PARTIAL RELINQUISHMENT REPORT
EL31145
"BARROW CREEK LITHIUM PROJECT"
7 November 2016 to 6 November 2020

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Date:	6 November 2020
Tenement Holders:	Lithium Developments Pty Ltd (100%)
Tenements:	EL31145
Reporting Period:	7 November 2016 to 7 November 2020
Distribution:	Core Lithium Ltd (1) Northern Territory Department of Primary Industry and Resources (1)
Map Sheet:	Barrow Creek 1:250,000 sheet (SF53-06) Crawford, Barrow and Home of Bullion 1:100,000 sheets
Target Commodity:	Lithium, Gold, Base Metals
Keywords:	Lithium, Gold, Base-Metals, Soil Geochemistry, Rock-Chip Geochemistry, Geological Mapping, Pegmatite, LCT-Type

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1. SUMMARY

This is the Relinquishment Report by the Core Lithium Ltd (CXO) for relinquished blocks of the Barrow Creek Lithium Project exploration licence EL 31145. This retained portion of this EL is held 100% by Lithium Developments Pty Ltd, a wholly owned subsidiary of CXO. The relinquished part was in its 4th year of tenure (granted 7 November 2016).

In the Project area, swarms of intrusive pegmatite dykes and sills comprising the Barrow Creek Pegmatite Field are related to the Ooralingie and Bean Tree granites of the Barrow Creek Granite Complex. The Barrow Creek Granite Complex is one of several large Paleoproterozoic felsic intrusive complexes in the region with ages in the range 1820–1789 Ma. Pegmatite veins vary compositionally and texturally from medium to coarse-grained equigranular quartz-feldspar-muscovite-tourmaline-garnet pegmatite, quartz-rich muscovite-tourmaline pegmatite, compositionally segregated (zoned) quartz-muscovite/quartz-feldspar-tourmaline pegmatite and megacrystic feldspar-bearing pegmatite. Greisenisation associated with pegmatite intrusion is also common. The pegmatite swarms and granite bodies intrude the poorly exposed Paleoproterozoic Lander Rock Formation and mafic intrusive rocks of the Aileron Province, Northern Arunta. Rocks of the Lander Rock Formation exhibit LP-HT metamorphic grade and generally comprise biotite-muscovite-andalusite-bearing metapelitic, metapsammitic and metapsammo-pelitic schist.

The pegmatite occurrences in the Barrow Creek Pegmatite Field have previously provided opportunities for the discovery of commodities such Sn-Ta-W. However, prior to investigation by government geologist Frater (2005), no historical exploration or prospecting investigations had explored the potential for pegmatite-related lithium (Li) mineralisation.

Geochemical analysis by Frater (2005) on samples from historical prospects in the general area strongly indicate the potential for Lithium-Caesium-Tantalum (L-C-T) Type pegmatite associations and mineralisation in the Barrow Creek Pegmatite Field. Consequently, the potential for discovery of prospective L-C-T Type pegmatite mineralisation provides a significant opportunity consistent with the current strategic profile of lithium-focussed CXO.

No on-ground work was conducted on the relinquished portion EL 31145 during its tenure This is largely due to a substantial commitment of resources and funds by CXO to pursue an aggressive resource definition drilling campaign at the Finniss Lithium Project area, proximal to Darwin. This portion was relinquished because it holds less prospectivity for lithium, owing to the area being largely covered granite.

CXO are encouraged to continue work on this project and believes there is an excellent strategic fit between the lithium potential of Barrow Creek Pegmatite Field (also the nearby Anningie Tin (Pegmatite) Field), direct rail link to Darwin Port and the Finniss Lithium Project. This strategic fit in turn expands potential for Darwin to become long-term, central processing and transport hub for NT lithium and spodumene production for CXO. However, the relinquished portion holds much less potential, as it is largely covered granite.

2. INTRODUCTION

This report covers the 4th and final year of exploration activities, during its tenure, within an area of EL 31145 that was relinquished in November 2020 (Figure 1). The Barrow Creek Project is located within the Crawford, Barrow and Home of Bullion 1:100,000 map sheet areas and is located within the BARROW CREEK (SF53-06) 1:250,000 map sheet.

All weather access to the Project area from Alice Springs is north via the Stuart Highway (~300 km). Reliable fair-weather access to individual sites is via a series of established pastoral and historical exploration tracks. The project overlies the Neutral Junction Pastoral Lease (PPL 3375) and Stirling Station Pastoral Lease (PPL 655 and 1092; Figure 1).

There has been no reportable on-ground exploration work conducted over the relinquished portion of EL 31145 during its tenure.

