



ALLIGATOR ENERGY LTD

ACN 140 575 604

SELS 24921 & 24922

TIN CAMP CREEK PROJECT

COMBINED ANNUAL

REPORT

CONFIDENTIAL

Project Operator:	Alligator Energy Ltd
Tenement Holder:	TCC Project Pty Ltd
Date:	July 2011
Period:	1 June 2010 to 31 May 2011
Report No.:	AGE_TCC -1
Target commodity:	Uranium
Authors:	Robert Sowerby & Greg Duncan
Contact Details:	PO Box 338 Spring Hill, QLD 4004 Ph. 07 3852 4712
Email for further technical details:	gnd@alligatorenergy.com.au
Email for expenditure:	gnd@alligatorenergy.com.au
Datum/Zone:	GDA94 (Zone 53)
Map Sheets:	1: 250,000: Alligator River (SD-5301) 1:100,000: Howship (SD-5572) & 1:100,000 Oenpelli (SD-5573)
Tenement manager:	AMETS
Copies:	DoR (1) Northern Land Council (1) Alligator Energy Ltd (1)

SUMMARY

The Tin Camp Creek project comprises two Substitution Exploration Licences (SEL), SEL 24921 and SEL 24922 and one Exploration Licence (EL) 25002. These tenements were purchased by Alligator Energy's wholly owned subsidiary TCC Project Pty Ltd in November 2010.

This Annual Report is in respect of the two SELs. The SELs were granted on 1 June 2007 for a period of four years with renewal applications lodged on 2 February 2011 for an additional 2 year period. The tenements are located in western Arnhem Land approximately 250 km east of Darwin and 50 km northeast of Jabiru. The tenements are considered prospective for unconformity-style uranium deposits similar to Ranger, Jabiluka, Koongarra and Nabarlek.

Geology within the tenements is equivalent to that at the known deposits in the Alligator Rivers Uranium Field and consists in part of equivalents of Lower Cahill Formation of the Pine Creek Orogen (PCO) overlain in places by the lower Kombolgie Sub-group sandstone. The Tin Camp Creek Project area has been explored intermittently since 1970 resulting in the discovery of the Caramal deposit, South Horn prospect and the Two Rocks prospect, which have been the focus of considerable drilling and exploration.

Exploration during the 2011 tenure year was influenced by the sale of the tenements to Alligator Energy Ltd. The sale process and subsequent transfer of title and environmental licence occupied a significant part of the 2010 field season. Nevertheless, exploration work was undertaken by Alligator Energy towards the end of the 2010 season and for the early part of 2011, which has led into a significant diamond drilling program which commenced in mid-June 2011. Work undertaken during the 2010/2011 tenure year included a re-assessment of past exploration, commissioning an Independent Geologists Report, ground radiometric surveys, re-sampling of historic drill core and the commencement of a detailed airborne magnetics and radiometric survey in the eastern part of the project area. In addition to this field work there has also been substantial work in re-establishing the Myra Camp, preparation of various compliance documents, conducting safety and environmental audits and assisting regional stakeholders with introduced weed management programs.

The above work was undertaken as preparatory work leading to a 5,000 metre diamond drilling program which commenced in Mid-June 2010. This drilling will target extensions to known mineralisation at the Caramal and South Horn prospects and EM/Radiometric anomalies at the Two Rocks Prospect.

Contents

1. INTRODUCTION	4
1.1 Location and Access.....	4
1.2 Tenure.....	5
2. REGIONAL and PROJECT GEOLOGY	6
2.1 Regional Geology.....	6
2.2 Project Geology	8
3. PREVIOUS WORK	9
3.1 Overview.....	9
3.2 1970s	10
3.3 1980s	10
3.4 1990s	10
3.5 Post 2000.....	12
4. EXPLORATION WORK 2010-2011 TENURE YEAR.....	14
4.1 Overview.....	14
4.2 Project Review and Independent Geologists Report	14
5. EXPENDITURE	19
6. CONCLUSIONS	19
7. WORK PROGRAMME AND PROPOSED BUDGET.....	19
8. REFERENCES.....	20

FIGURES

Figure 1: Location Map for SELs 24921 and 24922

Figure 2: Location of Ground Radiometric Surveys

Digital Files

SEL24921_201105_01_Annual Report
SEL24921_201105_02_IGR.pdf
SEL24921_201105_03_CoreAssayData.xls
SEL24921_201105_04_TwoRocksSpecData.xls
SEL24921_201105_05_CaramalSpecData.xls
SEL24921_201105_06_ExpenditureReport .pdf
SEL24922_201105_07_ExpenditureReport.pdf

1. INTRODUCTION

The Tin Camp Creek Project is a uranium project that comprises Substitution Exploration Licences (SELS) 24921 and 24922 and Exploration Licence (EL) 25002. This Annual Report is in respect of the two SELs. The Annual Report for EL 25002 will be compiled and submitted separately.

SELS 24921 and 24922 are located within the Arnhem Land Aboriginal Reserve and are subject to a Consent Deed with the Northern Land Council (NLC) and the Traditional Owners. Clearance for work was given by the NLC, on behalf of the Traditional Owners, following the Exploration and Liaison Committee Meeting held in May 2010 at Gunbalanya.

This report details exploration activities as conducted during 2010 - 2011 on the Tin Camp Creek project which comprised of the following:

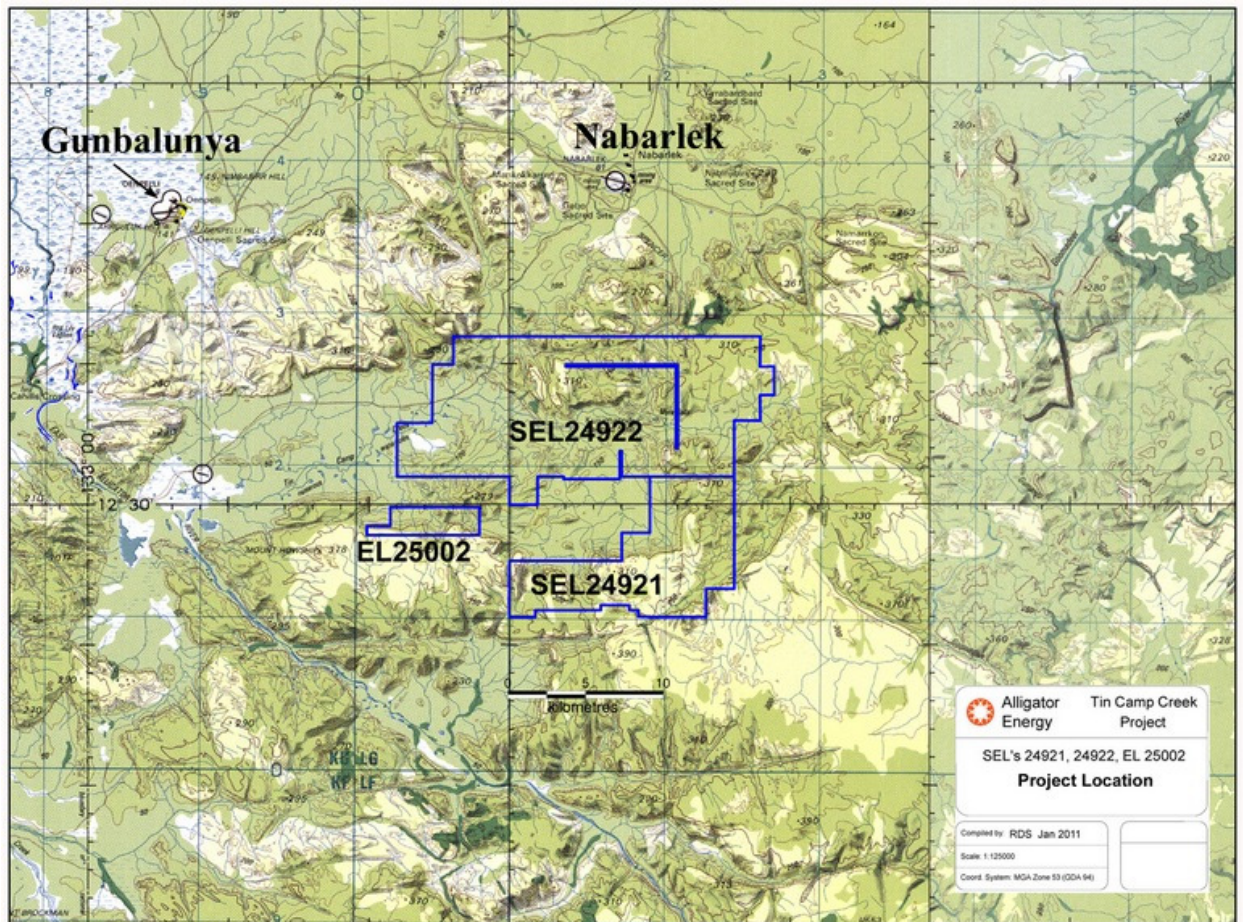
- re-assessment of past exploration data,
- commissioning an Independent Geologists Report
- validation of the historic drill database,
- ground radiometric surveys,
- re-sampling of historic drill core and
- commencement of a detailed airborne magnetics and radiometric survey in the eastern part of the project area.

In addition to this field work there has also been substantial work in re-establishing the Myra Camp, preparing various compliance documentation, conducting safety and environmental audits and assisting regional stakeholders with introduced weed management programs.

1.1 Location and Access

SELS 24921 and 24922 are located in western Arnhem Land approximately 250 km east of Darwin in the Northern Territory, Australia (refer **Figure 1- Location Map for SELs 24921 and 24922**).

Access is by road via the Arnhem Highway to Jabiru and then via Cahill's Crossing and unsealed roads to the Myra Base Camp located on Tin Camp Creek. The rugged terrain of the Myra Falls Inlier and flanking sandstone escarpment country is only accessible by helicopter or by foot. There are some disused tracks in the eastern parts of the tenements, which have not been upgraded since the withdrawal of AFMEX in 2002. Portions of tracks in the northeast have provided access to the NE Myra area since 2005.



1.2 Tenure

The Tin Camp Creek project comprises Substitution Exploration Licenses (SELs) 24921 and 24922, originally a group of exploration licenses (ELs 2505, 2506, 2516, 2517, 7029, and 9354) that were part of a Joint Venture between Afmeco Mining and Exploration Pty Ltd (AFMEX, the operator), Cameco Australia Pty Ltd (Cameco) and SAE Australia Pty Ltd (SAE) up to 2002, and EL23461 (Myra project) which was operated by Cameco. The joint venture with AFMEX was dissolved in March 2003 and Cameco Australia assumed control and operator of the project until the expiry of the licences in 2005.

Applications were lodged on 8 September 2005 for Substitution Exploration Licenses (SEL) 24920, 24921 and 24922 to cover the same areas as former ELs 2505, 2506, 2516, 2517, 7029, 9354 and 23461. SELs 24921 and 24922 were granted to Cameco Australia Pty Ltd on 1 June 2007 for a period of four years

SELs 24921 and 24922 and EL 25002 were purchased from Cameco by TCC Project Pty Ltd (wholly owned subsidiary of Alligator Energy Ltd) in November 2010. An application for renewal of SELs 24921 and 24922 for an additional 2 years was lodged with DoR on 2 February 2011. SELs 24921 and 276.8 comprise approximately 84 and 195 km² respectively.

2. REGIONAL and PROJECT GEOLOGY

2.1 Regional Geology

The Tin Camp Creek project area is located within the eastern margin of the Pine Creek Orogen (PCO) and lies on the eastern boundary of the Nimbuwah structural domain (Needham 1988)).

This following description of the regional geology is largely based on the work by (Needham, Crick et al. 1980; Needham, Smart et al. 1983 and Needham and De Ross 1990). Information that is not based on these references is indicated below.

The Bureau of Mineral Resources (now Geoscience Australia) completed 1:250 000-scale geological maps of the Pine Creek Orogen between the 1940s and 1960s following the discovery of uranium at Rum Jungle. The Alligator Rivers region was systematically mapped by the Bureau of Mineral Resources and the Northern Territory Geological Survey between 1972 and 1983. This later work produced 1:100 000-scale geological maps and reports for the region from Darwin to Katherine to the Alligator Rivers region

The oldest exposed rocks in the Alligator Rivers region are included in the Neoproterozoic (ca. 2500 Ma) Nanambu Complex. The complex consists of paragneiss, orthogneiss, migmatite, and schist forming domical structures that are unconformably overlain by Palaeoproterozoic metasedimentary and metavolcanic rocks which were formerly included in the Pine Creek Geosyncline. Recent collaborative research work by the NTGS and Geoscience Australia indicates that SHRIMP U-Pb age dating of an area of previously mapped Myra Falls Metamorphics outcropping within the Myra Inlier is Neoproterozoic in age (Hollis, Carson et al. 2009a) and these quartzofeldspathic gneisses are named the 'Kukalak Gneiss' (Hollis, Carson et al. 2009b). Palaeoproterozoic rocks in the Alligator Rivers region are amphibolite-facies psammites assigned in the Mount Howship Gneiss and the Kudjumarndi Quartzite. These formations are included in the Kakadu Group and are probably correlatives of the Mount Basedow Gneiss and Munmarlary Quartzite, respectively (Ferenczi, Sweet et al. 2005). The group appears to on-lap Neoproterozoic basement highs, but gneissic variants are also thought pass transitional into paragneiss of the Nanambu Complex.

