CAZALY RESOURCES LIMITED
ACN 101 049 334

Annual and Final Surrender Report

QUARTZ HILL – EL24838

For the Period
6th April 2006 to the 8th May 2013

Northern Territory

Exploration Activities on Tenements:	EL24838
Sheet 1:250 000:	Illogwa Creek SF53-15
Sheet 1:100 000:	Quartz 5951
Project Operator:	Cazaly Resources Limited
Author:	D Horn
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1.0 SUMMARY

The Quartz Hill Project consists of two exploration licences [EL25296 and EL24838] in the Harts Ranges, Northern Territory, ~ 220km east of Alice Springs. The tenements are centred on the Harts Range Pegmatite field where historical exploration has defined the presence of uraninite and rare earth elements [REE] such as Ta, Nb, La, Y and Tb in a number of pegmatites bodies.

While the occurrence of REE and U bearing minerals are documented within individual pegmatites and economic values have been reported in assays results from coincident rock chip samples, there have been no systematic reporting and/or recording relating to the location of samples within the individual pegmatite bodies, or the density and distribution of mineralisation. Due to the highly zoned morphology of pegmatite bodies and the variable distribution of mineralisation within these zones this understanding is required for further economic assessment and to design any future bulk sampling or drilling campaigns.

In 2011-12 a first-pass reconnaissance mapping and sampling campaign was conducted in the Quartz Hill Project. The main focus of this work was to map the zonation within the most prospective individual pegmatites where REE-U mineralisation has been reported. Concurrent rock chip samples were taken from identifiable zone, with multiple samples taken from several sites along strike in larger pegmatite bodies. Activities were restricted to the ‘Lone Pine’ prospect due to the deteriorated condition of the tracks leading to the Feldspar prospect, caused by a lengthy wet season experienced in the Northern Territory.

Epic Resources Limited managed exploration on the tenements under a JV with Cazaly Iron Pty Ltd (a wholly owned subsidiary of ASX listed company Cazaly Resources Limited). Epic Resources withdrew from the JV and returned the tenements 100% back to Cazaly.

2.0 INTRODUCTION

The Quartz Hill Project is located in the eastern Harts Ranges in the Northern Territory approximately 220km east-northeast of Alice Springs, on the Illogwa Creek 1:250,000 Geological Map Sheet SF/53-15 (Figure 1 & 2).

There are two routes of access to the Quartz Hill Project area from the township of Alice Springs.

1) Heading east, along the sealed Ross Highway through to the historic gold workings of Arltunga, then northwards on grade tracks to Claraville station and from there on station tracks heading east to the project area. The journey takes just under four hours and is bitumen until the turnoff to Arltunga from the highway. This track is narrow in places and crosses a number of creeks and as such is only suitable for 4WD light vehicles.

2) Heading north on the sealed Stuart Highway, then east onto the well-maintained partial sealed Plenty Highway, turning south onto Abulindum Station tracks located east of the Harts Ranges township. This route takes approximately four and a half hours and is sealed for the first 170 km from Alice Springs but covers many more kilometres. This is the main route into Abulindum Station and is regularly maintained. Recent upgrading and widening of station tracks to accommodate exploration activates by *Mithril Resources Ltd* means that this is the most suitable route for heavy vehicles and drill rigs.

3.0 TENURE

The Quartz Hill Project consists of two granted exploration licenses EL25296 & EL24838 that cover a total of 79 square kilometres. Cazaly Iron Pty Ltd (Cazaly) was the current title holders of the tenements. Until recently, exploration was managed by Epic Resources Ltd (Epic). EL24838 was surrendered on the 8th may 2013.(Table 1 & Figure 2).

Table 1: Quartz Hill Project tenement details

Tenement	Area (Sq Km)	Date Granted	Surrender date	Holder	Operator/ Managers
EL24838	9.5	6/04/2006	8/05/2013	Cazaly Iron Pty Ltd	Epic Resources Ltd, Cazaly Resources

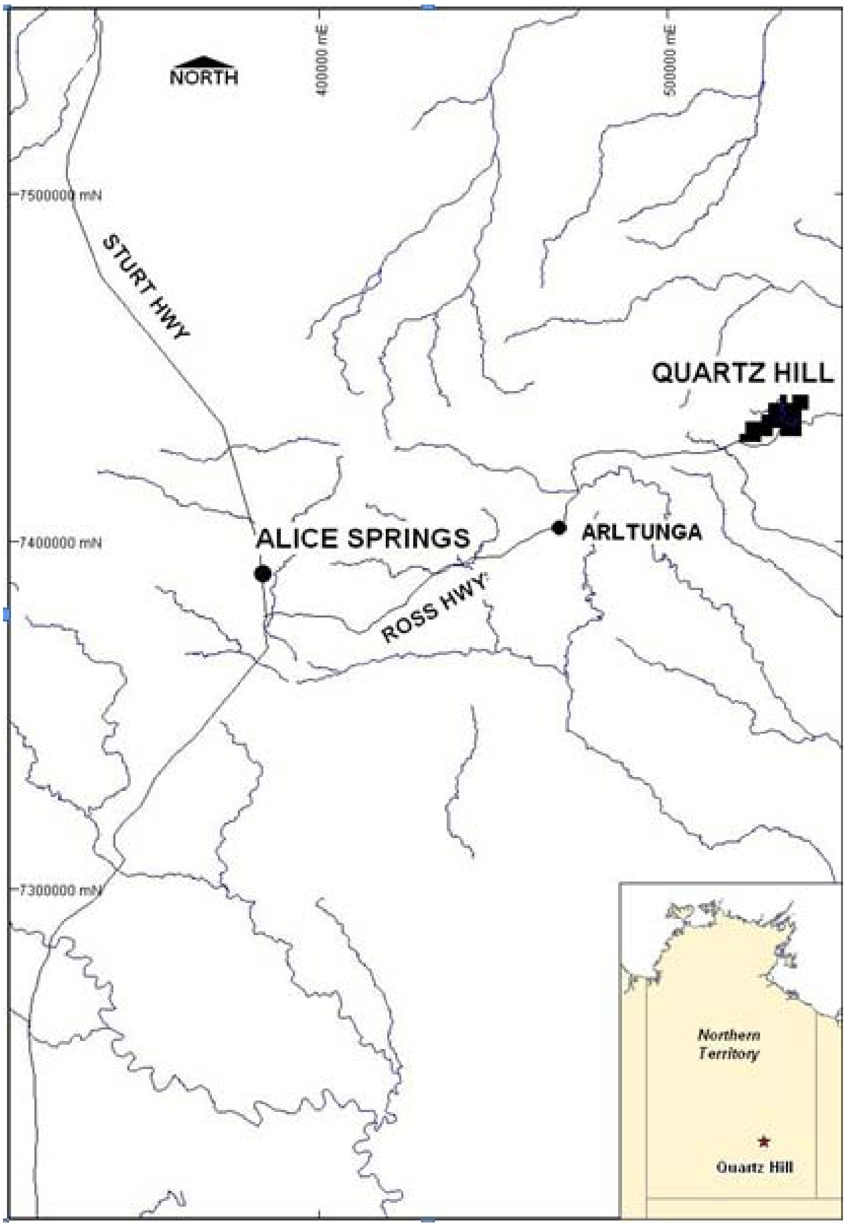

Figure 1: Quartz Hill Project Area Location Plan

4.0 GEOLOGY

The Quartz Hill Project is situated within the SE corner of the Arunta Inlier where several different styles of uranium mineralisation have been observed in the Harts Range and the Entia Dome areas. The inlier comprises a sequence of sedimentary, igneous and high (amphibolite-granulite) grade metamorphic rocks transected by a network of regional and local scale EW and NW – SE anastomosing faults. Uranium mineralisation in the area is related to metamorphic, magmatic and hydrothermal processes during the Alice Springs Orogeny (450-300 Ma; Scrimgeour, 2003) and is associated with sodic or calcic metasomatism, felsic metamorphic segregations, felsic pegmatite and retrogressed shear zones.

Stratigraphy is largely overprinted by the structural thrusting and the division of the Inlier into structural provinces, but there are divisions of groups based on age dating and relationships. The older basement rocks have been considered to be the Strangways Metamorphic Complex, but age dating by AGSO suggests the Weldon and Aileron Metamorphics in the Napperby area to the west may be older.

The Harts Range Group in the south eastern Arunta is essentially a pelitic and calcareous metasedimentary assemblage metamorphosed predominantly to amphibolite facies. The basal unit, the Entia Gneiss, has attained granulite facies but has been retrogressed to amphibolite facies and affected by the Palaeozoic Alice Springs Orogeny. PNC believed the Entia Gneiss was possibly older than the Strangways Metamorphics. The bulk of the Harts Range Group, the Irindina Gneiss and the younger Brady Gneiss, show little evidence of having exceeded amphibolite facies and are clearly younger than the Entia. The Bruna Gneiss, a felsic intrusive, or less likely a part-extrusive porphyroblastic rock, has been dated at 1750Ma but this date only puts a minimum age to the sequence. Studies at Adelaide University suggest the dominant metamorphism within the Harts Range Group is related to the Alice Springs Orogeny.

Post-orogenic platform cover sediments are sporadically distributed throughout the Arunta Inlier. At least three age groups were named but the Hatches Creek Group (1 830-l800Ma) and the Reynolds Range Group (1820-1780Ma) are now both considered SMC equivalents.

The youngest sediments are the neo-Proterozoic Amadeus Basin to the south and the Ngalia Basin in the centre (Fig. 5), which cover substantial portions of the Inlier and have little enough deformation to be significant oil and gas reservoirs.

The mapping shows the area of interest covers the central and eastern portions of the Huckitta Dome. In general, the area is comprised of gneiss and other high-grade metamorphic rocks, marble and ultramafic intrusive. Numerous quartz-pegmatite dykes and veins intrude, some of which have been mined for mica and gemstones. The Yambla uranium mineralisation is associated with a retrograde schist in marble and para-amphibolite.

The Arunta Inlier has a complex and virtually continuous history of igneous activity. There are at least six major recorded felsic igneous intrusive episodes. Of these the Ngadarunga Granite (1880Ma), the Napperby-Huckitta-Jervois Granites (1780-1760Ma) and the Yarangunyi Granite (1600-1570Ma) are the most extensive and geologically most important. Other recorded igneous events, of relatively small areal extent, are the Andrew Youngs Igneous Complex (l635Ma), Mordor Igneous Complex (1200Ma), Stuart (mafic) Dyke Swarm (1050Ma), Gum Tree Granite (990Ma), Mud Tank Carbonatite (730Ma) and the Harts Range Pegmatites (520,400Ma).

The Harts Range region at has undergone repeated and substantial crustal reworking between Proterozoic and Palaeozoic times, and is now thought to represent an ancient and strongly altered/metamorphosed version of a continental collision zone. Much work was done in the 1990's on the Harts Range region by Arnold and Fogly et al and Mawby (1996) of the University of Adelaide, with the assistance of PNC.

The structural elements of the Harts Range area are shown in Figure 2. The key features of the Harts Range structural map, in order of interpreted age, are:

- The Entia Dome, a pre-1850Ma feature which forms basement to the Irindina Supracrustal sequence.

- The emplacement of the younger granites (1780Ma) which form the exposed Inkamulla and Huckitta Domes. The position of the (inferred/buried) Mt. Muriel Dome is uncertain but is assumed to be post Entia as it has apparently indented the SW margin of the Entia Dome.

Recently presented data (Adelaide University and NTGS geologists Selway et al, 2007) suggests the Entia dome system is a deep-crustal feature that can be shown extending to the mantle. One of the two traverses crossed the Arunta from north to south and skirted around the dome to the east, and showed a major subduction zone to the north of the dome which extends to the mantle. Oxidation of the rocks around the dome extends some 20km, with the area of greatest oxidation in the Quartz Hill vicinity. This work was presented at the 2007 AGES conference in Alice Springs. The Hardings Springs Slide is a NNE-SSW defined shear system along the SE margin of the Entia Dome. The development of the Florence Creek Shear (mylonite) Zone may have been coeval with emplacement of the Bruna Gneiss (Ding et.al.) but probably pre-dates that event. The Florence Creek structure represents a zone of south directed thrusting and granulation-recrystallisation with an apparent absence (less H_2O?) of the widespread retrogression typical of the younger transgressive Illogwa Schist Zone.

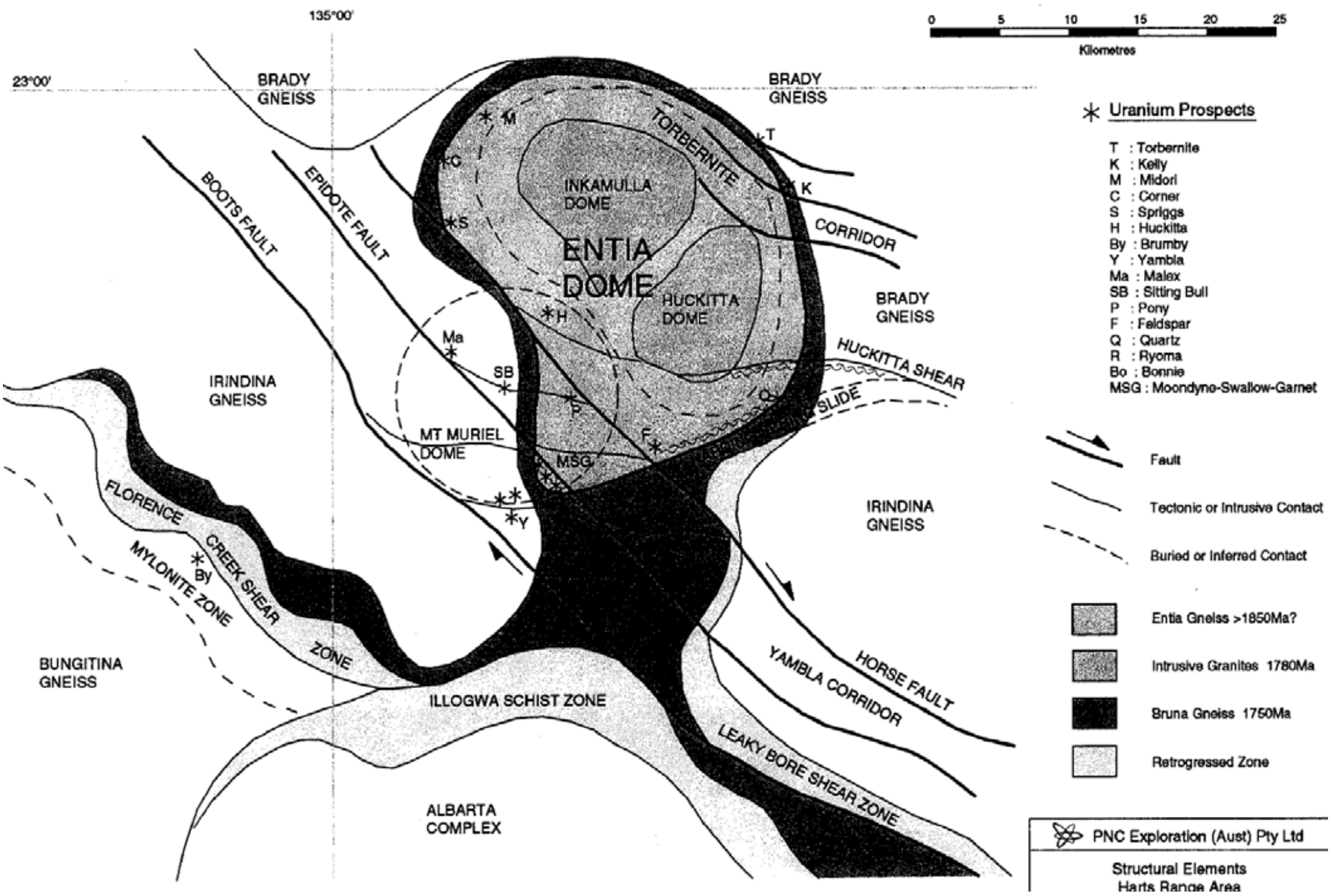

Figure 2. PNC map of the Harts Range and Entia Dome complex (Drake Brockman et al 1996).

