

## **EXPLORATION LICENCE EL 3347**

## CADELL – NT

## **RELINQUISHMENT REPORT FOR THE PERIOD 28 JULY 2004 TO 27 JULY 2005**

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### SUMMARY

Cadell is a uranium exploration project area in northwest Arnhem Land, which is owned and operated by Cameco Australia Pty Ltd (Cameco). Cameco assumed ownership of this project in early 2003 following the dissolution of an unrelated joint venture. Cameco was granted an extension/renewal in July 2003, whereby the tenement is due to expire on the 27<sup>th</sup> of July 2005. On this date, Cameco extended for two further years a small 6-block portion of EL3347, covering the vicinity of Steven's Anomaly. The remaining 109 blocks were relinquished. This report documents exploration activities carried out on the relinquished portion by Cameco and it's predecessors.

Exploration activities within this portion of tenement principally involved the drilling of eight helicopter-supported diamond drill holes for 2104.5 m at various localities. Drilling was also accompanied by gamma probing of the holes, lithological logging and sampling, and spectral (PIMA), XRD, geochemical, petrophysical and petrographic analysis of the core. Limited helicopter-borne outcrop and stream sediment geochemical sampling was also carried out, on most occasions to follow up airborne radiometric anomalies. Aerial photography was flown over the entire tenement to assist location and structural mapping. In terms of geophysics, detailed airborne radiometrics-magnetics-DEM and Hymap Hyperspectral surveys were flown over the entire tenement. Cameco subsequently reprocessed the airborne radiometrics. Limited ground gravity data was collected. Four short lines of NanoTEM were also carried out over the Daniel Fault.

Results from exploration activities to date have been disappointing, with no mineralisation or significant anomalies identified in any of the datasets. In addition, drilling depths to basement would appear to be large throughout the tenement and drilling would necessarily involve expensive helicopter support. Based on this information, it was recommended that the area beyond Steven's Anomaly be relinquished.

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## **INTRODUCTION**

Cadell is a uranium exploration project covering exploration licence EL3347. The project is managed and operated by Cameco Australia Pty Ltd (Cameco). This report details exploration work completed by Cameco and previous tenement-holders on the relinquished parcel of 109 blocks during the period of tenure (1997-2005).

The prime objective of work on the project was to discover economic 'unconformity style' uranium mineralisation within a geological environment similar to the known deposits of the Alligator Rivers Region, Northern Territory, and the concealed high-grade deposits of the Athabasca Region, Saskatchewan, Canada.

The project lands are underlain by a variety of granitic and metamorphic basement units of the Nimbuwah Complex, which are unconformably overlain by a cover sequence of Kombolgie Subgroup sandstone and volcanic units. Basement and cover are intruded by sills and dykes of the Oenpelli Dolerite. Favourable structures and hydrothermal alteration occur in the region.

### Location and access

EL3347 is located in western Arnhem Land, Northern Territory on the Millingimbi (SD-5302) 1:250 000 scale topographic map sheet and the Goomadeer (5673) 1:100 000 scale topographic map sheet. The tenement is centred approximately 90 km northeast of Jabiru and 35 km southeast of the now rehabilitated mine site at Nabarlek (Figure 1; Figure 2). Access is either by air to the Nabarlek or Mamadawerre airstrips, or by road via the Arnhem Highway to Jabiru and then via Cahill's Crossing and unsealed roads towards Mamadawerre outstation.

### Figure 1 Location map for EL3347 prior to relinquishment

### Figure 2 Relinquishment area covered by this report

The rugged nature of the sandstone, which overlies most of the Cadell tenement, means that access during exploration programs was only possible by helicopter or by foot. Helicopter access was based from a semi-permanent field camp located on Tin Camp Creek, named 'Myra Camp', which was operated by AFMEX and then Cameco. Road access to Myra Camp is via the Arnhem Highway to Jabiru and bitumen road to Cahill's Crossing, then by dirt road via Oenpelli and Nabarlek.