The Cahill Formation of the Namoon Group conformably overlies the Kudjumarndi Quartzite. The lower part of the Cahill Formation (informally referred to as the Lower Cahill Formation) hosts the Nabarlek, Ranger and Jabiluka uranium deposits. The Lower Cahill Formation consists of a structurally lower calcareous marble and calc-silicate gneiss, which is overlain by pyritic, garnetiferous and carbonaceous schist, quartz-feldspar-mica gneiss, and minor proportions of amphibolite.

The informally named Upper Cahill Formation is psammitic and consists of feldspar-quartz schist, quartzite, lesser proportions of mica-feldspar-quartz-magnetite schist, and minor proportions of metaconglomerate and amphibolite. The Upper Cahill Formation is magnetic and significantly so at the base of psammitic unit in what is informally known as 'hanging wall sequence'. The magnetic characteristic of this unit is due to the presence of mafic sills or magnetite and it is a useful characteristic used for distinguishing the Cahill Formation from surrounding less magnetic rocks (Kendall 1990). Mafic sills and dykes assigned to the Goodparla and Zamu Dolerites intruded the Cahill Formation prior to metamorphism.

The Nourlangie Schist overlies the Cahill Formation and consists of argillaceous to quartzose phyllite and quartz-mica schist that locally contain garnet and staurolite.

The supercrustal rocks of the region are structurally complex, having been affected by at least three deformation event before deposition of the late Palaeo- to Mesoproterozoic Kombolgie Subgroup (Thomas 2002). The rocks have also been locally migmatized during the ca.1847-30 Ma Nimbuwah Event. In addition, there is a broad trend of increasing grade from southwest to northeast in the Nimbuwah Domain. This gradient is thought to reflect the synchronous emplacement of ca. 1865 Ma granites in the Nimbuwah Complex.

The Kombolgie Subgroup is the basal unit of the late Palaeo- to Mesoproterozoic Katherine River Group of the McArthur Basin (Sweet, Brakel et al. 1999; Sweet, Brakel et al. 1999). The subgroup consists of sandstone units called the Mamadawerre Sandstone, Gumarrirbang Sandstone, and Marlgowa Sandstone, which are divided by thin basaltic units called the Nungbalgarri Volcanics, and Gilruth Volcanics. The Mamadawerre Sandstone has a minimum age of ca. 1700 Ma, which is the minimum age of the intrusive Oenpelli Dolerite. Detrital zircon SHRIMP data from the GA OZCRON database constrain the maximum age of the sandstone at ca. 1810 Ma.

The Oenpelli Dolerite is the most pervasive mafic intrusive suite to affect the Alligator Rivers region and is the youngest Proterozoic rock unit exposed. It intrudes various Neoproterozoic and Palaeoproterozoic units, and the Kombolgie Subgroup, forming magnetic sills, dykes, lopoliths, and laccoliths. The Oenpelli Dolerite has a SHRIMP U-Pb baddeleyite date of 1723 ± 6 Ma (Ferenczi, Sweet et al. 2005), however, geochemical and geophysical data suggest several phases of intrusion throughout the region. These intrusive events had a pronounced thermal effect within the Kombolgie Subgroup, with the promotion of fluid flow and aquifer or aquitard modification. Localised effects in the sandstone include silicification, desilicification, chloritisation, sericitisation, and pyrophyllite alteration. A characteristic mineral assemblage of prehnite-pumpellyite-epidote has formed in the quartzofeldspathic basement rocks adjacent to the intrusions.

Deformation since deposition of the Katherine River Group includes transpressional movement along steep regional-scale strike-slip faults and possibly some shallow thrusting. These regional faults follow a pattern of predominantly north, northwest, north – northwest and northeast strikes, giving rise to the characteristic linearly dissected landform pattern of the Kombolgie Plateau. Another significant set trends east – west and includes both the Ranger and Beatrice Faults. The Bulman Fault Zone is a principal regional feature and is considered to represent a long-lived deep crustal structure, with a large lateral component in rocks of the PCS. However, it appears that post-Kombolgie displacements along this and other faults have not been great because the Arnhem Land Plateau is essentially coherent and offsets along lineaments are generally minor. Field investigations of many interpreted ‘faults’, including those with a marked geomorphic expression, show no displacement, and are best described as joints or lineaments (Thomas 2002).

Erosional remnants of flat-lying Palaeozoic Arafura Basin and Cretaceous Carpentaria Basin are present as a veneer throughout the coastal zone of the Top End. Various regolith components are ubiquitous as cover throughout much of the region.

2.2 Project Geology

The tenements are centrally located over the Myra Falls Inlier and cover the Early Proterozoic metasediments of the Cahill Formation. Ridges of Kudjumarndi Quartzite occur extensively in SEL 24922. Metamorphic grade increases to the east and southeast while lithologies in the west and north are predominantly amphibolitic. Carbonaceous and psammitic schists of the Lower Cahill Formation underlie some of the prospects in the north and west of SEL 24922 (i.e. Mordijimuk, Gorrunghar and Gurrigarri), and also in the northeastern part of the tenement where they are characterised by approximately 5% sulphides in calc-silicate gneisses and carbonaceous schists.

Drilling at South Horn (SEL 24921), approximately 8 km south of Caramal, confirmed the presence of Nimbuwah Complex rocks as shown in mapping data but has also indicated that probable Cahill Formation equivalents occur below the Kombolgie sandstones to the west of the Beatrice Fault. There is minor graphite locally in these dominantly quartz-biotite-garnet schists and gneisses. The contact between the Nimbuwah Complex and interpreted Cahill Formation is marked by a complex migmatite zone.

In the North East Myra area, such correlations are more problematic. There is a prominent ridge of interpreted Kudjumarndi Quartzite to the immediate south of the faulted contact zone between the Cahill Formation and the Kombolgie, indicating that the overlying rocks are basal (PC₁) Lower Cahill Formation. However, calc-silicate rocks and carbonaceous lithologies which characterize PC₁ Lower Cahill Formation, and which are well-represented just 6 km to the southwest, are rare in the NE Myra area. The psammopelitic gneisses and amphibolites that characterize the NE Myra stratigraphy are better correlated with the Lower Arkosic (PC₂) and or Amphibolitic Unit (PC₃) of the Lower Cahill Formation. Previous RAB drilling has determined that metasediments and amphibolites dominate lithologies south of the quartzite ridge. Neoproterozoic (ca. 2500 Ma) Nanambu Complex gneiss is observed 1.6 km south of the ridge (Hollis, Carson et al. 2009b).

Faulting and folding may explain the absence of the Nanambu immediately below the Kudjumarndi Quartzite to the south and apparent absence of PC₁ in the Lower Cahill Formation to the north.