5.0 EXPLORATION ACTIVITIES

5.1 Previous Exploration

PNC Exploration (Australia) Pty Ltd studies of the pegmatite-type uranium mineralisation at Quartz Hill identified the mineralisation to be characterised by uranium-bearing Y/Nb/Ta/Ti/REE oxides of variable mineralogy within feldspar or quartz which are imbedded within or immediately adjacent to, east and southeast-trending pegmatites. These pegmatites are thought to have a metamorphic source, derived from partial melting during the Alice Springs Orogeny. U-Pb dating of uranium minerals from uraninite-type and pegmatite-type mineralisation indicates that uranium precipitation and remobilisation occurred in three main phases at 550 Ma, 425 Ma and 350 Ma. The Quartz Hill pegmatite is related to an event at 425 Ma (Drake-Brockman et al 1996a). The K-feldspar rich Quartz Hill pegmatite is found both sub–parallel to and cross-cutting the gneissic layering and contains intergrown samarskite, uraninite, coffinite(?), and U-tanteuxenite, all of which contain uranium along with variable amounts of yttrium, niobium, tantalum and titanium. Using data from Drake-Brockman et al, (1996) and Drake-Brockman (1995) the REE character of the prospects in the Quartz Hill Project can be highlighted (Figure 4).

Sampling for REE-U mineralisation in the Quartz Hill tenements has concentrated on known mineral occurrences and areas of multiple pegmatite emplacements (Figure 3). Prior to the 1970's mining and prospecting activities in the project area and surrounds were primarily concerned with the mining of pegmatite-associated mica from the Harts Ranges-Plenty River Mica Field (Joklik, G. F. 1955). During the late 1970's Esso Australia Ltd conducted exploration in the southern Harts Range and indentified minor uranium mineralisation, but no rare earth elements (REE) mineralisation was reported. In 1992, PNC Australia Pty Ltd began exploration of the Quartz Hill area (then known as EL 8036). Work undertaken by PNC Australia is by far the most exhaustive and of the greatest value for future exploration activities. Several company reports, including PNC, report that one of the mica mines on the Quartz Hill project was known to contain uraniferous minerals, but the location or occurrence is not detailed. PNC initially flew airborne exploration and followed up with ground exploration campaigns. In general this work consisted of large-scale airborne magnetic and radiometric surveys followed by ground mapping and rock chip sampling.

Follow-up of the airborne anomalies resulted in the discovery of mineralisation at the Quartz and Feldspar (named Spartacus by Newera Uranium Ltd) pegmatite prospects. Quartz was a priority 1 anomaly on the "quartz blow" outcrop known as Quartz Hill. Ground checks located hotspots within soil and quartz scree and on the pegmatite vein near the spur of the ridge, and a small pit was blasted on the pegmatite. Copper has been indicated on the Geological Survey map at Quartz Hill but PNC found none, whereas they located uranium rich samarskite intergrown with uraninite and coffinite, with some alteration to uraniferous tanteuxenite. Samples were in what they reported as "brecciated pegmatite".

Feldspar was a strong anomaly caused by float of a uranium rich mineral associated with a large E-W pegmatite. The mineral was massive, black, and glassy, had a conchoidal fracture and did not show weathering. It was identified as a Y-Nb>U mineral of the fergusonite series plus alteration products. They found only one ground based radiometric anomaly roughly 30x30m in extent and reported it was caused by a small mineral occurrence spread by movement of float downhill, though they did mention other hot-spots. The mineral assayed 6.8% U. Further prospecting was limited.

PNC also mention a small number of “low order” anomalies they traversed, including a possible allanite occurrence in an aplite vein in gneiss to the north of Quartz Hill. In this second rank of anomalies they include “Lone Pine” (also reported as “Cone Hill”), which lies to the northwest of Quartz Hill in a series of large pegmatites that host an abandoned mica mine, which PNC state had known uraniferous minerals. They found “numerous fragments of a black glassy mineral” later identified as “a member of the fergusonite -samarskite series” in the scree as well as several hot spots on the working face.

Several other mica mines in the area were checked for uranium minerals, and uranium proved to be present in small concentrations in some, with associated high rare earths.

In 2006, Cazaly Iron Pty Ltd was granted tenements EL29256 and EL24838. In 2007, Newera Uranium Ltd [Newera] became the joint venture operators of both EL’s and undertook exploration activities for uranium, REE and IOCG targets until 2009. The exploration activities carried out by Newera consisted of acquisition and analysis of open file data by CSA Australia, public domain geophysical data, topographic map data, satellite imagery, a VTEM survey, and rock chip sampling.

Analysis of the data and sampling of outcrops by Newera showed the Harts Range pegmatites to contain significant uranium mineralisation, including the presence of uraninite minerals, and high REE values. Cursory analysis of the True Grit (i.e. Lone Pine) and Brave Heart prospects (near Feldspar) and other prospects on the leases suggests for each the presence of sufficient pegmatite for substantial scale.

Samples of a heavy black highly radioactive mineral, a light apparently cubic mineral and a slightly denser version of the same material were found in the pegmatites at both True Grit and Brave Heart. It is believed that these may be one of the uraninite minerals and a tantalum-niobium solid solution series, or perhaps ilmenite.

Reported petrological results contain uraniferous rare earth minerals samarskite and euxenite, grading in excess of 1000 ppm uranium collected from within a pegmatite system with a strike extent of over 1300 m. The minerals also occur as inclusions within garnets, which are common in the pegmatite system. Samarskite and euxenite are highly radioactive materials forming a solid solution, and contain significant amounts of niobium, tantalum and other REEs in an iron oxide matrix which also contain up to 38% U. Both massive and crystalline forms are present on the project and specimens found to date are up to 55 mm in diameter in a further pegmatite named Spartacus by Newera (the Spartacus prospect coincides with the location of PNC’s Feldspar prospect). The Spartacus prospect consists of a 2km long ENE trending low ridge line with abundant course grained pegmatitic feldspar and quartz float.

The mineralised pegmatites at Spartacus outcrop as a pair of overlapping, sub-parallel units each in excess of 650 m long with an interpreted lateral extent of in excess 100m. Smaller parallel external units surround the main pegmatites and they contain internal rafts of the host granitoids gneiss. Concentrations of mineralisation were not determined, but mapping evidence suggests the minerals occur throughout the pegmatites with higher density clusters or patches.

In addition to the pegmatite analysis, two magnetic high “bullseye” anomalies on the Quartz Hill project were investigated with a view to exploring for Iron Oxide Copper Gold (IOCG) mineralisation. A series of field mapping and VTEM surveys were conducted which lead to downgrading of the targets and a cessation of exploration.

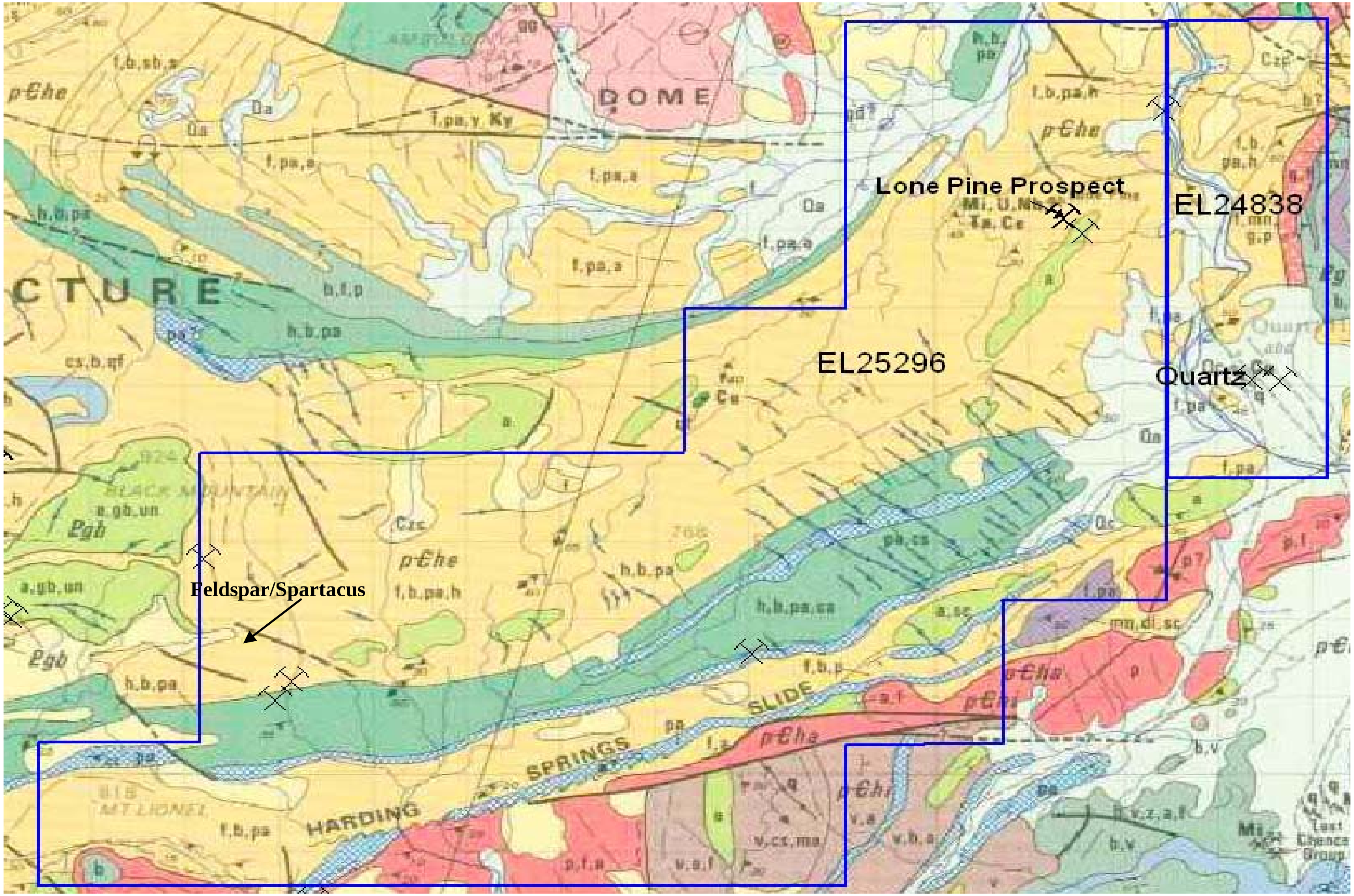

Figure 3: Epic Resources Ltd Quartz Hill Project tenements and geology

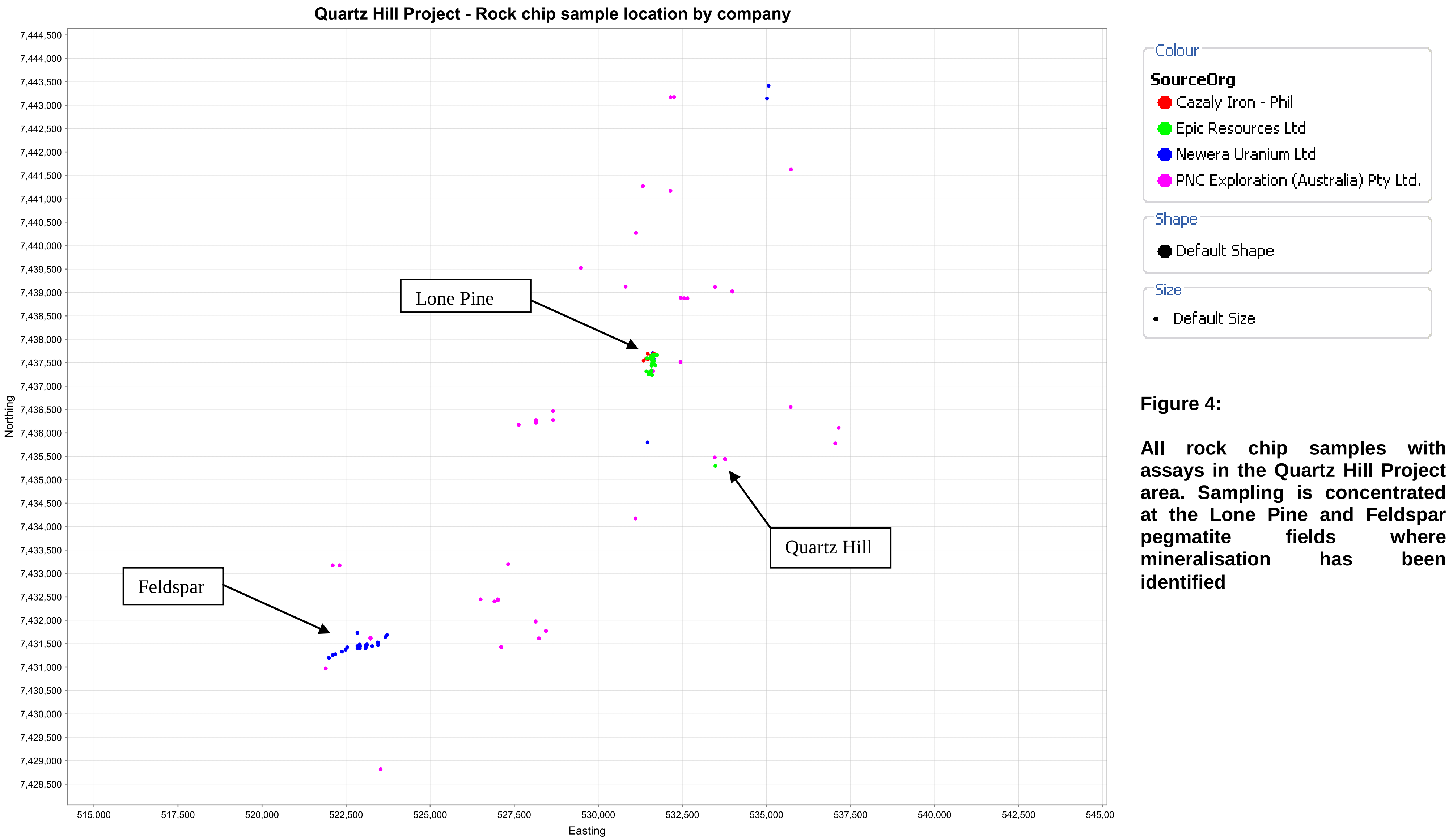

Figure 4:

All rock chip samples with assays in the Quartz Hill Project area. Sampling is concentrated at the Lone Pine and Feldspar pegmatite fields where mineralisation has been identified

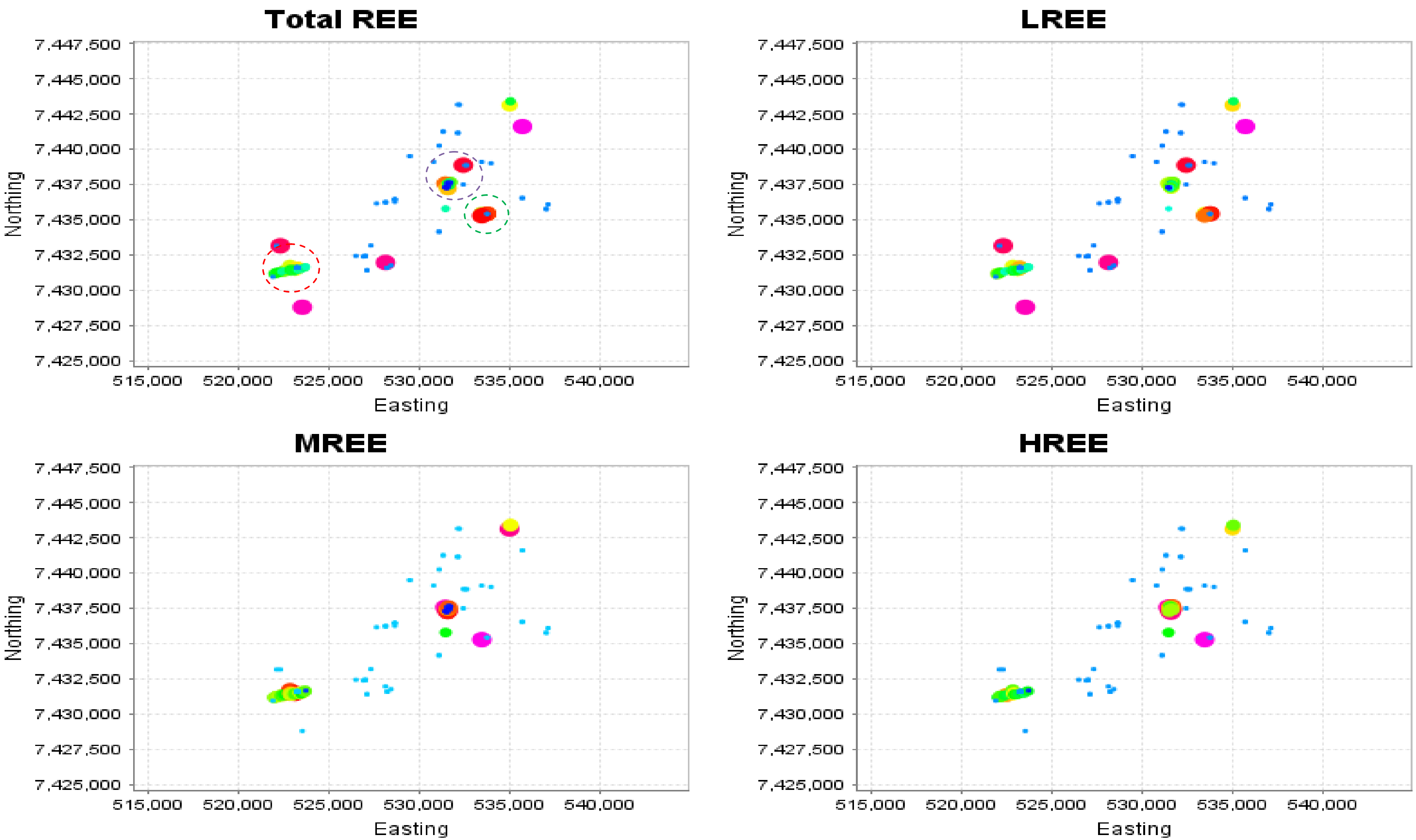

Figure 5: Quartz Hill Project ranked variable map showing historical assays: Total, light (LREE), middle (MREE), & heavy (HREE); Datum is WGS84 Zone 53; Circles: Feldspar = red, Lone Pine = purple, Quartz Hill = green

Rare Earth Element Pegmatite Systems

Pegmatite Classes

Granitic pegmatites are commonly ranked into three hierarchies (class-type-subtype) depending on their mineralogy-geochemistry characteristic (Table 2). Pegmatite *classes* show a strong relationship to depth of emplacement, ranging from the deeply-seated abyssal class to the typical shallow-level miarolitic class. The further subdivision of classes of granitic pegmatites into *types* and further into *subtypes* is based on mineralogical-geochemical criteria of the dominant mineralogy (Cerny, P. 1991; Ercit, T. S. 2005).

A further classification concept for rare-element granitic pegmatites was introduced by Černý (1991) and is used to genetically classify granitic pegmatites and their associated granites. The definitions are based on: their bulk compositions, special characteristics of their trace elements chemistry, and the characteristics of their genetically associated granites. The three populations are the: **LCT** – Lithium-Cerium-Tantalum family; **NYF** - Niobium-Yttrium-Fluorite; and a 'mixed' character population (Černý 1991).

Internal Zones

Internal zonation in REE-enriched granitic pegmatites range from unzoned to strongly zoned across most classes (Figure 5; figure 5 in Ercit 2005). Except for the miarolitic class, zoning is similar for all classes where it can vary from asymmetric to high symmetric. The optimal zoning pattern from the earliest-formed outer zones to the generally latest-formed central zones is (Ercit, T. S. 2005):

i. Border zone [BZ]
ii. Wall zone [WZ]
iii. Intermediate zone(s) [IZ]
iv. Quartz core [QC]
v. Pocket zone [PZ]
vi. Late units of apparent replacement origin [LR]

Few pegmatite bodies display all zones with most displaying a subset of zones related to their class (setting), evolution, and level of erosion. The level of erosion is an important aspect when it is consider that granitic pegmatites are three-dimensionally zoned and only some sections of a zoned body will display the full breadth of zoning. Typically, the section in the vicinity of the greatest thickness or maximum amount of 'bulging' will expose the maximum number of zones that have developed in a pegmatite body.

External exomorphic zones developed during metasomatic exchange in the host rock immediately adjacent to a pegmatite body are rarely recognised in the field, but can cause additional elemental enrichment in the pegmatite and host rock is sufficiently developed.

Table 2: Classification of granitic pegmatites (modified after Černý, 1991)				
Class	**Type**	**Typical Minor Elements**	**Peak Metamorphic Environment**	**Examples**
Abyssal		U, Th, Zr, Nb, Ti, Y, REE, Mo	high P-T (6-10km, 700-800°C: upper amphibolite to granulite facies	Grenville province, Canada
Muscovite		(none, but giant muscovite crystals)	high P, moderate T (5-8kbars, 580-650°C): amphibolite facies	Appalachian mica belt, USA
Muscovite-Rare-Element		Y, REE, Ta, Nb, Ti, U, Th, Be, Li	mod-high P, moderate T (3-7kbare, 540-650°C): amphibolite facies	Bihar belt, India
Rare-Element	Rare-Earth	REE, U, Th, Be, Nb>Ta, F	generally mod-low P, moderate T (2-4kbars, 500-650°C): upper greenschist to amphibolite facies; can be variable	Baringer Hill, USA
	Beryl	Be, Nb	mod-low P, mod. T (2-4kbars, 500-650°C): upper greenschist to amphibolite facies	Greer Lake, Canada
	Complex	Li, Rb, Cs, Ta, Be	mod-low P, mod. T (2-4kbars, 500-650°C): upper greenschist to amphibolite facies	Tanco, Canada
	Albite-Spodumene	Li, Sn, (Be, Ta)	mod-low P, mod. T (2-4kbars, 500-650°C): upper greenschist to amphibolite facies	Preissac-Lacorne, Canada
	Albite	Ta, (Sn)	mod-low P, mod. T (2-4kbars, 500-650°C): upper greenschist to amphibolite facies	Hengshan, China
Miarolitic	(LCT affiliation)	Li, Be, B, F	low P (1.5-3 kbars)	San Diego, USA
	(NYF affiliation)	Y, REE, Ti, U, Th, Zr, Nb, F	very low P (1-1.5 kbars)	Pikes Peak, USA

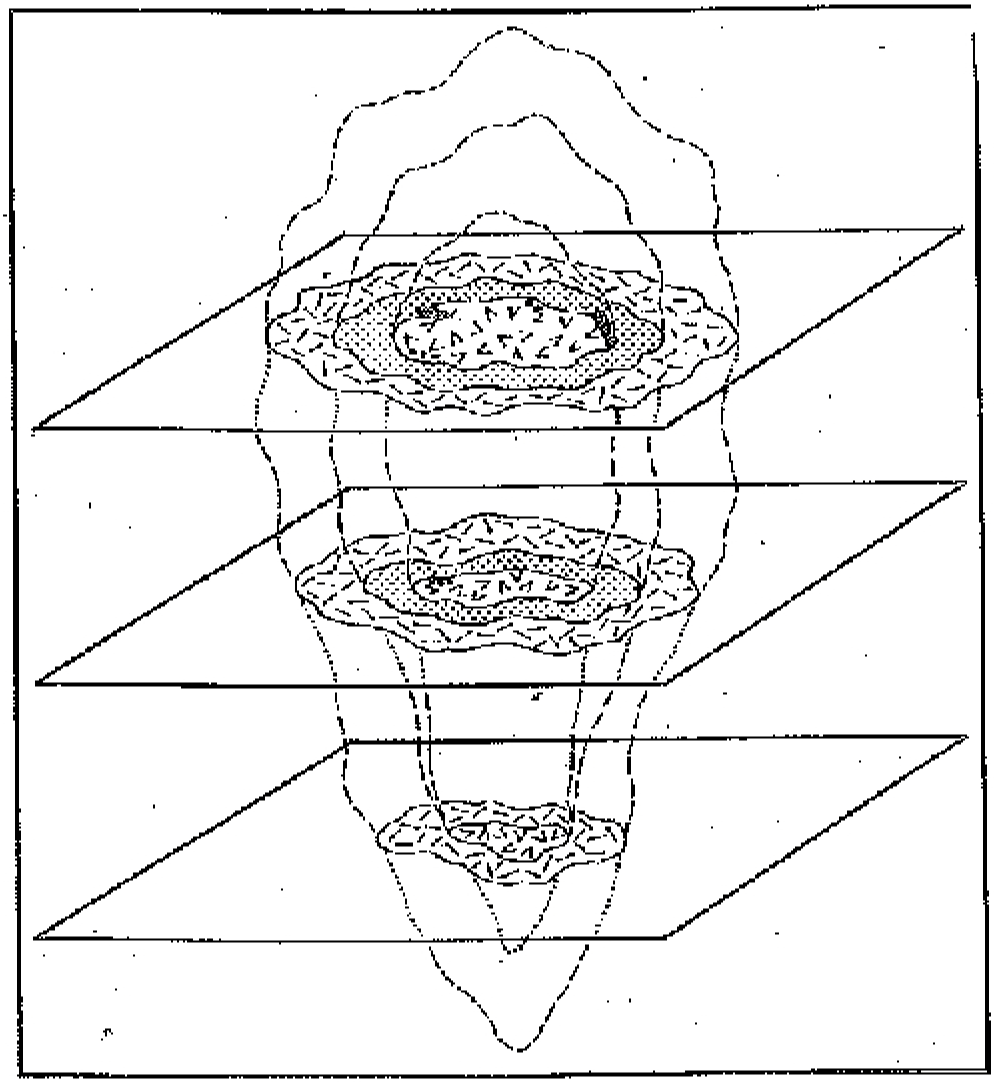

Figure 5. *Three-dimensional model of the maximal zoning pattern for REE-enriched pegmatites of the abyssal, muscovite – rare-element and rare-element classes. Hatch marks: wall zone, stippling: intermediate zone, "v"s: core, solid black: apparent replacement units and pockets. Modified after Simmons and Heinrich (1980).*

Figure 6: Pegmatite Zones (Ercit 2005)

The Border Zone [BZ] is generally a thin, fine-grained zone developed at the contact with the host rock. It is generally rich in calcic plagioclase, with lesser amount of alkali feldspar and minor minerals. The Wall Zone [WZ] is distinctive due to the development of alkali feldspar – quartz graphic to quasi-graphic textures, which are much coarser and pegmatoidal compared to the BZ. The WZ is more potassic consisting predominantly of potassium feldspar, with quartz, plagioclase, biotite, and sometimes muscovite. The Intermediate Zone [IZ] generally consists of large crystals of blocky potassium feldspar, and quartz sometime with large decimetre- to metre-size laths of biotite. The Quartz Core [QC] is usually bucky white monomineralic quartz. The Pocket Zone [PZ] is generally restricted to the miarolitic class of pegmatites whose shallow depth of emplacement allows phase separation to occur (Table 2). The Pocket Zones are generally well zoned domains surrounding a cavity and represent the last stages of crystallisation from the melt. If levels of the more incompatible elements (e.g. Be, B, & F) are high enough then the miarolitic pocket zones can host gemmy crystals of beryl, topaz, and schorl. The Late Units of Apparent Replacement Origin [LZ] are sodic in composition with saccharoidal albite and a variety of accessory minerals are typically located near the contacts of the IZ and QC. The discordant nature of these zones have historically lead researchers to ascribe their formation to metasomatic replacement by a later fluid (Ercit, T. S. 2005). However, more recent experimental modelling suggest they are a product of disequilibrium crystallization of pegmatite melt-fluid (Ercit, T. S. 2005); hence the ‘apparent’ term in their description.

