ANNUAL REPORT
ON
EL 24550
GEORGE PROJECT
NORTHERN TERRITORY
FOR THE PERIOD
12 December 2007 to 11 December 2008

Compiled by: Ian Faris
Date: January 2009
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LIST OF DATA FILES SUBMITTED
Adelaide River Mine ground radiometric readings (AR_WASG3_RADIOM_2008A.txt)
George Prospect ground radiometric readings (GG_WASG3_RADIOM_2008A.txt)
SUMMARY

The George Project is located immediately south of the township of Adelaide River in the Northern Territory. The project area covers 26 blocks (84.45 km²) and was explored in the 1950s for uranium.

This report details exploration activities undertaken by Aldershot Resources Ltd during the tenement’s third year of tenure from 12 December 2007 to 11 December 2008.

Exploration activities completed during the reporting period comprised grid based footborne radiometric surveys over the Adelaide river Mine area and the George prospect environs to refine hole positioning while awaiting drilling approval.
1 INTRODUCTION

EL 24550 was granted on 12 December 2005 and covers 84.45 km² (26 blocks). It is 100% owned and operated by Aldershot Resources Ltd.

The area is prospective for vein-type uranium deposits similar to Adelaide River and George Creek mines and unconformity type deposits to a lesser extent. The focus should be on demonstrating depth and strike extensions around the two mine sites. This will require an understanding of both the structural and lithological environment because ore has precipitated in faulted coarse-grained greywacke.

This report summarises the work carried out by Aldershot Resources Ltd during the second year of tenure from 12 December 2006 to 11 December 2007.

2 LOCATION

EL 24550 is located immediately south of the township of Adelaide River in Northern Territory (Figure 1). The tenement is located on the Pine Creek 1:250 000 Sheet SD52-08 and the Batchelor 1:100 000 sheet.

3 TENURE

The tenement details for the George Project are shown in Table 1.

Three shallow, sand mining tenements lie within EL 24550. These are owned by Tom Fawcett and are ML25/173, ML22/237, and ML 25/175.

<table>
<thead>
<tr>
<th>Tenement</th>
<th>EL24550</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>George Creek</td>
</tr>
<tr>
<td>Ownership</td>
<td>100% Aldershot Resources Ltd</td>
</tr>
<tr>
<td>Grant date</td>
<td>12 December 2005</td>
</tr>
<tr>
<td>Expiry date</td>
<td>11 December 2011</td>
</tr>
<tr>
<td>Area</td>
<td>26 Blocks (84.45 km²)</td>
</tr>
<tr>
<td>Expenditure commitment</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

As described in (Urangesellschaft, 1981) the Adelaide River Uranium Mine is located in hilly terrain some 4 km due south of the Adelaide River township and is 2.5 km by bush road from the old Stuart Highway (Dorat Road). The George Creek Uranium Prospect is located 11.5 km south-southeast of Adelaide River township and about 1 km north of the George Creek microwave repeater station. Access is gained by travelling down the Dorat Road for 13–13.5 km and then proceeding east along bush roads for 1 km.

The project area experiences a wet season from November–April and a dry season from May–October. The average rainfall is 371 mm with a mean temperature of approximately 32º C.

Local relief is generally flat lying to rugged, ranging from 80–270 m above sea-level with a north-northwest trending escarpment of Cretaceous Petrel Formation (Burn, 1992).
Figure 1: Location Map
5 GEOLOGICAL SETTING

The regional geology comprises well-bedded siltstone, greywacke, and conglomerate of the Burrell Creek Formation which is folded into a series of upright, tight, north-trending and south-plunging folds at the Adelaide River mine. In the George Creek area the folds are gently north-plunging. The Adelaide River mine lies in the western limb of a syncline where bedding dips 60° towards 240° (Plumb, 1960). The mine lies within a 3X background radiometric anomaly extending along strike for 570 metres. An early fault set relates to mineralisation trends north to north-northeast and is offset by a later set of east-northeast faults. Four ore zones are known with the best, the Black Lode, occupying a fault that dips 70° towards 090°, with a reverse (east side up) movement sense. Mineralisation exists only where the fault intersects a 15-metre-thick coarse-grained greywacke bed. The ore lode plunges 45° south and has an average width of about 1.5 m. Pitchblende is disseminated in the country rock adjacent to the fault and forms coatings on joint and fracture surfaces associated with quartz veining. Accessory minerals include abundant pyrite, chalcopyrite and lesser arsenopyrite, marcasite and limonite (Plumb, 1960).

The George Creek mine lies in the western limb of a north-plunging anticline with an axis about 0.5 km to the east, with bedding dipping 30° toward 280°. Sub-vertical northwest-trending faults and related fractures control mineralisation. The geometry of the largest ore pod suggests it was formed in a dilational jog. Ore was also formed at the intersection of a fault and coarse-grained greywacke.

