ANNUAL REPORT EL 23573 – Y/E 22/12/06
(LAGOON CREEK)

compiled by

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for

ARAFURA RESOURCES NL

And

LARAMIDE RESOURCES LTD
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INTRODUCTION

BACKGROUND

Exploration Licence 23573 was applied for on behalf of Arafura Resources NL in 2002 to secure tenure over known gold and uranium prospects in that portion of the Westmoreland uranium province which extends into the Northern Territory. In 2005, Arafura entered an agreement with Toronto-based, Laramide Resources Ltd, whereby Laramide can earn a 60% interest in EL 23573 by the expenditure of A$5.5 million over 5 years. Laramide holds title to the Westmoreland uranium deposits on adjacent titles across the border in Queensland and have a right to earn an interest in EL 10335 immediately to the north of EL 23573.

In mid-2005 Laramide commissioned a low level detailed airborne geophysical survey over much of the area in which it holds an interest in both the NT and Queensland, and applied for Aboriginal sacred site clearances over the NT tenements. In addition they commissioned and ultimately lodged with Canadian regulatory authorities an independent geological report (“43-101 Report”, Jones, 2005) on their Westmoreland interests. This was reported in the previous annual report (Goulevitch, 2006) in so far as it related to EL 23573.

In 2006 Laramide, through its wholly owned Australian subsidiary, Lagoon Creek Resources Pty Ltd (LCRPL), undertook compilation of historical exploration data into a GIS framework, interpretation of data from the 2005 airborne geophysical survey, helicopter-borne geological reconnaissance, ground radiometric surveys, structural geology mapping and interpretation and, ultimately, RC drilling in the Northeast Westmoreland Zone in the NE corner of EL 23573.

This present report outlines Laramide’s activities on EL 23573 in 2006.

LOCATION & ACCESS

Exploration Licence 23573 (Lagoon Creek) is located about 235 km southeast of Borroloola, about 1250 km SE of Darwin (Figures 1 and 2) and about 400 km NNW of Mt Isa. The eastern boundary of the EL runs along the state border with Queensland.

Access to EL 23573 from Borroloola, the nearest settlement of any size, is by the graded Carpentaria Highway from Borroloola to Burketown as far as Wollogorang Station (Figure 2). From the west end of the Wollogorang airstrip, LCRPL has established 4WD access to the northern portion of the licence area and to a camp site at Crocodile Waterhole on Doctors Creek, a few kilometres to the NW of the licence area (Figure 3), approximately 60 kilometres from Wollogorang.

CLIMATE

The area lies in the tropical monsoon rain belt of northern Australia. Annual rainfall is about 900 millimetres. The bulk of this falls between December and March. Pre-monsoon tropical storms occur in October and November and can restrict activities temporarily. Virtually no rain falls between the start of May and the end of August. Temperatures range from 20-38°C in summer (“wet season”) and 10-30°C in winter (“dry season”).
Figure 1: Location Plan, EL 23573, Lagoon Creek

Figure 2 – Regional Location and Access (Jones, 2005)
TOPOGRAPHY AND VEGETATION

Topographically the area consists of strike ridges, plateaux and intervening valleys. Soil development is poor with lithosols and shallow siliceous sands present in the area. The creeks drain to the north and east.

Vegetation consists of scattered small trees, shrubs and spinifex. Larger trees occur along the water courses.
SUMMARY

In 2006 Laramide, through its wholly owned Australian subsidiary, Lagoon Creek Resources Pty Ltd (LCRPL), undertook compilation of historical exploration data into a GIS framework, interpretation of data from the 2005 airborne geophysical survey, helicopter-borne geological reconnaissance, helicopter-supported ground radiometric surveys, structural geology mapping and interpretation, earthmoving and, ultimately, RC drilling in EL 23573.

The ground radiometric surveys were conducted over seven separate uranium targets identified from the data acquired in the high resolution airborne geophysical survey carried out in the previous reporting period. Discrete uranium anomalies were confirmed at four of the targets with peak eU levels of 20-150 ppm.

