Cameco Australia Pty Ltd

PLATEAU TENEMENTS

Exploration Licences 9928, 9929, 22368, 22369, 22447, 22825, 22827, 23247 and 24780

NORTHERN TERRITORY

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SUMMARY

The Plateau project is located in western Arnhem Land, approximately 250 km east of Darwin, and comprises nine Exploration Licences (ELs 9928, 9929, 22369, 22447, 22825, 22827, 23247 and 24780) for a total land area of 225 km^2. The ELs were granted to Cameco Australia Pty Ltd on July 20 2005 for a period of six years.

The 2005 exploration program included helicopter supported outcrop sampling, geological reconnaissance, radiometric anomaly follow-up. A total of five rock chip samples were collected from ELs 9928 and 9929 for geochemical analysis. Limited compilation of digital data and review of previous work was also conducted.

The highest U value from 2005 sampling was 11.4 ppm U in rock chip sample PL050002, collected from a fracture in Gumarrirnbang Sandstone in EL9929. This sample also returned elevated values for P_2O_5 (14,600 ppm), Sr (6210 ppm), S (2360 ppm) and Y (2820), as well as heavy rare earth elements.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

INTRODUCTION

This report describes exploration activities conducted by Cameco Australia Pty Ltd (Cameco) in the Plateau tenements during the 2005 field season. The tenements (ELs 9928, 9929, 22368, 22369, 22447, 22825, 22827, 23247 and 24780) were granted on 20 July 2005 for a period of six years and cover an area of 225 sq km (70 blocks). The tenements are located on the 1:250 000 Alligator Rivers (SD-5301) and the 1:100 000 Oenpelli (5573) and Howship (5572) map sheets. As the exploration licence is located on Aboriginal land the work 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.

Location and Access

The tenement is located in west Arnhem Land on the Alligator River 1:250,000 Geological Map Series, Sheet SD 53-1, and is wholly within Aboriginal Land, The Ranger uranium mine is situated approximately 50 km to the west and the rehabilitated Nabarlek mine site is 45 km to the northwest. Access to the project area is via the sealed Arnhem Highway from Darwin to Jabiru, and northeast to Cahill's Crossing. From Cahill's Crossing, the Oenpelli-Maningrida road is taken to 'three ways', where the Nabarlek road is followed for approximately 14 km to the Myra Camp turnoff. Myra Camp is approximately 25 km south of the turnoff. The Plateau group of tenements is located to the southeast of the camp. Access within the tenements is by helicopter only. The location of the Plateau project area with respect to major roads, towns and mines is shown in Figure 1.

A vehicular track in the northern part of EL 22825was constructed and maintained by Uranerz between 1987 and 1991 to permit access from Myra Camp to the former EL 3419, located to the east of the Plateau project area. This track is currently in disrepair and is inaccessible to vehicles. At this stage Cameco Australia has no plans to refurbish the track.

Figure 1 Location Map

Tenure

The nine Exploration Licences were granted to Cameco on June 3 2005 for an initial period of six years. The areas now covered by ELs 9928 and 9929 were formerly covered by Els 3597 and 4015 respectively, held by PNC Exploration (Australia) Pty Ltd (PNC). Cameco lodged applications for this ground on 21.07 2007 after these tenements were relinquished by PNC. The areas covered by ELs 22368, 22369, 22447, 23247, 22825, 22827, 24780 were formerly covered by relinquished portions of Els 2506 and 2507 which had been under tenure to AFmeco Mining and EXploration Pty Ltd (AFMEX) as operator in Joint Venture with SAE Australia Pty Ltd and Cameco. EL24780 is additional to the original applications. This modification from the original applications was necessary due to a 'NoGo' zone (i.e. deemed by the Justice Department as non 'consent' land), which divided EL22447 into two separate portions. The northern portion was retained as EL22447 with the southern portion split off into a separate application and issued with a new number EL24780. The area that was refused consent in EL9928 has been issued with a new number ELA24789 and placed in moratorium from 10 November 2004 for five years until 10 November 2009. This application does not form part of the present Plateau project, which is the subject of this report. On grant, the total area under licence is 225 km^2 (70 blocks).

Physiography

Sandstone plateau and escarpments dominate the topography of the Plateau project area. Savannah woodlands predominate in the undulating uplands of the eastern part of the Myra Inlier and the Caramal East Inlier, located in the northern part of the tenements. The uplands of the Myra Inlier are sufficiently flat to permit vehicular access, though pre-existing tracks have washed out over the previous wet seasons.

Gorges and valleys within the plateau contain alluvium with some soil development, and denser vegetation. Transported materials and soil cover the lowland areas of the tenements.

GEOLOGIC SETTING

The Plateau project area lies on the eastern margin of the Pine Creek Inlier (PCI), roughly on the boundary of the so-called East Alligator and Nimbuwah structural domains (Needham, 1988; Needham and Stuart-Smith, 1980). Reconnaissance mapping of the PCI has been carried out by the Bureau of Mineral Resources (BMR) personnel since 1946, with more detailed work in the 1950's and 60's following the discovery of uranium at Rum Jungle. The Alligator Rivers region was systematically mapped by the BMR during the period 1972 to 1983, resulting principally in the publication of two 1:250 000 scale geological and metallogenic maps (Needham, 1990; Needham et al., 1983) and a detailed report (Needham, 1988). Cobourg Peninsula was also mapped at this time (Hughes, 1973). Relevant 1:100 000 scale compilation maps were published in colour and/or black & white format. Related publications are numerous (Hughes, 1978; Needham et al., 1980; Needham and Stuart-Smith, 1985; Stuart-Smith and Ferguson, 1978; Stuart-Smith and Needham, 1982; Stuart-Smith and Needham, 1984; Warren and Kamprad, 1990). In more recent years, the Northern Territory Geological Survey (NTGS) has remapped the central parts of the PCI and the Milingimbi sheet (Ahmad, 1998; Carson et al., 1999; Ferenczi and Sweet, 2004). It has also begun focused geochronological studies aimed at developing a better stratigraphic framework, in collaboration with Geoscience Australia (GA) (Worden et al., 2004). The regional geology of the areas surrounding the Plateau project area is shown in Figure 2 Regional Geology.

The oldest rocks exposed in the Alligator Rivers region, belonging to the 2500 Ma (late Archaean) Nanambu Complex, crop out sparsely in Kakadu National Park and include paragneiss, orthogneiss, migmatite, granite and schist (Needham, 1988). The Archaean complexes form structural domes that are unconformably overlain by metasediments and minor metavolcanics of the Palaeoproterozoic Pine Creek Succession or Supergroup (PCS), which constitutes the Pine Creek Orogen tectonic unit (formerly the Pine Creek Geosyncline). In the Alligator Rivers region, the PCS initiates with meta-psammitic and quartzose rocks of the Mount Howship Gneiss and Kudjumarndi Quartzite (both Kakadu Group). These are laterally equivalent to the Mount Basedow Gneiss and Munmarlary Quartzite respectively (Ferenczi et al., 2005). This Group appears to onlap the Archaean basement highs, but gneissic variants are also reported to be transitional into paragneiss of the Nanambu Complex (Needham, 1988).

