic anomaly (and adjacent to an inferred granitic intrusive). In any case, the projection of the As-anomalous stratigraphy southerly to the inferred fault (which is covered by recent alluvial silts) presents a valid ore target which requires deep bedrock drilling to properly evaluate.

Another target, of equal priority to that just described, exists towards the northern end of the main magnetic ridge. Here, a single sample of quartz from a small outcrop of veined, sheared dolerite (or ultramafic, WMC) returned an assay of 165 ppb Au, together with anomalous base metals, arsenic and bismuth. This occurrence exists at the apex of the ultramafic body which could be construed (from both geochemical and magnetic evidence) to be the closure of an isoclinal fold. This would be an excellent structural site for ore localization, particularly if the iron formation/black shale stratigraphy continues through it. However, LAG sampling has produced no anomalies for either Au or As in this area, so a similar "blind" ore potential is envisaged.

The third target is defined by a radiometric anomaly which is quasi-coincident with two of the Zn peaks (and the only tentative Au anomalies) within the Cu-As LAG anomaly. Although radiometric anomalies are known to relate to surficial concentrations of Th, U in iron rich surfaces such as here, this peak could indicate a locus for alteration within the broader mineralized feature.

A fourth ore target is presented by a discrete magnetic anomaly near the northern edge of the EL which is of similar intensity to the main magnetic ridge. This appears to be the southern end of a more extensive, less intense N-S magnetic ridge where it either terminates against or is bent around a granitic intrusive. Magnetic patterns also allow the interpretation of a more extensively WNW'ly trending shear along this contact. This structural situation is considered to be highly favourable for localization of Au mineralization. Separate isolated As and Cu anomalies were obtained from LAG samples near the northern end of this anomaly, but no As or base metal values are recorded for the traverse across its southern end.
Because of the low level of the Au anomalies, the targets are considered to be primary haloes to "blind" orebodies, so that wide spaced bedrock sampling is preferred to further sampling of the secondary dispersion medium.

10. **RATIONALE**

Given the poor results of extensive surface testing of the property, and the likely nature of the target (refer Section 9) the objective will be to locate some indication of significant mineralization in the bedrock before committing to a more extensive programme. The location of the planned drill holes is shown in transparency 3.

The target zone with the best apparent potential to contain a major ore body occurs in the vicinity of where the projection of the surface As anomaly is truncated by the inferred fault. Two lines of RAB drilling to cover the zone of maximum auger Au anomalism, and a third to cover the centre of the associated BLEG anomaly and the inferred fault are planned.

Two lines of RAB drilling are planned to cover the peak of the Zn/Cu/As anomaly and the adjacent radiometric anomaly.

A single line of RAB drilling is planned to cross the Au-anomalous quartz veined "dolerite" outcrop and the stratigraphy on either side in the possible fold closure.

Because the northern magnetic anomaly has never been tested by any previous geochemical survey, and because of its highly favourable structure situation, three RAB drilling lines are proposed across it.