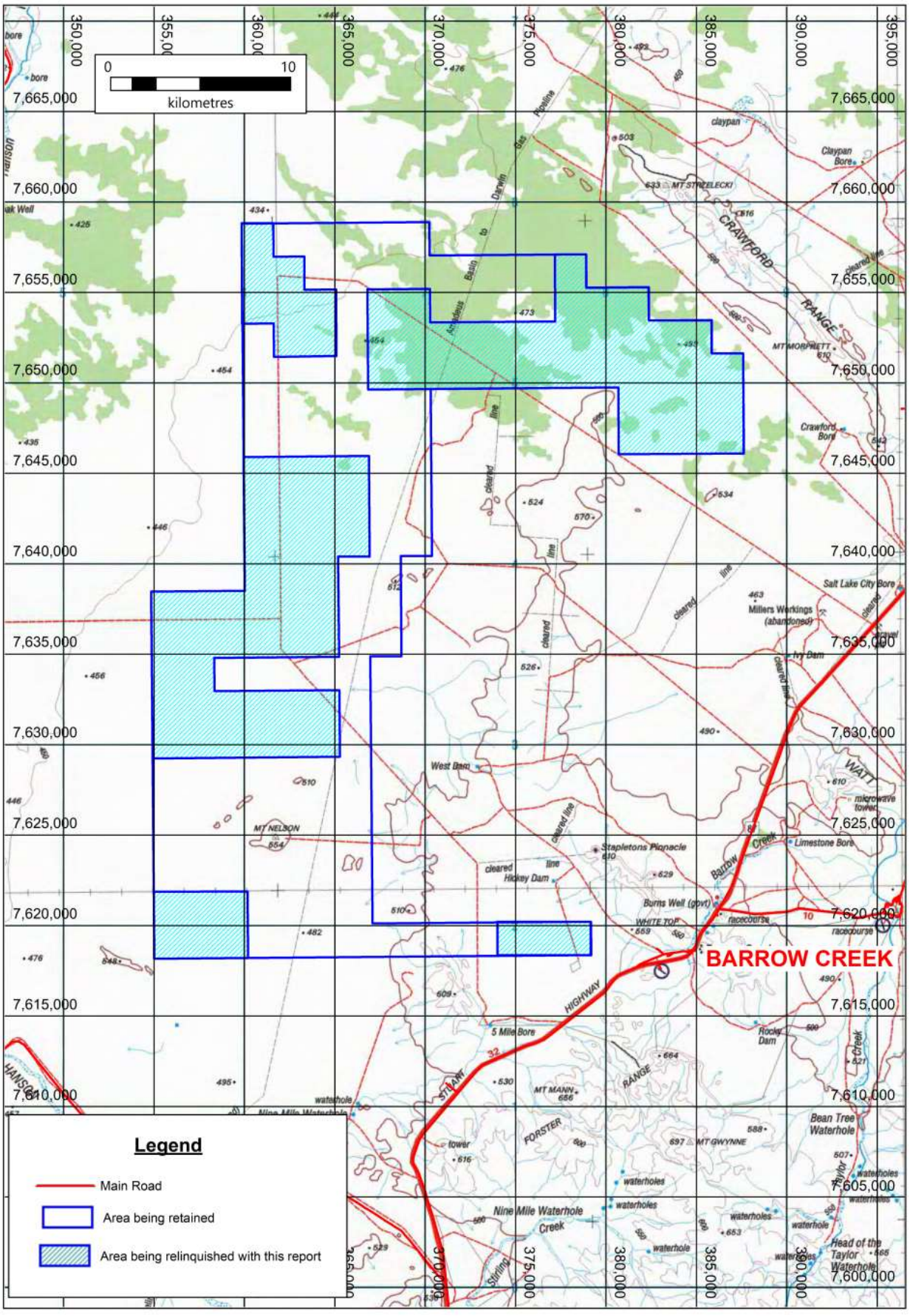

Figure 1: Location Map of EL 31145, showing the relinquished area (blue screen)

3. TENURE

EL 31145 was granted to Lithium Developments Pty Ltd on 7 November 2016 and is in its 4th year of tenure. Tenure details are tabulated in Table 1.

Table 1: Tenure Details for EL31145

Tenement	Owner	Date Granted	Tenure	Size
EL 31145	Lithium Developments Pty Ltd (100%)	07/11/2016	6 Years	Relinquished 95 blocks/303.93 km^2 Retained 95 blocks/303.93 km^2 Total prior to relinquishment 190 blocks/607.86 km^2

4. GEOLOGY AND MINERALISATION

The Barrow Creek Lithium Project area is located at Barrow Creek, Northern Territory, approximately 300 km N of Alice Springs (Figure 1). The area is characterised by light mulga and acacia tree species in spinifex and tussock grass aeolian sandy plains that largely obscure underlying bedrock. The region is punctuated by low hills and rises that are cut by NE and W trending recent alluvial drainage systems. The drainage systems are only periodically subject to seasonal flooding events and are generally dry. In the S and SE are several SE trending low ranges.

The oldest rocks in the region are the poorly exposed Paleoproterozoic Lander Rock Formation (formerly Lander Rock beds) and mafic intrusive rocks of the Aileron Province, Northern Arunta (Bagas & Haines 1990, Haines et al 1991, Scrimgeour 2013; Figures 2 and 3). The Lander Rock Formation is considered a transitional lateral equivalent (Scrimgeour 2013) of the Bullion Schist of Haines et al (1991) and a probable time equivalent of the Ooradidgee Group in the Davenport Province of the Tennant Region to the N (Claoué-Long et al 2008b). Sedimentary facies and associations within the Lander Rock Formation indicate deposition in a proximal shallow-water marine environment (Donnellan 2008). Regional geochronological studies suggest a likely depositional age in the range 1840 – 1830 Ma (Cross et al 2005, Cross and Crispe 2007, Claoué-Long et al 2008a). Metasedimentary rocks of the Lander Rock Formation exhibit LP-HT metamorphic grade and generally comprise biotite-muscovite-andalusite+/-sillimanite+/-garnet bearing metapelitic, metapsammitic and metapsammo-pelitic schist. In the Barrow Creek-Lander River region the Lander Rock Formation and mafic intrusives have gold and base-metal prospectivity (see below).

The region is punctuated by several large Paleoproterozoic felsic intrusive bodies with ages in the range 1820–1789 Ma (Scrimgeour 2013). Granitoids are typically equigranular to porphyritic biotite-granite, biotite-muscovite granite, medium to coarse-grained quartz-feldspar-muscovite-tourmaline+/-garnet leucogranite+/-metasedimentary enclaves, biotite-granodiorite and monzogranite. In adjacent Lander Rock Formation local tourmalisation, pseudomorphic replacement of andalusite by quartz-muscovite and growth of minute garnet porphyroblasts are interpreted to be associated with contact metamorphism during intrusion. Similarly, local hornfels and calc-silicate rock in areas such as the Ringing Rocks Ta-Sn prospect may be attributed to contact metamorphism.

In the exploration area swarms of intrusive pegmatite dykes and sills are related to the Ooralingie and Bean Tree granites of the Barrow Creek Granite Complex (~1803 Ma; Smith 2001). Pegmatite veins vary compositionally and texturally from medium to coarse-grained equigranular quartz –

feldspar-muscovite-tourmaline+/-garnet pegmatite, quartz-rich muscovite-tourmaline pegmatite, compositionally segregated (zoned) quartz-muscovite/quartz-feldspar+tourmaline pegmatite and megacrystic feldspar-bearing pegmatite. Greisenisation associated with pegmatite intrusion is also common.