The Cahill Formation and Masson Formation of the Namoona Group (Ferenczi et al., 2005) conformably overlie the Munmarlary Quartzite, the Cahill Formation being informally mapped as two subunits or members (Needham, 1988). The Lower Cahill Formation hosts the main uranium ore bodies in the region (e.g. Nabarlek, Ranger and Jabiluka; Figure 2) and consists of a basal calcareous marble and calc-silicate gneiss unit that is overlain by pyritic, garnetiferous and carbonaceous schist (meta-pelite), quartz-feldspar-mica gneiss (meta-arkose) and minor amphibolite. The Upper Cahill Formation is more psammitic, comprising feldspar-quartz schist (meta-arkose) and quartzite, lesser mica-feldspar-quartz-magnetite schist (meta-pelite), and minor conglomerate and amphibolite. It also contains the mafic to intermediate Stag Creek Volcanics, which have a SHRIMP U-Pb age of 2048±13 (Ferenczi et al., 2005). The Cahill Formation is notably magnetic, in particular the base of the upper psammitic unit (also known as 'hanging wall sequence'), due the presence of mafic sills and/or magnetite, providing a means of spatially distinguishing it from underlying and overlying less magnetic formations (Kendall, 1990). The Masson Formation is generally considered to be the lower grade metamorphic equivalent of the Cahill Formation.

The unconformably overlying Nourlangie Schist is a monotonous succession of argillaceous to quartzose phyllite and quartz-mica schist that locally contains garnet and staurolite. Nourlangie Schist is interpreted to be the eastern temporal correlative of the combined interval – Mundogie Sandstone and Wildman Siltstone (Mount Partridge Group), and Koolpin Formation, Gerowie Tuff and Mount Bonnie Formation (all South Alligator Group) (Needham, 1988). Some authors argue that temporal equivalents of the Mundogie Sandstone are absent east of the South Alligator River (Ferenczi et al., 2005), but it may not be possible to distinguish facies variants at the Cahill Formation-Nourlangie Schist level. Wildman Siltstone is characteristically composed of silty carbonaceous phyllite, sandy ferruginous siltstone and shale, consistent with a Nourlangie Schist 'protolith'.

Early stratigraphic columns also included the Kapalga Formation as a lateral equivalent of the Nourlangie Schist (Needham et al., 1983), however, outcrops formerly mapped as this unit in the Mount Evelyn sheet are now re-assigned to South Alligator Group (Ferenczi and Sweet, 2004). As a result, the name Kapalga Formation will probably be abandoned and various outcrops throughout the eastern PCI re-assigned to other units. Lithological descriptions of the Kapalga Formation (Needham et al., 1983) – ferruginous, pyritic and carbonaceous chert-banded metasiltstone (slate/phyllite) or biotite schist, garnetiferous schist and quartzite – are consistent with the lower metamorphic grade Koolpin Formation, which hosts a number of gold prospects and deposits in the central PCI (Ahmad, 1998). However, calcareous and dolomitic lithologies (including stromatolites) and banded iron formation that are also common in the Koolpin Formation are not documented in the Kapalga Formation. The overlying Gerowie Tuff and Mount Bonnie Formation in the central PCI comprise variously interbedded massive silicic-potassic tuffaceous chert, carbonaceous clayey siltstone, coarse 'greywacke' and lithic sandstone. Metamorphosed equivalents of these lithologies have not yet been recognised in the Nourlangie Schist, suggesting either facies variation, onlap/pinchout, erosional removal or a lack of definitive exposure in the east.

The age of the Nourlangie Schist is only constrained by its inferred correlatives. The Wildman Siltstone is about 2025 Ma and the Gerowie Tuff is 1863±2 Ma, based on SHRIMP U-Pb zircon dating (Worden et al., 2004). Large time breaks are obviously present in the succession.

Mafic sills and dykes including the Goodparla and Zamu Dolerites intrude the PCS, with the former common in the upper Cahill Formation and the latter prolific in the South Alligator Group (Warren and Kamprad, 1990). Lower metamorphic grade rocks have typical dolerite textures, but in the Alligator Rivers region, they are generally amphibolite *sensu stricto*. Regardless, these dykes impart a magnetic signature to their respective hosts where they contain residual magnetic phases.

The sedimentary and igneous rocks of the PCS are structurally complex, having undergone at least three recognisable phases of deformation (Thomas, 2002) related to Top End Orogeny (1880 to 1780 Ma). They have also undergone high-temperature low-pressure prograde metamorphism, including local migmatisation and remobilisation, during the ~1850-1860 Ma Nimbuwah Event of the Barramundi Orogeny (Page and Williams, 1988). The intensity of metamorphism and deformation varies across the region, with the western and eastern margins of the Pine Creek Inlier (Litchfield Province and Nimbuwah Domain respectively) showing the most pronounced effects. In the Nimbuwah Domain or Alligator Rivers region, there is a broad trend of increasing grade from southwest to northeast. This gradient clearly reflects synchronous emplacement of the 1865 Ma Nimbuwah Complex granitoids in that area. Distinctions based on metamorphic grade and protolith type have been made on regional maps (Needham, 1988) and are summarised below.

Greenschist to amphibolite facies metasedimentary rocks in the southwest can generally be distinguished stratigraphically and are assigned to specific formations and groups:

1. Amphibolite to granulite facies metasedimentary rocks that lie between the Nimbuwah Complex in the northeast and the areas of better-defined stratigraphy in the southwest are mapped as Myra Falls Metamorphics. They incorporate outcrop that cannot be distinguished from the Zamu Dolerite and Kakadu, Mount Partridge, Namoona or South Alligator Groups, but where a sedimentary precursor can be demonstrated (Needham, 1988). Rocks with a likely felsic igneous protolith are assigned to the Nimbuwah Complex (see below).

2. Magmatic rocks (mostly I type granodiorite) and felsic to intermediate migmatite and granulite in the northeast are distinguished as the Nimbuwah Complex. These rocks have a relatively simple isotopic character (Page and Williams, 1988) that suggests an entirely igneous protolith. However, there is some doubt about this distinction, as much of the mapped Nimbuwah Complex around King River appears to have a sedimentary protolith (e.g. lit par lit zones).

Metamorphic, igneous and sedimentary rocks of the PCS have been intruded by later Palaeoproterozoic ‘post-orogenic’ granites of the Cullen Batholith, including the Jim Jim and Mount Bundey Granites (Jagodzinski and Wyborn, 1997).

The PCS and Cullen Batholith are locally overlain by felsic volcanic rocks belonging to the Edith River and El Sherana Groups, which are comagmatic with the Cullen Batholith (Jagodzinski, 1992). These units are thickest in the south in the South Alligator Fault Zone and are generally absent in the Alligator River region due to Palaeoproterozoic erosion.