### Tenure

The Cadell project Exploration Licence (EL3347) is located in western Arnhem Land (Figure 1). The licence was originally granted on 28<sup>th</sup> July 1997 for a period of six years, covering an area of 770 km<sup>2</sup> (230 blocks). The tenement was explored by a Joint Venture comprising AFMEX – operator (19.6%), S.A.E Australia Pty Ltd (19.6%), Kumagai Gumi Co. Ltd (19.6%), Uranerz Australia Pty Ltd (19.6%), Pasminco Exploration Pty Ltd (formerly Savage Australian Exploration Pty Ltd) (19.6%) and Kunbohwinjgu Land Corporation Pty Ltd (2%). During the fourth year of tenure, a 50% reduction was made to the area, leaving approximately 384 km<sup>2</sup> (115 blocks). Cameco

acquired 98% of this project in early 2003 following dissolution of the Joint Venture; 2% remains with the Kunbohwinjgu Land Corporation Pty Ltd (2%). Cameco applied for and was granted a two-year extension in July 2003, whereby the tenement was due to expire on the 27<sup>th</sup> of July 2005. Prior to this expiry date, Cameco relinquished 109 blocks and applied for an extension for the remaining 6 blocks of the tenement for a period of a further (and final) two years. The relinquished area is shown in Figure 2 and is the subject of this report.

The Cadell tenement is located within the Arnhem Land Aboriginal Reserve and is subject to a Consent Deed with the Northern Land Council (NLC) on behalf of Traditional Owners. Cadell contains areas that are sensitive or have cultural and/or social significance to the Traditional Owners ('No Go Areas') that are excluded from exploration access. As a result of prior arrangements between the earlier Joint Venturers and Traditional Owners, a tenement-wide site clearance for Cadell was only carried out in mid 2004.

## **GEOLOGICAL SETTING**

The project area lies in the western portion of the Pine Creek Orogen, roughly on the boundary of the East Alligator and Nimbuwah structural domains (Needham, 1988; Needham and Stuart-Smith, 1980). The oldest rocks exposed in the region are gneiss, migmatite, granite and schist belonging to the Archaean Nanambu Complex. These are overlain by the Palaeoproterozoic Pine Creek Succession, which initiates with the Mount Howship Gneiss and the distinctive Kudjumarndi Quartzite, both belonging to the Kakadu Group. Psammitic rocks of the Kakadu Group are in turn overlain by the Cahill Formation (Mount Partridge Group) that hosts the main uranium ore bodies in the region (e.g. Ranger and Jabiluka). The Lower Cahill Formation consists of a basal calcareous unit that is overlain by a sequence of pelitic schists, meta-arkose and amphibolite. A well-defined amphibolitic unit at the top of the Lower Cahill Formation hosts the Nabarlek uranium deposit. The Upper Cahill Formation and overlying Nourlangie Schist consist of a monotonous sequence of metaarkose, schist and amphibolite. The Nourlangie Schist is most likely a temporal correlative of the Wildman Siltstone further west and therefore equates to the upper Mount Partridge Group. Thin mafic sills and dykes of the Zamu Dolerite are locally prolific within the Pine Creek Succession.

The sedimentary and igneous rocks of the Pine Creek Succession are structurally complex, having undergone at least three recognisable phases of deformation (Thomas, 2002). They have also undergone high-temperature low-pressure metamorphism, including local migmatisation and remobilisation, during the ~1870 Ma Barramundi Orogeny (Page and Williams, 1988). The intensity of metamorphism varies across the region, however, a broad trend of increasing grade from southwest to northeast is apparent in the Kakadu-East Arnhem region. Distinctions based on metamorphic grade and protolith type have been made on regional maps (Needham, 1988).

- 1. Greenschist to amphibolite facies metasedimentary rocks in the west can generally be distinguished stratigraphically and are assigned to specific formations and groups.
- 2. Amphibolite to granulite facies metasedimentary rocks that lie between the Nimbuwah Complex in the east and the areas of better-defined stratigraphy in the

west are mapped as Myra Falls Metamorphics. They incorporate outcrop that cannot be distinguished from the Zamu Dolerite and Mount Partridge or South Alligator Groups, but where a sedimentary precursor can be demonstrated (Needham, 1988). Rocks with a likely felsic (to intermediate) igneous protolith are assigned to the Nimbuwah Complex (see below).

3. Magmatic rocks (mostly I type granite) and felsic to intermediate migmatite and granulite in the east 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 has a sedimentary protolith (e.g. lit par lit zones).