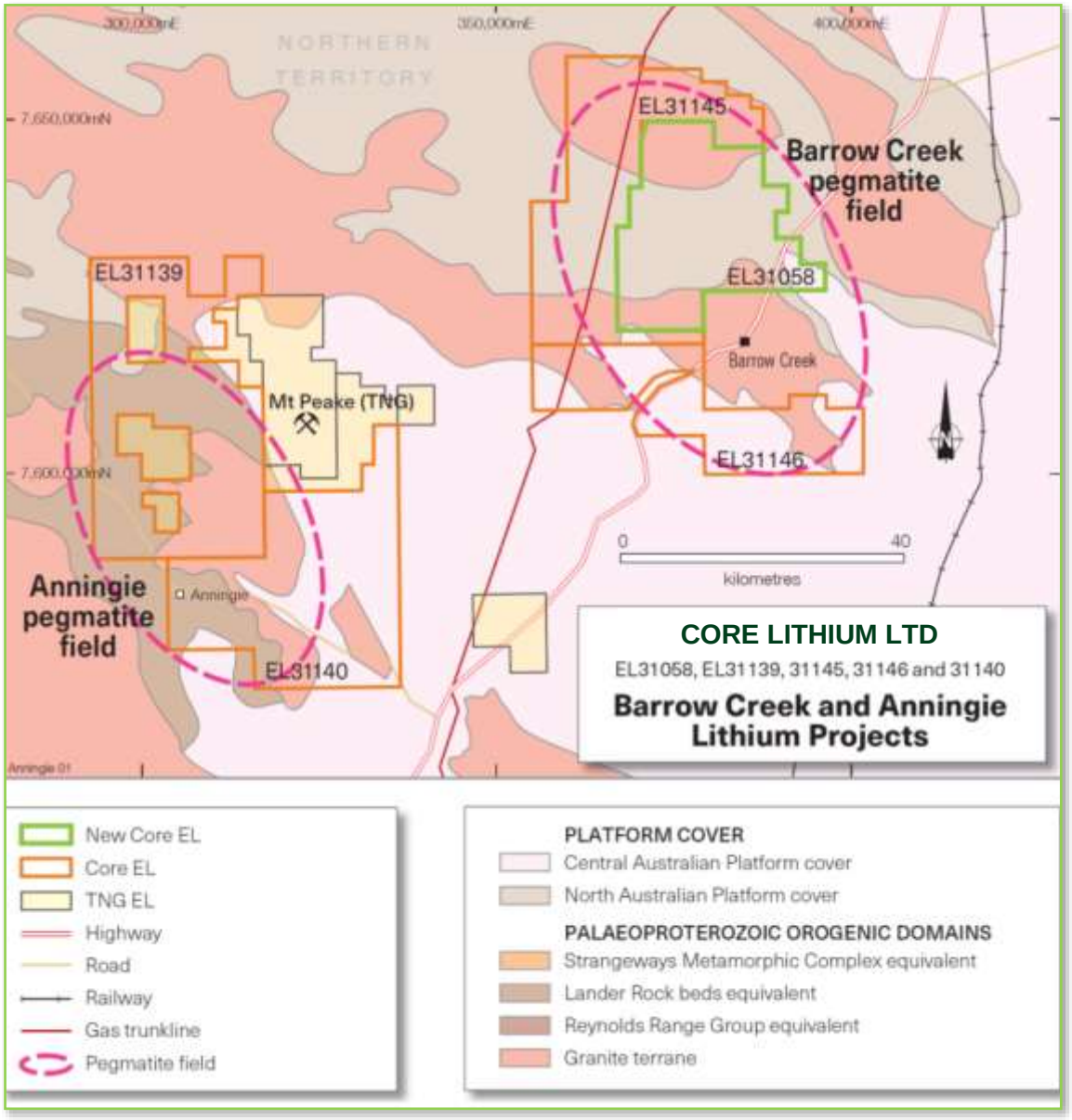

Figure 2: CXO's Anningie and Barrow Creek Pegmatite Fields. Interpreted regional geology (DPIR) as background.

