



Cameco Australia Pty Ltd

GOOMADEER PROJECT

EL 2858 & EL 5892

ANNUAL REPORT FOR 2002

CONFIDENTIAL

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SUMMARY

This report describes exploration work undertaken on the Goomadeer project between 25 of July 2002 and 31 December 2002. The tenements once formed part of the Arnhem Land West Joint Venture, a joint venture between Cameco Australia Pty Ltd, PNC Exploration Australia Pty Ltd and the Mangingburru Aboriginal Corporation. Cameco became manager of the project on granting of the tenements in 2000 and subsequently acquired ownership in 2002 after PNC ceased exploring for uranium in Australia.

The year's exploration activities included an airborne hyperspectral survey conducted by De Beers Exploration Australia and a RAB drilling program. Associated work completed included laboratory analysis of the RAB samples.

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INTRODUCTION

This report describes program activities carried out between the July 25 2002 and December 31 2002. Cameco is involved in a joint venture arrangement with the Mangingburru Aboriginal Corporation. Since the Exploration Licences are located on Aboriginal Land, the exploration program was carried out under the terms of consent documentation agreed with the Northern Land Council pursuant to the Aboriginal Land Rights (Northern Territory) Act 1976.

The activities completed in the above period included an airborne hyperspectral survey by De Beers utilising their Hymap MkI system and some RAB drilling.

The RAB drilling program, which comprised about 30 holes, was abandoned due to mechanical difficulties. The program has been rescheduled for 2003.

Location and Access

Exploration Licences 2858 and 5892, which comprise the Goomadeer project, are located in north western Arnhem Land. The tenements are centered approximately 50 km northeast of the rehabilitated Nabarlek mine site and 115 km northeast of Jabiru.

The principal access is via the Oenpelli – Maningrida road which traverses EL5892 from west to east. Several subsidiary tracks branch off the main road, some servicing outstations in the region. There is no known vehicular access into EL2858. Much of the country is flat lying and can most likely be accessed by four-wheel drive vehicle.

Location Map

Tenure

EL 2858 and EL 5892 were granted on the 25th July 2000 for an initial period of six years. On granting, the combined area covered by the licences was 1014.3 km² or 306 blocks. Individually, EL2858 totalled 66 blocks or 208.3 km² (with 79.1 km² excluded from exploration) and EL5892 240 blocks or 806 km² (with 109.5 km² excluded from exploration).

Subsequent relinquishments into Year 3 reduced EL2858 to 31 blocks. A waiver of reduction was granted for EL5892 by DBIRD.

Physiography

Much of the topography in both tenements is relatively flat lying and covered by savannah woodland. Several localised outliers of Kombolgie sandstone are present in the eastern half of EL5892. The larger heavily dissected one located in the south eastern corner of the tenement marks the northern limit of the Arnhem Land plateau country in the region.

The principal drainage in 5892 is the north flowing Goomadeer River. Several major creeks traverse EL2858. All have swampy estuaries developed within the coastal plains.

Tenement Geology

Based on the most recent NTGS mapping (Milingimbi 1:250000 geological series), the oldest rocks within the tenements comprise the Paleoproterozoic Nimbuwah Complex. These are overlain by remnants of the Kombolgie subgroup. Cambrian Buckingham Bay sandstone crops out as an elongate northwest trending ridge within EL2858. With the exception of the Kombolgie sandstone, only isolated scattered outcrop is present within the project area.

The Nimbuwah Complex consists of gneiss, migmatite and various granitic intrusives. The most recent age determinations place the Nimbuwah within 1870-1850 Ma. The 'complex' has an I-type granite origin and is considered to be, in part, intrusive into Paleoproterozoic metasediments, in this case the Myra Falls Metamorphics. (Carson et al., 1999). Within EL5892, visible Nimbuwah is restricted to a series of northwest striking ridges (southeast corner), as outcroppings along the base of the main sandstone outlier and at isolated locations throughout the tenement.

The basement rocks are overlain by the Kombolgie Subgroup, which comprise the lower units of the early Proterozoic Katherine River Group, the oldest rocks of the McArthur Basin. The Mamadawerre Sandstone, the fluvatile basal unit of the Kombolgie, outcrops as several outliers, typically heavily dissected. The most southeasterly and largest block is almost square in outline, being controlled by a series of linear NNE and WNW structures. The age of the Mamadawerre has been constrained between 1822 and 1720 Ma and is probably closer to 1800 Ma (Sweet and others 1999).

The basal unit of the Cambrian Wessel Group, the Buckingham Bay Sandstone, crops out in EL2858 and trends southeastwards into the adjoining Cameco tenements. These Cambrian sediments, which comprise the oldest rocks of the Arafura Basin, obscure any northern extensions of the Paleoproterozoic basement and sandstone.

Oenpelli dolerite has been observed at two locations in EL5892, both near the main sandstone outcrop. One locality was discovered during NTGS mapping where dolerite intrudes the Mamadawerre sandstone along an east-west linear. The other locality is several kilometres to the southwest in the vicinity of a basement-hosted airborne anomaly. During reconnaissance traversing, boulders of dolerite were observed in association with porphyritic granite and migmatitic gneiss.

Lateritised Cretaceous tablelands cover the central western part of EL5892. Some outcrop is present along the erosional fringe of this tableland country. Large areas of Nimbuwah Complex rocks are exposed in places adjacent to the retreating edge of the Cretaceous. One such locality is traversed by the Maningrida road.