The various basement units are unconformably overlain by the Kombolgie Subgroup, the basal unit of the late Palaeoproterozoic Katherine River Group, McArthur Basin (Sweet et al., 1999a; Sweet et al., 1999b). This subgroup consists of a series of sandstone formations

(Mamadawerre, Gumarrirnbang and Marlgowa Sandstones), which are divided by thin basaltic units (Nungbalgarri and Gilruth Volcanics). The minimum age of the Mamadawerre Sandstone is 1725 Ma based on geochronology of the Oenpelli Dolerite (see below). Detrital zircon SHRIMP data from the GA OZCRON database constrain the maximum age as ~1810 Ma. The true age is probably close to 1800 Ma (Rawlings, 2002). The sandstones form a flat-lying or shallow southeast-dipping strongly-jointed platform, called the Arnhem Land Plateau. The eroded edge of the Mamadawerre Sandstone forms the characteristic Arnhem Land escarpment and the isolated sandstone mesas and ranges on the coastal plain. The middle to upper part of the Katherine River Group is exposed ~50 km further to the southeast near Mount Marumba (Sweet et al., 1999b).

The Oenpelli Dolerite is the most pervasive mafic intrusive suite to affect the Alligator Rivers region and is the youngest Precambrian rock unit exposed. It intrudes various levels of the stratigraphy, including the PCS and Kombolgie Subgroup, forming highly magnetic sills, dykes, lopoliths and laccoliths. Intrusions can be either concordant or discordant with Palaeoproterozoic stratigraphy. This unit is currently constrained by a SHRIMP baddeleyite date of 1723±6 Ma (Ferenczi et al., 2005), however, geochemical and geophysical data suggest several phases of intrusion throughout the region. At least one phase correlates with emplacement of the Nungbalgarri Volcanics at about 1780 Ma (Rawlings, 2002). These intrusive events had a pronounced thermal effect within the Kombolgie Subgroup, with the promotion of fluid flow and aquifer/aquitard modification. Localised effects in the sandstone include silicification, desilicification and introduction of chlorite, muscovite and pyrophyllite in active aquifer systems. A characteristic mineral assemblage of prehnite-pumpellyite-epidote has formed in the quartzofeldspathic basement rocks adjacent to the intrusions.

Field evidence for the age of the Nabarlek and Tin Camp Creek Granites is inconclusive, with both pre- and post-sandstone interpretations being valid. The Tin Camp Granite has been traditionally interpreted as unconformably overlain by Mamadawerre Sandstone along Tin Camp Creek, however, common silicification and up-doming of the cover sequence above this granite is also consistent with emplacement as a sill at the basement-sandstone unconformity and subsequent thermal metamorphism of the sandstone. The pre-sandstone explanation of these observations involves long-lasting radiogenic-driven fluid flow and silicification above the granites and structural displacement of the granite (i.e. solid state diapirism).

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 also recognised in the region.

Figure 2 Regional Geology

Local Geology

The Plateau project area is dominated by the Myra Inlier in the northern tenements (ELs 22825 and 22368). The southeastern portion of the Myra Falls Inlier is also known as the Caramal East Inlier or the Caramal re-entrant. In the latter there is extensive outcrop of Tin Camp Granite and Nimbuwah Complex, as well as Zamu Dolerite and Oenpelli Dolerite. The regional Beatrice Fault bounds the Caramal East Inlier along its western edge, and the east-west Caramal Fault bounds it on the north.

The remaining southern tenements are covered by rocks of the Kombolgie sub-group; dominantly the basal Mamadawerre Sandstone, with the stratigraphically higher Nungbalgarri Volcanics and Gumarrirnbang Sandstone occurring only in the southwest of the project area. The Nimbuwah Complex-Mamadawerre Sandstone unconformity is locally exposed along the southern boundary of the Inlier, in EL 22368, and the Tin Camp Granite-Mamadawerre Sandstone unconformity (?) is locally exposed in EL 22825. Geology of the project area is shown in Figure 3, and stratigraphy is outlined in Table 1.

Previous exploration drilling on the sandstone plateau provides an indication of the depth to unconformity and nature of the underlying basement. Drilling by AFMEX (hole KPE-001) in EL 23247 places the unconformity at 244.3 m depth, with Mamadawerre Sandstone underlain by foliated granitoid rocks of the Nimbuwah Complex. In 1992 PNC drilled 5 holes (BDD-BDD5) in the northwest corner of EL 9928. The sandstone-basement unconformity was intersected between 66 (BDD4) and 110.55 m depth (BDD1). Basement here consists of Tin Camp Granite and Nimbuwah Complex gneisses variably intruded by Oenpelli Dolerite. Drilling results correspond with overall outcrop patterns, which suggest increasing depth to unconformity towards the southeast.

Oenpelli Dolerite also occurs along the inferred extension of the arcuate Kukalak Valley feature (Rawlings, 2006) in the area (off tenement) between ELs 22447, 23247, 22369 and ELs 24780, 9929. A small area of Tin Camp Granite is exposed to the north of the Ranger Fault in the southwest corner of EL 9928.

Major structures in the general Plateau project area include the east-west Ranger Fault, located in the valley/No-Go zone separating EL 9928 and ELs 22447 and 23247; the east-west trending Caramal Fault and the 340° trending Khyber Pass fault, which is present in ELs 22827 and 9928, and is inferred to extend southward into EL 23247. The Khyber Pass Fault can be traced northward towards Nabarlek.

Table 1. Stratigraphy of the Plateau Project area

ROCK UNIT	THICKNESS	GEOLOGIC AGE
Residual sand cover and laterite on tableland, silt and alluvium in valleys	Up to several metres	Quaternary-Tertiary
Oenpelli Dolerite – intrusive dolerite sills and dykes	Up to 250 m	Palaeoproterozoic
Gilruth Volcanic Member – altered basalt and siltstone	Up to 30 m	Palaeoproterozoic
Gumarrirnbang Sandstone – quartz arenite with minor pebble conglomerate	Up to 250 m	Palaeoproterozoic
Nungbalgarri Volcanics – vesicular and amygdaloidal basalt	Up to 150 m	Palaeoproterozoic
Mamadawerre Sandstone – quartz arenite, quartzite and conglomerate	Greater than 150 m and possibly as much as 400 m.	Palaeoproterozoic
Tin Camp Granite – altered biotite granite and trondhjemite		Palaeoproterozoic
Nimbuwah Complex – foliated granite and granodiorite		Palaeoproterozoic
Zamu Dolerite – metadolerite and orthoamphibolite	Variable. Up to 10s of meters.	Palaeoproterozoic

Figure 3. Plateau Tenement Geology

EXPLORATION TARGET

The focus of exploration in the Plateau project area is the discovery of "unconformity-style" uranium deposits. The prospective nature of the Alligator Rivers region is highlighted by the presence of economic uranium occurrences at Ranger, Jabiluka, Koongarra and Nabarlek. In addition, significant gold, platinum and palladium are present at existing uranium occurrences in the Alligator Rivers Uranium Field (Ranger, Jabiluka, Koongarra and Coronation Hill-style deposits) suggesting that economic Au and PGE (Platinum Group Element) mineralisation, either associated with a economic or sub-economic uranium may also be present in the project area.

