Contents

SUMMARY ............................................................................................................................................. 3
INTRODUCTION ...................................................................................................................................... 4
HISTORY OF TENURE AND JOINT VENTURES ................................................................................. 4
GEOLOGICAL SETTING ......................................................................................................................... 5
PREVIOUS EXPLORATION ...................................................................................................................... 7
EXPLORATION RATIONALE .................................................................................................................... 8
WORK BY RUM JUNGLE RESOURCES LTD ....................................................................................... 8
CONCLUSION ........................................................................................................................................ 14
SUMMARY

EL 24939 was acquired from Wasabi Energy and became part of Rum Jungle Resources’ Top End project. At various times, this project contained over twenty titles; either 100% Rum Jungle, or in various percentage ownerships, or operatorships, or with various rights to target commodities, or with various royalty arrangements. Crocodile Gold (then GBS Gold) had an agreement with Rum Jungle to explore for gold and to acquire the gold rights to any gold deposit found on EL 24939 in return for Rum Jungle having the uranium rights to GBS’s exploration tenements in the Tom’s Gully/Mount Bundey area. The primary target for Rum Jungle in EL 24939 was unconformity-type uranium on the flanks of the Archaean Woolner Granite at Woolner Dome. Exploration was largely based on acquisition and interpretation of geophysical data followed by RAB and air core drilling. Fixed wing radiometrics and magnetics and heli-VTEM were acquired. Two small TEMPEST surveys were also undertaken. For the most part, the EM surveys were unsuccessful, being unable to see through the conductive saline sediments and black soil on the floodplain. Ninety-five holes for a total of 4471 m were drilled during the third year of tenure. The best result was 10 m at 4 g/t Ag, 200 ppm Cu, 0.5% Pb and 0.15% Zn from 52-62 m in RAB hole WORA025. No uranium was intersected. During the fourth year of tenure, one 164.9 m inclined diamond drill hole, WODDH1, was completed on the floodplains at Woolner Station. The diamond drill hole was targeted on magnetic Palaeoproterozoic metasediments on the western flank of the Woolner Dome granite. No economic mineralisation was encountered. No field work could be conducted on the tenement in 2010 due to the extended and unusually heavy wet season and lack of access on the boggy coastal flood plains. Instead, a major desktop review was undertaken of EL 24939 and other ELs in the Top End Project. The geophysical data was modelled in conjunction with structural analysis looking at all possible target commodities. This work failed to generate any new leads and the EL was surrendered.

Expenditure for the final year was $1,132.50 against a covenant of $18,000. This does not include production of this report.
INTRODUCTION

EL 24939 was located 100 km by road east of Darwin and was accessed by the Arnhem Highway and station tracks. The EL is generally flat coastal flood plain with salt and clay pans. Much of EL 24939 is covered by unconsolidated transported marine sediments or black soil which makes driving difficult at the best of times. Large open treeless areas of black soil plains constitute the higher ground. Most of the area is inundated during the wet season. This is especially true of the northwestern part of the tenement which is annually flooded by the Adelaide River. The unusually heavy and prolonged 2010-2011 wet season made the area impassable for most of the last reporting year.

![Figure 1. Location and access map, showing original extent of EL 24939](image)

HISTORY OF TENURE AND JOINT VENTURES

EL 24939 was granted to Wasabi Energy Ltd on 11 July 11 2006. On 31 May 2007, Rum Jungle Uranium Ltd purchased EL’s 25528 (Mount Bundy), 24939 (Woolner) and 24917 (Ross River) from Wasabi via the allocation of shares and share options. Crocodile Gold (then GBS Gold) had an agreement with Rum Jungle to explore for gold and to acquire the gold rights to any gold deposit found on EL 24939 in return for Rum Jungle having the uranium rights to GBS’s exploration tenements in the Tom’s Gully/Mount Bundy area.

Two major relinquishments were made during the period of tenure. Most recently, in 2010, 74 blocks were relinquished from EL 24939, leaving 73 blocks remaining.
GEOLOGICAL SETTING

EL 24939 was located on the northern fringe of the central domain of the Proterozoic Pine Creek Orogen (PCO) in the Top End of the Northern Territory. The Archaean Woolner Dome subcrops beneath black soil floodplains and 30-80 m of Cretaceous sedimentary rocks. The Woolner Dome consists of granite and gneissic metasediments overlain by schists and a magnetic BIF unit of the Dirty Water Metamorphics. There is a large regional retrogressive chlorite alteration halo around the granite (chlorite replacement of mica and hornblende) but this alteration is nowhere known to be associated with mineralisation. Overlying the Dirty Water Metamorphics on all sides of the granite is the Koolpinyah Dolomite. The dolomite extends 10-20 km to the south where it is overlain by folded and deformed Wildman Siltstone. The southern part of the EL is primarily weathered siltstones of the Palaeoproterozoic Wildman Siltstone which is the basal unit of the Mount Partridge Group. Overlying the Wildman Siltstone to the south is the heavily folded and deformed South Alligator Group, composed of the iron-rich Koolpin Formation, the 1862 Ma Gerowie Tuff and the overlying Mount Bonnie Formation. The Mount Bonnie Formation conformably grades into the overlying Burrell Creek Formation of the Finniss River Group which occupies a large area of the central domain of the PCO. To the south of the tenement, the Mount Bundy Igneous Suite comprising the thorium-rich and magnetic Mount Goyder Syenite and the paler pink Mount Bundey Granite intruded the Wildman Siltstone and South Alligator Group sediments around 1831 Ma and resulted in
mineralisation. EL 24939 has minimal outcrop. Over 90% is covered by Cenozoic lateritic gravel and younger alluvial floodplains and drainages.

