ANNUAL EXPLORATION REPORT
ON MCN’s 3839 - 3844
FOR PERIOD ENDING 31 December 2009
EVA VALLEY (YEURALBA GROUP)
NORTHERN TERRITORY

Katherine SD5309 1:250,000
Eva Valley 5469 1:100,000
Titleholder: Crocodile Gold Australia Pty Ltd

Distribution:-
1. DOR Darwin, NT
2. Crocodile Gold Australia, Darwin
3. Crocodile Gold Australia, Brocks Creek

GBS Report No: PC/BJV/10-10

Zia U. Bajwah
April 2010
SUMMARY

Crocodile Gold Australia Pty Ltd acquired the Yeuralba Group of tenements (MCNs 3839 – 3844) on 6 November 2009 after purchasing assets held by GBS Gold Australia Pty Ltd (liquidated). This group of tenements is situated about 68km north east of Katherine NT, and 3km north of the old Eva Valley (Manyallaluk) homestead.

The tenements cover a prospective sector of Tollis Formation volcanics, grey-wackes, Maud Dolerite and banded ironstones striking NNW. The Copper Flower prospect has been explored for gold and base metals mineralisation since the mid 1960s. Significant gold and base metals anomalies have been identified at a number of localities.

During the year under review, project remained under care and maintenance because project previous owner’s parent company went into voluntary administration on 15 September 2008. Under the instruction of Several Administrators, the project area was reviewed, ranked and evaluated in order to prepare it for sale. Review of the geological setting of the Tollis Formation, particularly the Dorothy Volcanic Member shows that it is prospective for gold and copper mineralisation. There is a good possibility of finding economic concentrations of gold and base metal mineralisation in the area.

Crocodile Gold regards the project area highly due to the presence of Copper Flower prospect and further mineral potential of the project area. However, it will remain under review in near future because much attention is diverted in developing nearby Maud Creek Gold deposit.
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1. **INTRODUCTION**

The Yeuralba Group of tenements covers prospective part of Proterozoic geological setting and was originally granted to Denehurst Limited to protect the Copper Flower prospect prior to the surrender of EL 4457. These tenements have been explored for gold and base metals mineralisation. Significant gold and base metals anomalies have been identified at a number of localities. However, a detailed exploration program has not been carried out to test the full potential of the area.

2. **LOCATION AND ACCESS**

The tenements are located 3km NNW of Manyallaluk (previously old Eva Valley Homestead) and approximately 68km north east of Katherine (Figure 1). Access via Katherine is SE along the Stuart Highway for 65km to the turn off northwards onto the Central Arnhem Highway for 20km to the Manyallaluk turnoff. A graded road continues northwards for 35km to the homestead and a further 3km by bush track to the tenements. It is understood that the owners of Manyallaluk conduct tourist activities on the property.

3. **TENEMENT STATUS AND OWNERSHIP**

The Yeuralba Group tenements comprise MCN 3839-3844 inclusive, a contiguous group totalling 240 ha. They were originally pegged by Denehurst Limited to protect the Copper Flower prospect prior to surrender of EL 4457. Denehurst later joint ventured the property to Billiton/Acacia Resources Limited with Acacia earning 34%. Denehurst and Acacia sold the tenements to Kilkenny Gold NL (Dolomatrix International) in 1998. The tenements were transferred to Harmony Gold in 2001. During 2005, Terra Gold purchased Harmony Gold’s Maud Creek tenements, including the Eva Valley tenements. Since 2005, Terra Gold is wholly owned subsidiary of GBS Gold Australia Pty Ltd. On 15 September GBS Gold Australia went into voluntary administration and as a result of that all exploration and mining assets were placed under care and maintenance. Crocodile Gold Australia purchased all assets held by GBS Gold Australia (liquated) and after
Figure 1: Tenement Location Map
Table 1: Yeuralba Group Tenement Details.