Recent research into Proterozoic Westmoreland district uranium deposits, from the Northern Territory-Queensland border (Wall, 2006) suggests that the same broad physiochemical processes that govern "unconformity-style" uranium deposits also produce Westmoreland-style deposits, and indeed other basin/unconformity associated precious and base metal deposits. Thus, "Westmoreland-style" uranium mineralisation is also a possibility in the project area.

The most important elements of "unconformity-style" uranium system, in the most general sense, include: (i) a redox contrast between the overlying, oxidised sedimentary succession and reduced Fe^{2+}- bearing or carbonaceous material in or near the basement/unconformity; (ii) "basinal" fluids sufficiently oxidised to transport U^{6+} and oxidised Au and PGE species in solution. Interaction between fluid and sulfate- (or borate?) bearing evaporitic rocks higher in the sedimentary succession seems the most probable mechanism for generating oxidised fluids; (iii) a suitable "plumbing system", most likely formed by faults that cut both the sedimentary sequence and basement rocks, permitting focussing of large volumes of widely-sourced, oxidised basinal fluids into restricted structural zones in and around the unconformity/basement rocks; porous conglomeratic units at the base of the sandstone may also be important; (iv) uranium-enriched 'source' rocks, either in the overlying sedimentary sequence, and/or in the basement.

The principal mechanism for uranium deposition is the reduction of soluble aqueous U^{6+} to insoluble U^{4+} (which precipitates, typically as uraninite) with corresponding oxidation of reduced material from basement rocks, or fluids produced by reduced basement rocks. Carbonaceous schists (e.g. lower Cahill formation) represent the most likely reductant, either in the form of graphite, or methane formed through fluid interaction with graphite. Fe^{2+}-rich rocks, such as dolerite and its metamorphic equivalent, ortho-amphibolite are also a potential reductant. The carbonate-rich units of the Lower Cahill Formation may also be significant due to their ability to alter the chemistry (i.e. pH) of saline, uranium-bearing fluids. This general model for the controls on uranium solubility is seemingly borne-out by existing uranium occurrences, which are all hosted by either lower Cahill Formation rocks (Ranger, Jabiluka, Koongarra and Caramal) or amphibolite/dolerite (Nabarlek, Caramal). All deposits are associated with structures and are in the vicinity of the unconformity.

Thus, conceptual exploration targets for "unconformity style" uranium mineralisation fitting the model outlined above should involve prospective basement rocks, (e.g. Lower Cahill formation and its Myra Falls Metamorphics equivalent, or Fe^{2+} bearing rocks, including Zamu Dolerite and Oenpelli Dolerite) and structures cutting both basement and overlying sandstone. Due to the near-surface position of the basement-Kombolgie unconformity in the western Arnhem Land landscape, most basement exposures are in the vicinity of the unconformity.

PREVIOUS EXPLORATION

1970-1973: Queensland Mines Pty Ltd

The area covered by the present tenements was held by Queensland Mines Pty Ltd (QML) as part of a much larger tenement (Authority to Prospect 2221) during the early 1970's. QML is believed to have undertaken reconnaissance exploration consisting of an airborne magnetometer/spectrometer survey and regional stream sediment geochemistry. Airborne radiometrics lead to the discovery of the Caramal and Nabarlek deposits. Detailed results of this work are not available in NTGS open file data.

The Federal Government imposed a moratorium on mineral exploration in the in the Alligator Rivers area in September 1973, pending resolution of Aboriginal Land Rights issues. No further exploration was conducted in the area until 1990.

1990-1996: PNC Australia-Arnhem Land West Joint Venture

The Arnhem Land West Joint Venture (ALWJV), comprising PNC Exploration (Australia) Pty Ltd (as operator) and Cameco, was granted Exploration Licences 3597 and 4015 on 27 August 1990 for a period of six years. ALWJV successfully deferred reduction of the tenement area throughout their tenure, ensuring that the original tenement area (80 and 32 sq km respectively) remained intact. Current ELs 9928 and 9929 correspond with portions of former ELs 3597 and 4015 (Figure 4) respectively.

1990

In September 1990, Surtec Geosurveys Pty Ltd (Surtec) was engaged to undertake a reconnaissance survey consisting of ground radiometrics and stream sediment sampling along structures or lineaments evident in air photographs. Austirex International Ltd. flew an airborne magnetic and radiometric survey in early October 1990. In December 1990 Surtec conducted a follow-up sampling (soil, stream and rock chip) targeting geochemical and radiometric anomalies from the earlier surveys. Thirteen soil, sediment and rock chip samples were submitted for Pb isotope analysis. Seven anomalies (Anomaly A through Anomaly G) were identified for further investigation. An anomaly in the northwest corner of EL 3597 consisting of an elongate zone of hematite (after chlorite) alteration and intense quartz veining associated with a 340° trending structure was assigned a high priority.

1991

In May 1991 PNC staff conducted investigation of the seven anomalies identified the previous year. Notable results included 8.9 ppm uranium and 4 ppb Au in a clay-rich sandstone sample from Anomaly B (later part of the AB Grid, Figure 4), and 3 ppm U in quartz veined and hematite altered sandstone from Anomaly G, which later became the NW Grid area (Figure 4).

In October 1991 Surtec was contracted to establish a 50 x 50 m grid over Anomaly G, called the NW Grid. Ground based radiometric and magnetic surveys were conducted over the NW Grid, along with rock chip sampling (n=130), of which nine samples were submitted for petrography and two for later electron microprobe analysis (EMPA).

Two SIROTEM surveys were conducted in 1991 to evaluate the effectiveness of the technique for estimating the depth of sandstone cover. An initial test survey was conducted over locations in both EL 3597 (northeast corner) and 4015 (AB Grid) as part of a larger test jointly funded by QML that included surveys over Jabiluka and Caramal. A more detailed survey was undertaken over the NW Grid (only where ground conditions were amenable) in an attempt to map alteration. The results were not conclusive, but did suggest that there may be a measurable response associated with alteration.

A test GEOTEM survey was flown over the NW Grid area in October 1991 to evaluate response over the mapped alteration zone. Results indicated that conductors could be correlated with alteration.

1992

A helicopter-supported diamond-drilling program was conducted in the NW Grid area during May-June 1992. Five holes (BDD-1 to BDD-5) were drilled for a total of 789 m. The highest uranium analysis was 5 m at 65 ppm U from BDD-001. In the holes drilled the sandstone-basement unconformity was intersected between 66 and 110.55 m, with Nimbuwah Complex gneiss being the dominant basement, along with Tin Camp Granite and Oenpelli Dolerite. Rocks adjacent to the unconformity are variably clay, chlorite and hematite altered.