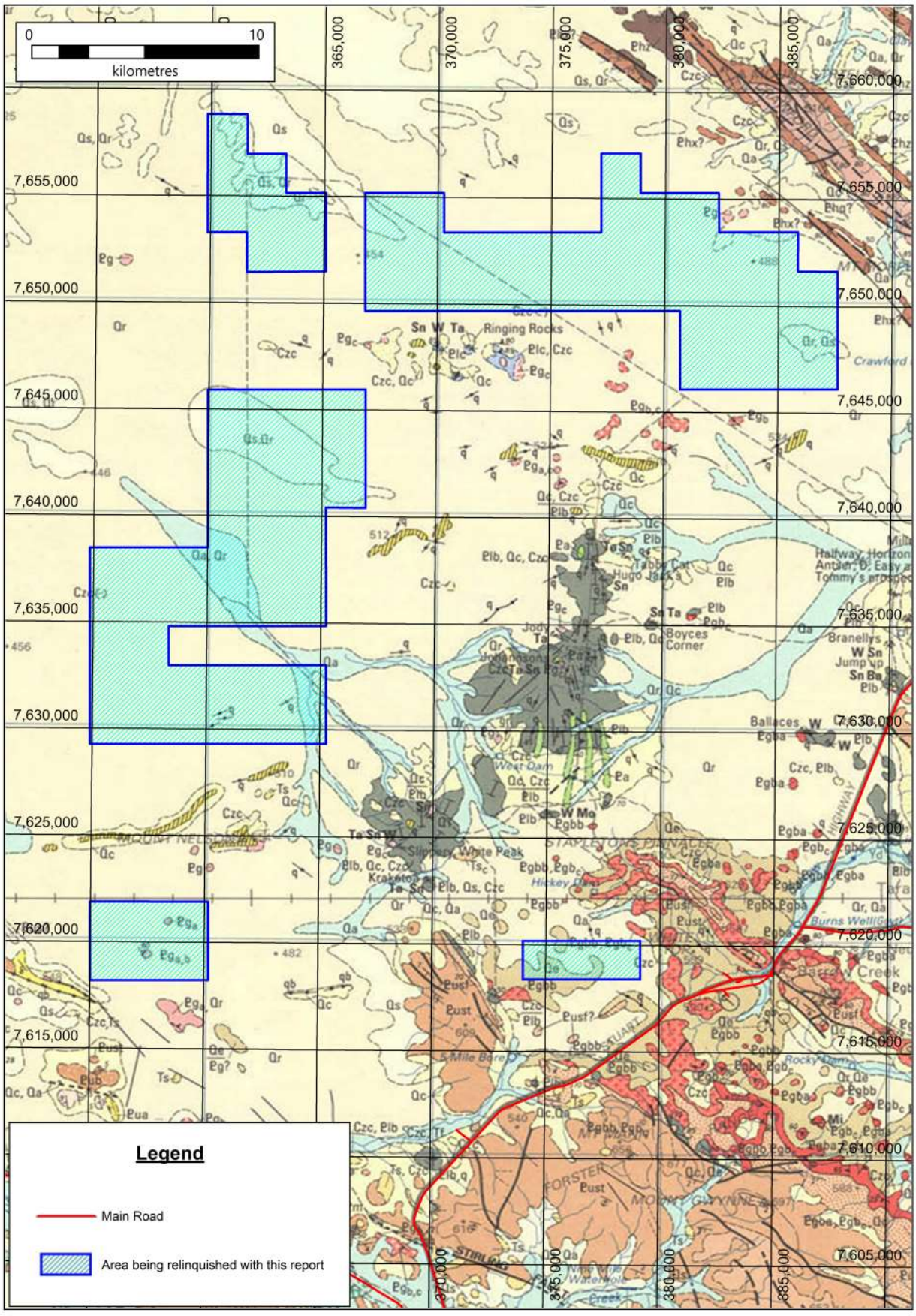

Figure 3: Regional Geology of the relinquished blocks of EL31145 with respect to the Barrow Creek pegmatite field.

The felsic intrusives have historically provided opportunities for the discovery of commodities such as those in the Barrow Creek Sn-Ta-W Pegmatite Field (Frater 2005, Donnellan 2013, Scrimgeour 2013; Figure 2 and 3). However, prior to Frater (2005) no historical investigations had explored the potential for pegmatite-related lithium mineralisation. The pegmatite of the Barrow Creek Pegmatite Field is divided on geochemical grounds by Frater (2005) into the Eastern and Western Pegmatite Groups, and a third weakly mineralised Neutral Junction Pegmatite Group.

A summary of these divisions is provided in Scrimgeour (2013). Pegmatite of the Neutral Junction Pegmatite Group were not investigated during the current reporting period. Pegmatite occurrences belonging to the Eastern and Western groupings of Frater (2005) and includes the:

- Jump Up and Aster prospects (Eastern Pegmatite Group), and
- Tabby Cat, Hugo-Jack's, Boyce's Corner, Johannson's, Jody's, Slippery, Krakatoa and the Ringing Rocks prospect areas (Western Pegmatite Group).

Unconformably overlying the Paleoproterozoic stratigraphy and intrusive rocks are the unmetamorphosed, Neoproterozoic to Devonian platform cover sedimentary sequences of the contiguous Southern Georgina and Wiso basins (Dunster et al 2007, Kruse et al 2013). The interconnected Georgina and Wiso basins (and Daly Basin) collectively formed part of the vast middle-Cambrian Centralian Superbasin that extended across northern, central and southern Australia. In the S of the project area the ranges of flat lying-to gently undulating sedimentary rock sequences are eroded remnants of the Central Mount Stuart Formation of the Georgina Basin.

Throughout the exploration area are numerous W-WNW to NW trending thick white quartz blows and resilicified creamy brown quartz-breccia zones.

These structures are most likely associated with numerous W to NW trending faults interpreted from geophysical data and mapped by Bagas and Haines (1990), Haines et al., (1991) and Donnellan (2008). The on-ground positions of interpreted faults are often coincident with elongate low mounds of white quartz lag and areas of scattered quartz lag, float metasedimentary and mafic rock. Where exposed these structures are generally steep N to NE dipping with interpreted N-over-S thrust displacement. A major NW-trending thrust fault system likely separates rocks of the Barrow Creek Granite Complex and associated Barrow Creek Sn-Ta-W (Pegmatite) mineral field in the S and SW, from the Ali Curung Granite dominated polymetallic domain to the N and NE. It is suggested here that the apparent mineral species partitioning across the interpreted structure may indicate the influence of a fundamental crustal scale controlling structure though the region. These faults appear to define a semi-continuous network from the Barrow Creek Region through to the Tanami, parallel to and coincident with the Willowra Gravity Ridge. Results of the 2005 Tanami Seismic Survey indicate many of the faults with comparable scale and along-strike position are fundamental crustal-scale features interpreted to be associated with a buried Paleoproterozoic-age continental suture zone (Goleby et al 2009). The structure has a probable multi-phase history from the Paleoproterozoic through to the ~300Ma Alice Springs Orogeny, involving extensional basin-formation, reactivation (inversion?) and modification.

5. PREVIOUS EXPLORATION

The CXO Barrow Creek Lithium Project area falls within the general region known as the Barrow Creek Pegmatite Field (Figure 2) and was subject to scattered early prospecting and small-scale mining in the period 1930s –1950s. Shallow metre-scale discovery pit workings and alluvial scrapes sited on and around pegmatite occurrences are generally all that remain of this early phase of mining, exploration and prospecting. These small workings were picked over largely for W-Ta-Sn, and there are generally no records of production (Dunlop 1942, McGain 1980, Forsythe 1982a, Wyche 1986, Frater 2005). These early small mines and prospects include (but are not limited to)

Ballace's Mine (W), Hugo-Jack's mine (Sn-Ta), Boyce's Corner (Sn-Ta), Johannson's (load and alluvial Sn-Ta-W), Ringing Rocks (Sn-W-Ta), Jump Up (Ta-Nb-W-Sn-Ba), Slippery (Ta) and QT (Sn; Figure 3).