Figure 3. Published solid geology of EL 24939
PREVIOUS EXPLORATION
Prior to 1979, the Woolner Dome was only recognised as a gravity low on geological maps, as it is almost entirely under cover. It wasn’t until it was drilled that the granite and its age were recognised. Figure 4 shows historical drilling on the tenement. Over 100 drill holes have been drilled into the tenement and the surrounding Woolner Granite Dome, but none had been drilled in the last 20 years prior to Rum Jungle’s work.

Figure 4. Historic drill hole locations relative to the original extent of EL 24939
While early drilling defined the limits of the dome; further work was abandoned in 1981 after the Ranger mine was brought into production and the implementation of the Three-mine Policy by the Federal Government. Past interpretations of the early drilling suggested that:

- the Woolner Complex correlates with the favourable Nanambu and Rum Jungle Complexes
- the Fish Creek Schists (Wildman Siltstone) correlate with the Mine series schists at Ranger
- the Fish Creek Schists on the western side of the Woolner Dome are non-prospective for Ranger-type mineralisation because of the absence of a basal carbonate unit
- the carbonate sequence overlying the schists and gneisses is Coomalie Dolomite and this is an unfavourable host for uranium mineralisation
- the magnetite-rich quartzites in the Fish Creek schists contain low grades of syngenetic gold up to 3 grams per tonne (g/t).

No further work had been carried out on the west side of the Woolner Dome since 1982. Some EM geophysical exploration targeting uranium south of the Woolner Dome was carried out in the late 1980s. RC Drilling of a strong EM conductor proved it to be caused by sediments and clays within a palaeochannel. No further work was then conducted in the area.

**EXPLORATION RATIONALE**

Rum Jungle Resources explored the tenement for uranium, gold, iron ore and base metals. Crocodile Gold had the gold rights. The limited previous exploration carried out over the Woolner Dome indicated to Rum Jungle that the Dome was prospective for uranium. Conceptual targets included:

- Ranger/Jabiluka type mineralisation.
- the Coomalie Dolomite as at Mt Fitch and Rum Jungle.
- a possible gold/uranium association in the graphitic portions of the BIF within the Wildman Siltstone on the western side of the Dome
- palaeochannels south of the Woolner Dome.

The exploration strategy of previous explorers which relied on the presence of a carbonate sequence were expanded to include other significant criteria, such as graphite, chlorite alteration, proximity to unconformities and proximity to the Archaean basement. Consequently, it was felt that the best exploration potential existed in the syncline on the west side of the Dome. Exploration was largely based on acquisition and interpretation of geophysical data followed by drilling to definitively test each geophysical anomaly.

**WORK BY RUM JUNGLE RESOURCES LTD**

During the first year of tenure, D. Muller spent two weeks forming a data base from earlier reports held at the DoR library in Darwin and undertook several visits to the core library in Winnellie. Also in the first year of tenure, Rum Jungle commissioned a detailed low level radiometric and aeromagnetic survey by UTS geophysical contractors.

By the start of the second year of tenure, 7718 line km of airborne geophysics (magnetics and radiometrics) had been completed by UTS Geophysics. The data was subsequently processed and interpreted by Southern Geoscience Geophysical Consultants. These data were previously submitted to, and accepted by, DoR. A number of radiometric anomalies were identified from the data and field checked with a handheld Exploranium GR-110 scintillometer. Most of the anomalies were found to be caused by lateritic/ferricrete outcrops and were about 250-350 cps on the scintillometer. One large anomaly “Marrakai” in the southern part of the tenement (Figure 5).
produced counts between 500 and 1000 cps from ferricrete boulders and black soil over Wildman Siltstone.

Some surface prospecting was undertaken using a NITON handheld XRF. Eight rock chip samples were taken and assayed for uranium, gold, base metals and iron ore. The data have previously been submitted to the DoR and are included again here along with descriptions of the sample preparation, analytical methods used and limits of detection.
Table 1. Rock chip sample data