The drilling program was concentrated on the Northeast Westmoreland prospect in the NE corner of EL 23573. A total of 2814 metres was drilled in 23 RC holes which terminated at depths between 51-204 metres. Not all holes reach the desired depths due to uncontrollable inflows of groundwater in some areas.

A total of 105 drill samples (1 metre intervals) were ultimately sent for analysis. Sample selection was on the basis of measured radiometric response on the bags of bulk drill samples. No results were to hand at the end of the reporting period.

A major component of the 2006 exploration program was construction of a new access track into the project area from Wollogorang on the Carpentaria Highway. This reduced the travel distance from the Highway to the exploration camp to about 60 kilometres. A further 30-40 kilometres of access tracks was installed through the project area, mainly along exploration tracks which had not been maintained for the past 15-20 years.

Exploration expenditure during the current year of grant was approximately $1.3 million.
TENURE

MINING/MINERAL RIGHTS

Arafura Resources NL was granted EL 23573 on 23 December, 2003, for 6 years. The tenement contains 67 blocks with an area of 194 sq km (Figure 1). There are no pre-existing mineral claims or mining leases within the boundary of the EL. Reductions due at the end of the second and third years of the licence have been waived by the Minister and the area remains at 64 blocks for the current year (4).

In May, 2005, Arafura entered an agreement with Toronto-based uranium explorer, Laramide Resources Ltd, whereby Laramide can earn a 60% interest in EL 23573 by the expenditure of A$5.5 million over 5 years.

LAND TENURE

Background land tenure for EL 23573 is Pastoral Lease 1113 (NT Portion 674) operated as Wollogorang Station.

NATIVE TITLE

EL 23573 is affected by Native Title Claim DC02/11, Wollogorang South, made on behalf of the Gudidiwalia and Binanda Garawa People and accepted for registration by the National Native Title Tribunal on 19/07/2002.

The southern boundary of EL 23573 abuts Aboriginal Freehold Land (NT Portion 2006) administered by the Waanyi/Garawa Land Trust.

ABORIGINAL SACRED SITES

In December, 2005, Laramide was issued with AAPA Authority Certificate C2005/095 for the purpose of

“exploration works including ground traversing, stream, rock and soil sampling, track clearing and drill pad construction, drilling of test holes”

across the area of EL 23573.

The Certificate identifies Registered Sacred Site 6462-25 on the northern boundary of the licence area where “no ground disturbing works are to be carried out”. No other Registered or Recorded Sites were identified in the area of the EL.
GEOLOGICAL SETTING

REGIONAL GEOLOGY
(From Jones, 2005)

The Westmoreland region lies within the Palaeoproterozoic Murphy Tectonic Ridge, which separates the Palaeoproterozoic Mt Isa Inlier to the southeast from the Mesoproterozoic McArthur Basin and the flanking Neoproterozoic South Nicholson Basin to the northwest.

The oldest rocks exposed in the area are early Proterozoic sediments, volcanics and intrusives which were deformed and regionally metamorphosed prior to 1875 Ma. These Murphy Metamorphics (Yates et al., 1962) are represented mainly by phyllitic to schistose metasediments and quartzite. They are overlain by two Proterozoic cover sequences laid down after the early deformation and metamorphism of the basement, and before a period of major tectonism which began at about 1620 Ma. The oldest cover sequence is the Cliffdale Volcanics unit, which unconformably overlies the Murphy Metamorphics. The Cliffdale Volcanics contain over 4000 m thickness of volcanics of probably sub-aerial origin, more than half of which consist of crystal-rich ignimbrites with phenocrysts of quartz and feldspar. The remainder are rhyolite lavas, some of which are flow banded. The ignimbrites are more common in the lower part of the sequence, with the Billicumidjii Rhyolite Member occurring towards the top.