It is estimated that around 5 t of tungsten was produced at Ballace's Mine (Ballace's Claim 2; Dunlop 1942) where mineralisation is associated with pegmatite and quartz veins cutting metasedimentary gneiss and schist of the Lander Rock Formation (Bullion Schist member). At Ballace's Mine an extensive series of shallow pits and costeans in areas of outcrop define a mineralised strike length of approximately 2.7 km.

In the early 1970's Kewanee Australia Pty Ltd (Kewanee) conducted a regional exploration campaign across the Barrow Creek region which primarily focused on identifying Cu, Pb, Zn, W and Sn mineralisation (Cogar 1972). Analysis for Li-content were not conducted.

The aerial extent of current EL 31145 falls within the extent of the early Kewanee reconnaissance program which utilised aeromagnetics, radiometrics and EM survey techniques to identify areas of interest for follow-up mapping and geochemical surveys.

Areas of interest identified by Kewanee included the Ringing Rocks, Ivy-through to Jump Up (~2 km of strike), Ballace's and Tabby Cat prospects. Reconnaissance mapping and rock chip geochemistry investigations at Ringing Rocks, including excavation of a costean, resulted in discovery of up to 5 % scheelite (W) in calc-silicate rock but no production. At Ivy, follow-up reconnaissance mapping and air track drilling did not encounter any significant anomalous mineralisation. In the Ballace's prospect area, follow-up regional soil geochemical surveying did not establish any significant mineral anomalism. At the Tabby Cat prospect, follow-up exploration involving gridding, geochemical soil sampling and trench excavations did not establish any significant mineral anomalism (Cogar 1972).

During 1978 – 1979 AV Miller conducted extensive exploratory prospecting work across the Eastern Pegmatite Group (Freeman 1978, 1979). Work included extensive bulldozing of cover and trenching to expose bedrock and resulted in the discovery of pegmatite-related and eluvial tantalum (columbite, tapiolite) and tin mineralisation at the Millers prospect, Tommy's Show, Anster and Horizontal. Except for Anster, these prospects are off CXO EL 31058. Nevertheless, these prospects, together with Jump Up which lies approximately 4 km farther SSW, appear to be part of a contiguous sub-surface regional trend that can be observed in regional aeromagnetic data. AV Miller also inspected historical prospects in the Johannson's prospect area (EL 2188) and the lease, together with ground over the Eastern Pegmatite Group, was introduced to, and taken up by, R.B Mining in 1979.

An extensive exploration program during the period 1980-1982 was subsequently undertaken R.B Mining over the Barrow Creek Pegmatite field area. The R.B Mining exploration program focussed on pegmatite-related tantalite (Ta) mineralisation and involved gridding, reconnaissance mapping, sampling of mullock, extensive backhoe trenching and clearing of colluvial and alluvial cover to expose bedrock, auger drill sampling and geochemical analyses over know historical workings and other geochemical targets identified during initial surveying (McGain 1980, Forsythe 1982a, b).

For prospects in the Western Pegmatite Group, initial reconnaissance-level auger drilling and stream sediment sampling programs during 1980 covered the Ringing Rocks, Slippery, Krakatoa, Johannson's, Tabby Cat, Hugo-Jack's, Boyce's Corner, Jody's prospect areas. Geochemical analysis did not include lithium, and results of this initial exploration suggested:

- Areas of pegmatite in the northern and southern section of the Western Pegmatite Group were prospective for tantalum, and

- All granite contact zones were prospective for tantalum, in particular the western margin contact with a large granite to the W, and a suspected contact margin to the E related to a probable granite body under sandy plains between Hugo-Jack's (and Tabby Cat) area and the Millers/Ivy prospect area of the Eastern Pegmatite Group.

A brief follow-up reconnaissance of Ringing Rocks was made in 1981 involving collection of 10 stream sediment samples for XRF analysis of Ta, Sn, Nb and W. Only trace amounts of these elements were identified (Forsythe 1982a).

More detailed investigations were conducted by R.B Mining during 1981-1982 over the Slipper-White Peak, Krakatoa, Johannson's and Tabby Cat prospect areas.

Geological mapping at 1:1000 scale of the Slippery-White Peak area during 1981-1982 was based on extensive outcrop traversing and trenched exposures. The mapping defined a large pegmatite body at Slippery approximately 300 x 150 m in length and width but of unconstrained depth extent. The large pegmatite body locally contains both granitic and pegmatitic textures, and together with numerous other narrow pegmatite veinlets intrudes greenschist facies metasedimentary schist of the Lander Rock Formation. An auger-drilling and sampling program detected low concentrations of Ta-Nb, and trenches were channel-sampled for Ta, Sn, Nb and WO_3. Results of trenching and small exploratory pits indicated erratic tantalite distribution to be associated with quartz blows within the large pegmatite, and in the NW and NE sections of the large pegmatite body. The mineralisation was described as occurring in small pods and of insufficient grade and volume to warrant further investigation. Testing of eluvial and alluvial gravels at Slippery resulted in an estimated average recoverable grade of 18 g/m^3 Ta_2O_5 and was similarly concluded to be uneconomic (Forsythe 1982a).

The Krakatoa prospect, located approximately 2 km SE of Slippery, was discovered in 1980 by R.B Mining after anomalous tantalum values in the range 230-3940 ppm were returned during scout auger drilling (Forsythe 1982a). The prospect occurs on a low rise and is characterised by subcrop quartz-tourmaline+/-muscovite veining and abundant quartz scree. Follow-up detailed mapping at 1:2500 scale and systematic auger drilling was unable to repeat the results of the 1980 season and did not detect any significant mineral anomalism.