The Kudjumarndi Quartzite is not as extensive to the south of the western part of SEL 24922 as indicated by Government mapping. Quartzite in this area is mostly exposed as a gentle south dipping dip-slope, which explains the extensive exposures. However, the quartzite does not immediately underlie the unconformity in the east. The quartz-biotite schists and minor amphibolites in this area are better assigned to the Upper Cahill Formation. There is extensive but mostly thin Cainozoic cover in this area that obscures lithological contacts.

In the north of SEL 24922 in an area covered by sandstone, historic drilling has intersected para-amphibolitic rocks. Two main stratigraphic units were intersected comprising finely laminated pelitic to psammopelitic schist and a finely laminated para-amphibolite sequence containing pyrrhotite. Graphite is associated with this sequence. This stratigraphy appears comparable to the 'banded amphibolite' with associated graphite described by QML from several prospects in the Nabarlek tenement to the north. The para-amphibolite is typically about 60-70 m thick.

The distribution of Tin Camp Granite as shown by industrial work is suspected to differ slightly to that indicated by government mapping. In particular, the Caramal area and to the north (along the east-west trending structure approximately 2 km north of Caramal) comprises less extensive outcrop than that shown on government geology maps. Field mapping by S Dorling in 2009 revealed outcropping boulders of Tin Camp Granite approximately 1 km northwest of the Caramal prospect, which is in turn approximately 1.2 km south of the location indicated by the government geology map. The granite observed at Caramal was pink-coloured, biotite-rich granite containing minor quartz shears. More extensive outcrops of Tin Camp Granite have been mapped near the northeastern boundary of SEL 24922. An excellent exposure of sandstone in this locality unconformably overlies the granite and xenoliths of Kudjumarndi Quartzite are observed in the granite nearby. There are also quartz-feldspar porphyries in this area which spatially appear to be part of the Tin Camp Granite.

In the Caramal to Two Rocks area, mapping and drilling shows the rocks to be quartz-mica schists of the Cahill Formation, quartzite, interpreted as the Kudjumarndi Quartzite, and quartz-feldspar (biotite) gneiss previously interpreted as Mt Howship Gneiss. Recent work by the NTGS has re-evaluated the age of the outcropping gneiss in this area, with SHRIMP age dating demonstrating that the rocks are Archaean, ca2500 Ma (Hollis, Carson et al. 2009a). These Archaean gneisses in the Myra and Caramal Inliers have been named the Kukalak Gneiss, and this unit is interpreted to form part of a continuous regional felsic magmatic event with the Nanambu Complex basement throughout the region (Hollis, Carson et al. 2009b).

Field mapping conducted in 2009 by Cameco identified an outcropping ridge of dacite or rhyolite immediately adjacent to a thrust fault in the valley approximately 1 km to the west of the Caramal prospect. The dacite appears to be compositionally similar to dacite that was intersected by drilling at NE Myra in 2005 (drill hole TCD3007, 97.2 – 175.5 m). Quartz-hematite breccias are present and exhibit various north-northeast, north- northwest and east-west trending orientations.

3. PREVIOUS WORK

3.1 Overview

Modern exploration for uranium commenced in the region following regional airborne radiometric surveys over the Alligator Rivers Province by the BMR in 1969. The Nabarlek deposit, 20km north of the Tin Camp Creek Project, was subsequently discovered by QML following a regional fixed wing airborne radiometric survey which identified 135 radiometric anomalies, 95 of which occurred within the Tin Camp Creek region. QML undertook follow up work consisting of radiometric surveys, regional stream sediments surveys, ground follow up and geological mapping. As a result of this work, the Caramal, Mordijimuk, Gorrungar and Gurri Garri prospects were identified. Drilling was subsequently undertaken on all of these prospects, however the main focus of work was on the Caramal deposit. Esso Minerals, QML and Uranerz Australia Pty Ltd ("UAL") conducted exploration in the area during the early 1970s, which resulted in the discovery of the NE Myra prospect.

Exploration ceased in 1973 following the Federal Government decision to inhibit uranium mining in the Alligator Rivers region. No work was undertaken in the area between 1973 and 1987 due to an embargo on the grant of exploration licences in

The former Tin Camp Creek exploration licences (ELs 2505, 2506, 2507, 2516, 2517, 7029 and 9534) were granted in 1995 to QML who subsequently divested the ground to Afmeco in joint venture with Cameco (49%), SAE Australia ("SAE" - 24.5%) and West Arnhem Land Corporation Pty Ltd (2%). The Razorback gold prospect and the South Horn uranium prospect were discovered in this time. In 2003 Cameco acquired the AFMEX and SAE interests and continued exploration until 2005, when the licences were relinquished and exchanged for SELs, which were granted in 2007. Alligator acquired SELs 24921 and 24922 and EL 25002 from Cameco in 2010.

3.2 1970s

Initially, QML completed a total of 27 diamond drill holes at the *Caramal* deposit. Drilling intersected uranium mineralisation associated with chloritised schists of the Cahill Formation adjacent to an intrusive sill of Oenpelli Dolerite.

Gorrunghar was costeamed and percussion drilled in the early 1970s by Queensland Mines. A total of 12 percussion drill holes were completed to a maximum depth of 67m. Uranium mineralisation was identified in three of these holes including a maximum of 8.6m @ 0.33% U₃O₈ from 1.3m in TCGOR-006.

Costeaming and percussion drilling was undertaken at the *Mordijimuk* prospect in 1972. Two percussion drill holes were completed to test surface radiometric anomalies. Both holes were drilled to a depth of 51m. Anomalous uranium was intersected in weathered and chloritised amphibolite.

GurriGarri is a radiometric anomaly associated with a prominent quartz-breccia ridge. Soil geochemistry and radiometric surveys were carried out over a gridded area. Costeaming was undertaken to follow up soil geochemical and radiometric anomalies. Results of these surveys are not available.

Following the election of the Whitlam Labour Government in 1973, the Federal Government placed a moratorium on exploration in the Alligator Rivers region and Arnhem Land.

3.3 1980s

The moratorium on exploration was lifted in 1987. The Alligator Rivers Joint Venture ("ARJV"), comprising Uranerz Australia Limited ("UAL") as operator with Kumagai Gumi (50%), completed 4,000m of diamond core drilling between 1987-1989 at the *Two Rocks* prospect, and the *Kudjumarndi/Khyber Pass* area. Two small pods of uranium mineralisation were located at Two Rocks, while a broad zone of hydrothermal alteration and minor uranium enrichment was outlined in the Kudjumarndi/Khyber Pass area.

EL 3418 in the Myra area was issued to Afmeco Pty Ltd ("Afmeco").

