Western Metals Limited

WICKHAMS WELL
E.L. 8961

1998 ANNUAL REPORT
FOR THE YEAR TO 19TH April 1999

Prepared by
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April 1999

Issued by
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Exploration Manager
April 1999

Reporting Period: 20/4/98 to 19/4/99
Tenements: EL 8961
Held By: Western Metals Resources NL
Managed By: Western Metals Resources Ltd, A.C.N. 004 664 108
Exploration Division
1 Altona Street, West Perth, WA 6005
Distribution: Department of Minerals and Energy, Darwin
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Adelaide Resources NL
EXECUTIVE SUMMARY

This report covers work completed by Western Metals Resources (previously Aberfoyle Resources) on Exploration Licence 8961, Wickhams Well, in the twelve-months to 19th April 1999. This licence was held 100% by Western Metals Resources Ltd.

E8961 covers an area of 294 graticular blocks in the Arunta Province of the Northern Territory, believed to be prospective for gold deposits of Granites – Tanami type.

Work completed in the period included interpretation of airborne geophysical datasets and laterite and rock chip sampling (31 samples). No anomalous results were returned.

Following the takeover of Aberfoyle Ltd by Western Metals Ltd in September 1998, the decision was taken to divest the Tanami interests. In March 1999, an agreement was reached under which Western Metals withdrew from its Tanami Joint Venture with Adelaide Resources and under which Adelaide Resources acquired 100% of the Wickhams Well tenement.
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1. INTRODUCTION

ELA 8961 (Wickhams Well), located approximately 600km NW of Alice Springs, was granted to Aberfoyle Resources Ltd on 20th April 1998. Aberfoyle Resources Ltd was renamed Western Metals Resources Ltd on 8th October 1998, following the takeover of Aberfoyle Ltd. by Western Metals Ltd.

ELA 8961 comprises 105 graticular blocks which cover interpreted Mt. Charles Beds correlatives, believed to be prospective for Tanami-style gold mineralisation.

Since the takeover, Western Metals has undertaken an extensive review of all of Aberfoyle’s exploration interests, including the Tanami JV. This resulted in a decision to divest the Tanami gold properties. In March 1999, terms were agreed with Adelaide Resources for withdrawal from the joint venture.

This report covers work completed by Western Metals on the tenement in the twelve-months to 20th April 1999, which comprised interpretation of airborne geophysical datasets and surface lag and rock chip sampling.

2. LOCATION AND ACCESS

The Wickhams Well EL8961 licence is located 110km SW of the Granites Gold Mine and approximately 600km NW of Alice Springs in the Northern Territory (Figure 1). The nearest permanent settlement is Yuendumu which lies approximately 220km to the south-east.

The licence is covered by the Highland Rocks (SF/52-7) 1:250,000 Geology sheet (Hodgson, 1977).

Access to the licence area can be gained from Alice Springs via the Stuart Highway thence the Tanami Highway to Chilla Well where a newly established (CLC approved) single lane track runs west to the area and traverses the centre of the licence.

Sand dunes run east-west across the licence making vehicular access to the northern region difficult.
3. TENEMENTS

EL8961 (Wickhams Well) was granted to Aberfoyle Resources Ltd on 20th April 1998 for a period of six years. Aberfoyle Resources Ltd (A.C.N. 004 664 108) was renamed Western Metals Resources Ltd on 8th October 1998, following the takeover of Aberfoyle Ltd. by Western Metals Ltd.

The Wickhams Well licence covers an area of 946 square kilometres (294 graticular blocks).

4. GEOLOGY

4.1 REGIONAL GEOLOGY

The tenement lies within the Arunta province, a Palaeoproterozoic terrain believed to be analogous to the Granites - Tanami province.

The relationship between the Granites - Tanami and Arunta provinces is not well understood. Basement metasedimentary sequences in both regions are thought to be lateral equivalents (Blake et al., 1975) and the sequences merge with one another (Stewart et al., 1984).

The Granites - Tanami and the northern Arunta provinces contain similar rock sequences and share similar Palaeoproterozoic magmatic, metamorphic and deformational histories. Both comprise a deformed Palaeoproterozoic basement turbiditic sequence of greywacke, quartz sandstone, siltstone, shale, and minor mafic rocks and their moderate to high grade metamorphic equivalents (schist, gneiss, quartzite, amphibolite). The Tanami Block also contains chert, pyritic carbonaceous sediments and ironstone, whereas the Arunta Block has minor calc-silicates and meta-felsic volcanics (felsic orthogneiss).