Like Slippery, the Johannson's prospect area was mapped at 1:1000 scale by R.B Mining (Forsythe 1982a). Mapping during 1981-1982 was based on extensive traversing, exposures afforded by the historical workings, and trenched exposures. Historical workings included a 6 m deep shaft and several shallow pits on an irregular coarse-grained pegmatite dyke at the crest of a low ridge and bulldozed shallow alluvial workings on the NE flank of the ridge and in one of the gullies to the SW. 2 main pegmatite bodies were mapped and sampled from the Johannson's prospect area, however only traces of Sn and W were detected in both pegmatites and the average tantalum grade was considered to be uneconomic. 15 alluvial and eluvial gravel samples from the historical workings were collected and analysed, however results were also disappointing. A resource of only 145.6 kg of Ta_2O_5 at an average grade of 12.7 g/m^3 was inferred, and mineralisation was considered too low grade and too small to be economic.

Work by R.B Mining in 1981 at the Tabby Cat prospect involved gridding, auger-drill sampling, trenching and compilation of a detailed 1:2500 scale geological map (Forsythe 1982a). No extensive trenches are evident today, however their work indicated low-grade pegmatite-related mineralisation was widespread. A pegmatite swarm of narrow feldspathic dykes had general NNW strike and auger geochemistry indicated that a low-level Sn anomaly (max SnO_2 28 g/m^3) was open to the S, E and NE. The prospect was subsequently downgraded to uneconomic for eluvial tantalum or tin and relinquished.

Reconnaissance stream sediment sampling and auger drilling in 1981 over the areas around Hugo Jack's and Boyce's Corner (~2.75 km SE of Hugo Jack's) by R.B Mining returned erratic Sn-Ta anomalism approximately 500 m S of Hugo Jack's, and low-level Sn-Ta anomalism W and NW of Hugo Jack's. The anomalism W and NW of Hugo Jack's was noted to be coincident with an approximately 2 km long swarm of pegmatite. Local high Sn anomalism was also detected immediately W of the Hugo Jack's Sn (and Ta) mine, however the relatively low level of anomalism over the general area suggested mineralisation was not of economic significance.

The historical Jody's Ta prospect and adjacent areas were also investigated by R.B Mining. A mullock grab sample containing tantalum encouraged them to conduct exploratory trench sampling across an historical prospecting hole which exposed a pegmatite dyke in granite.

A channel sample did not return any significant mineral anomalism, tantalum was considered likely to be restricted to small pods, and the prospect was downgraded as economically insignificant (Forsythe 1982a).

Reconnaissance mapping by R.B Mining in 1980 also identified the Eastern Pegmatite Group of the Barrow Creek Pegmatite Field as an area of potential pegmatite-related tantalite (Ta) mineralisation (McGain 1980, Forsythe 1982b). A follow-up program during the years 1980-1981 included reconnaissance mapping, sampling of mullock, extensive backhoe trenching and clearing of colluvial and alluvial cover to expose bedrock (including the Jump Up prospect area), auger drilling and alluvial sampling. While pegmatite-related Ta-Sn mineralisation was geochemically anomalous, overall results were disappointing and grades were considered sub-economic (Table 2). Testing of uniformly thin eluvial gravels was similarly disappointing with no significant mineralisation enrichment indicated. A resource of only 170 kg of Ta_2O_5 at an average grade of 31 g/m^3 was inferred with similar minor quantities of SnO_2, Nb_2O_5 and WO_3 (Forsythe 1982b).

Lithium was not the focus of the R.B Mining program and therefore was not included in geochemical analysis (Table 2). Similarly, the results of rock chip sampling by R.B Mining from along the Stuart Highway-Jump Up road cutting did not include lithium (Table 2).

Table 2: Summary of pegmatite sample chemistry (Forsythe 1982b in Frater 2005).

Pegmatite	Small chip samples (average ppm)				Large channel samples (average ppm)			
	No of samples	Ta	Sn	Nb	No of samples	Ta	Sn	Nb
Millers	25	87	346	44	4	106	288	35
Millers South	7	62	214	43	1	95	110	40
Millers South, schist	1	10	65	10	0			
Tommys Show	5	183	65	47	4	67	137	25
Antser	0				5	50	210	30
Easy	0				4	33	74	24
Jump Up	7	40	72	40	0			

During the years 1993 – 1999, Normandy NFM Pty Ltd (Normandy; formerly Normandy Gold, formerly Poseidon Gold Ltd) conducted a limited exploration program 'Millers Prospect-Area 1' over ground N of Jump Up (EL8177 and EL9432; Mujdrica 1994, Morris 1997, Smith 1999a, Longmire & Adrichem 1999). The program was primarily focussed on shear-hosted and/or granite-related gold targets. Lithium was not included in geochemical analyses. The structure and strategic focus of Normandy was undergoing significant change during this period and the limited work by Normandy in the area included:

- Acquisition of aeromagnetic and radiometric data flown at 100 m grid spacing and 40 m height,

- Compilation of a regional regolith map,
- Regional soil geochemistry, and
- Follow-up shallow VAC drilling (225 holes for 1071 m) and RAB drilling (13 holes for 352 m at Ringing Rocks and a further 11 regional RAB drill holes along fence lines and tracks).

Compared to the rest of the general area, the Ringing Rocks prospect was found to be an area of relatively high magnetic character.

Initial VAC drilling at Ringing Rocks returned low order Bi (99 ppm) and Au (12 ppb) anomalism. Follow-up VAC drilling could not verify the results of the initial drilling program. Similarly, no mineral anomalism was found at Ringing Rocks during a small follow-up RAB drilling program. In 1998 it was decided that the area did not fit the companies' strategic profile and the leases were relinquished in 1999.

