Cameco Australia Pty Ltd

Exploration Licence EL 2858

GOOMADEER PROJECT
PARTIAL SURRENDER REPORT

CONFIDENTIAL

Date: October 2003

Report No.: GD03-09

Period: 25 July 2000 to 24 July 2003

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SUMMARY

This report describes exploration work undertaken within the 25 (76%) surrendered blocks of Exploration Licence 2858 over the three years of tenure between 2000 and 2003. The tenement is located in northwestern Arnhem Land and was granted on 25th July 2000.

Cameco Australia Pty Ltd carried out exploration on behalf of the Arnhem Land West Joint Venture, a joint venture between Cameco Australia Pty Ltd (Cameco), PNC Exploration (Australia) Pty Ltd (PNC) and the Mangingburru Aboriginal Corporation. PNCs involvement in the JV ceased in early 2002.

The focus of the exploration strategy is the discovery of unconformity-related uranium deposits. The nearby economic deposits at Ranger, Jabiluka, 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.

Exploration work undertaken during the period includes airborne surveys (fixed wing), geological reconnaissance mapping and sampling. Four samples from three stations are located within the relinquished area.

There were no results of significance obtained from the work carried out. Geological interpretation has shown that most of the relinquished land is comprised of low prospectivity Nimbuwah Complex granitoids overlain by Cambrian sandstone and Cretaceous to recent unconsolidated to semi-consolidated sands and sediments.

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INTRODUCTION

This report fulfils the obligation of a 50% surrender of an Exploration Licence under the Act.

Program activities were carried out during the 2000 - 2002 field seasons on behalf of the Arnhem Land West Joint Venture, a joint venture between Cameco Australia Pty Ltd (Cameco), PNC Exploration (Australia) Pty Ltd (PNC) and the Mangingburru Aboriginal Corporation are described herein.

The exploration licences are located on Aboriginal Land and exploration programs were carried out under the terms of consent documentation agreed with the Northern Land Council pursuant to the Aboriginal Land Rights (Northern Territory) Act 1976.

Cameco Australia Pty Ltd ("Cameco") as operator carried out the Work Program for the Mangingburru Joint Venture, in conjunction with exploration on the adjoining EL 5892 under the 'Goomadeer Project'. PNC no longer has an interest in the tenement, having sold the assets and withdrawing from uranium exploration in Australia.

Location and Access

Exploration Licence 2858 is located in northwestern Arnhem Land. The tenement is centred approximately 80 km northeast of the rehabilitated Nabarlek mine site and 130 km northeast of Jabiru. This tenement is situated immediately east of other Arnhem Land West tenements, which make up the King River project.

There are no known tracks servicing EL 2858. Much of the country is flat lying and highly vegetated with coastal estuaries and swamps making access by four-wheel drive vehicle extremely difficult. Access was achieved with the use of a helicopter.

Location Map

Tenure

EL 2858 was granted on the 25th July 2000 for an initial period of six years. On granting, the total area covered by the licence was 208.3 km^2, of which 79.1 km^2 was excluded from exploration. 35 blocks of the original exploration licence area were surrendered on 24th July 2002. On July 24 2003, 25 blocks or 76% of the tenement holding was relinquished as per Section 26(1) of the Act.

EL2858 Relinquished Blocks 2003

Personnel

One or two Cameco geologists and one field assistant undertook the fieldwork. An Aboriginal traditional owner was employed to assist in this work.

Contractors and consultants used were:

- Airborne surveys by UTS, Perth.
- Analytical work by NTEL, Darwin.
- Helicopter assisted activities by Jayrow, Darwin.

Physiography

Much of the topography is relatively flat lying and covered by savannah woodland. Several major creeks traverse EL2858 into Junction Bay. All have swampy estuaries developed within coastal plains.

Regional Geology

Relinquished portions of the tenement consist of the Paleoproterozoic Nimbuwah Complex and Oenpelli dolerite intrusives. There is virtually no outcrop with much of the area covered by sands and alluvium and, in places, thin Cretaceous sediments.

Regional Structure and Geological History

Early Proterozoic rocks of the region have been affected by the Top End orogeny (1880 - 1780 Ma), which includes the initial Nimbuwah Event, or by the Barramundi Orogeny (~1870 Ma). This produced a prograde metamorphic effect with associated tight folding and faulting. The various 'domains' exhibited 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-north-west (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 northwest, north, northeast and east trends. Both faulting and jointing with displacements ranging from a few metres up to 100 metres locally heavily dissect the Kombolgie.

The Goomadeer project area occupies the northwestern extension of the Arnhem Shelf in the northern McArthur Basin. Deposition of the Mamadawerre Sandstone took place in an environment of extension and local basin formation with probable fault-controlled sedimentation. This is implied by rapid thickening and thinning of the sequence.

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.