During the Barramundi Orogeny (1890-1850 Ma, Page and Williams, 1988), the sedimentary sequences in the Arunta Block were intruded by mafic rocks, deformed and metamorphosed up to amphibolite facies. Granite plutons were emplaced in the closing stages of the Barramundi Orogeny, at about 1820-1800 Ma.
In the Arunta province, platform quartzite-shale-carbonate sediments (Reynolds Range Group) unconformably overlie the Barramundi metamorphic rocks and probably represent correlatives of the Hatches Creek Group of the Davenport Province to the north (Blake et al. 1987). Deformation of the Hatches Creek Group preceded granite intrusion at about 1660 Ma (Blake and Page, 1988) and involved an early phase of upright northwest-trending folds and a second episode of northeast-trending folds. Both episodes were accompanied by faulting, thrusting and metamorphism.

The Arunta province remained tectonically active after the Barramundi Orogeny with several metamorphic and deformation events, including the ~1800 Ma Strangways granulite event (Shaw et al, 1984), the 1760-1650 Ma Aileron retrogressive event (Windrim and McCulloch, 1986) and the most recent Carboniferous Alice Springs Orogeny. In the northern Arunta region, significant granitic magmatism occurred at 1780-1770, 1713, 1635 and 1570 Ma.

The basement provinces described above are unconformably overlain by younger, Neoproterozoic and Palaeozoic sediments of the Birrindudu, Wiso, Georgina and Ngalia basins (Wells and Moss, 1983).

4.2 LOCAL GEOLOGY

The tenement is 70% covered by Quaternary aeolian sand cover. The limited exposures of deeply weathered and lateritised Proterozoic basement rocks within the EL are interpreted to be gneiss, quartzite and schist.

5. PREVIOUS EXPLORATION

The first recorded exploration of the Wickhams Well area was a party led by Colonel Warburton in 1873 (Warburton, 1875).

In 1900 Davidson led a prospecting expedition westwards from Tennant Creek (Davidson, 1905), discovering gold at Tanami and The Granites which are located to the north of the ELA. In 1933 Terry traversed the area, naming False Mount Russell and Wickhams Well (Terry, 1937).
In 1967 a reconnaissance gravity survey was undertaken by the Bureau of Mineral Resources (BMR) (Whitworth, 1970). Aerial photography was flown over the Wickhams Well sheet area in 1971 and 1972, and geological mapping by the BMR was carried out in 1972 and 1973 (Hodgson, 1997). Due to the very poor ground access they traversed the area using helicopters.

The NTDMR, in conjunction with the Australian Geological Survey Organisation (AGSO) flew an airborne magnetic survey at 500m line spacing of Wickhams Well and adjacent sheet areas in 1993 (Milligan et al., 1994).

Landform regolith mapping of the Wickhams Well region based on interpretation of Landsat MSS and airborne gamma-ray spectrometric imagery data was undertaken by AGSO in 1994 (Maidment, 1994).

6. 1998 EXPLORATION

6.1 SITE SURVEY

A site clearance was completed by the CLC between 9th and 13th March 1998. Two exclusion zones were defined on the EL, as outlined in the CLC letter in Appendix I.

6.2 LAG AND ROCK CHIP SAMPLING

A total of 31 lag and rock chip samples were collected on the licence during the reporting period. Sampling was concentrated in areas with magnetic stratigraphy in the central part of the licence area.

Lag sampling involved shovelling surface material into a 5mm sieve with the +5mm fraction retained for analysis. Rock chip samples were collected with a geology hammer. All samples were analysed for Au (PM205) and As (AA205) to detection limits of 0.001ppm and 5ppm respectively at Australian Laboratory Services.

6.3 GEOPHYSICAL INTERPRETATION

Government aeromagnetic and gravity data were acquired for the Wickhams Well area and limited interpretation and modelling completed.
The aeromagnetic survey was completed with a 500m line spacing and 90m flying height. Several traverses over the tenement were modelled, with results suggesting that the average depth to magnetic source is approximately 200-300m over the higher amplitude magnetic features (Figures 1-12). There are also several shallower dyke-like features which are of lesser significance. The depth estimates should be accurate to within ±50m.

The highest amplitude anomaly for the area was approximately 750nT for which a 2km wide body, with a magnetic susceptibility of 0.0021cgs was modelled at a depth of 200m. The flying height of 90m was subtracted from the calculated depths to compute the correct depth to source.

