ANNUAL TECHNICAL REPORT

on

EXPLORATION LICENCE EL 10120

ON THE

PINE CREEK SHEET SE 53-13 in the 1:250,000 Series

For the Year Ending 15 August 2008

for

ARMADA EXPLORATION PTY LTD

By

PETER SCHWANN

SEPTEMBER 2008
ABSTRACT

The work on EL10120 for 2007-8 consisted of a major rock and soil sampling program with scintillometer and GPS completed. This program was done with the team supervised by experienced prospector Mr Neville Wigg. The survey was a baseline survey and is designed to set up exploration in the coming year. Time and budget has precluded a detailed geological examination to date of the area and patterns in the assays. This will be done in the coming year.
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1. INTRODUCTION

Armada Exploration Pty Ltd (Armada) has a large land holding in the Mt Bonnie area near the old Mt Bonnie-Iron Blow gold and base metal workings. The leases are under option from Mr Robert Biddlecombe, a well known prospector in the Pine Creek region. The Mt Bonnie – Iron Blow area has a large polymetallic deposit listed in Undeveloped Resources (2006) by the NT Government to contain 1.7 Mt of 7.2% Zn, 1.1% Pb, 0.5% Cu, 165 g/t Ag and 2g/t Au. This area is held by GBS after acquiring it from Northern Gold NL.

This report details and presents results for the 2007-8 year. The year has allowed field programs to be done without geological supervision except for the prospectors and lease holders.

2. LOCATION

The Armada Lease, EL10120 is located 155 km south of Darwin within the Pine Creek Geosyncline that dominates local geology. The lease covers some 2 blocks and is part of a group of leases that cover the Grove Hill end of the Hayes Creek Fault. The leases are on the Pine Creek Sheet SE 53-13 and the Pine Creek 1:100,000 Sheet as well. The area is accessed by the Stuart Highway for 155 km then north east on the Grove Hill Hotel road for the last 8km.

Figure 1. EL10120 Lease on 1:250,000 Geology.
The area in the lease (shown in Figures 1 and 2 above) is typical Pine Creek razor back ridge country covered by medium trees and speargrass. The rocks are from the upper part of the South Alligator group of the Pine Creek Geosyncline and consist of Bouma Sequence material comprised of turbidites such as sandstones, siltstones, shales and cherts that have also been affected by dolerites and granites. The ridges are the harder sandstones and cherts with valleys of siltstones and shales. The major structure is the Hayes Creek Fault running NE SW through the lease.

The leases are shown in a composite plan (Figure 1) which gives the regional location and geological setting of the area held by Armada. These leases are in between Mt Bonnie and Iron Blow along the Hayes Creek Fault. Also the Landsat Image (Figure 2) shows the approximate area of the lease and demonstrates the rugged nature of the lease area.
3. PREVIOUS WORK.

Alluvial and bedrock gold have been won from the Grove Hill area since the 1870’s especially in the Mt Bonnie and Iron Blow areas. The previous work the lease area has been by metal detecting and alluvial mining with minor early shafts sunk just as exploration tools. The Distribution of Mineralisation below (Figure 3) shows the leases to be in the stratabound Iron Oxide Copper Gold area and Tin Tantalum in the granites. The lease contains the unnamed copper prospect No 166.

The previous exploration by prospectors, Henry Walker (Gold), Geopeko, Gold Fields, Dominion and Northern Gold involved all the phases from remote sensing through drilling to mining and was carried out with various models on geology and mineralisation. During the 1980s the improved price of gold on international markets encouraged further mineral exploration and in 1985 a joint venture between Enterprise Gold Mines NL and Renison Goldfields Consolidated Ltd commenced extensive open cut operations around the old Enterprise mine at Pine Creek. In 10 years this mine produced some 750,000 ounces.

Previous mining occurred at Mt Bonnie and at Iron Blow by Henry Walker (Gold) in the early 1980’s with the destruction of the historic boilers and smelters, now located at Pine Creek.
4. SCOPE OF WORK.

The work undertaken on the lease was part of a major effort in the area covered by the MCNs and the ELs belonging to Armada. This involved the use of a prospecting group managed by Neville Wigg, and used a scintillometer and GPS with rock chip and soil samples to cover the total area along both sides of the Hayes Creek Fault. Assays were done for Rare Earths as well as base and precious metals.

5. METHODS.

Standard controlled griding and sampling with radiometrics was undertaken on the leases in the year. The results were plotted on blown up maps and related to rock types with special emphasis on the potassic rocks seen in the area.
6. STRATIGRAPHY.