Touhy’s prospect is very similar to George Creek with respect to geology and structure. The workings are enclosed by a 2X background radiometric anomaly centred about the shaft where visible torbanite is common and autunite has been recognized previously.

Ronan’s prospect exists where a radiometric anomaly strikes for 40 metres along an east-dipping, brecciated siltstone from which grab samples up to 300 ppm U3O8 have been collected (Urangesellschaft, 1981).

A small gold prospect called Possum is located southeast of the Adelaide River Mine and was discovered by L. Baxter (Shields and Bellette, 1988). It is an Au-bearing saddle reef and was found where the gold exists in greywacke within an anticline (GIGIAC) model. The reef strikes north-northeast, dips steeply to the east and is rarely wider than 30 cm. Grab sample grades have been up to 704 ppm but historic diamond drilling has failed to intersect any grades higher than 5.94 ppm (Shields and Bredhauer, 1995). There are two other Au prospects located near Possum called Arum and Happy Valley: both of which have similar geometries and are hosted by greywackes — grades to-date have been low.

5.1 Mineralisation

Uranium mineralisation in the George Project area has been discovered in four main prospects: Adelaide River, George Creek, Touhys, and Happy Valley. The Adelaide River and George Creek prospects were mined from 1950–1957. Uranium mineralization at Adelaide River exists in the metamorphosed sedimentary units of the Lower Proterozoic Burrell Creek Formation. The Burrell Creek Formation is represented by siltstone, greywacke and conglomerate (Herlihy, 1958) and mineralization has been localized where minor shears intersect two distinct sandstone beds which are separated by a unit of fine-grained siltstone. Pitchblende has been identified as the ore mineral in the core from BMR No1 drill hole. Accessory minerals are pyrite and chalcopyrite with minor amounts of marcasite, arsenopyrite, linnaeite, and galena. The minerals are associated with vein quartz, as coatings on joint planes, and disseminated within the country rock. The accessory minerals exist throughout the unoxidised zone in all four drill cores (Plumb, 1960).

The mineralized shears, as described by Herlihy (1958), have been called the Black Lode, White Lode, Brown Lode, Green Lode and Orange Lode. The mineralized lodes exist where the southwest dipping greywacke beds are intersected by the narrow shears that dip steeply to the east and subsequently the lodes plunge to the south at 40–50°. The Black Lode shear has the largest mineral endowment and although ore is patchy it is mineralized for approximately 60 metres. The Black Lode exists where the upper greywacke unit is cross-cut by a steep dipping shear (Black Lode Shear). The White Lode exists where the Black Lode Shear intersects the lower greywacke unit and as such the surface expression sits to the north of the Black Lode. The primary zone consists of narrow veinlets of pitchblende in the shear zone and occasionally in the adjacent country rock. Torbernite is the main secondary uranium mineral in the oxidized zone. The Brown, Green and Orange lodes have not been found to host significant mineralization to-date and exist where narrow, discontinuous shears intersect the upper greywacke.
The uranium mineralization at George Creek is described by Arkin and Walpole (1960) as localized by weak shear in greywacke; it closely resembles the nearby Adelaide River type of deposit, but is much smaller. The rocks, sandstone and siltstone which form part of the east limb of a large north-plunging syncline also belong to the Lower Proterozoic Burrell Creek Formation. The radioactive anomaly within the 3X background contour covers an area of approximately 4 acres. Torbernite is found in weak shears, joints and bedding-place fractures at the surface. Torbernite and uraninite have been intersected by diamond drill holes (Firman and Clarke, 1955).

Grab samples collected by Aldershot during the previous reporting period, and historic samples reported by Northern Gold (1990) indicate that the U mineralization is associated with Au mineralization at both the George Creek and Adelaide River prospects.

The official records of production and retained reserves are summarized in Table 2 below (Urangesellschaft, 1981)

<table>
<thead>
<tr>
<th>Mine</th>
<th>Production tonnes Ore</th>
<th>Uranium tonnes U₃O₈</th>
<th>Reserve tonnes Ore</th>
<th>Uranium tonnes U₃O₈</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Creek</td>
<td>108.9</td>
<td>0.28</td>
<td>250</td>
<td>0.65</td>
</tr>
<tr>
<td>Adelaide River</td>
<td>3447.4</td>
<td>17.3</td>
<td>broken 1500</td>
<td>7.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>unbroken 5500</td>
<td>12.10</td>
</tr>
<tr>
<td>Total</td>
<td>3556.3</td>
<td>17.58</td>
<td>7250</td>
<td>20.25</td>
</tr>
</tbody>
</table>

The geology of the George Project tenement is shown in Figure 2.