<table>
<thead>
<tr>
<th>Sample</th>
<th>Anomaly</th>
<th>East94</th>
<th>North94</th>
<th>Max CPS</th>
<th>Date sampled</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB08043</td>
<td>121</td>
<td>780662</td>
<td>8591325</td>
<td>650</td>
<td>25/06/2008</td>
<td>Ferricrete RHS of track</td>
</tr>
<tr>
<td>MB08044</td>
<td>122</td>
<td>780826</td>
<td>8591587</td>
<td>900</td>
<td>25/06/2008</td>
<td>Ferricrete either side of track NE of creek</td>
</tr>
<tr>
<td>MB08045</td>
<td></td>
<td>781687</td>
<td>8589337</td>
<td>480</td>
<td>26/06/2008</td>
<td>Ferricrete on east edge of swamp</td>
</tr>
<tr>
<td>MB08046</td>
<td></td>
<td>784589</td>
<td>8590358</td>
<td></td>
<td>26/06/2008</td>
<td>Quartz vein float, headland of floodplain</td>
</tr>
<tr>
<td>MB08047</td>
<td>123</td>
<td>781347</td>
<td>8591742</td>
<td>1000</td>
<td>26/06/2008</td>
<td>Lateritic gravel B horizon in gully</td>
</tr>
<tr>
<td>MB08048</td>
<td>123</td>
<td>781347</td>
<td>8591742</td>
<td>1000</td>
<td>26/06/2008</td>
<td>Lateritic gravel B horizon in gully</td>
</tr>
<tr>
<td>MB08049</td>
<td></td>
<td>782166</td>
<td>8592388</td>
<td>500</td>
<td>26/06/2008</td>
<td>Ferricrete on fenceline</td>
</tr>
<tr>
<td>MB08071</td>
<td>118</td>
<td>777304</td>
<td>8590428</td>
<td>300</td>
<td>3/07/2008</td>
<td>Ferricrete in sandy alluvial plain, ferrigenous gravels</td>
</tr>
<tr>
<td>MB08072</td>
<td>120</td>
<td>779336</td>
<td>8590993</td>
<td>710</td>
<td>3/07/2008</td>
<td>Ferricrete in flood plain, 70m wide; U=73.5; Th=16.7 (spectrometer ppm)</td>
</tr>
</tbody>
</table>

During the third year of tenure, 28 RAB holes were drilled for 1295 metres on the southern part of the tenement and 67 air core holes were drilled for 3176 metres on the Woolner floodplain in the northern part of the tenement. The RAB drill program was designed to test graphitic siltstone of the Wildman Siltstone for uranium or base metal mineralisation under black soil and lateritic cover. Most of the drilling was done along existing access tracks at 400 m spacing. The Marrakai radiometric anomaly was also drilled. Data were previously submitted with the 2009 annual report and are resubmitted here. The air core program on North Woolner targeted folded Wildman Siltstone structures beneath black soil and Cretaceous cover as well as testing magnetic anomalies under cover on the western fringe of the Woolner Dome. Chloritic schist and granite were intersected but no uranium mineralisation. A Heli-VTEM survey (Figure 7) was flown at 200 m line spacing for 186 line km (090-270 line direction) over a large magnetic anomaly on the western fringe of the subcropping Woolner Granite. Two small TEMPEST surveys were also flown in the northern part of the tenement. These geophysical data are resubmitted in the format as received from the contractors to accompany this report. For the most part, all the EM surveys were unsuccessful, being unable to see through the conductive saline sediments and black soil cover on the floodplain. However, the RJ8 survey area in the south of the tenement was partly successful in mapping conductive units of graphitic black siltstone of the Wildman Siltstone Formation.
Figure 7. Location of VTEM lines on part of EL 24939 over the western flank of Woolner Dome
During the **fourth year** of tenure, one inclined 164.9 m diamond drill hole WODDH1 (Figure 9) was completed at Woolner Dome into magnetic metasediments on the western flank of the subsurface Woolner Granite. The first 45 m were wet grey floodplain mud then highly weathered Cretaceous sand and clay from 45-68.8 m. Drilling through this proved to be particularly challenging and took a week, as documented in the previous annual report. Drilling the target rocks was relatively straightforward but was slowed by the need to use only small capacity water trucks on the boggy flood plains. No uranium was intersected in WODDH1 however a 20 m section of core in a garnet gneiss unit and chlorite altered schistose rocks showed minor sulphides (Figure 10). The hole ended in
barren quartz mica schist with neither the Woolner Granite nor the magnetic BIF unit being intersected. A second planned hole was not drilled.

Figure 9. Woolner Floodplain drill site WODDH1

Figure 10. Minor sulphides in garnet gneiss

Drill core assay results from the Woolner diamond drill hole are tabled below. Quarter core was submitted to AMDEL laboratories in Adelaide for assay. Preparation methods, assay techniques, laboratory codes and detection limits are explained in an accompanying document. Results from a 20 m section of core between 92-112 m, as shown below, were not encouraging.
No work was conducted during the **fifth year** of tenure due to an early wet season which rendered the flood plains impassable and due to field commitments elsewhere. Instead, a major desktop review was undertaken of EL 24939 and other ELs in the Top End Project. The geophysical data was modelled in conjunction with structural analysis looking at all possible target commodities. This work failed to generate any new leads. Expenditure for the final year was $1,132.50. This does not include production of this report.

**CONCLUSION**

In the opinion of Rum Jungle Resources, the potential of EL 24939 has been thoroughly and methodically tested and the EL was surrendered.