The leases are shown in a composite plan (Figure 1) which gives the regional location and geological setting of the area held by Armada. These leases are along strike of the Mt Bonnie and Iron Blow open cuts operated by Henry Walker (Gold) in 1982 to 1986.

The notes to the Sheet describe the lithologies as shallow to deep water Bouma Sequences with sub aerial Gerowie tuffs and later mafic and granitic intrusives. These are classic gold mineralisation traps, especially for coarse gold sandstones (spurs) and fine to refractory gold in the shales. The granites are known to generate skarn and hornfelses at many locations in the area.

The importance of the Cullen granites as a heat source for the alteration and mineralisation is well documented and the distance that the alteration can cover from the heat source will be investigated in the next phase of evaluation.

7. REGIONAL GEOLOGY.

The Leases are on the Pine Creek Sheet. The stratigraphy of interest is the South Alligator and Finnis River Groups and the effect of the Cullen Batholith and possibly the unconformity with the Burrell Creek and Mt Bonnie Formations.

It is now thought that the units are somewhat modified by both tectonics and hornfelsing, with the Cullen Batholith stoping and deforming the remnant sediments in typical Pine Creek geosyncline style.

The hydrothermal-diagenetic model is applicable for gold, copper, uranium and lead, and mostly controlled by pH effects. Requirements are source rocks for water, heat and mineralisation, and these are shale, granite-diagenesis and mafics or hot granites.

The role of graphite is doubtful as a reducing agent as most of the black carbon material is kerogen (coal) and has been through the hydrocarbon temperature (430° to 460°). This is consistent with the 400° of the hydrothermal temperatures required.
8. ASSAY RESULTS

The results of the sampling program are attached as Appendix 2. The data is still being plotted at the time of writing and will be sent to the department as an addendum to this report. The results of anomalous assays are set out below. The REO (Rare Earth Oxides) results are required to be in the 2 to 5% range and the best result to date is less than 0.05% REO. The table below gives the projection of REO prices from Arafura Resources.

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<th>Product</th>
<th>outlook</th>
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<td>2.00</td>
</tr>
<tr>
<td>Lanthanum</td>
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<td>3.00</td>
<td>+5.00</td>
</tr>
<tr>
<td>Neodymium</td>
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<tr>
<td>Europium</td>
<td>v strong</td>
<td>300.00</td>
<td>+500.00</td>
</tr>
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Only two samples returned anomalous (>0.1 ppm) Au, and these were 25909 at 0.14 ppm and 25803 at 0.15 ppm Au. There were no anomalous radiometrics on the lease with the maximum reading being 230 cps, near the Lady Josephine Line. Background was 75 to 85 cps.

9. TARGETS.

After plotting the results, it is envisaged that target definition and Hyvista Multispectral maps will allow a ranking of alteration and anomalies will indicate the areas of interest and allow targeted exploration to occur.

10. CONCLUSIONS.

The outlook for the Exploration is a positive one with the prospect of several orebodies in several different areas. The Property represents a strategic landholding in an under explored mineralised province with a major find at Mt Bonnie and Iron Blow being within similar stratigraphy and fitting the Model.

11. RECOMMENDATIONS.

The leases will require a staged and thorough evaluation over the next 12 months. This will involve Hyperspectral investigations and drilling to rank the targets.
12. EXPENDITURE.

12.1 Current Year

The leases were explored with an initial orientation program that established a knowledge base and familiarity with the area. The total amount spent was on all the ten leases within the EL10120.

<p>| | | |</p>
<table>
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<td>Supervision</td>
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<td>Consulting Geologist</td>
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12.2 Coming Year

The coming year should see the two areas explored as a project area and the application of a systematic and scientific basis of staged exploration. This will involve Hyvista Multispectral scanning and at a cost of some $6 per ha, will cost some $32,000 for the two ELs on the Hayes Creek Fault line. This will be done in July 09 in conjunction with other lease holders in the region.

This method will give high resolution mapping and alteration identification for the food outcrop in the lease area.

Following this, a mapping and alteration sampling program will define targets for follow up scrutiny. This will give a full years budget of some $52,000.
13. APPENDICES

1. Notes from 1:100,000 Pine Creek Sheet

**GOLD–SILVER–ZINC–COPPER**

Two precious and base-metal massive sulphide lodes occur within the Mount Bonnie Formation on the opposite limbs of a shallow north-plunging syncline, known as the Margaret Syncline, on the western flank of the Golden Dyke Dome.

