ANNUAL REPORT E24451

NGALIA REGIONAL PROJECT

PERIOD ENDING 6 FEBRUARY, 2008

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SUMMARY

Exploration License E24451 is part of the Ngalia Regional Project and is located 200 kilometres (by road) northwest of Alice Springs. The Ngalia Regional Project is 100% owned and operated by Energy Metals Limited. The Bigrlyi Project located ~ 150kms along strike to the west northwest, is a Joint Venture between Energy Metals Limited with 53.3% (operator), Valhalla Uranium (a subsidiary of Paladin Resources Ltd) with 41.7% and Southern Cross Exploration NL with 5%. The Bigrlyi camp and core yard facility is used to support the entire Ngalia Regional Project.

The Malawiri Prospect is located in the southeast of the Ngalia Basin, on E24451 approximately 200 kilometres northwest of Alice Springs. Exploration was carried out on the Malawiri Prospect between 1978 and 1982 in a Joint Venture between Central Pacific Minerals, Urangesellschaft GmbH and AGIP, following discovery of the Minerva uranium deposit by AGIP along strike.

Uranium mineralisation was discovered at Bigrlyi by a joint venture managed by Central Pacific Minerals (CPM) in 1973 which occurs to the west northwest of E24451. In the period 1974 to 1982 the project was subject to several major drilling campaigns, with some 413 holes (total 37,500m) completed. Subsequent to 1982 CPM completed metallurgical testing and resource calculations, with a global resource of 809,000 tonnes at 3.43 kg/t U₃O₈ for 2,770 tonnes of contained U₃O₈ delineated at Bigrlyi (note that these resources are not JORC 2004 compliant). Field activities conducted in the period 1983 to 2004 were limited to maintenance of the core shed.

In May 2005 Energy Metals acquired a 53.3% interest in, and assumed management of, the Bigrlyi project through the purchase of the interests of CPM and Yuendumu Mining Company NL. In September 2005 Energy Metals listed on ASX after raising $3m, primarily to fund exploration at the Bigrlyi and Ngalia Regional Projects.

Exploration undertaken in the period 06 February 2007 to 06 February 2008 included:

- Field Mapping and GPS surveying.
- Exploration planning/logistics.
- Submition of a drilling proposal for 4,500m of aircore and RC drilling in 72 holes.
- CLC exploration notifications/negotiations and approval.
- Airborne Geophysical survey measureing magnetic, radiometrics and topography.

Expenditure for the period was $75526.06.
INTRODUCTION

The Ngalia Regional project comprises ten 100% owned exploration licences (total area 2,840 km²) located in the Ngalia Basin, between 180 and 350 km northwest of Alice Springs in the Northern Territory (Figure 1 & 2). Seven of these tenements are contiguous and enclose the Bigrlyi project as well as containing a number of uranium occurrences including the Malawiri prospect (EME 52%) and the Walbiri prospect (EME 42%). The remaining 3 applications cover discrete uranium anomalies located southwest of the Bigrlyi deposits.

![Figure 1: Location of the Bigrlyi/Ngalia Regional Projects (NT).](image)
Four exploration licences, including E24451 enclosing the Bigryi project, were granted in the March 2006 quarter, with E24807 granted in August 2006.
PREVIOUS WORK

Ngalia Regional Projects

Exploration on the Ngalia Regional and Bigrlyi Projects commenced in August 1971 with the granting of Authority to Prospect (A to P) 2677 valid for one year. This A to P was converted to Exploration Licence 605, and renewed annually to October 1977. Exploration on this property was managed by Central Pacific Minerals NL on behalf of various joint venture partners including Magellan Petroleum Australia Ltd, Agip Nucleare Pty Ltd, Urangesellschaft mBH & Co. and the Atomic Energy Commission.

The Malawiri Prospect was identified in 1978 and is located in the southeast of the Ngalia Basin, on E24451 approximately 200 kilometres northwest of Alice Springs. Exploration was carried out on the Malawiri Prospect between 1978 and 1982 in a Joint Venture between Central Pacific Minerals, Urangesellschaft GmbH and AGIP, following discovery of the Minerva uranium deposit by AGIP along strike.

The Joint Venture drilled a total of 20 pre-collared diamond core holes testing a concealed portion of the Mount Eclipse Sandstone, south of the Yuendumu to Alice Spring Road, close to the southern boundary of the Ngalia Basin.

Drilling between 1979 and 1982 was carried out on seven sections and uranium mineralisation was intersected on 3 of the sections, in 8 separate holes. The mineralisation is usually present in multiple narrow intervals with the uranium present as uraninite. The depth to the bedrock Mount Eclipse Sandstone below Cainozoic cover rocks is typically between 104 and 122 metres in depth and future exploration will be of necessity drill intensive.

