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# PADDYS WELL REE PROJECT UPDATE DRILL PLANNING UNDERWAY



- Rare earth elements (REEs) drill planning progressing at Paddys Well CSZ1 target
- Field exploration confirms several ironstone and pegmatite occurrences from rockchips
- Encouraging anomalous yttrium (Y), cerium (Ce) & lanthanum (La) from pXRF screening
- Paddys/West Well Project: ~300 km² landholding in emerging REE district
  - Multiple rockchips with highly anomalous radiometric response from portable scintillometer  $\rightarrow$  strong linkage to REE prospectivity
  - Prospective REE corridor identified with interpreted strike length >16 km; current focus is on 9 km strike 'CSZ1' target zone, within granted tenure
  - Several ironstone / schists / calcsilicate trends identified
  - Drill planning in progress along strike of identified REE mineralisation

**Voltaic Strategic Resources Limited** ('**Voltaic'** or 'the **Company'**) (**ASX:VSR**) is pleased to provide an update on its <u>Paddys Well</u> / <u>Gascoyne Critical Metals Project</u>, located in Western Australia.

Ground exploration commenced in September, focusing on REEs and lithium. A promising number of ironstone / calcsilicate outcrops have been discovered in the field, which are prospective for REEs, and extensive (78) rockchip samples have been collected across priority target zones and have been submitted for analysis. REEs have been confirmed at the Paddys Well 'CSZ1' target and a 16 km prospective corridor delineated (see <u>ASX release: 13/10/2022</u>), with planning underway for a shallow drill campaign to commence before the end of the year. The primary aim of this campaign is to confirm and delineate the extent of the REE anomalism already identified at Paddys Well, and to screen other target areas of interest.



Figure 1: (a,b,c) Outcropping ironstones; (c) Gascoyne project location





# Paddys Well Project (EL 09/2414)

Voltaic's immediate focus at our "Paddys Well" project is to delineate the extents of the highly prospective "CSZ 1" REE corridor 'by targeting: outcropping ferrocarbonatites (ironstones); carbonatite intrusions under cover; and potential oxide supergene mineralisation above interpreted regional structures. A total of **78 rockchips** have been collected from a 3 km priority target area to date and these will be used to aid target generation and geological and structural models.

A preliminary **drill campaign is planned to commence in December 2022** whereby the aim is to: (1) 'twin' (the oxide component) of historical Cameco drillhole GAD0004 with anomalous REEs and improve the resolution of composite sampling; (2) test and expand the extent of the REE anomalism within this area utilising wide-spaced gridlines; & (3) screen other key priority target areas of interest (see *Figure 2* below).

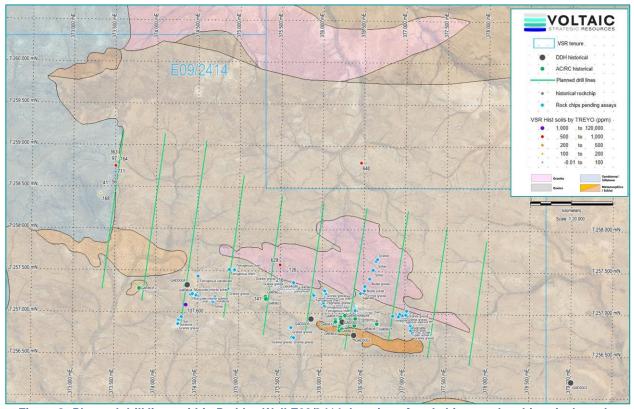


Figure 2: Planned drill lines within Paddys Well E09/2414; location of rockchip samples; historical results;

Program-of-Work (PoW) applications are in progress covering broad drill target areas and it is anticipated that either auger vacuum (AV) or air core (AC) drills will be used to conduct drilling over shallow target areas. It should be noted that high tenure mineralisation is not the primary target of AV/AC campaigns; rather they act as expeditious and economic vectoring tools for subsequent deeper drill campaigns.

Historical drilling in the area focused on thorium / uranium anomalism, which also correlates to REE occurrences in the region (see *Figure 4*). Several recently acquired rockchip samples and general trends of outcrop have displayed a high radiometric response, which is indicative of potential REE mineralisation.