6 PREVIOUS EXPLORATION

Uranium exploration in the George Project area has been undertaken since 1954 when radioactivity was discovered in the Adelaide River area.

6.1 BMR, 1955–1960

During 1955–1959 the following exploration was reported by BMR on the George Creek Uranium Prospect.

The George Creek prospect was mapped and radiometrically gridded by BMR in 1955. Two diamond drill holes were completed to test for primary uranium minerals: the first was drilled vertically below the most highly mineralized outcrop; the second to test for an extension of uranium minerals below alluvium southwest of the most highly mineralized outcrop. Uranium was encountered in both diamond drill holes. The bore holes were drilled on the slope of a steep hill, where strong leaching action was suspected. The highest readings obtained by the radiometric logging of the core in DDH02 were in the first zone (44–69 ft), where readings reached more than 14000 c/m. The highest assay sample obtained on the surface outcrop of the first radioactive zone was 6.7% eU₃O₈ (Rade, 1955).

During 1956 another 7 diamond drill holes were drilled with one intersecting approximately 10 m of mineralized rock with radiometric assays averaging 0.09% eU₃O₈ (Robertson, 1956). The mapping and drilling suggested that the mineralization was localized by a weak shear, trending about north and dipping steeply east. The shear cuts through interbedded siltstone and greywacke of the Lower Proterozoic Burrell Creek Formation (Arkin and Walpole, 1960).

During 1958–1959 a shaft was sunk to 23 m with cross-cutting and driving from it for a total of 50 m. The shaft was then extended to 38.4 m and another 9.1 m of cross-cutting was carried out. The exploratory work yielded approx 120 tons of development ore with an average grade of about 0.26% U₃O₈ (Arkin and Walpole, 1960).
Radioactivity in the Adelaide River area was discovered in 1954. The mine was closed in 1957 due to flooding of the workings. During production 14 diamond holes were drilled for 1216 m, 36 wagon holes were drilled for more than 700 m total (results not found) and 9 shafts were sunk in excess of 217 m. Production consisted of 10 parcels of ore, totalling approx 3800 tons with a grade of about 0.5% U3O8. They were sent to and treated at Rum Jungle (Herlihy, 1958). After closure of the mine a further 4 diamond drill holes were completed to test for the extension or repetition of the Black Lode ore body at depth and to the south. Although 3 drill holes intersected uranium mineralization, only one intersected ore. A possible ore reserve of 5500 tons of 0.22% eU3O8 grade was indicated in Plumb (1960).

6.2 Central Pacific Minerals

Exploration of the George Creek area within tenement AP1959 was carried out from 1970–1973 with auger, percussion and diamond drilling, costeans and EM surveys. After a lack of encouraging results from the exploration work it was recommended that no further work be carried out on the tenement.

6.3 Urangesellschaft

Exploration carried out in the Adelaide River area on EL2055 consisted of a combined input EM, magnetic and radiometric airborne survey which had only marginal success — no EM, gravity or magnetic anomalies were detected. Photogeology showed no direct relationship between the uranium and bedrock conductors and the stream sediment surveys highlighted two anomalous zones (Curtis, 1980).

6.4 Northern Gold

Gold mineralisation was targeted by Northern Gold on the EL5065 tenement with extensive stream sediment, soil and rock chip sampling, RAB, percussion and diamond drilling, and regional mapping. Au anomalies were discovered at Happy Valley, Possum, Arum and George Creek. The anomaly at Happy Valley and George Creek prospects were associated with As and Ag anomalies, whereas Cu, Pb and Zn were generally confined to single anomalies associated with small gossanous quartz veins which contain no Au mineralisation. At the Happy Valley prospect a definite antiline was mapped in an approximately N–S direction. Gold values associated with it were 0.83, 0.14, 0.08, and 0.07 g/t; and arsenic values of 570, 230, 180, and 170 g/t. A conglomerate bed outlines the position of the antiline and is the host for the highest gold value (Shields, 1989). Best results from the diamond drill holes at Possum were 0.2 m @ 5.94 g/t from PS1 and 0.3 m @ 4.78 g/t from PS3 (Shields, 1995).

6.5 Previous Aldershot Exploration

A search for sacred aboriginal sites within the tenement area was completed with the Aboriginal Areas Protection Authority. Two sites in the southern region of the tenement were identified which are away from the northern areas intended for exploration by Aldershot Resources Ltd.

Historical open-file exploration reports were identified and the originals scanned to provide PDF images. Thirty seven open-file reports were identified in and around the George Creek. A selection of these were ordered from the NT Mines Department in digital format and a further seven reports, written in the 1950s and early 1960s of the early work carried out by the BMR, were ordered.