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Figure 4 – Geological Regions
Compiled by D G Jones from published data
The Cliffdale Volcanics are comagmatic with the Nicholson Granite and together they comprise the Nicholson Suite. SHRIMP dating of both the Nicholson Granite and the Cliffdale Volcanics gave an age of 1850 Ma (Scott et al., 1997). The Nicholson Granite is predominantly I-type granodiorite in composition.

The Nicholson Suite shows little evidence of fractional crystallisation and on this basis the potential for forming large tonnage deposits is considered to be minor, although small tonnages of high grade are possible. In the vicinity of the granites there are no significant potential host rocks documented. Potential exists for small Sn and W deposits within the granite and for smaller Cu and Au deposits outside the granite (Budd et al., 2001).

Figure 5 - Generalised geology, Westmoreland area.
Compiled by D G Jones from published data; for legend see Figure 6 below.
Unconformably overlying the Nicholson Suite is the Tawallah Group (Yates et al., 1962). This is the oldest segment of the southern McArthur Basin. The base is a sequence of conglomerates and sandstones comprising the Westmoreland Conglomerate (Carter et al., 1958). The conglomerates thin out to the southeast and are in turn conformably overlain by the Seigal Volcanics (Grimes & Sweet, 1979), an andesitic to basic sequence containing interbedded agglomerates, tuffs and sandstones. Together these units comprise about two-thirds of the total thickness of the Tawallah Group. The volcanics are overlain in turn by the McDermott Formation, the Sly Creek Sandstone, the Aquarium Formation and the Settlement Creek Volcanics.

Uranium mineralisation has been recognised in the Westmoreland region in numerous structural and stratigraphic positions. These include:

1. associated with faults and fractures in Murphy Metamorphics;
2. in shear zones in the Clifftdale Volcanics near the Westmoreland Conglomerate unconformity;
3. at the reverse-faulted contact between Clifftdale Volcanics and Westmoreland Conglomerate;
4. within Westmoreland Conglomerate about 50m above its base;
5. in Westmoreland Conglomerate in close proximity to the overlying Seigal Volcanics;
6. in association with mafic dykes and sills; and
7. in shear zones within the Seigal Volcanics.

The most important uranium deposits occur on the northern dip slope of the Westmoreland Conglomerate in situation 5 above. The deposits represent thicker and higher grade concentrations of trace uranium mineralisation than is regionally common beneath the Seigal Volcanics-Westmoreland Conglomerate contact and along the flanks of the Redtree dyke zone. Mineralisation in other settings is only present in trace amounts (Rheinberger et al., 1998).
The deposits are associated with an altered basic dyke system intruded along faults. Mineralisation is present in both the sandstones and dyke rocks. To the north the Westmoreland Conglomerate is overlain by the Seigal Volcanics under Recent alluvium cover.

The Westmoreland Conglomerate is a flat-lying sequence dipping between 5° and 10° to the NNW. The dominant fault directions are WNW and NE. A prominent open joint system trending NE appears to have some control on the mineralisation.

Locally, the Westmoreland Conglomerate consists of a sequence of coarse to gritty feldspathic sandstone with local pebble and cobble lenses, overlaying a basal conglomerate bed containing abundant volcanic material.

Vesicular tholeiitic dykes have intruded along the fault zones in an en echelon pattern. The dykes weather more easily than the conglomerate and thus tend to be obscured at surface. Fresh dykes in core are brecciated and sheared, and extensively altered along the contact zones. The unaltered dyke is typically a dark green dolerite.

**GEOLOGICAL HISTORY**

Sands, muds and calcareous sediments were deposited prior to 1900 Ma over much or all of the regions shown in brown on Figure 3 above. The source area for the sediments was probably the Archaean granitic terrane to the west. Felsic and minor mafic volcanism related to accompanying intrusive activity affected some areas of the Murphy Tectonic Ridge.