In 1977 the Minerva Deposit was discovered by AGIP, which is excised from E24451. The area was mapped at 1:250,000 scale by the BMR during 1968-69. Reconnaissance gravity and seismic surveys were carried out by the BMR during 1965, 1969 and 1970. Magellan Petroleum carried out gravity surveys over parts of the Ngalia Basin during 1971-72. Agip’s exploration activities commenced in 1977 with a program of geological mapping, ground radiometric surveying, resistivity surveying, groundwater analysis and stratigraphic rotary drilling (35 holes for 3,468.95m) and percussion drilling (13 holes for 1,372m), with ancillary downhole geophysical logging (over a total depth of 4,589m).

During 1978, stratigraphic and follow-up drilling programs were undertaken, with 8,751.89m of rotary drilling completed in 74 holes and 1,148.9m of diamond drilling completed in 15 holes. Ancillary activities included downhole geophysical logging, carried out over a total depth of 10,452.7m.

Bigrlyi Project

Elsewhere in the Ngalia Basin exploration involved airborne radiometric surveys in 1972 and 1974, radiometric ground traversing and geological mapping. The Bigrlyi Prospect was found in 1973 and in 1974 mapping and trenching located uranium mineralisation at a number of the 16 anomalies now comprising the Bigrlyi Project. These anomalies occur intermittently over a 11.5 km strike length within the Treuer Range and south of prominent strike ridge formed by the Vaughan Spring Quartzite.

The northern margin of the Ngalia Basin and the Arunta Inlier basement to the north have been the focus of substantial regional exploration since the discovery of uranium mineralisation in the region.
in the early 1970’s. Exploration has been for a wide variety of mineralisation, particularly uranium, in both the Ngalia Basin sediments and the Arunta Inlier granites and metasediments and for diamonds, gold and base metals in the Arunta Inlier.

WORK COMPLETED FROM 6TH FEBRUARY 2007 TO 5TH FEBRUARY 2008

Mapping and GPS Surveying
Prospecting was undertaken to gain a better understanding of the local geology/terrain with a view to logistics and work planning for exploration programs scheduled for 2008. This involved using a GPS to map station tracks and any drill holes existing as locatable collars.

Field logistics of operating on the tenement was examined including, condition and location of major access routes for heavy vehicles, logistics in operating in locations close to population areas, logistics in relation to potable, drilling and ground water use/contamination. Scoping, budgeting, planning and sourcing equipment for intended work was undertaken during the period.

Drilling Proposal
A preliminary drilling program was submitted to DPIFM in April. This comprised 4,500m of aircore and RC drilling in 72 holes. Most of these holes will be shallow (~10m) to test calcrete hosted targets in the southern tenement area, with the remainder composed of 100-160m deep holes testing extensions to known sandstone hosted mineralisation. Approval was given, subject to Traditional Landowner clearance.

Traditional Landowners Consultation
A detailed ground clearance report was submitted in late April 2007 to the CLC for Aboriginal Heritage clearance for areas of drilling. A confirmation letter from the CLC was received 6 September 2007. Some conditions were imposed upon the tenement, notably as a 400m exclusion zone around the registered Marla Claypan (Site No 5352-5), and a 100m exclusion zone around an unnamed claypan. Other conditions relate to vehicular access around these sites to minimize disturbance. The majority of the planned drilling has been approved.
Geophysical Survey

UTS Geophysics conducted a low level airborne geophysical survey for the tenement. This was done in conjunction with Scimitar Resources and Toro Energy over their adjacent tenements to spread the survey over a larger area, thereby reducing the cost per each company’s tenement. Acquisition for this survey commenced on the 8th October 2007 and was completed on the 22 November 2007. The base location used for operating the aircraft and performing in-field quality control was Tilmouth Well, Northern Territory.

The survey was flown using the MGA94 coordinate system (a Universal Transverse Mercator projection) derived from the Geocentric Datum of Australia and was contained within zone 53 with a central meridian of 135 degrees. Details of the datum and projection system are:

- **MGA94** Map Grid of Australia 1994
- Semi major axis 6378137m
- Flattening 1/298.257222101
- 000-180 degree lines, spaced 100m for a total of 5189km.
- Sensor height 30m

The survey measured magnetics, radiometrics and topography. The data was sent to Southern Geoscience Consultants for re-processing, which is yet to be completed.
Figure 4: E24451 total magnetic intensity.

Figure 5: E24451 radiometric total count.
Figure 6: Digital terrain model
WORK PROPOSED FOR 2008

Work to be commenced in the first quarter of 2008 will comprise the following:

(i) A surveying program by BB Surveys to locate the ERL boundaries and pick up any existing drill hole collars.
(ii) Review of geophysical data and interpretations at various scales and conduct target generation work;
(iii) Scoping, budgeting, planning and sourcing equipment for prospecting, drilling and sampling;
(iv) Continued digital data capture of historic exploration mapping and drilling;
(v) Aircore and/or RC drilling and sampling for uranium, vanadium and other elements;

It is anticipated that exploration expenditure on E24451 for the year ending 06 February 2008 will exceed $65,000.
REFERENCES


Freeman, M.J., Shergold, J.JH., Morris, D.G. and Walter, M.R., 1990. Late Proterozoic and Palaeozoic basins of Central and Northern Australia – Regional geology and


APPENDICES

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