Economic Mineralisation

Historically, REE-enriched pegmatites have been exploited for their major-minerals contents: feldspar, quartz, and muscovite (e.g. Joklik, G. F. 1955; Simmons, W. B. *et al.* 1980). Recent world demands for REE has provided greater interest in economic concentrations of the REE, Nb, Sc, Y, U, Th, and Be in pegmatite bodies.

In granitic pegmatites niobium (Nb), tantalum (Ta), and titanium (Ti), are concentrated by complex oxide phases (i.e. euxenite, aeschynite, samarskite and fergusonite groups). Generally, Nb>Ta in overall concentration, while Ti is more complex as it is dispersed between oxide and silicate phases including ilmenite, biotite and titanite. Niobium, tantalum, and titanium are similar in size and charge and substitute readily into each other’s minerals phases. Although, the behaviour of Nb and Ta appear similar they form their own mineral oxides concentrated in the latest-formed intermediate unit of the pegmatite. Consequently, for REE-enriched pegmatites of the *abyssal* and *muscovite-rare element* class (Table 2), Nb and Ta oxides tend to concentrate in the wall units or in the outer parts of intermediate units. Zirconium (Zr) is also sufficiently incompatible to be enriched in the granitic pegmatite system. The atomic properties of zirconium are sufficiently different to exclude them from the Nb-Ta-Ti phases and it tends to concentrate in its own silicate phase zircon.

The lanthanon elements (REE and Y) are carried by a number of phases in REE-enriched pegmatites, but in the vast majority of examples minerals of the epidote and monazite groups are the main concentrators of LREE, whereas (Nb,Ta)-oxides, gadolinite-group minerals and fluorite are the main concentrators of Y and HREE (Ercit, T. S. 2005). Broadly, LREE are concentrated in earlier formed phases, while Y and HREE are concentrated in the later, more fractionated parts of the system (i.e. apparent replacement zones).

Scandium is generally enriched in REE-enriched granitic pegmatites where it can be dispersed throughout a number of different early and late silicate and oxide phases (e.g. epidote, spessartine, fluorite, and columbite-group) due to its similar ionic charge and radii of common transition elements (e.g. Fe^{2+}, Mn^{2+}, and Al^{3+}).

The actinide elements uranium and thorium are known to concentrate in REE-enriched pegmatites but little research has been done in this area. Of the available studies it was concluded that less-fractionated pegmatite bodies have higher Th/U ratios than more highly fractionated bodies (Ercit, T. S. 2005).

There is considerable variability in the style and type of mineralisation in pegmatites. For many classes of pegmatites, mineralisation occurs in a distinct potassic assemblage consisting of potassium feldspar, quartz, and biotite (or muscovite). The biotite-bearing assemblages are common, while the muscovite-bearing less common and are mainly found in the muscovite-rare element class (Table 2). Nonetheless, in all classes mineralisation is directly associated with the micas. The other major style of mineralisation occurs in sodic associations composed of albite and quartz. Most of the time these occur as discreet bodies in central location within the pegmatite body as late possible replacement origins or as part of wall zones or outer regions of intermediate zones.

Harts Range Pegmatites

At least two pegmatite suites have been noted in the Harts Range region (Joklik, G. F. 1955; Hussey, K. J. 2003). A mica-poor potassic suite which tends to be hosted in the Entia Gneiss complex and a mica-rich sodic suite which occurs in the Irindina and Brady Gneisses (Hussey, K. J. 2003). Most pegmatite sampled by PNC was of the potassic class (Figure 6). Using the pegmatite classification scheme of Černý (1991) and the historical data of PNC Australia (Drake-Brockman 1995; Drake-Brockman J, G. G., Thevissen J and Vieru C 1996; Drake-Brockman J, G. G., Thevissen J and Vieru C 1996), the mica-rich sodic pegmatites appear analogous to LCT-Type pegmatites which are enriched in Li, Rb, Cs, Be, Ga, Sn, and Nb<Ta (Table 2; Figure 7). It should be noted that these class of pegmatites have rare-metal potential, but are not considered prospective for REE mineralisation (Hussey, K. J. 2003). Conversely, the mica-poor potassic pegmatites appear analogous to NYF-Type pegmatites which are enriched in Y, REE, Sc, Ti, Be, Th, U, F and Nb>Ta (Table 2; Figure 8), and are considered prospective for REE mineralisation (Hussey, K. J. 2003). This is highlighted by the recorded occurrences of the REE-bearing phases in the potassic pegmatites of the Harts Range pegmatite field (e.g. samarskite, monazite, allanite, euxenite, and xenotime).

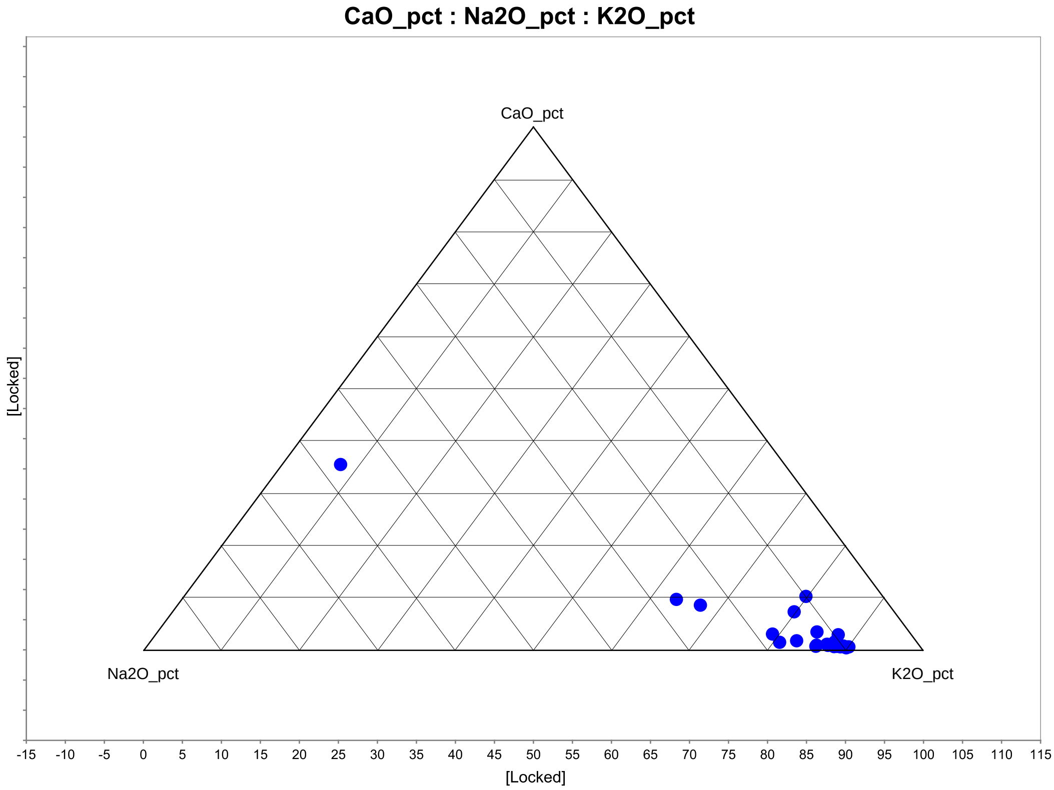

Figure 7: Alkali whole-rock showing the potassic nature of the Quartz Hill Pegmatites sampled by PNC

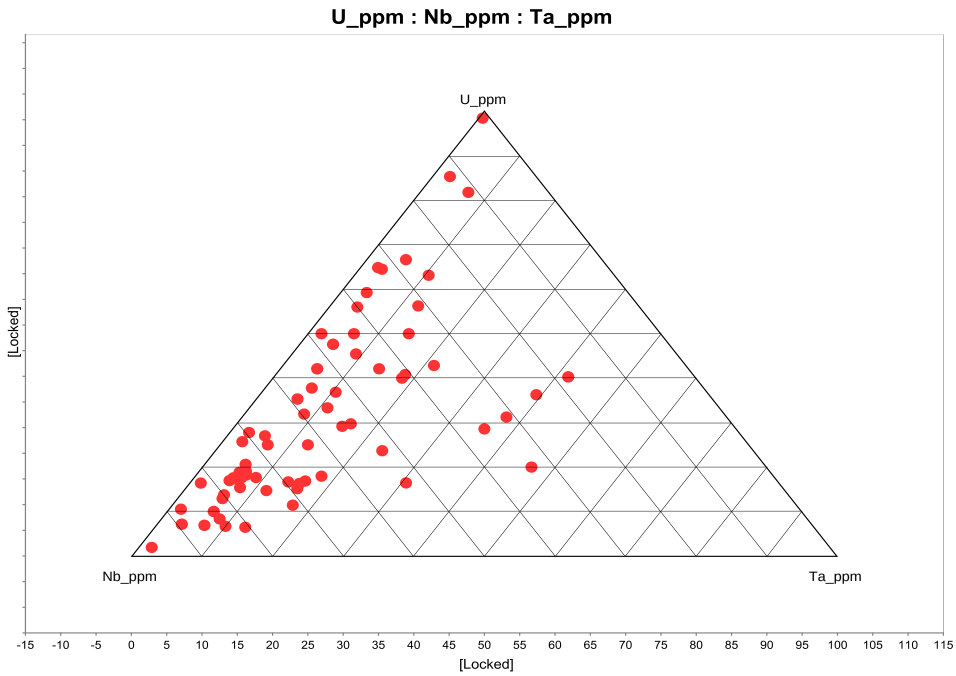

Figure 8: Ternary plot of U-Ta-Nb (ppm) from the Harts Range Pegmatites sampled by PNC

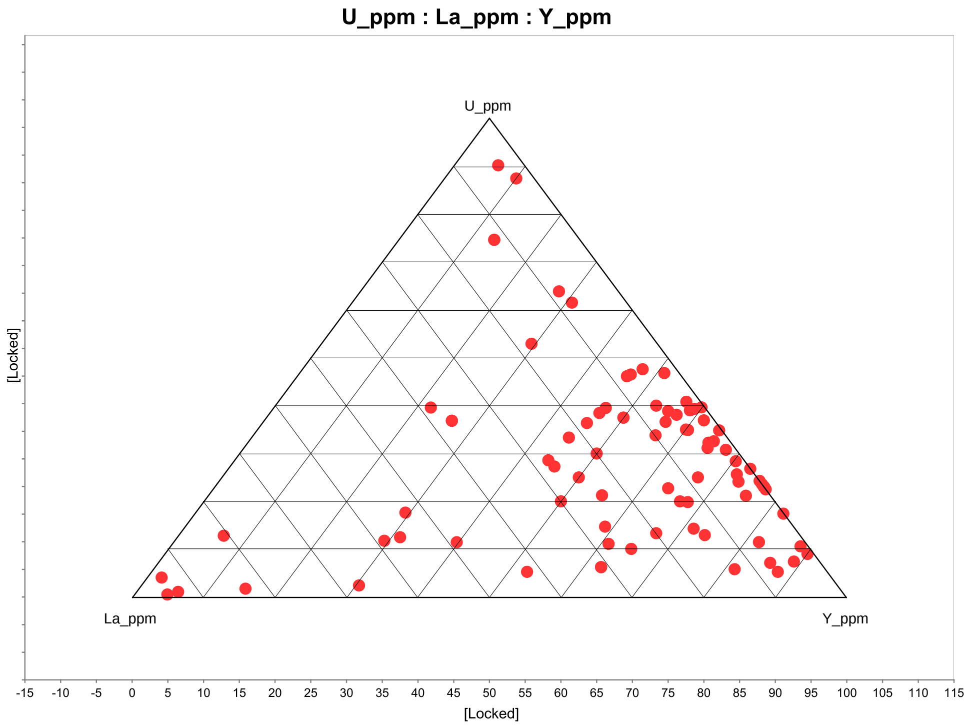

Figure 9: Ternary plot of U-Y-La (ppm) from the Harts Range Pegmatites sampled by PNC

5.2 Epic Resources Exploration

Epic Resources explored the EL24838 until withdrawing from the Agreement with Cazaly Resources Limited in early 2013.

5.2.1 Mapping

The focus of mapping during this campaign was to understand the extent and nature of internal zonation identifiable within the pegmatite outcrops to guide rock chip sampling of prospective high-grade zones. The three-dimensional nature of zoning displayed in granitic pegmatites mean that the zones currently exposed in outcrop are governed by the level of erosion.

The pegmatite bodies in the 'Lone Pine Field' form raised outcrops and prominent peaks and ridge lines in the landscape and are easily distinguished on Google Earth™ images. They are hosted in less resistant, strongly foliated quartzofeldspathic gneiss and layered and partial migmatitic amphibolite of the Palaeoproterozoic Aileron Province. The attitudes of some pegmatites are partially controlled by the geometry of the foliation and lithological contacts in their host rocks, while most bodies are clearly discordant to this fabric and show no relation. The size of individual pegmatite bodies is variable and range from less than1m to greater than 7m in width and approximately 10 to 300m in length. In places, several individual pegmatites clearly coalesce and thicken along strike into a large mass which is interpreted to represent a common source area.

The development of distinguishable zones was variable throughout the pegmatite population. In general, where zoning was developed it was asymmetrical, and thickest towards the hanging wall of dipping body. Larger bodies displayed the greatest tendency to develop zones where in most cases a combination of Wall Zones, Intermediate Zones and Late Zones were identifiable. The Wall Zone is best distinguished by the occurrence of intergrown feldspar-quartz forming a characteristic graphitic texture. In other cases, apparent zoning was most likely an artefact of multiple, sheeted pegmatites intruded along the same structure. On the whole, smaller pegmatites showed no internal zonation, but some did show a notable change in crystal size along strike. Several pegmatites of all sizes preserved a thin Border Zone where the contact with the host rock was vertically well exposed.

Pegmatite mineralogy was largely consistent throughout the field but varied between individual pegmatites. Overall, the pegmatites are granitic in character:

Major Minerals: Alkali feldspar-Calcium plagioclase-Quartz

<u>Minor Minerals:</u> Biotite-Muscovite-Garnet-Magnetite-Tourmaline-Smokey quartz

<u>Accessory Minerals:</u> Samarskite-Carnotite

The major minerals form the bulk of the pegmatite body and are generally coarse- to very coarse-grained and can exceed 10's of centimetres in size. The percentage of each feldspar changes systematically across the zones, with Ca-plagioclase in the outer zones and the alkali feldspar becoming more abundant towards the inner zones. Potassium feldspar occurs in most pegmatite zones along with plagioclase, quartz, and a variety of minor to accessory minerals. Plagioclase feldspar is less abundant than the potassium feldspar, and occurs principally in the outer zones along with quartz and a variety of minor and accessory minerals.

Quartz is ubiquitous through all zones as individual masses and intermingling with both feldspars and is virtually monomineralic in the barren quartz core. The colour of the quartz in the REE-enriched pegmatites can be variable from colourless to milky to smokey. Pods of smokey quartz were noted at the contact of the Wall-Intermediate-Quartz Core zones at Lone Pine, and in association with the samarskite crystals at Quartz Hill.