During the Barramundi Orogeny (1860-1850 Ma) the basement rocks were tightly folded and regionally metamorphosed to greenschist facies, to form the Murphy Metamorphics. The tectonism resulted in uplift and erosion, and by 1875 Ma most of the region was probably a land area where large tracts of metamorphic rocks were exposed.

From 1840 to 1800 Ma, widespread felsic volcanic activity together with minor mafic volcanism and local clastic sedimentation took place to form the Cliffdale Volcanics. The abundance of ignimbrites indicates that the eruptions were predominantly sub-aerial. Comagmatic with the volcanics, granites of the Nicholson Granite Complex were emplaced. A suite of mafic dykes were intruded about the same time.

Some contact metamorphism and local folding, tilting and faulting accompanied the granite emplacement and volcanism, but no major region-wide deformation or regional metamorphism took place during this period. Most of the region was probably a land area subjected to erosion throughout this period. By 1800 Ma, parts of some granite plutons had become unroofed and metamorphic basement rocks were exposed.

Sudden regional subsidence in a linked array of basins controlled by segmented north-striking extensional faults resulted in rapid sedimentation re-commencing about 1790 Ma to form the Westmoreland Conglomerate, the basal unit of the Tawallah Group. The first sediments laid down were alluvial fan and braided stream deposits derived locally from the basement rocks. Rounded boulders of Nicholson Granite around 30 cm diameter are common in the basal conglomerates.

The fluvial sedimentation was followed by sub-aerial and possibly shallow-water felsic and mafic volcanism around 1680 Ma to form the Seigal Volcanics. After a short period of erosion, the volcanics
were covered by near-shore marine and lagoonal dolomite, sandstone and siltstone of the McDermott Formation. The sea withdrew and there was a short hiatus in sedimentation; then sea level rose and sandstones and minor conglomerates of the Sly Creek Sandstone were laid down unconformably on the Seigal Volcanics and McDermott Formation. The Sly Creek Sandstone is overlain by poorly exposed sedimentary rocks of the Aquarium Formation and extrusives of the Settlement Creek Volcanics, which mark the top of the Tawallah Group in the Westmoreland area. The youngest internal SHRIMP zircon ages obtained for the Tawallah Group are 1713±7 Ma for the Tanumbirini Rhyolite and 1708±5 Ma for the Nyanantu Formation near the top of the group (Page and Sweet, 1998).

Major tectonism, involving thrusting, folding, faulting, mafic dyke emplacement and regional metamorphism affected the entire region between 1620 and 1550 Ma. Two main phases of deformation, D1 and D2, have been recognised. The first resulted in extensive thrusting and nappe formation, while the second was characterised by tight folding about northerly trending, steeply dipping to vertical axial planes. A later phase of deformation, D3, resulted in the formation of NNW and NNE-trending shear zones around 1480 Ma. Most of the mineral deposits in the region were probably formed during the deformation events in this period.

Some time after tectonism at 1450 Ma but before 1200 Ma, shallow-water sediments of the South Nicholson Group were deposited in the South Nicholson Basin. Some post-metamorphic NNE-trending mafic dykes were intruded around 1115 Ma. Vertical and lateral movements took place along the major faults of the region during the late Proterozoic, and gentle basin-and-dome folding affected the South Nicholson Group and underlying units.

Figure 7 - Locations of Principal Uranium Deposits, Westmoreland Region.

Compiled by D G Jones from published data.
LOCAL GEOLOGY EL 23573 AREA
(From Fabray, 2005)

The oldest rocks exposed in the tenement are flow-banded rhyolitic lavas and tuffs of the Billicumidji Rhyolite Member of the Cliffdale Volcanics (Murphy Inlier). These Palaeoproterozoic volcanics outcrop in two NE trending anticlinal windows and they are intruded by acid dykes. The volcanics have been dated at 1770 Ga (Ahmad and Wygralak, 1989).