A PROTEM 47 ground-based EM survey was conducted over a portion of the NW Grid to test conductors identified in the 1991 GEOTEM survey. PROTEM 47 was employed as it was considered technically superior to SIROTEM for work in resistive sandstone terrain. A well-defined response was obtained over the altered structure associated with BDD-1 and good contrast was achieved between granite and gneiss. Further investigation of the PROTEM data by Encom Technologies Pty Ltd suggests that alteration in the sandstone extends 500 m outwards from the main structure.

Follow-up mapping and geochemical sampling was conducted in the southeast corner of EL 3597, the location of Anomaly A as previous stream sediment samples had produced anomalous base metal assays of 390 ppm Cu, 490 ppm Pb and 400 ppm Zn. Infill sampling and resampling failed to reproduce the elevated results, with maximum values of 17 ppm Cu, 10 ppm Pb and 40 ppm Zn.

A PIMA (Portable Infrared Mineral Analyser) study was conducted on outcrop and drill core samples in an attempt to identify alteration minerals (i.e. clays) without resorting to XRD analysis. Mineral identification was successful, and the results suggested that kaolinite is associated with alteration surrounding structures, whereas illite occurs more widely. A shift in illite absorption features was found to be associated with known alteration.

Etheridge and Henley were contracted to conduct a two-stage structural study of the project area. The first stage consisted of air photograph interpretation, followed by a second stage of structural mapping. The study reported that despite the long strike length of most faults, displacement is only a few metres. This was considered consistent with the structures representing major pre-Kombolgie faults with only minor post-Kombolgie movement. Structures with large post-Kombolgie movement were considered the most prospective.

<u>1993</u>

Following a successful test the previous year, an airborne GEOTEM survey was flown over both tenements in July 1993. Five anomalies were generated by the GEOTEM survey (Anomalies 1, 2 and 3 in EL 3597; Anomalies 4 and 5 in EL 4015. Figure 3). Four anomalies were associated with north-northwest trending structures.

Anomaly 1 is located on the north-northwest trending fault termed ‘Fault G’ by PNC but also known as the Khyber Pass Fault by AFMEX. A 2 x 2 km grid of 100 m spaced east-west lines marked at 50 m intervals, known as the CS grid was pegged over Anomaly 1. Mapping and radiometric prospecting failed to identify any alteration beyond silicification of a fault breccia along the Khyber Pass Fault. No significant radiometric anomalies were detected. A PROTEM 47 survey was conducted over 15 lines of the CS Grid and failed to produce any anomaly. The similarity between PROTEM response and GEOTEM channel 3 response lead to a downgrading of GEOTEM channel 3 anomalies.

Anomalies 2 and 3 are located along the southern extension of the 340° trending Fault A, which is associated with the NW Grid to the north. Anomaly 2 is suggested to be due to strongly hematite/sericite altered Tin Camp Granite in the area.

Anomaly 3 was mapped as a southward extension of the NW Grid. A small radiometric anomaly (5 time background) was located in a few square meters of sandy soil. Soil sample analyses returned 0.6 ppm U and 1.75 ppm Th, which are not considered anomalous, leaving U and Th daughter products as likely candidates for the anomaly. A PROTEM 47 survey was conducted over the NW Grid extension. Sensitivity analysis of the resulting data identified a bell shaped conductive zone starting from a broad base at 300 m depth extending upwards to 50-60 meters. The bell shape is interpreted to represent extensive alteration in the basement becoming restricted towards the surface due to the unreactive nature of the overlying sandstone.

Anomaly 4 is an elongate anomaly correlating with the 350° trending Fault Q, though it is only present in the channel 3 data, leading to it being downgraded. Anomaly 5 is a channel 16 anomaly occurring along the 030° trending Fault T. Radiometric Anomaly B is located on the same structure 1 km to the northeast (AB Grid). No follow-up was conducted during 1993.

<u>1994</u>
Exploration work in 1994 concentrated on follow-up of GEOTEM channel 16 anomalies. A grid was established over Anomaly 5 (AB Grid) and the NW Grid was extended south by 1.5 km. Mapping and radiometric prospecting at 1:2000 scale was conducted over both grids, in addition to ground magnetic surveys and PROTEM 47 surveys. Mapping was hampered by poor exposure in the area of Anomaly 5. The PROTEM survey produced results consistent with an unconformity depth between 85 and 100 m. Mapping of Anomaly 5 identified red hematite alteration along fractures in sandstone. The PROTEM survey identified a clear anomaly sub parallel to splays of Fault T.

Pairs of 100 m spaced traverses were marked across GEOTEM anomalies 4, 5 and 6. Mapping, and ground magnetics were conducted along all traverses, and PROTEM 47 was conducted over anomalies 6 and 7. Anomaly 7 was interpreted to be a basic dyke due to the coincidence of ground magnetics and PROTEM anomalies. Anomaly 6 was interpreted to represent a 70 m layer of basic volcanics at 160 m depth on the basis of PROTEM data.

A lithogeochemical study of 40 samples (14 drill core and 26 outcrop) was conducted in 1994. Samples were thin sectioned and XRD was performed on whole rock and the clay-fraction of each sample to identify clay mineralogy and for comparison with PIMA analysis. Geochemical analysis was conducted on all samples. The results suggested that the Kombolgie sandstone is relatively clay mineral poor with low Fe content. Altered feldspathic lithic fragments are the most likely source of clay minerals in the sandstone. Illite was identified as the dominant clay mineral, and the sandstone is commonly limonitic rather than hematitic, due to severe weathering. Close agreement was found between mineral estimates from PIMA II spectra and XRD analysis, underlining the usefulness of PIMA for broad, rapid screening.

Three test lines of VLF were completed across the NW Grid to test the effectiveness of the technique for looking through Kombolgie sandstone. The survey produced an anomaly coincident with previous PROTEM results, indicating VLF may be effective at mapping near surface alteration.

Two small areas in each tenement were sites for test DIGHEM surveys, to test its effectiveness in mapping alteration in highly resistive terrain, and to provide detailed EM coverage of GEOTEM anomalies where terrain excluded PROTEM 47 surveys. High frequency DIGHEM channels produced anomalies that correlated well with GEOTEM channel 16 data.

In addition to uranium exploration activities, six stream gravel samples were collected for diamond indicator mineral analysis. Fourteen heavy mineral grains, identified as tourmaline with no kimberlitic affinity, were extracted by heavy mineral analysis. Three micro-diamonds were also identified in the samples.

1995

A second, more extensive diamond indicator mineral sampling program was conducted in May 1995. Fourteen stream gravel samples were collected, including repeat sampling at two of the 1994 locations. However, no diamonds or micro-diamonds were recovered from the heavy mineral fractions of the 1995 samples. Two Cr-spinel grains and a chromite grain were identified.