In 2002 and as part of a regional government survey into the mineralisation potential of pegmatite in the Northern Territory, 5 historical prospects from the Western Pegmatite Group within current EL 31058 were briefly inspected and sampled by Frater (2005). These include Hugo Jack's, Tabby Cat, Johannson's, Jody's and Ringing Rocks prospects. Grab samples from historical mullock dumps were subjected to geochemical analysis, including lithium, and the results are presented in Table 3. While attempts by Frater were made to inspect Boyce's Corner prospect, no in situ pegmatite or mullock was found and hence no samples were submitted for analysis. In summary:

- 4 samples from Hugo Jack's returned (averaged) moderately high lithium (111 ppm), low Cs (54 ppm), moderate Nb (103 ppm), high Rb (1000 ppm) and high Sn (1415 ppm),
- 3 samples from Tabby Cat returned (averaged) high lithium (480 ppm), moderately high Cs (715 ppm), low Nb (40 ppm), very high Rb (3367 ppm) and low Sn (143 ppm),
- 3 sample from Johannson's returned (averaged) low-moderate lithium (52 ppm), moderately low Cs (43 ppm), low Nb (53 ppm), high Rb (710 ppm) and low Sn (30 ppm),
- 2 samples from Jody's returned (averaged) low lithium (25 ppm), low Cs (10 ppm), low Nb (15 ppm), low Rb (165 ppm) and low Sn (15 ppm), and
- 4 samples of pegmatite from the Kewanee costean returned an average low Li content of 29 ppm.

Table 3: Average of chemical data for pegmatite grab samples (from Frater 2005).

Pegmatite (sample size)	Hugo Jacks (4)	Tabby Cat (3)	Johannsons (3)	Jodys (2)	Ringing Rocks (4)	Neutral Junction (3)
Oxides (wt%)						
SiO_2	73.40	63.90	69.60	67.80	75.80	75.30
Al_2O_3	15.40	21.13	17.40	19.90	13.48	14.53
CaO	0.28	0.21	0.51	0.27	0.56	0.05
Fe_2O_3	1.08	1.63	1.25	0.90	1.25	1.91
K_2O	2.85	7.94	3.61	1.18	2.25	4.09
MgO	0.08	0.25	0.14	0.85	0.13	0.19
MnO	0.07	0.08	0.03	0.01	0.03	0.05
Na_2O	3.83	1.27	4.86	0.09	4.42	0.54
P_2O_5	0.23	0.14	0.13	0.04	0.13	0.04
TiO_2	0.018	0.073	0.020	0.015	0.024	0.060
LOI	2.19	2.45	2.09	8.42	0.98	2.34
Trace elements (ppm)						
Ba	105	112	122	120	19	80
Be	163	13	189	7	4	12
Cs	54	715	43	10	12	44
Ga	42	48	34	28	27	40
Hf	2.9	0.5	1.3	2.3	0.6	0.5
La	8	6	4	44	9	5
Li	111	480	52	25	29	570
Nb	103	40	53	15	5	82
Rb	1000	3367	710	165	256	850
Sn	1415	143	30	15	10	198
Sr	43	14	37	70	9	4
Ta	43	46	27	3	2	46
W	14	21	7	5	3	26
Y	7	4	3	12	8	2
Zr	58	8	15	54	22	12

The mineralisation potential of the Eastern Pegmatite Group was also investigated by Frater (2005) and Millers, Horizontal, Halfway, Ivy, Tommy's Show and Jump Up (North) prospects were briefly inspected and sampled. Geochemical analysis by Frater (2005) on pegmatite mullock grab samples from these prospects indicates relatively moderate-to high Li contents (Table 4).

3 rock chip samples of mullock from Jump Up (Jump Up North, located within EL 31058) returned one of the highest (averaged) anomalous Li contents of 228 ppm from pegmatite in the group (Table 4). Compared to other samples from the Eastern Pegmatite Group, samples from Jump Up (North) also contained moderate-to high Rb (1170 ppm), and moderate Cs (117 ppm), Sn (1205 ppm) and Ta (46 ppm).

Table 4: Average of chemical data for pegmatite grab samples (from Frater 2005).

Pegmatite (sample size)	Millers (5)	Horizontal (4)	Halfway (2)	Ivy (7)	Tommys Show (1)	Jump Up North (3)
Oxides (wt%)						
SiO_2	57.30	71.20	65.10	69.30	63.60	74.50
Al_2O_3	28.14	17.55	22.90	18.94	23.7	16.03
CaO	0.10	0.18	0.12	0.24	0.23	0.08
Fe_2O_3	0.83	0.82	1.27	0.91	0.86	1.01
K_2O	7.22	4.46	6.16	1.96	6.81	3.84
MgO	0.11	0.11	0.15	0.65	0.17	0.05
MnO	0.02	0.04	0.01	0.03	0.02	0.05
Na_2O	0.73	0.50	0.62	0.10	0.29	2.63
P_2O_5	0.07	0.08	0.01	0.03	0.03	0.06
TiO_2	0.034	0.021	0.090	0.024	0.090	0.009
LOI	4.14	3.00	3.69	6.95	3.70	1.90
Trace elements (ppm)						
Ba	238	268	53	276	140	62
Be	12	22	9	13	17	105
Cs	601	129	115	59	390	117
Ga	79	40	45	37	73	49
Hf	5.0	4.5	0.5	1.5	0.5	0.5
La	74	46	6	86	5	7
Li	105	54	87	296	100	228
Nb	103	228	58	118	50	73
Rb	4610	1438	1400	673	3350	1170
Sn	248	10778	350	3771	220	1205
Sr	29	88	15	70	20	11
Ta	154	436	65	117	81	46
W	8	7	12	9	10	11
Y	58	11	1	3	1	3
Zr	45	43	8	18	8	8

The pegmatite class considered most important for lithium mineralization (target minerals include spodumene, petalite, amblygonite and lepidolite) is the L-C-T type. While there is insufficient geological and geochemical information to draw any definitive conclusions with respect to prospectivity for lithium mineralization, geochemical information contained in the Northern Territory Geological Survey (NTGS) Whole Rock database indicates pegmatites in the Barrow Creek region are most likely of the L-C-T type, and therefore should be prospective for lithium.