The Cliffdale Volcanics are overlain unconformably by the 1400-1800 metres thick Westmoreland Conglomerate of the Tawallah Group (McArthur Basin). This formation consists of pebbly sandstone, sandstone and conglomerate. It dips gently (5-10º) to the northwest, except close to some faults where buckling has occurred. The formation has been divided into four sedimentary units, each representing a fining-upwards sedimentation cycle.

The basal unit of the Westmoreland Conglomerate was deposited unconformably on the Cliffdale Volcanics and consists of breccias and conglomerates grading upwards into sandstones and quartzite. The coarse units immediately above the unconformity are about 12 metres thick and contain large fragments and cobbles of volcanic rock.

The lower part of unit 2 consists of pebbly sandstones overlain by two cobble conglomerate beds, each about 40 metres thick, separated by sandstone. The sequence above the conglomerates consists of coarse sandstone. The overall thickness of unit 2 is about 500-800 metres.

Unit 3 is well exposed and in places forms a prominent scarp cliff e.g. El Hussen area. The basal part of this unit consists of cobble and boulder conglomerate interbedded with sandstone and pebbly sandstone. This sequence is followed by medium to coarse feldspathic sandstone which is overlain by the El Hussen Conglomerate (informal name). The latter consists of pebble, cobble and boulder conglomerates about 40-100 metres thick.

The uppermost unit of the Westmoreland Conglomerate, unit 4, is estimated to have a thickness of 200-250 metres and is the preferred sedimentary host for uranium mineralisation in the area. The unit consists of sandstones with some pebble beds and conglomerates. A distinctive conglomerate has been mapped in Queensland and the NT by Queensland Mines Ltd and Kratos Uranium N.L. and it occurs about 60 metres from the top of the unit. The Metre Conglomerate (informal name), it is about 1 metre thick, is a clast-supported cobble conglomerate with a distinctive white porcellaneous sandstone matrix. The rest of unit 4 consists of sandstone with some pebble beds. The uppermost 5 metres of the unit contains concretionary hematite nodules and is heavily hematised at the top. Anomalous radioactivity has been found in this hematitic zone.

The Seigal Volcanics conformably overlie the Westmoreland Conglomerate. In some areas the base of the volcanics is marked by a thin (1-2 metres) siltstone bed which may be radiometrically anomalous. The volcanics are about 1600 metres thick and consist of basic lavas with many thin bands of siltstone and fine sandstone. About halfway up the succession there is a marker sandstone (Carolina Sandstone Member) which is 20 metres thick. The lavas occur as flows which are generally less than 20 metres thick. The upper parts of the flows are amygdaloidal and the vesicles contain quartz, chalcedony, hematite and celadonite. The dolerite dykes which intrude the underlying rocks are thought to be feeders of the volcanics.
Flat-lying rocks of Mesozoic age occur as dissected plateaux and isolated mesa capping older rocks. These are the Mullaman Beds and they consist of basal conglomerate, sandstone and siltstone with a thickness of up to 70 metres.

**MINERALISATION EL 23573 AREA**
(From Fabray, 2005; refer Figure 7)

Uranium, uranium-gold and copper mineralisation occur in the area.

Uranium was mined at the Cobar 2 and Eva mines in the 1950’s; both these prospects are outside the current tenement. At the Eva (Pandanus Creek) Mine, pitchblende and secondary uranium minerals occurred in shears zones within strongly altered acid volcanics overlain unconformably by the Westmoreland Conglomerate (Sweet et al., 1981). Pitchblende was found in vertical shears and faults within the Seigal Volcanics close to their contact with underlying Westmoreland Conglomerate at the Cobar 2 mine.

Ahmad (1987) has classified the uranium occurrences in the tenement area into the following types:

**Type A**

These prospects lie at the volcanic (Seigal or Cliffdale) – Westmoreland Conglomerate contact. The volcanics and/or the conglomerate are mineralised. The contact can be a normal stratigraphic succession or a reverse fault as the conglomerate underlies the volcanics. Examples of this type include El Hussen, Duccios and Jim Beam.