3.4 1990s

UAL ceased active operations in Australia in 1991. Afmeco subsequently became operator of a restructured ARJV (Afmeco 50%, Uranerz 25%, Kumagai Gumi 25%). Work focussed on drilling at the **Two Rocks** and **Kudjumarndi** Prospects. No drilling was undertaken in the Khyber Pass area. Diamond drilling totalled 2,323 m.

A best result of 7m at 155ppm U, including 6 m at 1600ppm Cu, was obtained in drill core in MRD061 at **Two Rocks**. In March 1994 UAL discontinued their involvement in the ARJV

Exploration Licences 2505, 2506, 2516, 2517, 7209 and 9534 were granted to QML in September 1995, and subsequently acquired by the ARJV. The combined areas became known as the Tin Camp Creel Project (“TCCP”). An airborne geophysical survey was flown over the tenements in 1996. Dighem, radiometric and magnetic data were acquired. A series of radiometric anomalies were delineated in the South Horn area and some shallow conductors were outlined elsewhere in the tenements.

Stream sediment surveys were conducted through much of the tenements in 1996, 1997 and 1998 excluding the sandstone plateau country. Prospect areas within the TCCP tenements identified and assessed as part of this work included:

- **Robbie’s**: Up to 110 ppm U and 240 ppm Cu in rock chips from hematitic quartzite, located near the eastern edge of the EL2505 sub-blocks outlier .
- **GurriGarri**: Up to 680 ppm U, 170 ppb Au, 2000 ppm P and 550 ppm Cu in reconnaissance rock chips associated with chlorite-white mica altered amphibolite marginal to a quartz-breccia ridge.
- **Gorrunghar and Mordijimuk**: The only work conducted was minor reconnaissance as they were within a restricted area until 1998 as there was a proposal to build an outstation in the area. The restriction on the area was removed in 1998.
- EM anomaly 11/12 and Anomaly 6 in EL2516: Ground EM was conducted at EM anomalies identified in DIGHEM data. Soil surveys designed to test EM anomaly 11/12 and to follow-up stream sediment anomalies were conducted in 1999. Minor base-metal anomalies were detected at Anomaly 11/12.
- **Razorback**: This gold prospect was identified from follow-up of gold in stream anomalies. Up to 546 ppb Au was outlined in soils and up to 1.4 g/t Au (plus anomalous copper) was obtained from rock-chips of malachite stained quartz-muscovite-biotite schist.
- **South Horn**: This prospect was identified from airborne radiometric data. Outcrop sampling and mapping and RAB drilling was conducted initially with follow-up RC/core drilling.
- RAB drilling was also conducted along the Tin Camp Creek to the south of **Gorrunghar** and **GurriGarri**. The drilling was conducted mainly to map the extent of prospective Lower Cahill Formation lithologies in this area with extensive Quaternary cover. The drilling shows that quartz-muscovite schists and amphibolitic units of interpreted Lower Cahill Formation plus Oenpelli Dolerite dominate in this area.

Conventional RC/core drilling and helicopter supported core drilling mainly focused on the South Horn and Caramal prospects with little work elsewhere.

- **Caramal** (27 holes). Wide spaced diamond drilling was undertaken to the northeast of the Caramal mineralisation defined by QML in the 1970’s. Drilling intersected chlorite altered meta-sediments of the Cahill Formation as well as anomalous thorium and rare earth geochemistry associated with altered meta-arkoses and patch uranium anomalism.
- **South Horn** (32 holes). Drilling intersected uranium mineralised intervals of up to 1% uranium over 6m in SHD-04 and narrower intervals of up to 1.4 g/t Au. The mineralisation is hosted within altered dolerite in quartz

veins with accessory sulphides (dominantly chalcopyrite and molybdenite). There is a selvage of uranium minerals on the edge of the quartz with hematite-sericite alteration extending up to 3 cm from the vein. Chlorite alteration and alteration of titaniferous magnetite to leucoxene extends several metres from the veins.

- There is also minor anomalous uranium in garnet and graphite bearing schist in the south of the prospect area. Four heli-supported core holes were also drilled to test geophysical and structural targets to the west of South Horn with negative results.
- **GurriGarri.** A single hole was drilled near the old trenches. Due to rugged terrain the hole was not sited in the optimum position to test the target.
- **NE Myra.** A single hole was drilled to test a subtle radiometric anomaly near the east- northeast trending NE Myra Fault. The hole was collared on sandstone 100m to the north of the fault and drilled at 340° away from the fault. The hole intersected extensive silicification-desilicification and chlorite alteration in the sandstone and moderated to strong hematite-chlorite alteration in mostly psammitic rocks below the unconformity, which is at 264m. There is +200m vertical displacement, (north side down) on the east-northeast structure. The drill hole did not test the major east-northeast structure.
- A single hole was drilled targeting EM anomaly 11/12 which had been confirmed by a TEMPEST survey conducted in 2001. The drilling intersected sulphidic metasediments, confirmed in petrography to be similar to those at Two Rocks. Analytical results show up to 1330 ppm Zn and 536 ppm Cu, but no anomalous uranium. The sediments locally contain trace graphite, and unaltered staurolite bearing schist was intersected at the end of the hole.

3.5 Post 2000

In 2001, a detailed airborne magnetic and radiometric survey was flown above part of ELs 2505 and 7029. This survey targeted the northwest trending structural corridor which hosts the Nabarlek uranium mine to the northwest of the survey area. TEMPEST surveys were also flown over the South Horn area, EM Anomaly 11/12 and the north-eastern part of EL2505. This survey successfully delineated the EM conductor and the unconformable horizon in the South Horn area, but was unsuccessful in EL2505 in determining the depth to basement due to near surface conductive Nungbalgarri Volcanics.

Several ground-based geophysical surveys were conducted primarily over the Caramal and South Horn Prospect areas. These included Protem, nanoTEM, Max-min, CSAMT and gravity. Other work at South Horn included regional outcrop sandstone sampling and PIMA studies at South Horn, Caramal and NE Myra.

Various airborne and ground based geophysical surveys have been conducted on the TCCP including:

- airborne radiometrics and magnetics over the Gorrunghar, Mordijimuk and GurriGarri prospect areas.
- airborne TEMPEST (Time Domain Electromagnetics) covering the northern part of SEL24922, Two Rocks, Caramal and South Horn.

- airborne gravity at 2km spacing over the entire tenement area as part of a larger regional survey
- ground based SAM (Sub-Audio Magnetics) at NE Myra.
- ground based gravity over Two Rocks.

The ARJV was dissolved on 1 March 2003 and Cameco Australia Pty Ltd ("Cameco") assumed full ownership of the TCCP after Afmeco withdrew from uranium exploration in the NT. Cameco initially undertook a regional characterisation study of the Kombolgie Formation which included rock chip sampling and PIMA analysis. The focus of the study appeared to be exploration for regional alteration halos in the sandstone.