The minor minerals biotite, muscovite, garnet and tourmaline are common minerals in REE-enriched granitic pegmatites. Magnetite is not commonly reported in granitic pegmatite in the literature, but is relative abundant in the Lone Pine area. Of these biotite predominates and ranges from small laths in the outer Wall Zone up to decimetre sized books associated with quartz aggregates and veins in the potassium feldspar of the Intermediate Zone. Large occurrences of biotite from the Harts Range Pegmatite field have been the subject of historical mining in this area(Joklik, G. F. 1955). Biotite occasional occurs intergrown with muscovite crystals in some pegmatites.

Muscovite is far-less common than biotite and occurs as small scaly aggregates. Notably, muscovite occurs within veins associated with the samarskite crystals at Quartz Hill

Garnets occur as euhedral dark red crystals and are in all probability almandine. They occur in clusters and rarely as isolated grains close to or at the contact of the Wall-Intermediate zones and may represent examples of auto-metasomatic re-equilibrium. Garnets are known sinks for HREE and this should be considered when assay results are assessed.

Only one occurrence of tourmaline was observed in the Lone Pine pegmatites (i.e. EQH024), but occurrences are not uncommon in this class of granitic pegmatites when hosted in supracrustal rocks. Tourmaline is black in colour and presumed to be schorl. Tourmalines are known sinks for boron in the crust and can also substitute lithium into their structure.

Magnetite occurs as euhedral to sub-euhedral crystals in clusters and can be, but not exclusively associated with garnet. Magnetite is more commonly reported from mafic pegmatites associations, some of which have been the focus of considerable research, e.g. Bushveld Igneous Complex (Cameron, E. N. *et al.* 1964). The magnetite in the Lone Pine pegmatites probably reflects the iron-rich nature of the source rocks (amphibolites?) and the low oxygen fugacity of the system.

The accessory minerals samarskite & carnotite recorded in the Lone Pine and Quartz Hill pegmatites are important indicators of REE-U mineralisation in the system. Samarskite is an HREE-bearing member of the allanite-subgroup of minerals. Samarskite can substitute a variety of HREE into its structure (lanthanum, cerium, praseodymium, neodymium, & samarium), and a number of other elements (yttrium, tantalum, & niobium) of economic interest. Carnotite is a secondary mineral produce via the weathering alteration of uranium-bearing minerals. The minerals itself is usually not found in economic proportions in pegmatites but is a good indicator of the presence of primary uranium-bearing minerals in the system.

5.2.2 Sample Collection

The selection of rock chip samples focused on the identifiable zones mapped within the individual pegmatite outcrop. Where multiple zones were readily defined a sample was taken from each zone. If zoning was absent or indistinguishable samples were taken at several points along the strike of the outcrop.

Samples were collected using a small sledgehammer and iron chisel and placed in white calico bags labelled with the sample number with additional aluminium tags inscribed with the sample number placed inside. The designated sample numbering system recorded the company and project title and the collection order (e.g. EQH001: Epic-Quartz Hill-sample 001). Sample sizes collected were generally large due to the coarse-grained nature of the pegmatites and averaged 2-5kgs in weight.

The locations of sample outcrop sites were recorded on a hand-held Garmin GPS in WGS84 Zone 53 datum (Appendix 1). The exact sample site was preserved on the outcrop by encircling it with an eco-friendly pink marker spray paint.

Five sample bags were placed in one larger polywoven sack and closed with a plastic pull-tie and sealed with industrial grade tape for transportation. Bags were labelled with the contained sample numbers and the destination address of Ultra Trace Laboratories in Perth, and freighted from Alice Springs Toll Express:

Toll Express
Cnr Cameron & Power Sts
Alice Springs NT 0871

Ultra Trace Pty Ltd
58 Sorbonne Crescent
Canning Vale WA 6155

5.2.3 Geochemical Analysis

Sample Preparation

Ultra Trace recommends that analysis for REE be via peroxide fusion digest with an ICP-MS finish. This procedure uses an aliquot of pulverise sample fused with sodium peroxide in either a zirconia crucible or alumina crucible. The melt is then dissolved in dilute hydrochloric acid and the solution analysed. This process provides complete dissolution of most minerals including silicates. Volatile elements are lost at the high fusion temperatures.

The potential for contamination during sample preparation and analysis means that the composition of the crucible used impacts on the integrity of the analysis. Hence, Al cannot be measured when alumina crucibles are used, and Zr cannot be measured when zirconia crucibles are used. The detection limits for this procedure is depended on the nature of the sample, but results in parts per million (ppm) are routinely produced.

Primary preparation involves sorting and drying and crushing of the whole sample, followed by pulverisation in a vibrating disc pulveriser. A ~50g sample is split from the pulverised mass and submitted for analysis.

Analytical Methods

The samples were subjected to a 31 multi-element and a 16 rare earth element ‘Mixed Acid Digest’ [MA102] analysis with an Inductively Coupled Plasma (ICP) finish. Samples have been fused with sodium peroxide and subsequently the melt has been dissolved in dilute hydrochloric acid for analysis. Because of the high furnace temperatures, volatile elements are lost. This procedure is particularly efficient for determination of major element composition (including silica) in the samples or for the determination of refractory mineral species. If Barium occurs as the Sulphate mineral, then at high levels (more than 2%) it may re-precipitate after the digest giving seriously low results.

- Sc has been determined by (ICP) Optical Emission Spectrometry (OES)
- Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry (MS)

ICP-MS Detection limits

MA102: ICP-MS detection limits - ppm				
Ag (0.5)	**Er (0.05)**	Nb (0.5)	Sn (1)	**Yb (0.05)**
As (1)	**Eu (0.05)**	**Nd (0.05)**	Sr (0.5)	Zn (2)
Ba (1)	Ga (0.2)	Ni (2)	Ta (0.1)	Zr (1)
Be (0.5)	**Gd (0.2)**	Pb (1)	**Tb (0.02)**	
Bi (0.1)	Hf (0.2)	**Pr (0.05)**	Te (0.2)	
Cd (0.5)	**Ho (0.02)**	Rb (0.2)	Th (0.1)	
Ce (0.1)	In (0.05)	Re (0.1)	Tl (0.1)	
Co (1)	**La (0.1)**	Sb (0.1)	**Tm (0.05)**	
Cs (0.1)	Li (0.5)	**Sc (2)**	U (0.1)	
Cu (1)	**Lu (0.02)**	Se (5)	W (0.5)	
Dy (0.05)	Mo (0.5)	**Sm (0.05)**	**Y (0.1)**	

Table 3: ICP-MS detection limits as reported by Ultra Trace; analysed REE in bold

5.2.4 Analytical Results

Rare Earth Elements [REE]

All samples were assayed for the 16 rare earth elements Sc, Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, & Lu with detection limits as reported in Table 3. The complete assay results are tabled in Appendix 1.

In the whole, the samples are elevated in HREE compared to the LREE, with relatively flat MREE values (Figure 9). The majority of the elements analysed reported below or close to analytical detection limits (Table 3). The heavy rare earth element ytterbium, the middle rare elements erbium, dysprosium, and holmium and the high field strength element yttrium are the most elevated elements across the samples. Several samples are elevated across a number of these variables and are detailed below.

EQH014 – Lone Pine

This sample was taken from the middle of the large pegmatite that defines the main hill in the Lone Pine prospect. This pegmatite is part of a larger composite mass of pegmatite bodies, some of which have been historically mine for mica. The sample was taken from a domain that contains veins and masses of smokey quartz hosted in large crystals of alkali feldspar, and minor magnetite and biotite.

EHQ016 – Lone Pine

This sample was taken from the same pegmatite as EQH014 at the southeast corner of the body. This sample was taken from a domain that contains masses of smokey quartz with associated books of large biotite crystals, hosted in alkali feldspar crystal masses.

EQH031 – Lone Pine

This sample was taken from a pegmatite situated in the creek valley to the SE of the hill. The sample was taken from an unidentified zone and contained greenish mica (Li-Rich?) and large garnets hosted in alkali feldspar and quartz.

EQH032 – Lone Pine

This sample is taken from a large confluence of three pegmatite bodies that forms a hill in the SE corner of the sampling area.The sample was taken from a domain containing lots of garnets, with plagioclase, quartz, and minor magnetite and biotite.

EQH038 – Quartz Hill

This sample was taken from a previously record samarskite occurrence on the north flank of a quartz-rich pegmatite which forms Quartz Hill. The sample site was taken from the contact of the monomineralic Quartz Core and the Intermediate Zone where large decimetre kspar crystals occurred with veins of smokey quartz and muscovite-rich veins with euhedral samarskite.

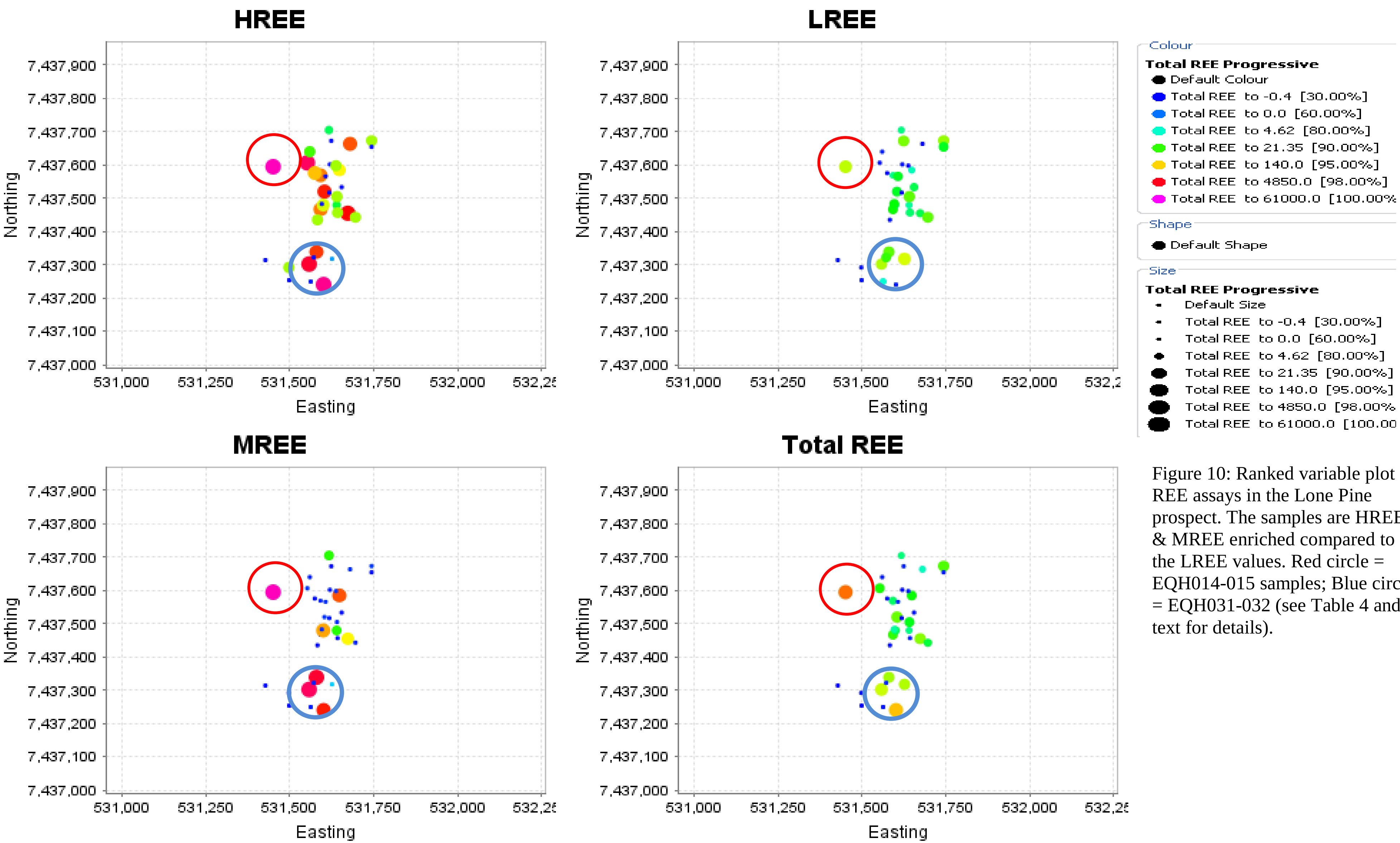

Figure 10: Ranked variable plot of REE assays in the Lone Pine prospect. The samples are HREE & MREE enriched compared to the LREE values. Red circle = EQH014-015 samples; Blue circle = EQH031-032 (see Table 4 and text for details).

Sample ID	EQH014	EQH016	EQH031	EQH032	EQH038
East WGS84	531451	531487	531563	531601	533481
North WGS84	7437595	7437574	7437288	7437241	7435295
RL (m)	676	664	596	613	544
Sc ppm	-10	-10	-10	-10	-10
Y ppm	150	168	104	45	4350
La ppm	2	2.5	1	0.5	3.5
Ce ppm	3	6	1	-0.5	19.5
Pr ppm	0.2	1.4	-0.2	0.2	6
Nd ppm	1	7	1	-0.5	55
Sm ppm	-0.5	4.5	-0.5	-0.5	94
Eu ppm	-0.2	-0.2	0.2	-0.2	3.2
Gd ppm	-2	6	-2	-2	340
Tb ppm	0.6	1.6	0.6	0.2	100
Dy ppm	11	11	8.5	3.5	721
Ho ppm	5.8	2.2	3.4	1.4	148
Er ppm	32	8	17.5	8.5	395
Tm ppm	7	1.2	3.6	1.8	52.6
Yb ppm	61.5	8	31	14	297
Lu ppm	11.6	1	5.4	3	32.6
Mineralogy	kspar-qtz-plag-mt-bt	qtz-kspar	kspar-qtz-mus-gt	plag-qtz-gt-mt-bt	kspar-Sam-qtz-mus
Comments	Kspar & smokey quartz domains	Mass of smokey quartz with large biotite books, hosted in kspar	Greenish mica (Li-rich?) and large garnets in sample	Confluence of 3 pegmatite bodies; lots of garnet in sample	**Quartz Hill** - Large decimetre kspar crystals with veins of smokey qtz adjacent to bucky Quartz Core Zone [QC]; IZ-QC contact with euhedral samarskite (Sam) crystals associated with muscovite in veins and as free crystals hosted in kspar crystals

Table 3: Maximum assay values for Epic Resources Ltd Quartz Hill Project. Sample EQH038 is from the Quartz Hill samarskite-bearing prospect, all other samples from the Lone Pine pegmatite field.