Metamorphic, igneous and sedimentary rocks of the Pine Creek Succession have been intruded by later Palaeoproterozoic 'post-orogenic' granites of the Cullen Batholith, including the Jim Jim, Nabarlek and Tin Camp Creek Granites (Jagodzinski and Wyborn, 1997).

The Pine Creek Succession 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 and are generally absent due to erosion in the north in the Alligator River region.

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 and Gumarrirnbang Sandstones), which are divided by a thin basaltic unit (Nungbalgarri Volcanics). The sandstones form a flat-lying or shallow southeast-dipping strongly-jointed platform, called the Arnhem Land Plateau. The middle to upper part of the Katherine River Group is exposed ~50 km further to the southeast near Mount Marumba.

The Oenpelli Dolerite intrudes various levels of the stratigraphy in the Alligator Rivers region, including the Pine Creek Succession and Kombolgie Subgroup, forming sills, dykes, lopoliths and laccoliths. It is the youngest Precambrian rock unit outcropping in the area.

Deformation since the Katherine River Group includes transpressional movement along steep strike-slip faults of various orientations and possibly some shallow thrusting. However, it is clear that displacements have not been great, because the Arnhem Land Plateau is essentially coherent and offsets along lineaments are generally minor.

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.

Reconnaissance mapping of the western Arnhem-Kakadu region was carried out by BMR personnel dating back to 1946, with more detailed work in the 1950's and 60's following the discovery of uranium at Rum Jungle. This 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 for the Alligator Rivers region (Needham, 1990; Needham et al., 1983) and a detailed report (Needham, 1988). Relevant 1:100 000 scale compilation maps were also published in colour or black & white format. Other related publications are numerous (Needham et al., 1980; Needham and Stuart-Smith, 1985; Stuart-Smith and

Ferguson, 1978; Stuart-Smith and Needham, 1982; Stuart-Smith and Needham, 1984). In more recent years, the NTGS has remapped the central parts of the Pine Creek Inlier and Milingimbi (Ahmad, 1998; Carson et al., 1999; Ferenczi and Sweet, 2004).

Regional and deposit scale metallogenic research, concentrated on uranium, has also been carried out in the Pine Creek region by a number of organisations, including BMR, Queens University, Johns Hopkins University, Bas Becking Laboratory, ANU, CSIRO, USGS and NTGS (Ahmad, 1998; Browne, 1990; Carville et al., 1990; Crick, 1981; Crick et al., 1980; Dunn et al., 1990; Ewers et al., 1985; Ferguson et al., 1980; Ferguson and Goleby, 1980; Fraser, 1980; Garven and Raffensperger, 1996; Hancock et al., 1990; Holk et al., 2003; Johnston, 1984; Maas and McCulloch, 1988; Mernagh, 1992; Needham, 1985; Needham and De Ross, 1990; Needham and Roarty, 1980; Needham and Stuart-Smith, 1980; Raffensperger and Garven, 1995a; Raffensperger and Garven, 1995b; Rossiter and Ferguson, 1980; Snelling, 1990; Solomon and Groves, 1994; Stuart-Smith et al., 1993; Stuart-Smith et al., 1980; Sweet, 2001; Tucker et al., 1980; Wilde et al., 1989; Wilde and Noakes, 1990; Wyborn, 1990).

### Local Geology of Cadell

The geological units present with the tenement are summarised in Table 1. Cadell lies at the southern extremity of the main surface expression of the Nimbuwah Complex, which occupies coastal plains and escarpment country north of the tenement, centred on King River. In this respect, it is a similar geographical and geological setting to the Nabarlek deposit 30 km to the west. Amphibolite to granulite facies gneiss, migmatite and granite of the Nimbuwah Complex crop out in the northwestern corner of the tenement, bounded from the McArthur Basin sedimentary succession to the south by a series of east- and north-east-trending faults, including the Goomadeer and Steven's Faults (Figure 3).