The corresponding gravity data over the area consists of a large high of approximately 200mgals in amplitude (Figure 13). This is quite a large anomaly and modelling of large body of approximately the same proportions as the Wickhams Well magnetic complex (14km by 12km) at a depth of 200m gives this body a density of 2.86g/cm³ which is quite significant. However, this is only true for a body of large depth extent (Figure 14). It is therefore plausible to suggest that the gravity feature may be produced by the same source as the magnetic feature if the source has a large depth extent.

Due to the large (10km) station spacing of the gravity survey, it is not possible to interpret anything further from the gravity data. As can be seen from Figure 15, the gravity anomaly over the Wickhams Well EL may in fact be part of a more regional stratigraphic feature. A more detailed gravity survey over the area of interest should reveal whether the gravity anomaly is isolated and associated with the magnetic feature or is simply part of a deeper, regional unit.

6.4 RESULTS

Lag and rock chip sampling failed to return anomalous results with all gold analyses below the detection limit for the technique used.

7. EXPENDITURE

Expenditure for the period totalled $21,791.40 as outlined in Table 1.
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8. CONCLUSIONS AND RECOMMENDATIONS

First phase exploration on the Wickhams Well tenement comprised geophysical interpretation and a limited reconnaissance lag and rock chip sampling programme.

The lag and rock chip sampling program completed during the period was concentrated on a small portion of the licence area leaving the majority of the licence unexplored. Although sampling was concentrated above magnetic stratigraphy thought to be a potential host for Tanami-style gold mineralisation further lag sampling is recommended to test the remainder of the licence.

However, Western Metals is not currently interested in pursuing grass-roots gold exploration and has divested the tenement to Adelaide Resources.

9. REFERENCES


APPENDIX I

CLC Work Area Clearance Letter
19 March, 1998

Mike Joyce  
Aberfoyle Resources Limited  
PO Box 761  
WEST PERTH WA 6872

Dear Mike,

RE: Work Area Clearance on ELs 8954 and 8961

The following are the results of the work area clearance which was conducted between the 9 March and the 13 March on the above ELs in the Highland Rocks locality. Apart from the areas listed below, Aberfoyle's work program is approved.

**EL 8954 – Highland Rocks**

One major exclusion zone is placed on the western side of the EL and is described as follows: (see Map)

1. Starting at the junction of the road and the western edge of the EL at 603 600E  
   7630 000N,
2. then north along the border of the EL to 603 600E  
   7633 000N,
3. then east to 605 100E  
   7633 000N,
4. then south back to the road at, 605 100E  
   7630 000N.

Your attention is also drawn to the eastern boundary of the EL south of the road. You may encounter a soakage in this region along co-ordinate 620043E. It may be near the road or towards the south east corner of the EL.
There are two exclusion zones to be placed on the EL.

1. The first is located near the northern boundary of the EL and is shown on the Highland Rocks 1:250 000 map as a “Rocky Outcrop”. A one kilometre exclusion zone has been place around:
   545 000E
   7639 000N

2. An exclusion zone, utilising the east-west track as the northern boundary, and to the following points, (see Map)
   a) Starting at the western boundary of the EL where the road meets the boundary:
      527 700E
      7630 000N
   b) Then south along the western boundary to
      527 700E
      7625 000N
   c) Then east to
      544 000E
      7625 000N
   d) Then north back to the road at
      544 000E
      7630 000N.

This is the first major clearance work to be centred on these particular exploration licences, and accordingly traditional owners are only now becoming more aware of the country. With this in mind Aberfoyle are requested to make every effort during exploration activities to report any sites that may be of significance to traditional owners.

The following standard conditions apply to all exploration:

a) Any encounter with archaeological material including soakages, stone arrangements, claypans, flaking/quarrying sites, human remains, unusual rock formations, paintings or rockholes should be reported immediately to the CLC, and the general area of the encounter should be avoided until the significance of the material can be assessed.

b) Any mature trees or trees of reasonable size are not to be interfered with, in particular: Desert Oaks, Bloodwoods, Ghost Gums, Desert Walnuts and Bean Trees.
c) No mature vegetation over 2 metres in height should be subject to impact in the course of exploration.

If you have any queries please do not hesitate to contact me.

Yours sincerely

[Signature]

Brett Mackie
Mining Officer
APPENDIX II

Surface Sample Location and Results
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Wickhams Well Airborne Magnetic Data
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Scale 1:100000
Wickhams Well
Depth to Magnetic bodies plan map
Scale 1:100000