The promising results of the 1994 lithogeochemical study prompted and expanded sampling program in 1995. 200 samples, including 132 Mamadawerre Sandstone, 58 Gumarrirnbang Sandstone, 7 Tin Camp Granite and 3 Oenpelli Dolerite were collected. Stable isotopes (O, H) were analysed in several samples from the 1994 study, revealing that clay minerals in the Kombolgie sandstone have re-equilibrated with meteoric water at temperatures of 20-50° C.

Eighteen samples from the 1992 drilling program were submitted for petrophysical measurements, in an attempt to generate data for use in future geophysical modelling.

1996

Heavy mineral separates from diamond indicator samples were re-picked, though no new minerals were identified. EMPA of chromite grains extracted in 1995 revealed they lacked kimberlitic affinity.

An airborne VLF survey was flown using fixed-wing aircraft in August 1996 to test the effectiveness of VLF in sandstone terrain. The survey did not produce any recognisable response, possibly due to technical difficulties.

Exploration conducted by the ALWJV is summarised in Table 2. A detailed summary of ALWJV exploration activities can be found in the relinquishment report of Follington (1997) and earlier annual reports by Mackie (1992, 1992a, 1993, 1993a, 1994, 1994a, 1995, 1995a, 1996, 1996a, 1997).

Table 2. Arnhem Land West Joint Venture Exploration Activities - EL 3597 and EL 4015

ACTIVITY	YEAR						
	1990	1991	1992	1993	1994	1995	1996
Sampling							
Stream sediment samples	*		19				
Rock Chip samples	*	404	10	67		200	
Soil samples			5				
Thin sections			12				
Diamond Indicator samples					6	14	
Drilling							
Holes			5				
Total meters			789				
Petrography			19				
Geophysics							
PROTEM 47 (line km)			5.25	37	37		
GEOTEM (line km)			50	912			
DIGHEM (line km)					*		
SIROTEM (line km)		*					
VLF (line km)					*		83
Airborne radiometrics/magnetics (line km)	1929						

* This work is known to have been conducted, though the exact amount is not specified in reports.

1995-2003: QMPL-AFMEX and Tin Camp Creek Joint Venture

The area covered by ELs 22368, 22369, 22447, 23247, 22825, 22827, 24780 cover land relinquished from ELs 2506 and 2507 in 1998-99 and 1999-2000. ELs 2506 and 2507 formed part of a larger area granted to QML in September 1995 (Figure 4). QML engaged AFMEX (AFmeco Mining and EXploration Pty Ltd) in a farm-in arrangement between 1995 and February 1998 at which point the Tin Camp Creek Joint Venture (TCCJV) comprising AFMEX (as operator) with SAE Australia Pty Ltd, Cameco and West Arnhem Land Corp. acquired the tenements from QML.

QML/AFMEX conducted a helicopter-based DIGHEM magnetic, radiometric, electromagnetic survey in July 1996, which was followed by ground follow-up of some radiometric anomalies. Weak uranium was found associated with chlorite veins in granite at the North Horn radiometric anomaly, located in northern EL 22368, although no samples were collected.

Stream sediment sampling and a limited outcrop sampling program was conducted between 1996 and 1998.

A single helicopter supported drill hole (KPE001) was drilled in EL 2507 to test for uranium mineralisation associated with the south extension of the Khyber Pass Fault. The sandstone-basement unconformity was intersected at 244.3 m depth. Basement rocks consisted of foliated granitic rocks of the Nimbuwah Complex. Elevated uranium was not present in the hole.

A summary of work conducted in areas relinquished by the Tin Camp Creek Joint Venture can be found in Fabray (1999, 2000).

WORK COMPLETED 2005

Data Compilation

As 2005 was the first year of tenure, the only work completed was a limited helicopter-supported sampling program, along with data compilation and review.

Stream sediment, rock chip, and diamond indicator mineral sample locations from ALWJV activities have been converted into digital format, along with geochemical analysis data. Drill hole data have not yet been compiled. QML Tin Camp Creek Joint Venture data was carried over from Cameco's existing Tin Camp Creek datasets.

The location of previous stream sediment and rock chip samples, along with previous drill hole locations are shown in Figure 4.

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Figure 4. Previous Exploration

Targets and Outcrop Sampling

During the 2005 field program data recordings and samples were collected from six field stations (PL050001-PL050006). No sample was taken at PL050006. This work was helicopter supported. An Urtec SB90325 scintillometer was used to collect radiometric data. Samples PL050001-PL050003 samples were collected along Cycad Valley, named after the abundance of cycads growing along the north-northeast-trending lineament sampled by PNC in EL 4015. The fourth sample PL050004 was taken on a ridge of ferruginised Gilruth Volcanics and the final sample was collected in the former NW Grid area. A sixth mapping station PL050006 was located on a small radiometric anomaly ascribed to ferruginised Gilruth Volcanics.

Sample locations are shown in Figure 3. Sample locations and descriptions are presented in Table 3. Sample locations. Details of alteration, colour and physical properties for samples are shown in Table 4. Sample alteration, colour and physical properties.

Table 3. Sample locations

Table 4. Sample alteration, colour and physical properties

PIMA (Reflectance Spectroscopy)

Standard practices for PIMA sampling are outlined in Appendix 1.

Appendix 1. PIMA Methodology

PIMA raw data (.fos files) for each sample is located in the data folder of this report. Results from PIMA analysis of outcrop samples is presented in Table 5.

Table 5. Outcrop sample PIMA data

Sample	TSA Mineral 1	Weight Mineral 1	TSA Mineral 2	Weight Mineral 2	TSA error
PL050001	Muscovite	1	-	-	217.25
PL050002	Aspectral	-	-	-	5000
PL050003	Muscovite	0.598	Paragonite	0.402	24.018
PL050004	Kaolinite	1	-	-	93.56
PL050005	Muscovite	1	-	-	618.28

Geochemistry

All samples were submitted to NTEL in Darwin for sample preparation, G400 and G950 analyses for multi-element analysis. Au, Pt and Pd were analysed at North Australian Laboratories in Pine Creek using Fire Assay. In total, four separate methods are used to analyse up to 65 elements and four isotopes outlined in the Appendix. Sample preparation at NTEL involves initial drying at 110°C. The entire sample is crushed to a nominal 2 mm in a Boyd Crusher, then divided using a Rotary Sample Divider (RSD) to give a ~300-400 g split. The split is milled in a Whisper ring mill to a nominal 75 µm. The material used on the crushing surfaces was selected to be free of contaminant trace metals (the major contaminant is iron) and this was confirmed in tests conducted by Cameco prior to submitting field samples, although it has subsequently been observed that Cr contamination has occurred in some sample batches. Before and after the processing of a sample the Crusher is flushed with barren blue metal and the ring mills are flushed with garnet sand, whilst the RSD is vacuum cleaned.

Geochemical analysis of outcrop samples is presented in Table 6. Sample geochemistry.