Mineral abbreviations: kspar =alkali feldspar; qtz =quartz; plag =plagioclase feldspar; mt =magnetite; bt =biotite; mus =muscovite; gt =garnet; sam =samarskite

5.2.5 Multi-element Results

In addition to the REE, all samples were assayed for the 31 elements with detection limits as reported in Table 3.

In general, the samples have values U>Nb>Ta and U/Th consistent with previous samples from across the Hart Range pegmatite field, but with a greater spread then samples taken from the Feldspar prospect by PNC exploration and (Figure 10).

Zones of anomalous values across several important economic elements (Nb, Ta, U, & Th; Figure 11) are coincident with those samples anomalous in REE discussed above in table 4 and Figure 9. Specifically, sample EQH016 reported the highest values for Nb, Ta, U, W, Hf, and Bi, an association similar to that reported for EQH038 taken from the known samarskite occurrence at Quartz Hill outcrop (Table 5). In addition, an area in the northeast of the sampling area, not previously highlighted by the REE assays is also anomalous in U, Th, & Nb (Figure 11).

Sample EQH022 has a basemetal association with Cu (180ppm), Pb (230ppm), and Zn (450ppm) all significantly anomalous compared to other samples (Table 5). These values are in agreement with samples taken from the Feldspar prospect by PNC Exploration.

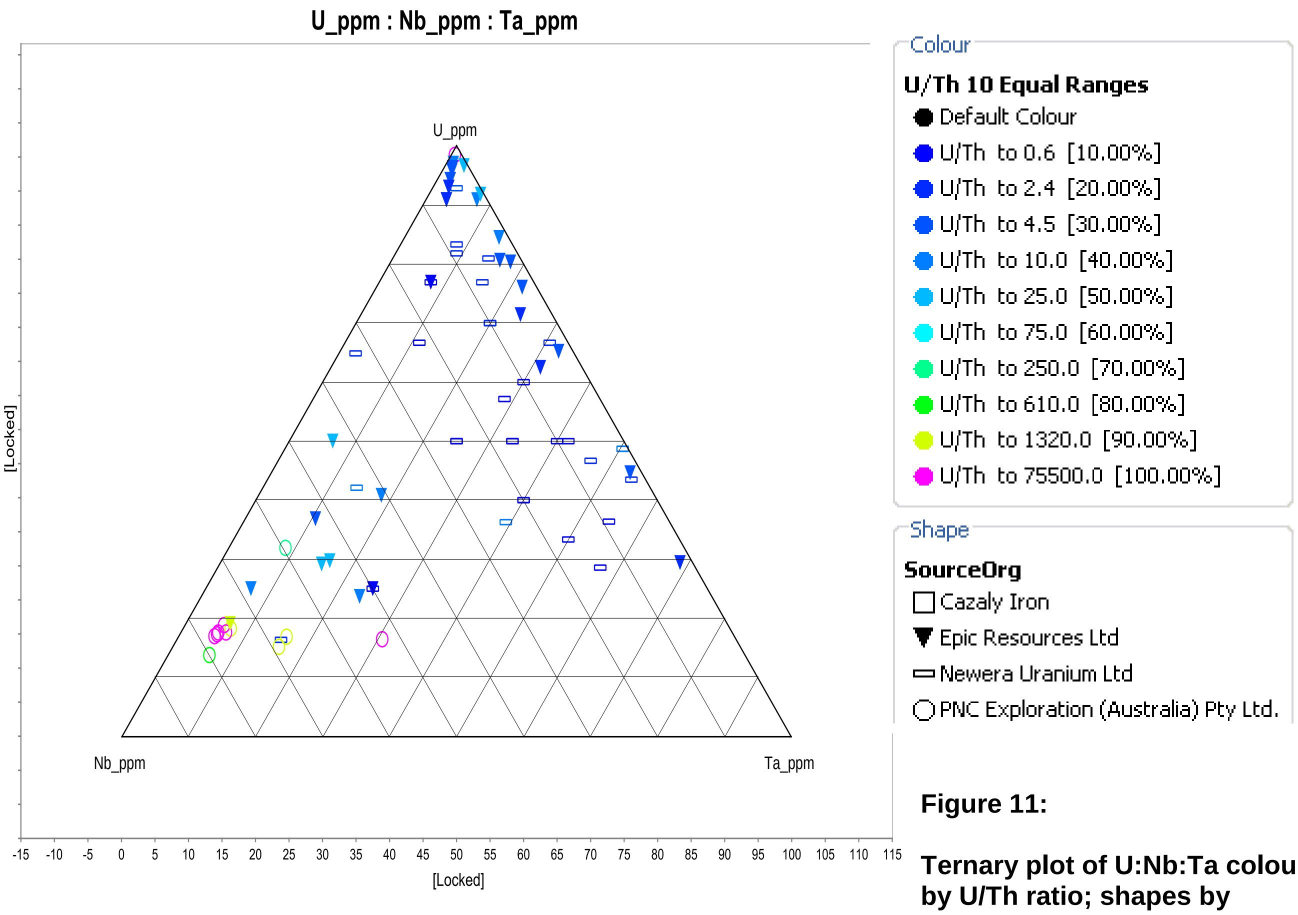

Figure 11:

Ternary plot of U:Nb:Ta coloured by U/Th ratio; shapes by company

Expenditure incurred during the reporting year as follows:

Assays	**$0**
Aerial photography	**$0**
Aircraft Support	**$0**
Appraisals	**$0**
Survey and Gridding	**$0**
Earthworks	**$0**
Drilling	**$0**
Geophysical	**$0**
Farm Out	**$0**
Land	**$0**
Equipment Expenses	**$0**
Data Acquisition	**$0**
Petrography	**$0**
Payroll	**$5,600**
Staff Related Costs	**$300**
Consultants	**$0**
Legal Expenses	**$0**
Vehicle Expenses	**$150**
Drafting	**$0**
Camp & Field Office	**$0**
TOTAL	**$6,050**

6.0 CONCLUSION

Epic returned tenement EL24838 to Cazaly Resources Limited in early 2013. A review by Cazaly of all work completed over EL24838 concluded there was limited potential for a significant discovery. Therefore the tenement was surrendered on the 8th May 2013.

7.0 REFERENCES

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Appendix 2 – REE rock chip assay results and field descriptions and Lab Reports

Assays results for rock chip samples taken from the Harts Range pegmatite field at Lone Pine and Quartz Hill

Sample	East	North	RL (m)	Sc ppm	Y ppm	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm	Lu ppm	Sample site comments
EQH001	531744	7437654	559	-10	2	0.5	1	0.2	1	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	Sample of discordant Late Zone [LZ]
EQH002	531744	7437673	557	-10	5	1.5	2	0.2	1	0.5	0.2	-2	-0.2	1	-0.2	0.5	-0.2	1	-0.2	Wall Zone [WZ] sample
EQH003	531680	7437663	556	-10	9	-0.5	-0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	1	0.4	1	0.2	2	0.4	WZ on HW of pegmatite body
EQH004	531679	7437669	555	-10	7	1	2	0.2	1	-0.5	0.2	-2	-0.2	1	-0.2	0.5	-0.2	1	-0.2	IZ with decimetre kspar crystals, with bright green-yellow carnotite(?) mineral associated with muscovite
EQH005	531620	7437602	574	-10	3	-0.5	0.5	-0.2	-0.5	-0.5	0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	WZ-IZ contact
EQH006	531638	7437598	569	-10	7	-0.5	-0.5	-0.2	-0.5	-0.5	0.2	-2	-0.2	1	0.2	0.5	-0.2	1	-0.2	IZ with variable crystal size ranges
EQH007	531607	7437566	588	-10	4	1	1	0.2	0.5	-0.5	0.2	-2	-0.2	1	-0.2	-0.5	-0.2	-0.5	-0.2	WZ-IZ Contact
EQH008	531592	7437569	590	-10	7	-0.5	1.5	-0.2	0.5	-0.5	-0.2	-2	-0.2	1	-0.2	1	0.2	2	0.2	Along strike of EQH007; IZ sample
EQH009	531575	7437576	604	-10	6	-0.5	-0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	0.5	-0.2	1.5	0.2	Confluence zone of two linear bodies
EQH010	531553	7437607	604	-10	11	-0.5	0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	1.5	0.4	2	0.4	3.5	0.6	IZ - large cm scale magnetite crystals occurring in patches with associated iron staining on the outcrop

EQH011	531624	7437672	572	-10	3	1	2	0.4	1	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	IZ - quartz-rich next to possible qtz core zone
EQH012	531560	7437640	598	-10	6	-0.5	1	-0.2	-0.5	-0.5	-0.2	-2	-0.2	1	-0.2	0.5	-0.2	0.5	-0.2	IZ with large kspar crystals
EQH013	531533	7437651	610	-10	3	0.5	-0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	IZ (?) - along strike on same pegmatite as EQH012, but medium-grained domain
EQH014	531451	7437595	676	-10	150	2	3	0.2	1	-0.5	-0.2	-2	0.6	11	5.8	32	7	61.5	11.6	Kspar and smokey quartz domains
EQH015	531477	7437565	680	-10	8	-0.5	0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	1	0.2	1	0.2	1.5	0.2	Near mining trench, WZ dominated by coarse-grained graphic textured plag-qtz; large books of biotite associated with bucky qtz domains hosted in large kspar crystal domains or their contacts
EQH016	531487	7437574	664	-10	168	2.5	6	1.4	7	4.5	-0.2	6	1.6	11	2.2	8	1.2	8	1	Mass of smokey quartz associated with large biotite books, hosted in kspar
EQH017	531655	7437533	559	-10	2	0.5	1.5	-0.2	0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	IZ-WR contact region
EQH018	531641	7437505	575	-10	7	1.5	1	0.2	1.5	-0.5	0.2	-2	-0.2	1	-0.2	0.5	-0.2	1	-0.2	Possible IZ?
EQH019	531618	7437517	584	-10	2	-0.5	-0.5	-0.2	-0.5	-0.5	0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	IZ

EQH020	531604	7437520	590	-10	14	0.5	1.5	0.2	0.5	-0.5	-0.2	-2	-0.2	1.5	0.4	1.5	0.4	2	0.4	Adjacent pegmatite to EQH019 taken near the confluence of the two bodies; lots of mt
EQH021	531596	7437483	598	-10	4	0.5	1.5	0.2	1	-0.5	0.2	-2	-0.2	1	-0.2	0.5	-0.2	-0.5	-0.2	WZ (?) Size gradation towards the medium-grained centre
EQH022	531592	7437467	594	-10	12	1	1.5	-0.2	1	-0.5	-0.2	-2	-0.2	1	0.2	1.5	0.2	1.5	0.2	IZ - Coarse kspar-qtz domains
EQH023	531643	7437457	589	-10	6	0.5	1	-0.2	0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	0.5	-0.2	1	-0.2	Domain of smokey qtz and large kspar crystals
EQH024	531673	7437455	568	-10	26	0.5	1.5	-0.2	0.5	-0.5	-0.2	-2	0.2	2.5	0.6	2	0.4	2.5	0.4	Same pegmatite as EQH023 along strike towards the creek; tourmaline crystals occurring near WZ-IZ contact
EQH025	531696	7437443	566	-10	6	1	2	0.2	1	-0.5	-0.2	-2	-0.2	1	-0.2	0.5	-0.2	1	-0.2	Same pegmatite as EQH023 across creek; WZ - possible secondary uranium mineral carnotite (?)
EQH026	531638	7437399	573	-10	15	0.5	1	-0.2	1	-0.5	0.2	-2	-0.2	1.5	0.4	1.5	0.4	2	0.4	Non-defined zone, medium-grained domain
EQH027	531583	7437435	595	-10	5	-0.5	0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	0.5	-0.2	1	-0.2	IZ-WZ contact domain
EQH028	531580	7437339	574	-10	19	1.5	1.5	0.2	1	0.5	0.2	-2	0.4	3	0.6	1.5	0.4	2	0.2	Coarse kspar & qtz-mus-plag
EQH029	531572	7437322	583	-10	2	1	1.5	0.2	1	-0.5	0.4	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	Medium-grained domain

EQH030	531558	7437302	585	-10	32	1.5	2	0.4	1.5	1	-0.2	-2	0.4	3.5	0.8	2.5	0.4	3	0.4	Medium-grained domain
EQH031	531563	7437288	596	-10	104	1	1	-0.2	1	-0.5	0.2	-2	0.6	8.5	3.4	17.5	3.6	31	5.4	Same pegmatite as EQH030, greenish mica (Li-rich?) and large garnets in sample
EQH032	531601	7437241	613	-10	45	0.5	-0.5	0.2	-0.5	-0.5	-0.2	-2	0.2	3.5	1.4	8.5	1.8	14	3	Confluence of 3 pegmatite bodies; lots of garnet in sample
EQH033	531563	7437250	605	-10	5	0.5	1	-0.2	-0.5	-0.5	0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	0.5	-0.2	Southern of the 3 pegmatite bodies; green muscovite (Li-rich?)
EQH034	531499	7437254	596	-10	1	-0.5	0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	Sample for zone adjacent to coarse kspar domain; green film on some surfaces (biological?)
EQH035	531474	7437274	603	-10	1	-0.5	-0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	Same pegmatite as EQH034; very coarse kspar-qtz domain, some smokey qtz in adjacent float, sample from medium-grained zone
EQH036	531428	7437314	601	-10	-1	-0.5	-0.5	-0.2	0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5	-0.2	Medium-grained domain; green mineral (?)
EQH037	531498	7437292	593	-10	6	-0.5	0.5	-0.2	-0.5	-0.5	-0.2	-2	-0.2	-0.5	-0.2	0.5	-0.2	1	-0.2	Same pegmatite as EQH036; medium-grained domain

EQH038	533481	7435295	544	-10	4350	3.5	19.5	6	55	94	3.2	340	100	721	148	395	52.6	297	32.6	Quartz Hill - Large decimetre kspar crystals with veins of smokey qtz adjacent to bucky Quartz Core Zone [QC]; IZ-QC contact with euhedral samarskite (Sam) crystals associated with muscovite in veins and as free crystals hosted in kspar crystals