ROCK UNIT	THICKNESS	GEOLOGICAL AGE
Residual sand cover and laterite on tableland, silt and alluvium in valleys	Up to several meters	Cenozoic
Undifferentiated Cretaceous- sandstone, siltstone and pebble conglomerate	Remnant outliers 10-50 m	Cretaceous
Oenpelli Dolerite – intrusive dolerite sills and dykes	Up to 200 m	Palaeoproterozoic
Gumarrirnbang Sandstone – quartz arenite with minor pebble conglomerate	100-400 m	Palaeoproterozoic
Nungbalgarri Volcanics – vesicular and amygdaloidal basalt	50-130 m	Palaeoproterozoic
Mamadawerre Sandstone – quartz arenite, quartzite and conglomerate	100-250 m	Palaeoproterozoic
Nimbuwah Metamorphic Complex – foliated granite and granodiorite; gneiss, migmatite	Unknown	Palaeoproterozoic

#### Table 1 Summary of rock units exposed in Cadell

#### Figure 3 Geology of the Cadell tenement showing location of drill holes

Sedimentary and volcanic rocks of the lower Kombolgie Subgroup unconformably overlie the majority of the tenement, including the Mamadawerre Sandstone, Nungbalgarri Volcanics and Gumarrirnbang Sandstone (Sweet et al., 1999a). The 100-250 m thick Mamadawerre Sandstone, the oldest formation of the Kombolgie Subgroup, occupies the northwestern third of the tenement, where it forms a deeply dissected plateau surface (Figure 3). This area is composed largely of bare rock with sparse areas of shallow sandy soil supporting Spinifex and scrub. Sandstone is quartzose to lithic and fine- to very coarse-grained with a variety of fluviatile to shallow high-energy marine bedforms, including trough and planar cross-beds (Ojakangas, 1979).

Mamadawerre Sandstone is unconformably overlain by the Nungbalgarri Volcanics. The contact is expressed locally as 100-500 m diameter subcircular depressions ('dome and basins'), with the upper sandstone surface interpreted to represent the palaeotopographic surface of giant lunate current ripples or aeolian sand dunes with the volcanic draped over the top (Nott and Ryan, 1996). It may also represent large dewatering structures formed as a result of hot volcanic rocks draped over watersaturated sediments, which were deposited in estuarine conditions (Needham, 1978). The Nungbalgarri Volcanics consist of multiple vesicular and amygdaloidal basaltic flows. The stratigraphic thickness of the volcanic unit is variable between 50 m and 130 m, however, it may also be locally absent (Carson et al., 1999).

The Gumarrirnbang Sandstone, which occupies the southeastern third of the tenement (Figure 3), unconformably overlies the volcanics, comprising fine- to coarse-grained quartz sandstone with scattered pebbly units. Sedimentary structures include planar and trough cross-stratification, ripples and horizontal planar stratification, suggesting a proximal to distal fluvial braided stream and estuarine depositional environment (Sweet et al., 1999b).

Sills and dykes of Oenpelli Dolerite occur within basement in the northwestern corner of the tenement, at Steven's Anomaly, and within the Nungbalgarri Volcanics in the south (Figure 3).

Undifferentiated Cretaceous rocks have been mapped in the central part of the tenement (Figure 3). The rocks are exposed as weathered outcrops of lateritised sandstone and siltstone forming resistant mesa-like ridges.

The most visibly obvious structures in the tenement are deeply incised linear features of various orientation and significance, including fractures, joints and small faults (Figure 3). The largest faults, based on perceived displacement, are the: (i) north to north-northwest trending <u>Daniel Fault</u> that has about 30 m vertical throw; (ii) northeast trending <u>Goomadeer Fault</u> where Nimbuwah Complex steeply abuts Mamadawerre Sandstone; (iii) east to east-southeast trending <u>Steven's Fault</u>, where Nimbuwah Complex and Oenpelli Dolerite steeply abut Mamadawerre Sandstone and; (iv) north-

northwest trending <u>Ponting Fault</u> (named herein), passing through the Kombolgie Plateau near the Goomadeer River.

### **EXPLORATION HISTORY**

Exploration in Cadell has been carried out by AFMEX in the period 1997 to 2002 and by Cameco during the period 2003 to 2005. This work is outlined chronologically below and is summarised in Table 2, Table 3 and Table 4. Where available, digital data are contained the data directory of this report. Parts of the AFMEX dataset are in hard copy format only.

 Table 2 Summary of data obtained during exploration in relinquished part of Cadell from 1997 to 2005

 Table 3 Summary of exploration results for relinquished part of Cadell from 1997 to 2002 (AFMEX)

 Table 4
 Summary of exploration results for relinquished part of Cadell from 2002 to 2005 (Cameco)

### 1997-1998

Exploration activities carried out during the first year of the licence (Table 3) included a helicopter-borne magnetic-radiometric geophysical survey, followed up by ground reconnaissance over 67 selected radiometric anomalies (Alonso and Kastellorizos, 1998). Selected samples were geochemically analysed (Appendix 1).