**Type B**

In this type the uranium mineralisation occurs as sub-horizontal lenses in the Westmoreland Conglomerate, adjacent to basic dykes which can also be mineralised. This type contains the most important uranium deposits in the Westmoreland region. The dykes are up to 10 metres in width and occupy northeast trending fault zones. Three fault-associated dyke systems have been identified in the region. Two (Redtree and El Nashfa) are located in Queensland and are host to uranium deposits containing over 10,000 tonnes of \( U_3O_8 \) (Hills and Thakur, 1975). The Northeast Westmoreland dyke zone is situated within Arafura’s tenement and contains three prospects (Mageera, Intermediate and Oogoodoo).

**Type C**

Type C occurrences are found in the Cliffdale Volcanics and there are no prospects of this type within the EL 23573.

**Type D**

This type is associated with fractures in the basal part of the Seigal Volcanics. The contact with the underlying Westmoreland Conglomerate may be 100 to 200 metres below these occurrences. The Horsepocket prospect is an example of this type.

There are two styles of uranium mineralisation:
1. Open-space filling and replacement of wallrock in the volcanics and rarely in sandstone.
2. Replacement of the matrix in sandstone.

Pitchblende is the most abundant primary uranium mineral. Torbernite, carnotite and meta-torbernite are the commonest secondary minerals. Hematite is invariably associated with the uranium mineralisation. Other alteration minerals include quartz, sericite, muscovite and chlorite. Gold has been reported from a number of the uranium prospects.
PREVIOUS INVESTIGATIONS

WESTMORELAND REGION

A very detailed account of the exploration history of the Westmoreland region has been provided by Jones (2005). This account was reproduced in the previous annual report (Goulevitch, 2006).

EL 23573 REGION – OTHER PARTIES

The area has been subjected to three periods of intensive exploration (Ahmad and Wygralak, 1989):

- 1956-1960: An intensive phase of uranium exploration following the discovery of the Rum Jungle and the South Alligator River uranium deposits.
- 1968-1971: Exploration mainly for uranium but also for copper in the Redbank area.
- 1978-: Most exploration has been directed towards uranium, gold and diamonds.

Full details were provided by Fabray (2005) and reproduced in the previous annual report (Goulevitch, 2006).

EL 23573 – LARAMIDE RESOURCES 2005

Airborne Geophysics

Laramide Resources Ltd completed a state of the art, low level, high resolution airborne magnetics and radiometrics survey over its Northern Australian project area including the entire area of EL 23573 in August-September, 2005.

The survey was conducted by UTS Geophysics of Perth with a crop duster airplane. The survey was flown at 60 metres flight height on 100 metres spaced lines for a total of 21,500 line kilometres.

The aerial survey conducted over Arafura’s EL 23573 identified several strong uranium anomalies (Goulevitch, 2006).

Aboriginal Sacred Sites Survey

Laramide applied to the NT Aboriginal Areas Protection Authority for an Authority Certificate for purpose of exploration over the whole of the area of EL 23573. In December, Laramide was issued with AAPA Authority Certificate C2005/095 for the purpose of

“exploration works including ground traversing, stream, rock and soil sampling, track clearing and drill pad construction, drilling of test holes”

across the area of EL 23573. The Certificate identifies Registered Sacred Site 6462-25 on the northern boundary of the licence area where “no ground disturbing works are to be carried out”. No other Registered or Recorded Sites were identified in the area of the EL.
EXPLORATION COMPLETED 2006

GIS DEVELOPMENT

Historical exploration data were collected, organised, digitised and subsequently incorporated into a GIS database together with the data from the 2005 airborne geophysical survey, acquired satellite imagery and published geological and topographical maps.

This GIS was used as a base for the geological interpretation and mapping exercises described below and it was used to construct plans and sections from which the 2006 RC drill program was developed.