Multi-element rock chip ICP-MS assay results

Sample	Ag	As	Ba	Be	Bi	Cd	Co	Cs	Cu	Ga	Hf	In	Li	Mo	Nb	Ni	Pb	Rb	Re	Sb	Se	Sn	Sr	Ta	Te	Th	Tl	U	W	Zn	Zr
EQH001	-5	20	1220	1	-2	-10	-10	10	-10	50	5.2	0.4	13	-2	-5	-10	60	337	-1	-1	-50	-10	264	0.5	-50	311	2	17.5	-5	250	140
EQH002	-5	-5	80	4	-2	-10	-10	-10	20	-50	3.8	-0.2	20	2	10	-10	10	88.4	-1	-1	-50	-10	143	1.5	-50	93.5	-1	11.5	-5	150	150
EQH003	-5	-5	230	6	-2	-10	-10	-10	-10	-50	6.8	-0.2	22	-2	-5	-10	30	122	-1	-1	-50	-10	193	0.5	-50	20	-1	6	-5	50	340
EQH004	-5	-5	530	4	-2	-10	-10	-10	-10	-50	1.2	-0.2	7	-2	30	-10	90	406	-1	1	-50	-10	198	3.5	-50	13	2	11.5	-5	100	10
EQH005	-5	-5	450	3	-2	-10	-10	-10	-10	-50	2.6	-0.2	8	-2	-5	20	20	115	-1	-1	-50	-10	243	-0.5	-50	6.5	-1	2	-5	50	120
EQH006	-5	-5	210	-1	-2	-10	-10	-10	30	-50	1	-0.2	31	4	5	-10	-10	59.6	-1	-1	-50	-10	272	1	-50	3.5	-1	3.5	-5	100	20
EQH007	-5	-5	1190	4	-2	-10	-10	10	-10	-50	2.6	-0.2	3	-2	-5	-10	40	190	-1	1	-50	-10	304	1.5	-50	3.5	-1	3	-5	-50	30
EQH008	-5	-5	200	7	-2	-10	-10	-10	20	-50	0.6	-0.2	14	-2	-5	-10	20	81.8	-1	-1	-50	-10	201	-0.5	-50	1	-1	2.5	-5	100	-10
EQH009	-5	-5	50	7	-2	-10	-10	-10	10	-50	1.2	-0.2	22	-2	-5	-10	10	26.8	-1	-1	-50	-10	178	-0.5	-50	0.5	-1	0.5	-5	100	20
EQH010	-5	-5	220	4	-2	-10	-10	-10	30	-50	4.2	-0.2	17	-2	-5	10	30	196	-1	-1	-50	-10	97	-0.5	-50	3.5	-1	5	-5	100	180
EQH011	-5	-5	380	-1	-2	-10	-10	-10	-10	-50	7	-0.2	14	-2	-5	-10	30	174	-1	1	-50	-10	143	-0.5	-50	3	-1	2.5	-5	50	390
EQH012	-5	-5	720	1	-2	-10	-10	10	30	-50	0.6	-0.2	11	-2	15	10	90	459	-1	-1	-50	-10	217	1.5	-50	1	2	5.5	-5	50	10
EQH013	-5	-5	500	3	-2	-10	-10	20	10	-50	3.8	-0.2	7	4	-5	10	40	291	-1	-1	-50	-10	196	-0.5	-50	1	1	2	-5	50	190
EQH014	-5	-5	90	5	4	-10	-10	10	20	-50	8.4	-0.2	38	-2	-5	-10	-10	15.2	-1	1	-50	-10	41	1.5	-50	2	-1	18	-5	50	180
EQH015	-5	-5	40	5	-2	-10	-10	-10	10	-50	2.4	-0.2	42	2	-5	20	10	20.2	-1	-1	-50	-10	142	0.5	-50	2.5	-1	4	-5	-50	110
EQH016	-5	-5	20	-1	26	-10	-10	10	30	-50	8	-0.2	30	2	100	10	-10	58	-1	-1	-50	-10	17	475	-50	4	-1	68	10	100	120
EQH017	-5	-5	1750	4	-2	-10	-10	-10	40	-50	0.8	-0.2	20	2	-5	10	60	190	-1	-1	-50	-10	310	3.5	-50	0.5	-1	1.5	-5	150	-10
EQH018	-5	-5	680	11	-2	-10	-10	-10	30	-50	2.4	-0.2	1	2	-5	10	60	195	-1	-1	-50	-10	395	3	-50	0.5	-1	2.5	-5	50	40
EQH019	-5	-5	1430	4	-2	-10	-10	-10	10	-50	1.8	-0.2	10	-2	-5	-10	50	281	-1	-1	-50	-10	311	-0.5	-50	-0.5	1	1.5	-5	50	30
EQH020	-5	-5	260	3	-2	-10	-10	-10	10	-50	6.6	-0.2	8	2	10	-10	50	107	-1	-1	-50	-10	223	4.5	-50	1	-1	10	-5	50	220
EQH021	-5	-5	340	2	-2	-10	-10	-10	10	-50	2.6	-0.2	11	-2	-5	10	30	137	-1	-1	-50	-10	180	0.5	-50	1	-1	1.5	-5	150	30
EQH022	-5	-5	220	4	-2	-10	-10	-10	180	-50	1.6	-0.2	-1	-2	-5	-10	230	47.4	-1	-1	-50	-10	276	0.5	-50	-0.5	-1	1	-5	450	20
EQH023	-5	-5	320	1	-2	-10	-10	-10	-10	-50	2.4	-0.2	12	-2	-5	-10	30	187	-1	-1	-50	-10	176	1	-50	-0.5	-1	3.5	-5	-50	30
EQH024	-5	-5	320	6	6	-10	-10	10	-10	-50	3.2	-0.2	15	-2	20	-10	30	164	-1	1	-50	-10	222	5.5	-50	0.5	-1	10.5	-5	-50	60
EQH025	-5	-5	170	11	-2	-10	-10	-10	-10	-50	5.2	-0.2	5	-2	-5	-10	10	80.8	-1	1	-50	-10	227	1	-50	0.5	-1	6	-5	50	80
EQH026	-5	-5	990	5	-2	-10	-10	-10	10	-50	1.2	-0.2	2	-2	10	-10	50	210	-1	1	-50	-10	281	7	-50	1	-1	9.5	-5	100	-10
EQH027	-5	-5	70	6	-2	-10	-10	-10	40	-50	3	-0.2	13	-2	-5	-10	30	32	-1	-1	-50	-10	181	0.5	-50	4	-1	2.5	-5	500	130
EQH028	-5	-5	320	8	-2	-10	-10	10	-10	-50	1	-0.2	-1	-2	20	-10	90	374	-1	-1	-50	-10	164	6	-50	3.5	1	11	-5	50	-10
EQH029	-5	-5	1160	4	-2	-10	-10	-10	-10	-50	1.4	-0.2	-1	-2	-5	-10	10	70.2	-1	-1	-50	-10	435	-0.5	-50	1	-1	1.5	-5	-50	10
EQH030	-5	-5	260	8	-2	-10	-10	-10	-10	-50	0.6	-0.2	-1	-2	20	-10	50	147	-1	-1	-50	-10	137	9	-50	1	-1	9	-5	50	-10
EQH031	-5	-5	390	2	-2	-10	-10	10	-10	-50	5.2	-0.2	-1	-2	15	-10	100	529	-1	-1	-50	-10	141	6	-50	2	2	9.5	-5	-50	40
EQH032	-5	-5	240	7	-2	-10	-10	-10	-10	-50	2.6	-0.2	-1	-2	-5	-10	40	196	-1	-1	-50	-10	159	1	-50	1	-1	4.5	-5	-50	30

EQH033	-5	-5	800	2	-2	-10	-10	-10	-10	-50	1.6	-0.2	-1	-2	-5	-10	30	243	-1	1	-50	-10	242	-0.5	-50	-0.5	-1	3.5	-5	-50	20
EQH034	-5	-5	320	-1	-2	-10	-10	-10	-10	-50	2.2	-0.2	-1	-2	-5	-10	-10	57.8	-1	-1	-50	-10	211	-0.5	-50	-0.5	-1	2	-5	-50	20
EQH035	-5	-5	30	3	-2	-10	-10	-10	-10	-50	-0.2	-0.2	-1	-2	-5	-10	10	7.6	-1	-1	-50	-10	149	-0.5	-50	-0.5	-1	-0.5	-5	-50	-10
EQH036	-5	-5	80	6	-2	-10	-10	-10	-10	-50	0.4	-0.2	2	-2	-5	-10	-10	5.4	-1	1	-50	-10	266	-0.5	-50	-0.5	-1	-0.5	-5	-50	-10
EQH037	-5	-5	580	5	-2	-10	-10	-10	-10	-50	3	-0.2	2	-2	-5	-10	20	138	-1	-1	-50	-10	220	-0.5	-50	-0.5	-1	4	-5	-50	60
EQH038	10	10	90	17	-2	-10	-10	-10	-10	50	10.8	-0.2	15	-2	5050	-10	90	85.2	-1	1	450	-10	89	454	-50	211	-1	1300	80	-50	130

Scan
File – EPC Project

ULTRA TRACE

Reference : u192745
Date : 30th May 2011
Order : MWR-0067-11
Project :
Date Received : 27th April 2011
Samples Analysed : 38

Analysis of Mineral Samples

for

Epic Resources Ltd

PO Box 1974

West Perth

WA 6872

Attention : Mr M Burdett

Authorised by :
Jon Landau
General Manager
Ultra Trace Pty Ltd

Ultra Trace Pty Limited
58 Sorbonne Crescent
Canning Vale, WA, 6155

Tel: (08) 9456 0404
Fax: (08) 9456 0403

Web: www.ultratrace.com.au
ABN: 86 008 746 585

ULTRA TRACE

	Sc ppm	Y ppm	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Eu ppm
Detn Limit	10	1	0.5	0.5	0.2	0.5	0.5	0.2
EQH001	<10	2	0.5	1.0	0.2	1.0	<0.5	<0.2
EQH002	<10	5	1.5	2.0	0.2	1.0	0.5	0.2
EQH003	<10	9	<0.5	<0.5	<0.2	<0.5	<0.5	<0.2
EQH004	<10	7	1.0	2.0	0.2	1.0	<0.5	0.2
EQH005	<10	3	<0.5	0.5	<0.2	<0.5	<0.5	0.2
EQH006	<10	7	<0.5	<0.5	<0.2	<0.5	<0.5	0.2
EQH007	<10	4	1.0	1.0	0.2	0.5	<0.5	0.2
EQH008	<10	7	<0.5	1.5	<0.2	0.5	<0.5	<0.2
EQH009	<10	6	<0.5	<0.5	<0.2	<0.5	<0.5	<0.2
EQH010	<10	11	<0.5	0.5	<0.2	<0.5	<0.5	<0.2
EQH011	<10	3	1.0	2.0	0.4	1.0	<0.5	<0.2
EQH012	<10	6	<0.5	1.0	<0.2	<0.5	<0.5	<0.2
EQH013	<10	3	0.5	<0.5	<0.2	<0.5	<0.5	<0.2
EQH014	<10	150	2.0	3.0	0.2	1.0	<0.5	<0.2
EQH015	<10	8	<0.5	0.5	<0.2	<0.5	<0.5	<0.2
EQH016	<10	168	2.5	6.0	1.4	7.0	4.5	<0.2
EQH017	<10	2	0.5	1.5	<0.2	0.5	<0.5	<0.2
EQH018	<10	7	1.5	1.0	0.2	1.5	<0.5	0.2
EQH019	<10	2	<0.5	<0.5	<0.2	<0.5	<0.5	0.2
EQH020	<10	14	0.5	1.5	0.2	0.5	<0.5	<0.2
EQH021	<10	4	0.5	1.5	0.2	1.0	<0.5	0.2
EQH022	<10	12	1.0	1.5	<0.2	1.0	<0.5	<0.2
EQH023	<10	6	0.5	1.0	<0.2	0.5	<0.5	<0.2
EQH024	<10	26	0.5	1.5	<0.2	0.5	<0.5	<0.2
EQH025	<10	6	1.0	2.0	0.2	1.0	<0.5	<0.2
EQH026	<10	15	0.5	1.0	<0.2	1.0	<0.5	0.2
EQH027	<10	5	<0.5	0.5	<0.2	<0.5	<0.5	<0.2
EQH028	<10	19	1.5	1.5	0.2	1.0	0.5	0.2
EQH029	<10	2	1.0	1.5	0.2	1.0	<0.5	0.4
EQH030	<10	32	1.5	2.0	0.4	1.5	1.0	<0.2
EQH031	<10	104	1.0	1.0	<0.2	1.0	<0.5	0.2
EQH032	<10	45	0.5	<0.5	0.2	<0.5	<0.5	<0.2
EQH033	<10	5	0.5	1.0	<0.2	<0.5	<0.5	0.2
EQH034	<10	1	<0.5	0.5	<0.2	<0.5	<0.5	<0.2
EQH035	<10	1	<0.5	<0.5	<0.2	<0.5	<0.5	<0.2
EQH036	<10	<1	<0.5	<0.5	<0.2	0.5	<0.5	<0.2
EQH037	<10	6	<0.5	0.5	<0.2	<0.5	<0.5	<0.2
EQH038	<10	4350	3.5	19.5	6.0	55.0	94.0	3.2

Ultra Trace Pty Limited
58 Sorbonne Crescent
Canning Vale, WA, 6155

Tel: (08) 9456 0404
Fax: (08) 9456 0403

Web: www.ultratrace.com.au
ABN: 86 008 746 585

	Gd ppm	Tb ppm	Dy ppm	Ho ppm	Er ppm	Tm ppm	Yb ppm	Lu ppm
Detn Limit	2	0.2	0.5	0.2	0.5	0.2	0.5	0.2
EQH001	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH002	<2	<0.2	1.0	<0.2	0.5	<0.2	1.0	<0.2
EQH003	<2	<0.2	1.0	0.4	1.0	0.2	2.0	0.4
EQH004	<2	<0.2	1.0	<0.2	0.5	<0.2	1.0	<0.2
EQH005	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH006	<2	<0.2	1.0	0.2	0.5	<0.2	1.0	<0.2
EQH007	<2	<0.2	1.0	<0.2	<0.5	<0.2	<0.5	<0.2
EQH008	<2	<0.2	1.0	<0.2	1.0	0.2	2.0	0.2
EQH009	<2	<0.2	<0.5	<0.2	0.5	<0.2	1.5	0.2
EQH010	<2	<0.2	1.5	0.4	2.0	0.4	3.5	0.6
EQH011	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH012	<2	<0.2	1.0	<0.2	0.5	<0.2	0.5	<0.2
EQH013	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH014	<2	0.6	11.0	5.8	32.0	7.0	61.5	11.6
EQH015	<2	<0.2	1.0	0.2	1.0	0.2	1.5	0.2
EQH016	6	1.6	11.0	2.2	8.0	1.2	8.0	1.0
EQH017	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH018	<2	<0.2	1.0	<0.2	0.5	<0.2	1.0	<0.2
EQH019	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH020	<2	<0.2	1.5	0.4	1.5	0.4	2.0	0.4
EQH021	<2	<0.2	1.0	<0.2	0.5	<0.2	<0.5	<0.2
EQH022	<2	<0.2	1.0	0.2	1.5	0.2	1.5	0.2
EQH023	<2	<0.2	<0.5	<0.2	0.5	<0.2	1.0	<0.2
EQH024	<2	0.2	2.5	0.6	2.0	0.4	2.5	0.4
EQH025	<2	<0.2	1.0	<0.2	0.5	<0.2	1.0	<0.2
EQH026	<2	<0.2	1.5	0.4	1.5	0.4	2.0	0.4
EQH027	<2	<0.2	<0.5	<0.2	0.5	<0.2	1.0	<0.2
EQH028	<2	0.4	3.0	0.6	1.5	0.4	2.0	0.2
EQH029	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH030	<2	0.4	3.5	0.8	2.5	0.4	3.0	0.4
EQH031	<2	0.6	8.5	3.4	17.5	3.6	31.0	5.4
EQH032	<2	0.2	3.5	1.4	8.5	1.8	14.0	3.0
EQH033	<2	<0.2	<0.5	<0.2	<0.5	<0.2	0.5	<0.2
EQH034	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH035	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH036	<2	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2
EQH037	<2	<0.2	<0.5	<0.2	0.5	<0.2	1.0	<0.2
EQH038	340	100.	721.	148.	395.	52.6	297.	32.6

****

These results pertain to the samples as received at this laboratory.