Drilling programs undertaken by Cameco included:

- aircore / rotary air blast (RAB) drilling
 - NE Myra - 144 holes for 3,196 m.
 - Two Rocks - 55 holes for 1,369 m.
- truck mounted diamond drilling
 - Two Rocks - 6 holes for 2,386.6 m.
 - Khyber Pass - 1 hole for 141.7 m.
 - helicopter supported diamond drilling
 - NE Myra – 8 holes for 2,129.5 m.
 - TEMPEST Anomaly – 2 holes for 609.3 m.
 - GurriGarri – one hole 224.6 m.

The drilling at **Two Rocks** intersected patchy uranium mineralisation. The best intersections were in MRD0101 with 0.8m @ 4.16 % U₃O₈ from 71.9m and MRD-0104 with 0.5m at 1.1% U₃O₈ from 36.5m.

Drilling at **NE Myra** identified anomalous uranium with a best result from TCD3007 which returned 2.5m @ 1,002 ppm U₃O₈ as well as 132 ppb Au and anomalous levels of Pt, Pd, Li, Sn and Zn. The anomalous basement-hosted uranium intervals in the eight cored holes (including TCNMD0001 drilled by Afmeco) drilled at NE Myra are all contained within the hanging wall of a major reverse fault with ~250m of vertical displacement. The mineralisation is hosted within intensely chlorite- altered units of the Cahill Formation and is spatially related to extensive hematite breccias in both sandstone and basement.

Drill holes TCTPD001 and TCD3003 indicated that the conductive basement feature identified in TEMPEST data is related to narrow graphitic shear zones within the pelitic Cahill Formation. Weakly elevated uranium was intersected within granitic pegmatoids, but no anomalous uranium was intersected in association with the graphitic shears. This drilling however indicated the presence of extensive prospective Cahill Formation lithologies under the Kombolgie Formation in the northern part of the project area.

In 2005, Cameco applied to consolidate the tenements in the TCCP area into two Substitution Exploration Licences. Exploration on these tenements commenced during 2007. Application for EL 25002, which covers an area of 10.83 km² (4 blocks) and

19 April 2006. EL 25002 was granted to Cameco on 2 September 2008 for an initial period of six years. No ground-based exploration has been conducted over EL 25002 since the tenement was granted.

In the period to from 2007 to 2009 Cameco conducted exploration over the TCCP area which comprised RAB/aircore drilling, reverse circulation drilling, various airborne geophysical surveys (TEMPEST and Sub-Audio Magnetics), and diamond drilling. The focus of work during this period was the NE Myra project area.

The best uranium assay returned from the various RAB/aircore drill programs was 156 ppm U_3O_8 from drill hole TCB3142 which was drilled in 2005. Regionally, the project area was found to contain anomalous concentrations of Ni, Au, Co, V, Cu, Zn, Ag, Pb, As, Li Sn, W, TiO_2 and Cr. Best uranium assay results from the various reverse circulation drilling programs included 6.6 m @ 1600 ppm U_3O_8 in drill hole TCR3243 within chloritised amphibolite from the North East Myra Fault zone.

Exploration in 2009 consisted of one helicopter-supported diamond drill hole (TCD3245) for 242.70m on SEL24922, an aircore drilling program of 96 holes for a total of 1,097m to the west of Caramal on SEL24291, reconnaissance and outcrop sampling, and a geological evaluation of NE Myra, Caramal and South Horn by CSA Global.

4. EXPLORATION WORK 2010-2011 TENURE YEAR

4.1 Overview

Exploration during the 2011 tenure year was influenced by the sale of the tenements to Alligator Energy Ltd. The sale process and subsequent transfer of title and environmental licence occupied a significant part of the 2010 field season. Nevertheless, exploration work was undertaken by Alligator Energy towards the end of the 2010 season and for the early part of 2011, which has led into a significant diamond drilling program which commenced in mid June 2011. Work undertaken during the 2010/2011 tenure year included a re-assessment of past exploration, commissioning an Independent Geologists Report, ground radiometric surveys, re-sampling of historic drill core and the commencement of a detailed airborne magnetics and radiometric survey in the eastern part of the project area.

4.2 Project Review and Independent Geologists Report

Alligator Energy has undertaken a detailed project review as a preliminary step to re-focusing exploration on The Tin Camp Creek Project. This has included the commissioning of an Independent Geologist Report undertaken by Mr David Jones of Vidoro Pty Ltd. The report is included as file **SEL24921_201105_02_IGR.pdf**

. The focus of Alligator Energy's review has been the Caramal and South Horn prospects and surrounding areas which have received little exploration attention in the past 10 years. The review has included sourcing of historic documents, helicopter supported site visits and reconnaissance and re-interpretation of historic datasets. Much of the results of this work were incorporated into the Independent Geologist's report. On the basis of this work, Alligator has planned and commenced a 5,000 metre diamond drilling program targeting extensions to known mineralisation at South Horn and Caramal as well as drill testing of untested

radiometric anomalies at Two Rocks and South Horn.

Geochemical Sampling – Historic Core

Work undertaken to date has included evaluation of historic drill core of the Caramal and South Horn Prospects including logging of selected intervals, structural interpretation and geochemical assay of key drill holes. Multi element ICP and FA assays have tested for a suite of elements including gold, PGEs and REE in order to characterize the signatures associated with high grade uranium.

Assay data is included as **SEL24921_201105_03_CoreAssayData.xls**

Caramal Prospect

At Caramal, representative intervals from three drill holes have been sampled to characterize the geochemical and alteration signatures. Caramal mineralization was sampled from drill hole CAD-07 and the broader alteration halo to Caramal was sampled in drill holes CAD-053 and CAD-054. Review and spot sampling of historic core has also been undertaken to assist in targeting the drilling planned for 2011 at Caramal which was originally drilled in 1971.

Remaining drill core from the high grade uranium zones is incomplete. Drill hole CAD-07 was selected for detailed examination as it contained an intact profile through mineralization. Within the mineralized zone a 10m interval was selected where there was a high level of confidence that the remaining core was representative. Analysis of this interval returned the following results

Drill Hole	From	To	Interval	U3O8(ppm)	Au(g/t)
CAD-07	27m	37m	10m	8699	0.52

Assays from 1971 for the equivalent interval were as follows:

Drill Hole	From	To	Interval	U3O8(ppm)	Au(g/t)
CAD-07	27.13m	37.19	10.06m	8572	Not Assayed

These and spot assays confirmed the tenor of uranium mineralization reported in historic assay results and the presence of anomalous gold.