**Iron Blow Mine**

The Iron Blow Mine was worked intermittently between 1873 and 1906 along a number of shafts, as deep as 65.5 m, four underground levels, and a 46 m-long open cut (Hossfeld, 1937; McDonald, 1901). Several unsuccessful attempts have been made to reopen the mine following investigations.
including geological mapping, geochemical sampling, self-potential and magnetic surveys, and diamond drilling (Hosfield, 1937; King & Thompson, 1949; Dunn, 1961; Skattebol, 1962; Kitto, 1968; Danielson, 1970; Shields & Pietsch, 1971; Goulavitch, 1980). All recorded production was from a lode in a steeply east-dipping, north-trending shear zone. Ore comprised a siliceous gossan capping of supergene-enriched gold, silver, lead and zinc, over a quartz–sulphide ore of these metals plus copper. The sulphides are pyrite with minor chalcocite, sphalerite and galena. The recorded production of the quartz–sulphide ore is approximately 14 000 t (Hosfield, 1937; Kitto, 1968).

A drilling program in 1963 (Balfour, 1978) indicated thinning of the main lode below 61 m and reserves of about 60 000 t of 6 to 9 g/t Au, 0.2 to 1% Cu, 4–5% Pb, 6–14% Zn, and 300 to 600 g/t Ag in places. A second pyrrhotite-rich lode, at a depth of 107 m with a probable width of 10 m and an estimated grade of 0.8% Cu and 4% Zn (Crunn, 1968), was also indicated. This lode is on a shear parallel to the main lode, and crops out 50 m farther west where it carries only low-grade mineralisation. A magnetic anomaly south of the pyrrhotite lode may suggest southward extension at depth.

Mount Bonnie Mine

The Mount Bonnie Mine began open cut operations in 1983 on a 500 000 t orebody averaging 8–9 g/t Au and 300 g/t Ag (Rich & others, 1984). The mine had been worked sporadically between 1903 and 1916 (Jensen & others, 1916), but no production records are available. These earlier workings included several vertical and inclined shafts, a 92 m-long adit and minor drives and cross-cuts. Between the two periods of production, a primary sulphide deposit of 400 000 t, averaging 1–5 g/t Au and 12–15% combined Pb–Zn, was outlined by drilling (King & Thompson, 1949; Shields & Pietsch, 1971; Goulavitch, 1980).

The current (1986) mining operation is restricted to the enriched oxidised zone, which lies beneath a siliceous hematite and limonite gossan with secondary arsenic and lead minerals. The main lode is about 20 m thick, and is conformable with bedding striking about 020° and dipping 40° to the west. In places, thrust faulting parallel to the lode has resulted in pinch-and-swell structures, and high-angle cross-faulting and shearing has caused minor displacements.

The primary lode is sulphide-rich containing pyrrhotite, pyrite, arsenopyrite, chalcopyrite, galena, sphalerite, tetrahedrite, gold and silver in a gangue of quartz, dolomite, actinolite, chlorite, talc, phlogopite and minor garnet. Primary ore grades intersected by two drillholes in 1917 were 3.1 g/t Au and 124 g/t Ag over 10.4 m, and 1.3 g/t Au, 404 g/t Ag, 0.5% Cu, 10% Zn, and 3.7% Pb over 8.8 m.
Both the Iron Blow and Mount Bonnie deposits are stratiform within interbedded pyritic shale, siltstone, tuff, mudstone, greywacke and minor banded iron formation of the Mount Bonnie Formation. They occur between two major greywacke–mudstone sequences near the base of the formation and associated with lenses of 'pebble breccia' present above, below and within the lobes (Goulevitch, 1980). The sulphide-rich base metal lodes are roughly lens-shaped up to 30 m thick and 150 m across, with most sulphide concentrated in tabular zones which are weakly foliated parallel to bedding (Goulevitch, 1980). The deposits are probably syn-genetic, and the interbedded tuffs may indicate a hydrothermal-exhalative source.

Carbonaceous rocks in the upper part of the Koepin Formation on the eastern side of the Golden Dyke Dome are anomalously high in lead, zinc and copper at Beattley's Prospect for a distance of 1000 m along strike (Shields & Pietsch, 1971). Subsequent drilling intersected only minor lead–zinc–copper mineralisation (2 m of 1000 ppm Cu, 1000 ppm Pb and 2000 ppm Zn; Bauder, 1972).

The base metals occur as sulphides (galena, sphalerite and chalcopyrite) in association with 2 to 5% iron sulphide (either pyrite or pyrrhotite) as discordant veins and as conformable lenses. The conformity and soft-sediment deformation structures in the sulphides, may be indicative of a syngentic or diagenetic origin (Nicholson, 1989).