<table>
<thead>
<tr>
<th>Tenement No.</th>
<th>Grant Date</th>
<th>Expiry Date</th>
<th>Area Hectres</th>
</tr>
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<tbody>
<tr>
<td>MCN3839</td>
<td>24 Aug 1990</td>
<td>31 Dec 2011</td>
<td>40</td>
</tr>
<tr>
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<td>40</td>
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<tr>
<td>MCN3843</td>
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<tr>
<td>MCN3844</td>
<td>24 Aug 1990</td>
<td>31 Dec 2011</td>
<td>40</td>
</tr>
</tbody>
</table>

meeting all statutory and regulatory requirements, these assets including Yeuralba Group were transferred to Crocodile Gold Australia on 6 November 2009.

The land covered by the claims is situated on old Eva Valley Station (Manyallaluk) held under pastoral lease 705 that is operated by the Barunga-Wugularr Aboriginal Community. Prior discussions with the Northern Land Council would be required prior to conducting ground disturbing exploration programs.

4. **GEOLICAL SETTING**

Regional geology is outlined in many publications, notably Kruse et al. (1994). The Eva Valley tenements lie in the extreme south-eastern margin of the Pine Creek Orogen, and the geology of the Pine Creek Orogen is detailed in many publications, including Needham and Stuart-Smith (1984), and Needham et al. (1988).
Within the Eva Valley tenements the rock sequence comprises Tollis Formation grey-wackes, siltstones and mafic volcanics that strike generally NNW. In the prospect area Maud Dolerite has intruded and dilated the Tollis Formation as a pre orogenic, semi-concordant package of mafic to micro-dioritic sills. The sequence is truncated to the north-west by faulting and by outcrops of Eva Valley Granite, a fine grained biotite leucogranite. To the west, the Tollis Formation is intruded by Yeuralba Granite that has greisenised parts of the contact zone and induced tin-tungsten occurrences. The airborne magnetics show that a strong crustal lineament strikes NW close to the Eva Valley prospect and passes beneath Cretaceous cover to the south. At the prospect the sequence strikes north westerly parallel to the lineament and is bounded to the west by a strong sinuous shear zone within the Tollis Formation. To the east of the shear, and sub parallel to it, copper showings associated with banded ironstone units occur over a strike length of 3km. A major dolerite unit of the Maud Dolerite suite occurs just east of the prospective sequence. A banded ironstone horizon that hosts copper and gold mineralisation has been traced within the Tollis Formation discontinuously for 8km. It has been displaced by NW and NE trending faults. The unit at surface comprises magnetite, haematite, tourmaline and chert, with secondary copper minerals and limonite. Increased gold values are associated with higher copper concentrations. Drilling has shown that the primary sulphide suite comprises finely disseminated chalcopyrite, sphalerite, and galena with some pyrrhotite and arsenopyrite.

5. PREVIOUS EXPLORATION

Shaw (2005) has outlined previous exploration at the Eva Valley tenements, and this is reported here. Exploration for base metals and gold has been intermittent since the early 1960s. Early work was conducted by Geopeko (1966-1970) Nord Resources P/L on EL1594 (1977-1982) and Newmont Pty Ltd (1979). Newmont conducted EMP surveys targeting large massive sulphide deposits without success. Billiton Australia explored the area from 1984-1987. Denehurst Limited took over the tenements in 1988. In the late 1980s, Denehurst Ltd conducted work on EL 4457 in the Eva Valley area. In 1989 this work culminated in costeaming and the drilling of 25 reverse circulation drill holes at the Copper Flower prospect. The drilling met with significant gold and copper values with
a best intercept at **13m @ 3.38g Au/t and 0.93% copper** from 30m depth in the CFRC1 drill hole. Primary sulphides were generally encountered from about 28m down hole.

Using a density of 2.3 for oxide and 2.7 for fresh a cross sectional resource using halfway extrapolation (12.5m) identified 116,000t @ 1.98g Au/t and 1% copper to a depth of 50m. The mineralisation was described as sub vertical narrow higher grade zones up to 4m wide that exceed 5.0g Au/t, within a much wider zone of lower grade (>0.5g Au/t material. The mineralised envelope dips steeply to the west and is about 30m wide at surface, narrowing to 10m wide at 50m depth. The host rock is described as a propylitically altered fine grained andesitic volcanic. The main mineralised zone at Copper Flower extends for about 80m and appears to be cut off by a fault at the northern end where a second zone is offset about 25m to the west. The relative small dimensions of the shoots and strike length, low average gold grade and the presence of metallurgically problematic copper oxides led to the project being downgraded. There has been no further field work reported to date. Kilkenny Gold NL conducted database reviews, acquired aerial photography and geological and topographic maps. These are yet to be located and reviewed by GBS Gold. During 2002, Harmony reviewed available historic data that led to the above geological and exploration summary and formed the basis for annual reporting.