A variety of quaternary surficial materials cover much of the region, obscuring the Nimbuwah Complex.

Geology Map

Regional Structure and Geological History

The early Proterozoic rocks of the region have been affected by the Top End orogeny (1880 to 1780 Ma), which includes the initial Nimbuwah Event or Barramundi Orogeny at about 1870 Ma. This event produced a prograde metamorphic effect with associated tight folding and faulting. The various 'domains' exhibit a variability of deformation and metamorphic grade, with the western and eastern margins of the Pine Creek Inlier (Litchfield Province and Nimbuwah domain respectively) exhibiting the most pronounced effects.

Major regional faults, which affect the early Proterozoic, have northwest (Bulman), north northwest (Aurari) and northerly (Anuru, Goomadeer) strikes. Another significant set trends to the east and includes both the Ranger and Beatrice faults. The Bulman Fault Zone is the principal regional feature and is considered to represent a long-lived, deep crustal structure, which has exerted a large lateral component in rocks of the Pine Creek Inlier.

A more intense concentration of structures traverse the mid Proterozoic and younger rocks and include north-west, east, north-east and north trends. Both faulting and jointing, with displacements ranging from a few metres up to 100 metres, locally heavily dissect the Kombolgie.

Deposition of the Mamadawerre Sandstone took place in an environment of extension and local basin formation with probable fault-controlled sedimentation. Rapid thickening and thinning of the sequence imply this.

The widespread Oenpelli Dolerite intrusive event took place at about 1715 Ma. Localised effects in the sandstone include silicification, the introduction of magnesium rich to intermediate chlorite and the formation of muscovite-illite. A characteristic mineral assemblage of prehnite-pumpellyite-epidote has formed in the quartzofeldspathic basement rocks adjacent to the intrusions.

Exploration Target

The focus of the exploration strategy is the discovery of unconformity-related uranium deposits. The nearby deposits at Ranger, Jabiluka and Koongarra and the now depleted Nabarlek Mine serve as models for this strategy. The presence of gold, palladium and platinum in these deposits plus the economic gold-platinum resource at Coronation Hill in the South Alligator Valley, indicates an additional potential for this deposit style.

Previous Exploration

Part of the project area (EL5892) was initially explored for uranium by Union Carbide Exploration Corporation in 1971 and 1972 as part of A to P 2543. Exploration activities consisted of airborne magnetic and radiometric surveys with follow-up sampling and geological mapping.

Total Mining Australia Pty. Ltd. originally applied for EL 2858. Prior to that, a section of the tenement was included in EL144, which was explored for uranium in the early 1970s by the Ormac JV, a consortium consisting of Ocean Resources, McIntyre Mines of Canada and a corporation representing the local Traditional Owners.

Cameco Australia has now completed three years of exploration on the tenements. Activities have included a regional fixed-wing magnetic, radiometric and DTM (digital terrain model) survey covering both tenements (Year 1); ground follow-up consisting of airborne anomaly investigation and regional sandstone sampling (Year 2); an airborne Hyperspectral survey and RAB drilling (2002) and further rock sampling and reconnaissance (2003) for Year 3. Continuation of the RAB program and an airborne EM survey were also planned for Year 3 but these activities have been delayed and will now be carried out in Year 4.

EXPLORATION PROGRAM

Field work for the 2002-2003 field seasons included an airborne hyperspectral survey and RAB drilling.

All digital data, which has been acquired by Cameco has been submitted on CD and DVD with this report. In some cases data over culturally sensitive “nogo” zones has been excised from figures and data in accordance with requests by Traditional Owners.

RAB Location Map

Hyperspectral – HyMap Mk1

During early August 2002, a hyperspectral survey was flown over the outcropping Kombolgie Sandstone within the tenement. The survey was conducted by De Beers utilising their HyMap MkI system, an airborne multi-spectral scanning instrument designed to map minerals and identify alteration. Cameco is utilising the instrument as an aid in locating alteration patterns associated with unconformity-style uranium deposits. It is hoped that the system will identify and map variations in clay types in the sandstone such as kaolinite, illite, dickite, halloysite and iron and magnesium chlorites as well as silicification.

Reports detailing the survey logistics and the processing and interpretation of the results are contained within the documents listed below.

Hyperspectral Logistics and Interpretation Report by Gerard Zaluski

RAB Drilling

Thirteen RAB holes were drilled for a total of 160 metres. Major mechanical problems with the rig's compressor resulted in the cancellation of the program. The remaining holes were planned to be completed prior to the tenement's anniversary in 2003, however a delay in the arrival of the drilling contractor has caused a postponement of the work until late August-early September.

RAB Drilling Locations

Rab Drilling - Summary of Rock Types

Unaltered fresh granitic/gneissic rocks of the Nimbuwah Complex were intersected in most holes. Two holes were placed near mapped outcrops of Maningkorri Phonolite and a Microgranite respectively. The latter has a high radiometric background with up to 100cps in outcrop (GR101 scintillometer). Surficial radiometric readings taken at each drill site varied depending upon the proximity of outcrop.

There were no anomalous uranium values apparent from the sampling.

RAB Sample Geochemistry

EL 2585 Summary of Expenditure

EL 5892 Summary Of Expenditure

WORK PROGRAM 2003

Planned activities for 2003 include follow-up helicopter assisted rock sampling and radiometric traversing of airborne anomalies, completion of the 2002 RAB drilling program and an airborne EM (HOISTEM) survey.

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