Appendix 2. NTEL Analytical Suite

Table 6. Sample geochemistry

DISCUSSION OF RESULTS

Target and Anomaly Evaluation and Sampling

Sample PL050002, collected from the Cycad Valley target was the most uranium rich sample collected in 2005 with 11.4 ppm. Cycad Valley corresponds with AB Grid area of ALWJV. Elevated radioactivity was encountered associated with fractures in Gumarrirnbang Sandstone forming the western side of the north-northeast-trending valley.

In addition to 11.4 ppm U, sample PL050002 also contains 0.59 ppm Th and elevated P_2O_5 (14600 ppm), Sr (6210 ppm), S (2360 ppm), Y (2820 ppm) and heavy rare earth elements (HREE): Dy (383 ppm), Er (282 ppm) and Ho (95 ppm).

The high phosphorus content suggests the elevated Y and HREE contents may be due to Y/HREE-bearing phosphate minerals such as xenotime $(Y,REE)PO_4$, wavellite

$Al_3(PO_4)_2(OH)_3 \cdot 5(H_2O)$ or goyazite $SrAl_3(PO_4)_2(OH)_5 \cdot (H_2O)$. It is notable that petrographic studies conducted as part of ALWJVs 1994 and 1995 lithogeochemical studies identified both wavellite and goyazite-group phosphates in samples from the Plateau project area (Mackie, 1995, 1996).

Also notable is the low Zr content of the rock, 0.3 ppm, suggesting an absence of abundant detrital zircon. Hydrothermal breakdown of zircon is unlikely to be the cause for the low Zr, as the extreme insolubility of baddeleyite, ZrO_2, the incongruent dissolution product of zircon, $ZrSiO_4$, is expected to conserve the Zr budget.

Follow-up sampling at this location will be conducted in 2006.

EXPENDITURE

Eligible expenditure on Plateau tenements in 2005 was AUD$31 367.

Table 7. Eligible Expenditure 2005

CONCLUSIONS AND RECOMMENDATIONS

Initial work during 2005 was confined to reconnaissance outcrop sampling and data compilation and evaluation. Sample PL050002 from the Cycad Valley area produced an encouraging result of 11.4 ppm uranium, warranting further investigation. More comprehensive outcrop sampling is planned for 2006.

In addition to outcrop sampling airborne TEMPEST and HYMAP geophysical surveys are proposed for 2006.

2006 WORK PROGRAM AND PROPOSED BUDGET

The proposed budget includes provision for helicopter-supported outcrop sampling and airborne TEMPEST and HYMAP geophysical surveys. Outcrop sampling will initially target both the Cycad Valley in EL 9929 and the North Horn prospect in EL 22368. Following additional data review other targets may be defined and appropriate field programs conducted.

The estimated expenditure for these programs is AUD$205,000.

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Table 3. Sample locations

Sample	Easting AGD66-53	Northing AGD66-53	EL	Formation	Lithology	Comments	Geomorphology	Outcrop Description	CPS bgnd Total Counts	CPS max Total Counts	Instrument Urtec serial #
PL050001	335790	8592204	EL9929	Phr	Medium sandstone	Eastern side of north east lineament- cycad valley	eastern wall of valley, 10m from valley floor above cycads	flat lying bench of cross bedded ss	40	45	UR-B90325
PL050002	335201	8591244	EL9929	Phr	Fine sandstone	Western side of north east lineament- cycad valley	western valley wall half way up	series of jointed benches of silicified ss	45	230	UR-B90325
PL050003	334807	8590649	EL9929	Phr	Pebbly sandstone	Southern end of NE lineament	creek bed gully. Rocky area with spinifex	bouldery outcrop in creek bed	40	60	UR-B90325
PL050004	335220	8590490	EL9929	Czl	Ferricrete	Ferruginised basalt, small rad anomaly	small hill, open rocky woodland	dark ferricrete boulders on small hill	100	140	UR-B90325
PL050005	319134	8607927	EL9928	Phe	Coarse-pebbly sandstone	western side of lineament 100m from AFMEX drill site	boulder slope with thick low scrub	bouldery area of cross bedded ss	45	60	UR-B90325
PL050006	333100	8590470	EL9929	Czl	Ferruginous Gravel after Gilruth Volcanics		flat ferruginous gravelly exposure	ferruginous gravel after Gilruth Volcanics sitting on Gumm SS	100	150	UR-B90325

Table 4. Sample Physical Properties, Colour and Alteration

Sample	Physical Properties		Colour				Alteration			
	Magnetic Susceptibility	Grain Size	Primary colour	Intensity PC	Secondary Colour	Intensity SC	Alteration Intensity	Alteration Colour	Alteration Type	Alteration Distribution
PL050001	0.04	Medium Sand 0.25-0.5 mm	Cream	Low	Cream	Low	Low	Cream	Clay	Interstitial
PL050002	0.1	Medium Sand 0.25-0.5 mm	Purple	Low			Low Low	Purple Purple	Diagenetic Hem Silicification	Pervasive Pervasive
PL050003	0.04	Fine Sand 0.125-0.25 mm	Orange	Low			Low	Orange	Silicification	Pervasive
PL050004	0.65		Black	High	Rust	High				
PL050005	0.08	Pebbles 4-64 mm	Grey	Low	Purple	Low	Low Low	Grey Purple	Clay Hematite	Interstital Pervasive
PL050006			Rust	Medium	Black	Low	Low	Rust	Iron Oxide	Replacement

Table 6. Sample Geochemistry

Sample	Na_2O ppm	MgO ppm	Al_2O_3 ppm	P_2O5 ppm	K_2O ppm	CaO ppm	MnO ppm	Fe_2O_3 ppm	LOI wt %	TiO_2 ppm
PL050001	50	260	7700	250	1700	140	32	5450	0.3	240
PL050002	400	180	14400	14600	300	780	16	4600	2	180
PL050003	50	560	20300	400	5100	160	24	3500	0.4	480
PL050004	100	240	189000	900	700	120	58	361000	11.3	20100
PL050005	50	420	15500	150	3400	100	44	15900	0.5	600