GEOLOGICAL INTERPRETATION OF AIRBORNE GEOPHYSICAL DATA AND SATELLITE IMAGERY (WALL)

LCRPL commissioned Dr Vic Wall (of Taylor Wall & Associates) to generate a geological interpretation of the entire Westmoreland area including the area of EL 23573. Wall’s interpretation was developed from detailed analysis of the 2005 aeromagnetic data, satellite imagery and 2005 airborne radiometric data and from his assessment of that data in conjunction with published geological maps and historical exploration information.

Elements of Wall’s interpretation are included on the accompanying CD as Appendix 1.

HELICOPTER RECONNAISSANCE

Subsequent to the completion of Wall’s interpretation, LCRPL accompanied Wall on a helicopter-borne geological reconnaissance survey of the area of EL 23573 in May-June, 2006. During this survey several uranium anomalies which had been identified in the data from the 2005 airborne geophysical survey were located and assessed in a preliminary fashion with a view to determining exploration priorities for the impending 2006 field season.

GROUND RADIOMETRIC SURVEYS

Systematic ground radiometric surveys were conducted (using helicopter support to gain access late in the extended wet season) over the Debbil (4 separate areas), El Hussen and Northeast Westmoreland (2 separate areas) (including Mageera) Zones in May-June using a Gamma Surveyor spectrometer. Readings were taken at nominal 25 metres intervals on lines spaced nominally 100 metres apart. Located data is included on the attached CD as Appendix 3.

Peak values of 61 ppm eU, 21 ppm eU and 153 ppm eU were measured at Debbil, El Hussen and Northeast Westmoreland respectively. The anomaly at Northeast Westmoreland was subsequently tested with RC holes NEWM 200-203.
**GEOLOGICAL MAPPING AND INTERPRETATION (HOLCOME)**

Dr Rod Holcome (of Holcome Coughlin & Associates) undertook regional mapping in EL 23573 in August-September, 2006, as part of a more wide ranging exercise over all of the Westmoreland titles of Laramide Resources. The purposes of the investigation were

- to evaluate the structural context of the Lagoon Creek/Westmoreland uranium project;
- to guide the initial mapping program and establish quality control on subsequent mapping procedures and data acquisition and management; and
- to start establishing the regional and structural framework of the prospects with a view to setting regional targeting criteria.

Holcome’s observations, summary interpretations and proposed mapping protocols are included on the accompanying CD as Appendix 2.

**ACCESS ESTABLISHMENT**

A new vehicle access track was established to the Lagoon Creek area from the Carpentaria Highway at Wollogorang. This was necessary to improve project infrastructure and allow more efficient transportation of drilling equipment and support personnel to and from the area. It reduced the travel distance from the Highway to the exploration camp to about 60 kilometres. A further 30-40 kilometres of access tracks was installed through the project area, mainly along old exploration tracks which had not been maintained for the past 15-20 years. Both the Wollogorang airstrip and Caroline airstrips are connected to the main access track. This work was undertaken from August to October with ongoing upgrade and maintenance continuing into November after the arrival of the drill rig.

An exploration camp was constructed at Crocodile Waterhole on Doctors Creek just to the NW of the boundary of EL 23573.

Other earthmoving activities undertaken included refreshing old tracks across the northern part of the licence and constructing drill pads at the Northeast Westmoreland prospect.

The path of the new access track and the location of the exploration camp and Northeast Westmoreland prospect are shown on Figure 3.

**RC DRILLING**

*Northeast Westmoreland*

This zone has been subject to exploration activities since the late 1970’s. During the historical exploration period approximately 90 holes were drilled into the zone which extends over a strike length of 3-4 kilometres.