Analysis of selected intervals within the broader Caramal alteration halo was undertaken to characterize geochemical trends in this system. Moderately anomalous REE intervals assays have been returned from these holes including:

Anomalous results from these holes are as follows:

Drill Hole	From	To	Interval	Total REE(ppm)
------------	------	----	----------	----------------

CAD-53	284m	289m	5m	7351
including	286m	288m	2m	11640 (1.16%)
CAD-54	196m	200m	4m	5094

REE mineralization consists dominantly of the LREE elements La, Ce and Nd.

These drill holes are located 600 metres to the northeast of high grade uranium mineralization at Caramal. These intervals are considered to be noteworthy as there has been no systematic evaluation of REE potential in this area before now.

South Horn Prospect

Selected intervals of two drill holes from the South Horn area were sampled for assay.

An interval of drill hole SHD-2 was assayed to determine if low to moderate grade uranium mineralization occurred adjacent to previously identified higher grade mineralization in drill holes SHD-6 (13m@ 2100ppm U₃O₈) and SHD-4 (15m@4700ppm U₃O₈). Analysis of this interval returned the following assay results:

Drill Hole	From	To	Interval	U ₃ O ₈ (ppm)
SHD-02	54m	64m	10m	263
including	54	57m	3m	607

(Calculated using a 100ppm U₃O₈ cutoff)

The assay results confirm that a broader low-moderate grade uranium envelope is present adjacent to high grade mineralization previously identified by AFMECO in the late 1990's within a dolerite intrusion. AFMECO's historic sampling and analyses were selective and based on gamma log peaks. Low to moderate grade intersections were generally not sampled due to the low uranium price and consequent mining parameters at that time.

An interval of drill hole SHD-32 has been sampled and assayed from within the strongly altered meta-sediments of the Cahill Formation close to the unconformity with overlying Kombolgie Sandstone. These assays tested uranium mineralization indicated by gamma probe by AFMECO in 1998.

SHD-32 is located approximately 1km south west of the main South Horn prospect and is situated to the west of the regional Beatrice Fault. Assay results confirm the presence of uranium mineralization (3m @ 482ppm U₃O₈ from 220m) There has been only limited "wildcat" drilling on the western side of the Beatrice fault in this region. The presence of uranium mineralization in this location is considered by Alligator Energy to be encouraging as it occurs within equivalents to the prospective Cahill Formation (host sequence to the Ranger and Nabarlek deposits) and exhibits similar alteration characteristics to the major uranium deposits of the Alligator Rivers Uranium Province. These characteristics provide encouragement to further explore this area and the extensive and largely untested 7 km structural corridor between Caramal and South Horn.

Review of REE Geochemistry.

Anomalous REE mineralization has been noted in the Caramal core assays. Previous assaying and assessment for REE in the region has been limited. During compilation of historic exploration data a number of strongly anomalous REE results in regional rock chip sampling on the tenement have been identified. Uranerz undertook regional rock geochemistry sampling in 1986 to gain background data for the region. Analysis for REE was undertaken on only 27 of these samples. Notable results from these samples were as follows:

Sample No	Easting (AGD66)	Northing (AGD66)	Company	Total REE (ppm)	Year of Sampling
524	318930	8621660	Uranerz	2.48%	1987
627	318860	8621550	Uranerz	3.27%	1987
695	319350	8621850	Uranerz	2.08%	1987
696	319320	8621900	Uranerz	1.59%	1987

All four samples are located approximately 2km east of the Two Rocks prospect. Mineralisation is dominantly La, Ce, Nd and Pr with lesser but anomalous Y, Gd and Sm. These results were not considered of interest in 1987. While AGE remains focused on uranium exploration, it is considered that further assessment of REE potential is warranted.

Ground Radiometrics Surveys

Ground Radiometric Surveys have been undertaken in the Two Rocks and Caramal areas. Surveys were undertaken on foot on GPS defined grids with station sampling density of 25metresx50 metres. The location of these surveys is shown on Figure 2: Location of Ground Radiometric Surveys. Both surveys were undertaken to better define radiometric anomalies previously defined by airborne radiometric surveys.

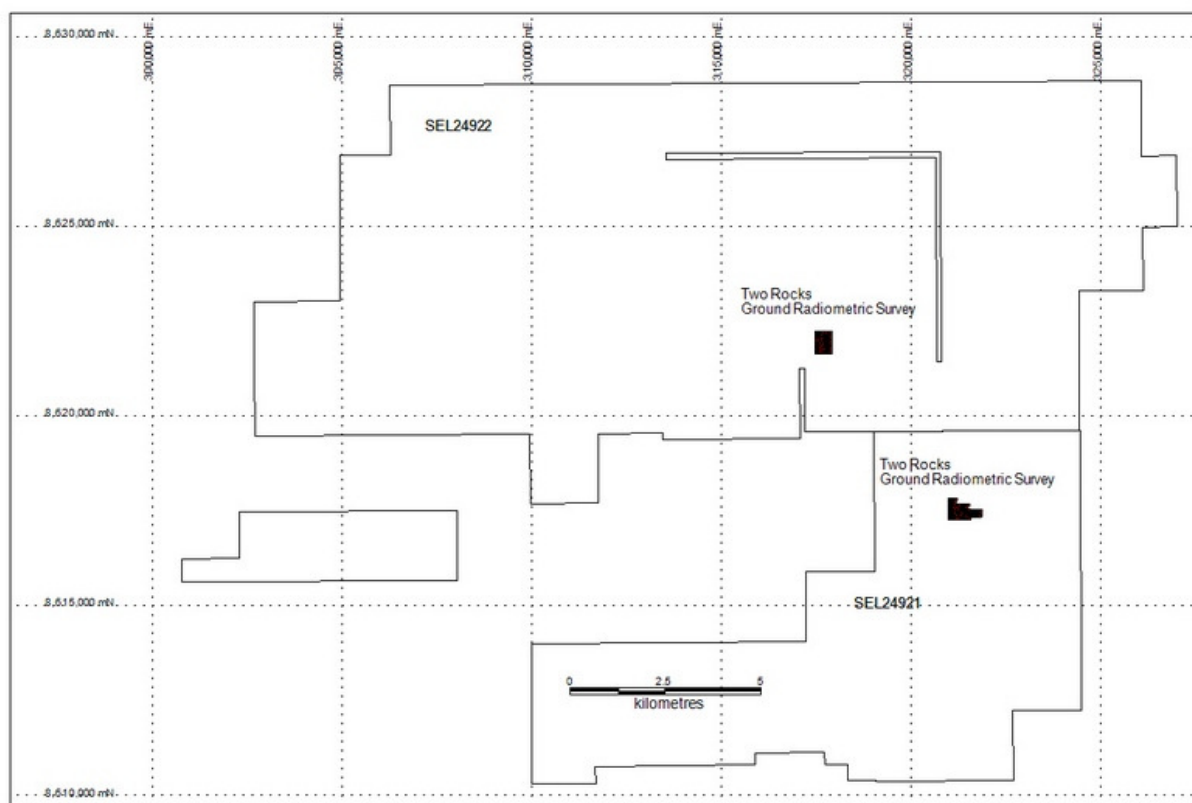


Fig 2. Ground Survey Locations. GDA 94.