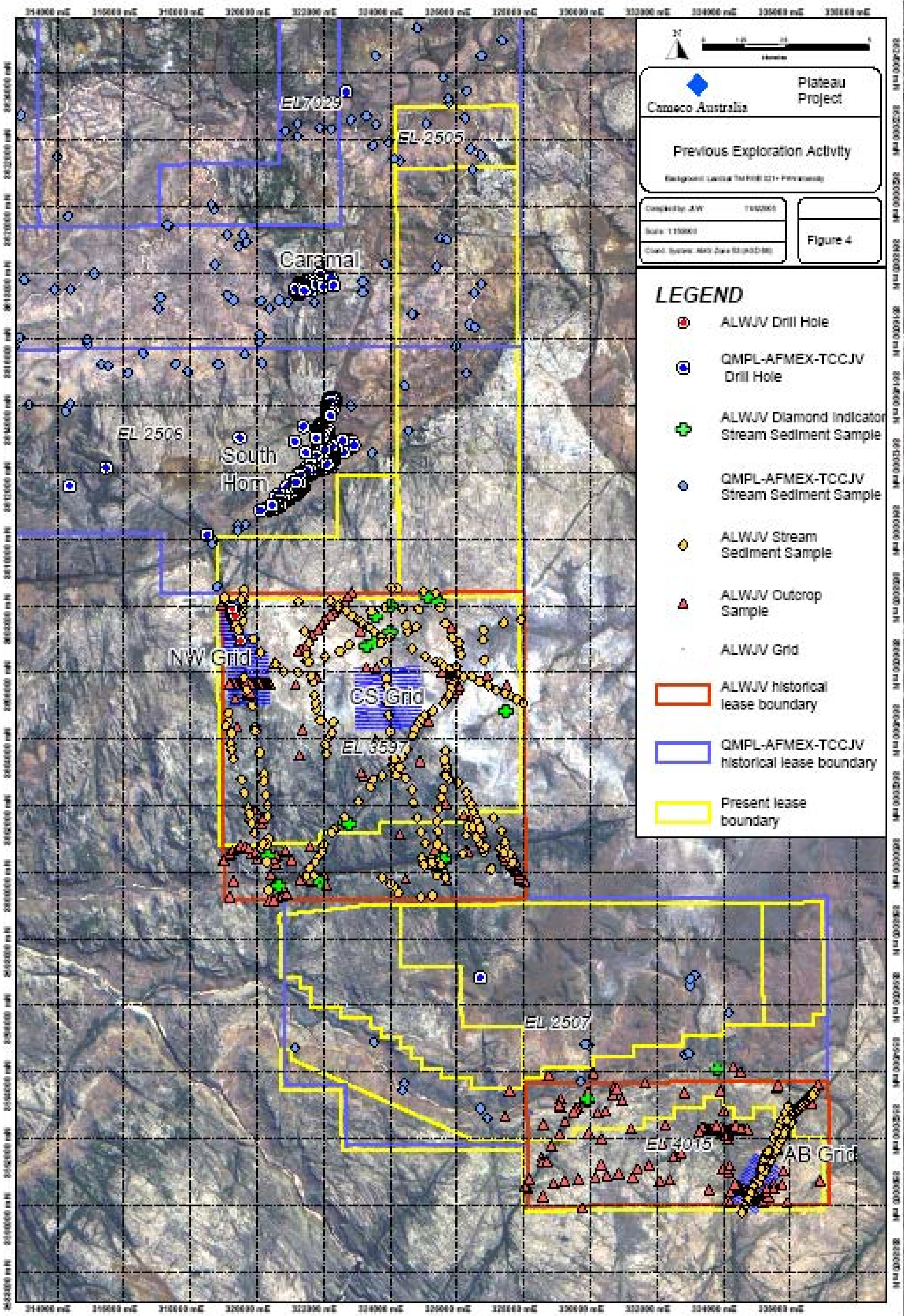
Sample	Li ppm	Be ppm	B ppm	Rb ppm	Sr ppm	Ba ppm	Se ppm	S ppm	As ppm
PL050001	2	0.05	10	4.08	12	12	1	20	0.5
PL050002	0.5	0.4	10	1.98	6210	42	56	2360	5
PL050003	2	0.1	40	7.59	87	18	1	40	0.25
PL050004	2	0.5	10	0.89	56	58	6	400	31
PL050005	1	0.2	10	8.12	10	8	1	20	1

Sample	V ppm	Cr ppm	Co ppm	Ni ppm	Cu ppm	Zn ppm	Y ppm	Zr ppm	Nb ppm	Mo ppm	Ag ppm
PL050001	2	10	0.15	0.4	0.5	2	2.04	13.1	0.25	0.3	0.025
PL050002	62	15	0.2	1	0.5	1	2820	0.3	0.1	0.95	0.025
PL050003	8	10	0.15	0.8	0.5	1	14	5.7	0.25	0.6	0.025
PL050004	1240	65	1.4	6.6	3	4	23.6	330	14	1.65	0.3
PL050005	6	10	0.2	0.8	2	2	2.18	42.1	0.95	0.35	0.025

Sample	Sn ppm	Hf ppm	Ta ppm	W ppm	Pb ppm	Bi ppm	U ppm	Th ppm	Pb204 ppm	Pb206 ppm	Pb207 ppm	Pb208 ppm
PL050001	0.1	0.27	0.01	0.1	0.6	0.01	0.46	2.02	0.1	0.1	0.1	0.4
PL050002	0.4	1.48	0.1	0.7	3.6	0.01	11.4	0.59	0.1	2.2	0.6	1
PL050003	0.1	0.12	0.01	0.1	1.4	0.01	0.94	3.37	0.1	0.4	0.2	0.6
PL050004	2.4	8.59	0.9	0.95	20	0.18	4.94	20.6	0.2	5.6	4.2	10
PL050005	0.6	1.06	0.04	0.9	1.4	0.01	0.57	6.05	0.1	0.4	0.1	0.8

Sample	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Lu ppm
PL050001	7.17	14.5	1.54	5.5	0.98	0.22	0.87	0.11	0.49	0.08	0.23	0.03	0.03
PL050002	29.1	89.3	16.6	91	27.7	7.5	66.8	32.1	383	95.2	282	37.8	30.6
PL050003	19.1	38.4	4.44	17.5	3.08	0.6	1.99	0.33	2.27	0.5	1.48	0.2	0.17
PL050004	40.6	74.8	8.18	30.5	5.9	1.73	5.6	0.85	5.12	0.95	2.72	0.37	0.39
PL050005	9.45	17.9	1.75	5.8	0.93	0.16	0.65	0.09	0.43	0.08	0.24	0.03	0.04

Sample	Pb^{204} ppb	Pb^{206} ppb	Pb^{207} ppb	Pb^{208} ppb	PbTOT ppb	U ppb	Au ppb	Pt ppb	Pd ppb
PL050001	1.57	36.1	26.5	63.3	127	86.1	0.5	0.5	0.5
PL050002	0.03	5.4	1.05	1.57	8.06	1160	1	47	0.5
PL050003	0.5	11.8	8.36	20.5	41.2	64.7	0.5	0.5	0.5
PL050004	4.4	85.6	72.4	174	336	278	9	0.5	7
PL050005	1.09	33.4	19.1	51	104	81.2	0.5	0.5	0.5


Cameco Australia
Plateau Project
Previous Exploration Activity
Figure 4
LEGEND
ALWJV Drill Hole
QMPL-AFMEX-TCCJV Drill Hole
ALWJV Diamond Indicator Stream Sediment Sample
QMPL-AFMEX-TCCJV Stream Sediment Sample
ALWJV Stream Sediment Sample
ALWJV Outcrop Sample
ALWJV Grid
ALWJV historical lease boundary
QMPL-AFMEX-TCCJV historical lease boundary
Present lease boundary
EL7029
EL 2505
Caramal
EL 2506
South Horn
NW Grid
CS Grid
EL 3597
EL 2507
EL 4015
AB Grid