Initial drilling by LCRPL in the Northeast Westmoreland area was undertaken in October-November. A total of 2814 metres was drilled in 23 RC percussion drill holes. Drilling was completed by Tom Browne Drilling using an UDR 600 rig with a 135 mm face sampling hammer.
The exploration model for the historical drill holes appears to have been shallowly dipping, nearly flat-lying contact mineralization and most holes were therefore designed as vertical holes. These holes were drilled to either side of a northeast trending, steeply westward dipping fault to test for mineralization along the lower contact of a thin siltstone layer which is underlain by Westmoreland conglomerates and overlain by the Seigal volcanics.

Upon review of Westmoreland mineralization at the Redtree deposit by LCRPL and its consultants, both flat lying contact mineralization and also steeply dipping mineralization along a mafic dykes were recognized in the historical data. At northeast Westmoreland there is some evidence from previous drill holes that sparse dyke material occurs along the major northeast trending fault which passes through the prospect area (Northeast Westmoreland Fault/JN Fault/Lagoon Creek fault). These occurrences of dyke material tend to coincide with richer uranium mineralization.

The 2006 drill program was therefore designed to test both flat lying and steeply dipping mineralization. Most holes were designed to be drilled -55° to the southeast (135°). In addition, magnetic lineaments trending roughly 075° were found to coincide with higher scintillometer readings where they cross the main fault. Several holes were designed at -55° dip to the south to test these zones. A third drill target occurs to the southern end of the prospect within the Westmoreland conglomerates. The target coincides with a strong airborne radiometric anomaly. Drilling on this target was designed to test the lower siltstone contact and holes were drilled at -55°, to the southeast.

The majority of the 2006 holes were drilled at an azimuth of 135° or 180°, with an inclination ranging from -55° to -75°. Hole depths ranged from 51 metres to 204 metres. Twelve holes failed to reach their planned target depths and of these 6 failed to reach the target siltstone horizon due mainly to excessive inflows of groundwater.

Drill samples were split 25/75 automatically through a riffle box upon exit from a trailer-mounted cyclone. Both subsamples and collected in calico bags and large plastic bags respectively. A small sample was collected in chip trays and geologically logged.

Each large sample was tested for uranium content using a Gamma Surveyor spectrometer. Samples exceeding 50 ppm eU3O8 were collected for assay as were the two one-metre intervals above and below that particular sample. A total of 105 one-metre samples were selected from 14 holes for assay.

Upon completion of drilling the samples destined for assay were transported by road to Mt Isa and then sent by courier to ALS Chemex in Alice Springs. No assay results had been received at the end of the current reporting period.

Drill hole logs are included on the attached CD as Appendix 4 and details of RC samples despatched to the laboratory are included as Appendix 5. Hole locations are shown in Figure 8 and located collar data are provided in Appendices 4 and 5.
Figure 8: Location of RC drill holes, Northeast Westmoreland prospect. Grey holes denote target not reached.
EXPENDITURE STATEMENT, YEAR 3

Table 1: Expenditure Statement Year 3 (to 31/12/06)

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Total Direct Expenditure 1,163,679
Overhead Allocation @ 12.5% 145,460

Total 1,309,139

The Expenditure Covenant for Year 3 of $150,000 has been exceeded.
PROPOSED EXPLORATION AND EXPENDITURE, YEAR 4

All 67 blocks have been retained for Year 4.

Further drilling is planned in the Northeast Westmoreland area to explore targets not adequately investigated in 2006. This may include core drilling to reach target depths not reached in 2006 due to uncontrolled inflows of groundwater and to test targets at even greater depths where historical drilling has met with success. Additionally, infill RC and core drilling is anticipated in areas where results of economic interest are returned from the 2006 drilling.

The proposed program and expenditure is outlined in Table 2 but implementation will be conditional on securing a suitable drilling rig during the dry season.

Table 2: Proposed Exploration Programme and Expenditure, EL 23573, Year 4

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<td><strong>Total</strong></td>
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The proposed expenditure covenant for Year 4 is $250,000.

JOHN GOULEVITCH
BSc(Hons) MSc FAIG
20 February 2007
REFERENCES