During the first year of exploration (8 December 2016 to 7 December 2017) by CXO over EL 31145, the following key activities were undertaken:

- Literature review encompassing EL 31145, EL 31146 and EL 31058 and development of an exploration model for the Project Area,
- Desktop-based compilation of historical GIS data; ongoing digital capture and compilation of data collected by previous explorers and miners,
- Prospectivity review of all received rock chips and soil samples geochemical results and identification of 3 potential target areas considered highly prospective for pegmatite-related Li-mineralisation, and

No on-ground activity took place on the relinquished portion of EL31145.

6. YEAR 4 – WORK COMPLETED DURING THE CURRENT REPORTING PERIOD

CXO's key objective throughout 2020 has been to make Darwin and CXO's Finniss Lithium Project near Darwin a central processing and global transport hub for NT lithium and spodumene production (Figure 4). Throughout 2017 to 2020, CXO continued to acquire and consolidate tenure position across the Finniss Lithium Project area, acquire detailed geophysical data and prosecute an aggressive resource definition drilling campaign. Consequently, on-ground exploration activities were not conducted on the relinquished portion of EL 31145 during its tenure. Nevertheless, while progressing the Finniss Lithium Project has absorbed the majority of CXO's resources and funding over this time, CXO believes there is an excellent fit between the lithium potential of the Barrow Creek Pegmatite Field (also the nearby Anningie Tin (Pegmatite) Field), direct rail link to Darwin Port and the Finniss Lithium Project.

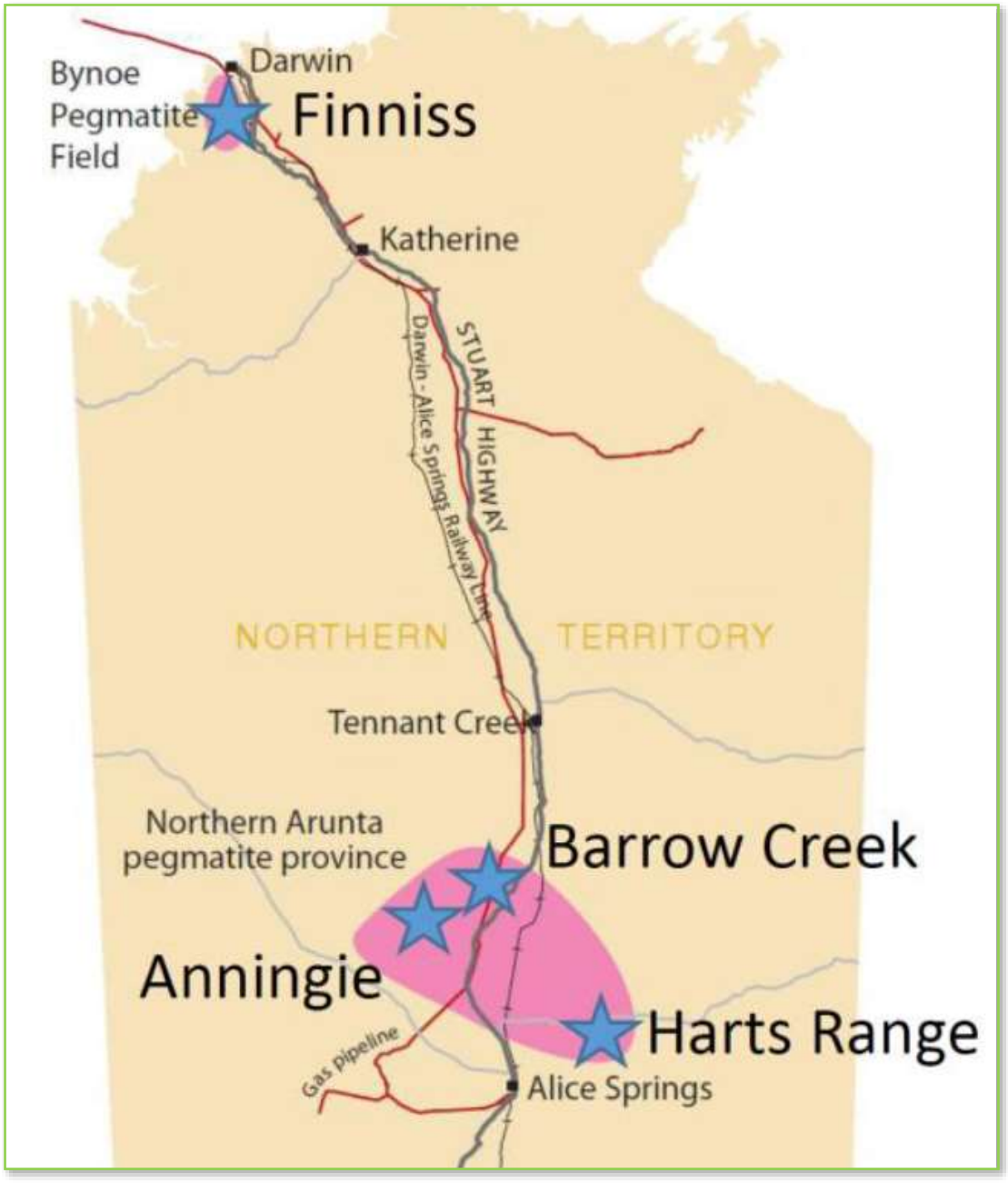

Figure 4: Tin-tantalum pegmatite provinces of the Northern Territory (from Frater 2005).

7. CONCLUSIONS AND RECOMMENDATIONS

Due to ongoing commitments at CXO's Finniss Lithium Project area, on-ground exploration activities were not conducted on EL 31145 during the reporting period 8 December 2019 to 7 December 2020. Core also did not carry out any exploration on the relinquished part of EL 31145 prior to this reporting period. This portion was relinquished because it holds less prospectivity for lithium, owing to the area being largely covered granite.

While progressing the Finniss Lithium Project has absorbed the majority of CXO's resources and funding over this reporting period, CXO believes there is an excellent strategic fit between the lithium potential of the Barrow Creek Pegmatite Field (also the nearby Anningie Tin (Pegmatite) Field), direct rail link to Darwin Port and the Finniss Lithium Project. This strategic fit in turn expands potential for Darwin to become long-term, central processing and transport hub for NT lithium and spodumene production for CXO.

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