Sample Storage
****
The excess material (Residues) will be returned after 30 days
The pulp samples will be returned after 60 days as per instructions.

Sample Preparation
****
The samples have been sorted and dried.Primary preparation has been by crushing the whole sample.The whole sample has then been pulverised in a vibrating disc pulveriser.

The samples have been fused with Sodium Peroxide and subsequently the melt has been dissolved in dilute Hydrochloric acid for analysis. Because of the high furnace temperatures, volatile elements are lost. This procedure is particularly efficient for determination of Major element composition (Including Silica) in the samples or for the determination of refractory mineral species.

Sc
has been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu
have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.

Ultra Trace Pty Limited
58 Sorbonne Crescent
Canning Vale, WA, 6155
Tel: (08) 9456 0404
Fax: (08) 9456 0403
Web: www.ultratrace.com.au
ABN: 86 008 746 585

ULTRA TRACE

Reference : u196126
Date : 25th July 2011
Order : MWR-0067-11
Project :
Date Received : 10th June 2011
Samples Analysed : 38

Analysis of Mineral Samples

for

Epic Resources Ltd

PO Box 1974

West Perth

WA 6872

Attention : Mr M Burdett

Authorised by :
Jon Landau
General Manager
Ultra Trace Pty Ltd

ULTRA TRACE

	Ag Fus ppm	As Fus ppm	Ba ppm	Be ppm	Bi Fus ppm	Cd Fus ppm	Co Fus ppm	Cs ppm
Detn Limit	5	5	10	1	2	10	10	10
EQH001	<5	20	1220	1	<2	<10	<10	10
EQH002	<5	<5	80	4	<2	<10	<10	<10
EQH003	<5	<5	230	6	<2	<10	<10	<10
EQH004	<5	<5	530	4	<2	<10	<10	<10
EQH005	<5	<5	450	3	<2	<10	<10	<10
EQH006	<5	<5	210	<1	<2	<10	<10	<10
EQH007	<5	<5	1190	4	<2	<10	<10	10
EQH008	<5	<5	200	7	<2	<10	<10	<10
EQH009	<5	<5	50	7	<2	<10	<10	<10
EQH010	<5	<5	220	4	<2	<10	<10	<10
EQH011	<5	<5	380	<1	<2	<10	<10	<10
EQH012	<5	<5	720	1	<2	<10	<10	10
EQH013	<5	<5	500	3	<2	<10	<10	20
EQH014	<5	<5	90	5	4	<10	<10	10
EQH015	<5	<5	40	5	<2	<10	<10	<10
EQH016	<5	<5	20	<1	26	<10	<10	10
EQH017	<5	<5	1750	4	<2	<10	<10	<10
EQH018	<5	<5	680	11	<2	<10	<10	<10
EQH019	<5	<5	1430	4	<2	<10	<10	<10
EQH020	<5	<5	260	3	<2	<10	<10	<10
EQH021	<5	<5	340	2	<2	<10	<10	<10
EQH022	<5	<5	220	4	<2	<10	<10	<10
EQH023	<5	<5	320	1	<2	<10	<10	<10
EQH024	<5	<5	320	6	6	<10	<10	10
EQH025	<5	<5	170	11	<2	<10	<10	<10
EQH026	<5	<5	990	5	<2	<10	<10	<10
EQH027	<5	<5	70	6	<2	<10	<10	<10
EQH028	<5	<5	320	8	<2	<10	<10	10
EQH029	<5	<5	1160	4	<2	<10	<10	<10
EQH030	<5	<5	260	8	<2	<10	<10	<10
EQH031	<5	<5	390	2	<2	<10	<10	10
EQH032	<5	<5	240	7	<2	<10	<10	<10
EQH033	<5	<5	800	2	<2	<10	<10	<10
EQH034	<5	<5	320	<1	<2	<10	<10	<10
EQH035	<5	<5	30	3	<2	<10	<10	<10
EQH036	<5	<5	80	6	<2	<10	<10	<10
EQH037	<5	<5	580	5	<2	<10	<10	<10
EQH038	10	10	90	17	<2	<10	<10	<10

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Canning Vale, WA, 6155

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	Cu Fus	Ga	Hf	In Fus	Li	Mo Fus	Nb	Ni Fus
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detn Limit	10	50	0.2	0.2	1	2	5	10
EQH001	<10	50	5.2	0.4	13	<2	<5	<10
EQH002	20	<50	3.8	<0.2	20	2	10	<10
EQH003	<10	<50	6.8	<0.2	22	<2	<5	<10
EQH004	<10	<50	1.2	<0.2	7	<2	30	<10
EQH005	<10	<50	2.6	<0.2	8	<2	<5	20
EQH006	30	<50	1.0	<0.2	31	4	5	<10
EQH007	<10	<50	2.6	<0.2	3	<2	<5	<10
EQH008	20	<50	0.6	<0.2	14	<2	<5	<10
EQH009	10	<50	1.2	<0.2	22	<2	<5	<10
EQH010	30	<50	4.2	<0.2	17	<2	<5	10
EQH011	<10	<50	7.0	<0.2	14	<2	<5	<10
EQH012	30	<50	0.6	<0.2	11	<2	15	10
EQH013	10	<50	3.8	<0.2	7	4	<5	10
EQH014	20	<50	8.4	<0.2	38	<2	<5	<10
EQH015	10	<50	2.4	<0.2	42	2	<5	20
EQH016	30	<50	8.0	<0.2	30	2	100	10
EQH017	40	<50	0.8	<0.2	20	2	<5	10
EQH018	30	<50	2.4	<0.2	1	2	<5	10
EQH019	10	<50	1.8	<0.2	10	<2	<5	<10
EQH020	10	<50	6.6	<0.2	8	2	10	<10
EQH021	10	<50	2.6	<0.2	11	<2	<5	10
EQH022	180	<50	1.6	<0.2	<1	<2	<5	<10
EQH023	<10	<50	2.4	<0.2	12	<2	<5	<10
EQH024	<10	<50	3.2	<0.2	15	<2	20	<10
EQH025	<10	<50	5.2	<0.2	5	<2	<5	<10
EQH026	10	<50	1.2	<0.2	2	<2	10	<10
EQH027	40	<50	3.0	<0.2	13	<2	<5	<10
EQH028	<10	<50	1.0	<0.2	<1	<2	20	<10
EQH029	<10	<50	1.4	<0.2	<1	<2	<5	<10
EQH030	<10	<50	0.6	<0.2	<1	<2	20	<10
EQH031	<10	<50	5.2	<0.2	<1	<2	15	<10
EQH032	<10	<50	2.6	<0.2	<1	<2	<5	<10
EQH033	<10	<50	1.6	<0.2	<1	<2	<5	<10
EQH034	<10	<50	2.2	<0.2	<1	<2	<5	<10
EQH035	<10	<50	<0.2	<0.2	<1	<2	<5	<10
EQH036	<10	<50	0.4	<0.2	2	<2	<5	<10
EQH037	<10	<50	3.0	<0.2	2	<2	<5	<10
EQH038	<10	50	10.8	<0.2	15	<2	5050	<10

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ULTRA TRACE

Reference u196126 Order MWR-0067-11

	Pb Fus ppm	Rb ppm	Re ppm	Sb Fus ppm	Se Fus ppm	Sn ppm	Sr ppm	Ta ppm
Detn Limit	10	0.2	1	1	50	10	1	0.5
EQH001	60	337.	<1	<1	<50	<10	264	0.5
EQH002	10	88.4	<1	<1	<50	<10	143	1.5
EQH003	30	122.	<1	<1	<50	<10	193	0.5
EQH004	90	406.	<1	1	<50	<10	198	3.5
EQH005	20	115.	<1	<1	<50	<10	243	<0.5
EQH006	<10	59.6	<1	<1	<50	<10	272	1.0
EQH007	40	190.	<1	1	<50	<10	304	1.5
EQH008	20	81.8	<1	<1	<50	<10	201	<0.5
EQH009	10	26.8	<1	<1	<50	<10	178	<0.5
EQH010	30	196.	<1	<1	<50	<10	97	<0.5
EQH011	30	174.	<1	1	<50	<10	143	<0.5
EQH012	90	459.	<1	<1	<50	<10	217	1.5
EQH013	40	291.	<1	<1	<50	<10	196	<0.5
EQH014	<10	15.2	<1	1	<50	<10	41	1.5
EQH015	10	20.2	<1	<1	<50	<10	142	0.5
EQH016	<10	58.0	<1	<1	<50	<10	17	475.
EQH017	60	190.	<1	<1	<50	<10	310	3.5
EQH018	60	195.	<1	<1	<50	<10	395	3.0
EQH019	50	281.	<1	<1	<50	<10	311	<0.5
EQH020	50	107.	<1	<1	<50	<10	223	4.5
EQH021	30	137.	<1	<1	<50	<10	180	0.5
EQH022	230	47.4	<1	<1	<50	<10	276	0.5
EQH023	30	187.	<1	<1	<50	<10	176	1.0
EQH024	30	164.	<1	1	<50	<10	222	5.5
EQH025	10	80.8	<1	1	<50	<10	227	1.0
EQH026	50	210.	<1	1	<50	<10	281	7.0
EQH027	30	32.0	<1	<1	<50	<10	181	0.5
EQH028	90	374.	<1	<1	<50	<10	164	6.0
EQH029	10	70.2	<1	<1	<50	<10	435	<0.5
EQH030	50	147.	<1	<1	<50	<10	137	9.0
EQH031	100	529.	<1	<1	<50	<10	141	6.0
EQH032	40	196.	<1	<1	<50	<10	159	1.0
EQH033	30	243.	<1	1	<50	<10	242	<0.5
EQH034	<10	57.8	<1	<1	<50	<10	211	<0.5
EQH035	10	7.6	<1	<1	<50	<10	149	<0.5
EQH036	<10	5.4	<1	1	<50	<10	266	<0.5
EQH037	20	138.	<1	<1	<50	<10	220	<0.5
EQH038	90	85.2	<1	1	450	<10	89	454.

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	Te Fus ppm	Th ppm	Tl ppm	U ppm	W ppm	Zn Fus ppm	Zr ppm
Detn Limit	50	0.5	1	0.5	5	50	10
EQH001	<50	311.	2	17.5	<5	250	140
EQH002	<50	93.5	<1	11.5	<5	150	150
EQH003	<50	20.0	<1	6.0	<5	50	340
EQH004	<50	13.0	2	11.5	<5	100	10
EQH005	<50	6.5	<1	2.0	<5	50	120
EQH006	<50	3.5	<1	3.5	<5	100	20
EQH007	<50	3.5	<1	3.0	<5	<50	30
EQH008	<50	1.0	<1	2.5	<5	100	<10
EQH009	<50	0.5	<1	0.5	<5	100	20
EQH010	<50	3.5	<1	5.0	<5	100	180
EQH011	<50	3.0	<1	2.5	<5	50	390
EQH012	<50	1.0	2	5.5	<5	50	10
EQH013	<50	1.0	1	2.0	<5	50	190
EQH014	<50	2.0	<1	18.0	<5	50	180
EQH015	<50	2.5	<1	4.0	<5	<50	110
EQH016	<50	4.0	<1	68.0	10	100	120
EQH017	<50	0.5	<1	1.5	<5	150	<10
EQH018	<50	0.5	<1	2.5	<5	50	40
EQH019	<50	<0.5	1	1.5	<5	50	30
EQH020	<50	1.0	<1	10.0	<5	50	220
EQH021	<50	1.0	<1	1.5	<5	150	30
EQH022	<50	<0.5	<1	1.0	<5	450	20
EQH023	<50	<0.5	<1	3.5	<5	<50	30
EQH024	<50	0.5	<1	10.5	<5	<50	60
EQH025	<50	0.5	<1	6.0	<5	50	80
EQH026	<50	1.0	<1	9.5	<5	100	<10
EQH027	<50	4.0	<1	2.5	<5	500	130
EQH028	<50	3.5	1	11.0	<5	50	<10
EQH029	<50	1.0	<1	1.5	<5	<50	10
EQH030	<50	1.0	<1	9.0	<5	50	<10
EQH031	<50	2.0	2	9.5	<5	<50	40
EQH032	<50	1.0	<1	4.5	<5	<50	30
EQH033	<50	<0.5	<1	3.5	<5	<50	20
EQH034	<50	<0.5	<1	2.0	<5	<50	20
EQH035	<50	<0.5	<1	<0.5	<5	<50	<10
EQH036	<50	<0.5	<1	<0.5	<5	<50	<10
EQH037	<50	<0.5	<1	4.0	<5	<50	60
EQH038	<50	211.	<1	1300.	80	<50	130

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****

These results pertain to the samples as received at this laboratory.

Sample Storage
****
The pulp samples will be returned after 60 days as per instructions.

Sample Preparation
****
No sample preparation was required on these samples.

The samples have been fused with Sodium Peroxide and subsequently the melt has been dissolved in dilute Hydrochloric acid for analysis. Because of the high furnace temperatures, volatile elements are lost. This procedure is particularly efficient for determination of Major element composition (Including Silica) in the samples or for the determination of refactory mineral species.

If Barium occurs as the Sulphate mineral, then at high levels (more than 2%) it may re-precipitate after the digest giving seriously low results.

Ag Fus, As Fus, Ba, Be, Bi Fus, Cd Fus, Co Fus, Cs, Cu Fus, Ga, Hf, In Fus
Li, Mo Fus, Nb, Ni Fus, Pb Fus, Rb, Re, Sb Fus, Se Fus, Sn, Sr, Ta, Te Fus
Th, Tl, U, W, Zn Fus, Zr
have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.

Ultra Trace Pty Limited
58 Sorbonne Crescent
Canning Vale, WA, 6155

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