Tenement Geology

Based on the most recent NTGS mapping in the region (Milingimbi 1:250000 geological series), the oldest rocks within the tenement comprise the Paleoproterozoic basement Nimbuwah Complex. Elsewhere, outcrops of the basal unit of the Cambrian Wessel Group, the Buckingham Bay Sandstone, unconformably overlie the Nimbuwah.

The Nimbuwah Complex consists of gneiss, migmatite and various granitic intrusive phases. 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. (Carson and others 1999).

Cretaceous remnants outcrop in various parts of the tenement usually along the erosional fringes of lateritised tablelands. These remnants usually overlie Nimbuwah basement rocks. A variety of quaternary surficial materials are also present as are sands derived from the weathering of the Cambrian sandstone.

EL 2585 Regional Geology

Exploration Target

The focus of the exploration strategy is the discovery of unconformity-related uranium deposits. The nearby economic deposits at Ranger, Jabiluka, 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 Goomadeer 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 consisted of airborne magnetic and radiometric surveys with follow-up sampling and geological mapping. Total Mining Australia Pty Ltd originally applied for EL2858. Prior to that, a section of the tenement was included in EL144, which was explored for uranium by the Ormac Aboriginal JV (Ocean Resources / McIntyre Mines) in the early 1970s.

EXPLORATION PROGRAM

Summary of Completed Work By Year

2000-2001 Field Season

The 2000-2001 field season work program consisted of flying a fixed-wing magnetic, radiometric and DTM (digital terrain model) survey over the tenement area.

2001-2002 Field Season

A helicopter assisted regional reconnaissance program was conducted in order to follow-up and ground truth the airborne survey results. The airborne radiometric anomalies could not be related to outcrop, and no anomalous readings were noted.

Recent alluvium/colluvium, wind-borne sands and marine mud were the dominant units noted in these areas with probable Cretaceous sands overlying Cambrian sandstone. No rock outcrops were noted in the released areas.

Other relinquished blocks fell within defined restricted zones, which were precluded from exploration.

Samples of Cretaceous Wessel Group Raiwalla Shale and Buckingham Bay Sandstone were collected within the relinquished area. Details of these samples are listed in the accompanying data tables.

2002-2003 Field Season

A helicopter assisted regional reconnaissance program was conducted during the 2003 field season. In the course of the program, systematic reconnaissance of the area relinquished did not identify any exposed outcrops of Nimbuwah Complex basement rocks through Cainozoic sands. One allochthonous sample of Nimbuwah Complex weakly foliated leucocratic granitic gneiss was located at the base of a Cretaceous sandstone plateau. It is interpreted that this allochthonous block of Nimbuwah was not transported any significant distance and represents basement rocks in the vicinity. Details of this sample are listed in the accompanying data tables.

Relinquished Exploration Data

All digital data covering the blocks relinquished has been submitted on CD and DVD with this report.

Airborne Geophysical and Hyperspectral Coverage

Airborne Geophysics

During July 2001, Universal Tracking Systems Pty Ltd (UTS) conducted an airborne magnetic, radiometric and DTM (digital terrain model) survey over the Goomadeer project (EL 2858 and EL 5892) totalling 5563 line kilometres. The survey was conducted at a flying height of 60m and at 200m spaced east-west flight lines. The primary aim of the survey was to locate any surface uranium enrichment worthy of ground truthing and to acquire data useful for future geological mapping.

Airborne Geophysics Logistics Report by UTS

Airborne Radiometrics – Total Counts
Airborne Radiometrics – Potassium (K)
Airborne Radiometrics – Uranium (U)
Airborne Radiometrics – Thorium (TH)
Airborne Radiometrics – RGB = U,TH,K
Airborne Magnetics – Reduced to Pole with 1st Vertical Derivative
Airborne Digital Terrain Model - DTM

Outcrop Sample Data Tables

Locations of the samples are shown in the Geology Map.

All samples were sent to NTEL in Darwin and Pine Creek, Northern Territory, for multi-element analysis. Reflectance spectroscopy (PIMA) analysis was completed using the PIMA II short-wave infrared spectrometer on all samples collected. The spectra are processed using "The Spectral Geologist" (TSG) developed by AusSpec International, and a Cameco in-house developed software program called Minspec.

EL2585 Work Completed Geology Map

Station Locations
Sample Physical Properties
Sample PIMA – Minspec Clays
Sample PIMA – TSA Clays
Sample Chemistry – NTEL Laboratory

NTEL Chemical Analysis and Methods
Competency, Grain Size, Friability and Munsell Colour Codes

CONCLUSIONS AND RECOMMENDATIONS

The lack of outcrop within the relinquished portions of EL 2585, and the interpreted unfavourable Nimbuwah Complex granitoid basement rocks in the area do not encourage further exploration efforts. The uranium prospectivity within the relinquished portion of the tenement is considered to be low. Any further exploration would require regional RAB drilling, or the like, in order to test the lithologies lying beneath sand and Cretaceous cover.

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