Surveys were undertaken using a Total counts readings were undertaken at each grid point. Spectrometer readings of Potassium, Thorium and Uranium were undertaken at each station.

Data is provided in

SEL24921_201105_04_TwoRocksSpecData.xls

SEL24921_201105_05_CaramalSpecData.xls

The Two Rocks survey was successful in defining a relatively discrete north south trending radiometric anomaly. Spectrometer readings indicated the anomaly to be due primarily to uranium.

At Caramal two adjoining surveys were undertaken covering the outcropping exposures of the Caramal deposit and a survey to the immediate west over a separate, prominent anomaly. A discrete, intense anomaly was defined over the outcropping part of the Caramal deposit which was, as expected uranium dominant. Thorium anomalies were identified to the south and west of the uranium anomaly. Further to the west a prominent discrete radiometric anomaly was defined which is thorium dominant. The anomaly is associated with meta-arkose and quartzite of the Kudjmarndi Quartzite and possibly lower Cahill Formation.

Airborne Geophysics Survey

A review of historic geophysical data was undertaken by Geophysical Consultants, Geodiscovery Pty Ltd. The purpose of this review was to determine the quality of previous surveys and whether the existing dataset was adequate to generate targets based on Alligator's exploration philosophy.

Following this review it was decided to undertake a high resolution survey of 3106 line km with 50m line spacing in the eastern part of the project area. It was considered that the resolution and flight line orientation of previous surveys was not optimal for targeting in the Caramal and South Horn prospect areas. The new survey was planned to cover an area incorporating the Caramal, Two Rocks and South Horn Prospect areas.

Planning and mobilisation to the site was undertaken in May 2011. The survey area was flown in the first week of June. Mobilisation and initial survey payment costs were incurred however, during the 2010/2011 tenure year. At the time of compilation of this report, final data from the survey was still being processed.

Data and interpretation will be provided to the department when final processed data is received from Thompson Aviation.

5. EXPENDITURE

Expenditure reports for SEL 24921 and SEL 24922 are included in files

SEL24921_201105_06_ExpenditureReport .pdf
SEL24922_201105_07_ExpenditureReport.pdf

6. CONCLUSIONS

The 2010/2011 tenure year saw the transfer of SELs 24921 and 24922 to Alligator Energy Ltd. A significant amount of preliminary exploration work was undertaken which has resulted in a significant refocus of exploration in the area. As a result, a 5,000 metre drilling program commenced in June 2011 which will target extensions to known mineralisation at the Caramal and South Horn prospects. In addition, previously untested radiometric anomalies at Two Rocks and South Horn will be drill tested during the late 2011.

7. WORK PROGRAMME AND PROPOSED BUDGET

Exploration for the 2011 field season will be focused on drill testing extensions to known mineralisation at the Caramal and South Horn prospects. In addition previously untested radiometric anomalies at Two Rocks and South Horn will be drill tested. A 5,000 metre diamond drilling program is planned. It is also planned to undertake mapping and ground follow up of radiometric targets generated by the recently completed airborne radiometric survey.

Proposed expenditure for the 2010-2011 reporting period exploration program is budgeted to total approximately \$3.5 million.

8. REFERENCES

- Otto, G. (2010). Annual Report, Tin Camp Creek Project, Northern Territory - Cameco Australia Pty Ltd
- Dorling, S. (2009b). Technical Report, Caramal Prospect, CSA Global - Cameco Australia.
- Dorling, S. (2009c). Technical Report, NE Myra Prospect, CSA Global - Cameco Australia.
- Dorling, S. (2009d). Technical Report, South Horn Prospect, CSA Global - Cameco Australia.
- Ferenczi, P. A., I. P. Sweet, et al. (2005). Mount Evelyn, Northern Territory (Second Edition); 1:250 000 Geological Map Series, sheet SD53-5; Explanatory notes, Northern Territory Geological Survey.
- Hollis, J. A., C. J. Carson, et al. (2009a). "SHRIMP U-Pb Zircon Geochronological Evidence for Neoproterozoic Basement in Western Arnhem Land, Northern Australia." (Northern Territory Geological Survey, Geoscience Australia in press.).
- Hollis, J. A., C. J. Carson, et al. (2009b). "Extensive exposed Neoproterozoic crust in Arnhem Land, Pine Creek Orogen: U-Pb zircon SHRIMP geochronology." Annual Geoscience Exploration Seminar (AGES). Record of Abstracts. Northern Territory Geological Survey. Record 2009-002.
- Kendall, C. J. (1990). Ranger uranium deposits. Geology of the mineral deposits of Australia and Papua New Guinea. F. E. Hughes. Melbourne, Australasian Institute of Mining and Metallurgy. **1**: 799-805.
- Needham, R. S. (1988). Geology of the Alligator Rivers uranium field, Northern Territory, Bureau of Mineral Resources, Geology and Geophysics.
- Needham, R. S., I. H. Crick, et al. (1980). Regional geology of the Pine Creek Geosyncline. Uranium in the Pine Creek Geosyncline; proceedings of the International uranium symposium on the Pine Creek Geosyncline. J. Ferguson and A. B. Goleby. Vienna, International Atomic Energy Agency: 1-22.
- Needham, R. S. and G. J. De Ross (1990). Pine Creek Inlier - Regional Geology and Mineralisation. Geology of the mineral deposits of Australia and Papua New Guinea. F. E. Hughes. Melbourne, Australasian Institute of Mining and Metallurgy. **1**: 727-737.
- Needham, R. S., P. G. Smart, et al. (1983). Alligator Rivers, Northern Territory; 1:250 000 Geological Map Series, sheet SD53-3, Bureau of Mineral Resources, Geology and Geophysics.
- Sweet, I. P., A. T. Brakel, et al. (1999). "The Kombolgie Subgroup - a new look at an old 'formation'." AGSO Research Newsletter **30**: 26-28.
- Sweet, I. P., A. T. Brakel, et al. (1999). Mount Marumba, Northern Territory (Second Edition); 1:250 000 Geological Map Series, sheet SD53-6, Australian Geological Survey Organisation-Northern Territory Geological Survey (NGMA).

Thomas, D. (2002). Reconnaissance structural observations: Myra-Kukalak Project, Arnhem Land, Northern Territory, Cameco Australia.

Figures

Figure 1: Location Map for SELs 24921 and 24922
Figure 2: Location of Ground Radiometric Surveys

Appendix 1

Independent Geologists Report