### Appendix 1 AFMEX outcrop geochemistry

Five different types of radiometric anomalies were observed over the surveyed area, which are either related to uranium-thorium and or radon/radium sources.

A high-resolution (1:10 000 scale) colour aerial photographic survey was also flown, but there are no references to it in the annual reports.

### 1998-1999

Four helicopter-supported diamond drill holes (KBW2-5) totalling 981 m, were drilled on the relinquished porion of EL3347 during the second year of exploration (Figure 3; Table 5) (Kastellorizos, 1999). The aim of the program was to test the geological nature of the underlying basement, with a strong focus on the major structural zones. No mineralisation was encountered, but some weak gamma spikes were accompanied by up to 174 ppm U (Table 3; Appendix 2). Drillhole KBW5 was drilled in the northern part of EL3347 boundary active during 1998, and falls within parcel of previously relinquished blocks. Data relating to this hole are contained herein. Two additional AFMEX drillholes, KBW1 and KBW9 fall within the area retained by Cameco on 27<sup>th</sup> July 2005 and data relating to these holes are not presented in this report.

#### Table 5 Diamond drill hole summary

#### Appendix 2 AFMEX drill core geochemistry

#### 1999-2000

Four helicopter-supported drill holes (KBW6-10) were completed during the third year of exploration, comprising 1114 m of diamond drilling (Figure 3; Table 5) (Fabray et al., 2000). Nimbuwah Complex granitoid forms basement in the area and is overlain by a variable thickness of Kombolgie Formation sandstone. No mineralisation was encountered, but some weak gamma spikes were accompanied by up to 224 ppm U (Table 3; Appendix 2). Petrology reports suggest that in the weakly mineralised veins, uranium may be contained within apatite grains or is adsorbed onto clays and oxides.

Five NanoTEM ground EM traverses carried out across the Daniel Fault in the eastern part of the tenement, show a number of offsets. This data is only available in hard copy format. A test regional gravity line was also completed in the west of the tenement. A helicopter supported regional stream sediment survey and limited radiometric anomaly follow up was also carried out. Results were low-order and no further follow-up was conducted (Table 3; Appendix 3).

#### Appendix 3 AFMEX stream sediment geochemistry

#### 2000-2001

No exploration work was carried out on the licence during the forth year of tenure due to fundamental changes in the structure of the Joint Venture, as it existed previously and due to budget re-allocation (Ewington, 2001).

#### 2001-2002

No exploration work was carried out on the licence during the fifth year due to budget re-allocation and the impending withdrawal of AFMEX from the project.

#### 2002-2003

No exploration work was carried out on the licence during its sixth and final year of tenure due to budget re-allocation and the withdrawal of AFMEX as operator. Cameco began a review of AFMEX data (O'Connor, 2003).

#### 2003-2004

Exploration in the relinquished area of EL3347during this period, under Cameco's management, consisted of a data review and reprocessing of geophysical survey data (Table 4) (Rawlings and Beckitt, 2004). No new anomalies were identified, but a small number of AFMEX anomalies were found to have not been followed-up.

### 2004-2005

Due to the lack of a current anthropological site clearance survey, Cameco were unable to access any of EL3347 outside of the immediate vicinity of Steven's Anomaly. As a

result, the only Cameco exploration activities relating to the relinquished portion of the tenement involved a review of core drilled previously by AFMEX (8 holes), including revised logging and selective geochemistry, PIMA and petrography (Table 4; Appendix 4; Appendix 5; Appendix 6; Appendix 7). Cameco also undertook an airborne hyperspectral survey over the entire EL3347 using the Hymap Mark1 system operated by Stockdale-De Beers. The survey was conducted to identify areas of clay alteration that might be indicative of mineralisation.

Appendix 4 Cameco geochemical data for the relinquished portion of EL3347

Appendix 5 Cameco thin-section list for the relinquished portion of EL3347

Appendix 6 Cameco thin-section summary for the relinquished portion of EL3347

#### Appendix 7 Detailed Cameco petrography for the relinquished portion of EL3347

The key findings of the core re-logging and new analytical work are summarised as follows.