Personnel from Aldershot undertook a reconnaissance trip to the George tenement with the intention of determining access to the area and locating the historical drill holes, pits, fence lines and grid pegs within the tenement. A total of 17 grab samples were collected from the George Creek Mine (7 samples) and Adelaide River Mine (10 samples). Drill pads were able to be located and surveyed with GPS.

Core from an historical diamond drill hole from Adelaide River Uranium Mine drilled during 1959–1960 (described in Plumb, 1960) were sourced in Darwin. The core was re-logged and 8 samples were collected (5 for chemical analysis and 3 for petrological analysis). The hole was one of 4 designed to test for extension or repetition of the Black Lode Ore body at depth and to the south. Abundant historical core is also scattered around old drill sites at the Adelaide River but no depth information is available.

An airborne survey, by Fugro Airborne Surveys Pty Ltd, covering the tenement area was completed at the end of the reporting period. The sediments have reasonably well defined magnetic trends and the unconformity at the
Burrell Creek/Tolmer Sandstone margin is prominent (see Figure 6). The radiometric survey picked up 32 radiometric anomalies.

During 2007 Aldershot undertook geological mapping, rock chip sampling, historical data compilation, ground checking of radiometric anomalies, petrographic sampling and analysis, and diamond drilling (4 holes) at the Adelaide River and George Prospects, with geological logging and down-hole gamma logging.

The most significant results came from second hole at the Adelaide River Prospect i.e. ARDDH002 (-50° to 288°) which was drilled to a depth of 126.36 m and intersected greywacke, siltstone and sandstone. The drill hole penetrated approximately 40 cm of radioactive material in the interval 92.15–92.55 m. This interval coincides with quartz veining and the presence of pyrite. Trace amounts of uranium mineralization were also detected over 20 cm at 93.95 m. Silica and chlorite alteration was observed in the zone of mineralization.

Best assay results from ARDDH002 were 0.72% U₃O₈ over 4 m (90.7–94.7 m), including:

- 0.46% U₃O₈ from 91.9–92.7 m,
- 0.42% U₃O₈ from 93.5–93.9 m,
- 0.16% U₃O₈ from 94.1–94.7 m.

Associated metal values include 7.5% Co, 1.9% Cu and 4.4% Ni over 20 cm (94.9–95.1 m).

The locations of the holes are shown on Figures 3 and 4 respectively.

7 EXPLORATION ACTIVITIES FOR 2008

During 2008 it was proposed to follow-up the 2007 drilling results by further drill testing and a Mine Management Plan was submitted in May. The plan was reviewed in September and bonds were lodged in October 2008. Ministerial approval for the drilling program has not yet been received.

As an adjunct to the proposed drilling footborne radiometric surveys were conducted over the Adelaide River Mine area and George Prospect area to better define the anomalies and remove the influence of mine waste on the airborne survey results. This data would also allow refinement of the design of the proposed drill holes. The results are presented in Figures 5 and 6 and in data files GG_WASG3_RADIOM_2008A (George Creek environs) and AR_WASG3_RADIOM_2008A (Adelaide River Mine environs). Instrument failure prevented the full program being completed.

A Geometrics GR_135S spectrometer was used (search mode) for the survey recording total counts, with sampling at a 1 second intervals and averaged over 3 seconds. Locations were recorded in a Garmin GPS 76 receiver. Clocks in the spectrometer and GPS receiver were synchronised (UTC time) to allow data merging later. Data recording problems with the GR_135 caused the survey to be suspended

8 CONCLUSIONS

Uranium mineralization at the Adelaide River Mine and George Creek Prospect is localised in carbonaceous siltstones and greywacke along sub-vertical shear zones accompanied by quartz veining and weak alteration. The shear zones are not normally visible at surface being covered by scree thin residual soils. It is anticipated that the footborne survey will delineate zones of elevated radioactivity which may represent the surface expression of the shear zones. Until the survey is completed, including infill lines no conclusions can be drawn.

9 WORK PLANNED

- Completion and infill of footborne radiometric surveys.
- Further geological mapping of anomalous zones identified by the radiometric surveys to identify any coincident structural features and alteration zones. From these results drill hole designs will be refined.
- Diamond/percussion drilling to target the lateral and vertical extents of mineralization at the prospects to determine the width and grades of the uranium lodes, and for structural and petrological analysis.
- Drill-pad access road works and construction of drill pads will be designed and approved prior to drilling.
Figure 3: Geological Map of the Adelaide River Prospect
Figure 4: Geological Map of the George Creek Prospect
Figure 5: Radiometric Map of the Adelaide River Prospect Environs
Figure 6: Radiometric Map of the George Prospect Environs
10  TECHNICAL DETAILS

Personnel

VP Exploration  Ian Faris

11  REFERENCES


Robertson, W.A., 1956: The George Creek Reserve and Uranium Prospect, NT., BMR 1956/87