During year 2005, data integration into DataShed continues on a regional basis. Many of the reports have been added to the site library ad catalogued for easy retrieval. During 2005 Terra Gold commissioned Geocraft Pty Ltd to compile and validate the Maud Creek database. This included the 25 RC drillholes and costeaming carried out at Copper Flower.

**6. EXPLORATION FOR YEAR ENDING 31st DECEMBER 2010**

On 15 September 2008, GBS Gold Australia went into voluntary administration, and as a result of that all mining and other exploration activities ceased and the project area was placed under care and maintenance. Under the instruction of Several Administrators, the main activity was to prepare assets for sale. For this purpose, a technical review, tenement ranking and valuation was undertaken. In addition, reconnaissance visits were
also undertaken. This exercise established the potential of the project area. After meeting regulatory and statutory requirements Crocodile Gold Australia acquired all assets including Yeuralba Group on 6 November 2009. Following this transaction, Crocodile Gold Australia embarked on an ambitious exploration and mining program in the Burnside area.

During the reporting year, a technical review of the group was undertaken. Located within the tenements, Copper Flower prospect contains significant quantities of copper and gold which has been identified in previous exploration program. Mineralisation is confined to shear zone within basic rocks of the Dorothy Volcanic Member (Tollis Formation). In places, the Tollis Formation grades into the Burrell Creek Formation (Kruse et al. 1994) which contain important gold deposits in the regions. The Tollis Formation is characterised by volcanic or volcanolithic fragments relative to the Burrell Creek Formation. This character points towards the significance of the formation for volcanogenic stratiform mineralisation.

Lohan (1990) identified three types of mineralisation within the Tollis Formation. The first type is stratiform base metal occurrences which now contain secondary copper minerals together with 0.1 – 2.0 ppm gold within banded ironstones and related tourmaline rich exhalites (e.g., Ludan prospect). The Copper Flower prospect represents the second type which is considered to be stratabound mineralisation within sheared basic rocks of the Tollis Formation. These host rocks are andesitic volcanics, dolerite, tuffaceous siltstone and tuff. This third type is minor shear-related copper mineralisation. This type contains minor lead and gold mineralisation. It may be noted that much of gold mineralisation at Maud Creek deposit is hosted by the Dorothy Volcanic Member (Tollis Formation) and the Maud Dolerite (Bajwah, 2007).

The information presented above indicates that geological setting of the Tollis Formation, particularly the Dorothy Volcanic Member is prospective for gold and copper mineralisation. There is a good possibility of finding economic concentrations of gold and base metal mineralisation in the area. This could add to the resource base already proven up at the Maud Creek project.
Exploration activities for the Yeuralba Group of tenements were restricted to a technical review, report writing, tenement management and reconnaissance visits. This program costed $3900.00 during the reporting year and details are given in Table 2.

**Table 2:** Expenditure details during the reporting period.

<table>
<thead>
<tr>
<th>Tenement No.</th>
<th>Expenditure ($)</th>
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<td>650.00</td>
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<tr>
<td>MCN3844</td>
<td>650.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3900.00</strong></td>
</tr>
</tbody>
</table>

7. **PLANNED EXPLORATION FOR 2010-11**

With the presence of copper gold mineralisation within the project area (Copper Flower prospect), Crocodile Gold Australia regards the tenement highly. However, the Yeuralba Group of tenements will remain under ranking exercise, because much attention is being directed in developing nearby Maud Creek gold deposit. With the Maud Creek project coming on line in the near future, the Yeuralba project will undergo fully blown field exploration program. It will include geochemical sampling and drilling to evaluate gold-copper mineralisation for further development. For the next year, a minimum budget of $5000.00 is proposed.
8.0 REFERENCES