- The Nimbuwah Complex is largely (>95%) a homogenous, weakly foliated I-• type granodiorite, with minor pegmatite and aplite dykes. In some drill holes, it exhibits diffuse compositional and textural variations (banding) and contains mafic and felsic enclaves. New data indicate that the foliation and layering are magmatic (flow alignment or differentiation) and there are no gneissic fabrics, granoblastic grain growth, aluminous or calc-silicate protoliths or high-grade metamorphic mineral assemblages in the granitoid. Therefore, earlier interpretations that it is a spectrum of I- and S-type granitoids and high-grade metasedimentary gneiss, derived from a favourable 'mafic' Pine Creek Supergroup protolith (including Cahill Formation) are unlikely. Only amphibolite facies mafic gneiss enclaves/xenoliths are interpreted as Pine Creek affinity (Zamu Dolerite?). Felsic orthogneiss enclaves with igneous 'ancestry' are geochemically indistinguishable from the granitoid and are the likely main protolith, however, only in KBW005 is there evidence of interlayering that demonstrates an anatectic relationship between the two.
- Regional alteration trends from PIMA data are: weak kaolinite and/or sericite in upper Mamadawerre Sandstone; sericite in lower Mamadawerre (often confused as chlorite by AFMEX); sericite and chlorite in basement. This summary excludes anhydrous alteration phases such as haematite, leucoxene or quartz.
- Geochemical data for re-sampled AFMEX drill core provides the following highlights:
  - KBW002 (Uturn): 182 ppm U in a single narrow (20 cm) anomalous interval at 244.2 m in lower Mamadawerre Sandstone. This confirms an assay of 180 ppm U by AFMEX.
  - KBW007R basement (Nei-igmut Creek or Daniel Fault): consistently elevated background uranium assays in the range 2-14 ppm in altered basement granite over 70 m. Analyses derived from nine random spot samples (20 cm length). There is also a single selective spot assay of 68 ppm U at 148.5 m, coincident

with an AFMEX spot assay of 224 ppm U. These anomalous values appear to relate to the radiogenic Tin Camp-type granite host rock.

- KBW007R sandstone (Nei-igmut Creek or Daniel Fault): three gold analyses in the range 14-44 ppb from in lower Mamadawerre Sandstone. These anomalies do not correspond with any other anomalous elements, including uranium, and may be indicative of contamination at the sample preparation stage.
- KBW008 (Daniel Fault): 12 ppm U, 42 ppb Au, 10 ppb Pd and 8 ppb Pt at 330-335 m in a 5 m composite sample from upper Nungbalgarri Volcanics. This confirms a 9 m composite analysis by AFMEX of 14 ppm U.

Interpretation of the airborne hyperspectral data indicate that upper Mamadawerre Sandstone in the northwest of the tenement is clay poor, with weak goethite and kaolinite. This is underlain by illite and dickite as seen in gorges. Gumarrirnbang Sandstone has lower illitic and upper dickitic units.

## **EXPLORATION METHODOLOGY**

Laboratory and exploration methodologies relevant to the various AFMEX and Cameco datasets in this relinquishment report are outlined in Appendix 8; Appendix 9 and Appendix 10.

Appendix 8 Exploration methodologies for Cameco analytical work

Appendix 9 Standard geochemical methods used by Cameco

Appendix 10 Standard geochemical methods used by AFMEX

### CONCLUSIONS

Exploration work completed by AFMEX and Cameco during the period 1997-2005 on the relinquished part of EL3347 failed to identify any significant anomalism or mineralisation. Interpretation of alteration, petrological and geochemical data supports the 'unconformity model', but does not indicate any preferential sites or structures in the tenement. Airborne hyperspectral data collected in 2004 have not delineated any anomalous 'halo'-style clay targets.

### RECOMMENDATIONS

A review of radiometric, magnetic, gravity, drilling, outcrop observation, down hole and outcrop geochemistry, stream sediment geochemistry, geological mapping and landsat data was carried out in early 2004 (Rawlings and Beckitt, 2004). Drilling depths to basement would appear to be large throughout the tenement and drilling would necessarily involve expensive helicopter support. Based on this information, it is recommended that Cameco relinquish most of EL3347 at the end of the current extension period (27<sup>th</sup> July 2005). The area around Steven's Anomaly should be retained and tested in the following two years.

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