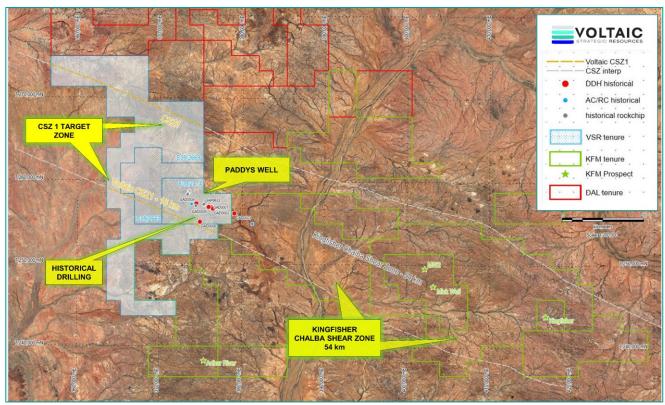


Figure 3: Regional map showing: historical drillhole locations within E09/2414; other REE occurrences in the area; & the interpreted prospective corridor;

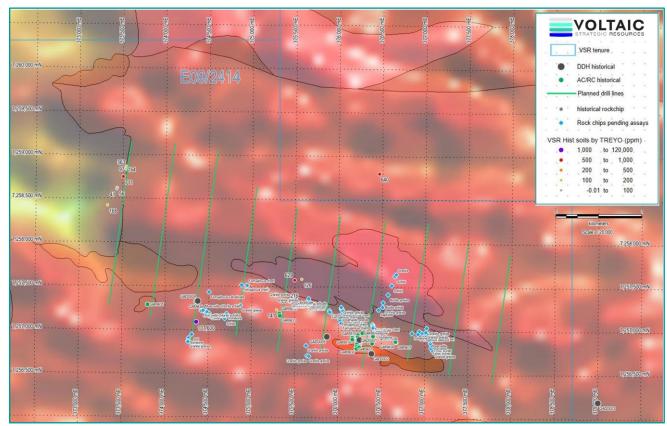


Figure 4: Drill target areas with thorium radiometric intensity (Th 80m V1 merged)



# Outcrop

An encouraging number of ironstone, schist and calcsilicate outcrops have been identified in the field within our Gascoyne project tenure which provides geochemical vectoring haloes that assist target generation (see *Figure 5* below).



Figure 5: Outcropping ironstone rocks within Paddys Well tenure



# **Rockchip Sampling at Paddys Well**

Extensive rockchip sampling was undertaken across Paddys Well and these have been submitted for multielement analysis, the results of which are expected mid-December 2022. An encouraging number of ironstone outcrop, pegmatite and calcsilicate samples have been collected.

A selection of ironstone, calcsilicate and pegmatitic rockchip photos from Paddys Well (EL09/2414) is provided in *Figure 6* below. When analysed with a portable XRF, several samples displayed anomalous yttrium, cerium and lanthanum, confirming the presence of REEs. Additionally, multiple rockchips yielded a highly anomalous radiometric response using a portable scintillometer, an aspect also linked to REE prospectivity. All samples will undergo laboratory multielement analysis to verify the above preliminary observations with results expected mid-December.







Figure 6: (a) Ironstone; (b) calcsilicate; & (c) pegmatitic rockchips collected from Paddys Well (EL09/2414)



#### **UPCOMING EXPLORATION**

- Preliminary shallow drill campaigns are planned for December 2022 at Paddys Well whereby the
  primary aim is to confirm and delineate the extent of the REE anomalism already identified and to
  screen other target areas of interest.
- Additional activities planned for Q4 2022/Q1 2023 exploration at the Gascoyne project aims to generate and refine target areas through the acquisition of enhanced radiometrics / magnetics / ASTER satellite imagery data, and supporting field activities to advance these targets.

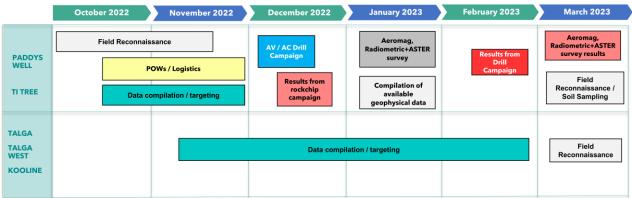


Figure 7: Planned and completed activities for the next 6 months at the Gascoyne Projects

#### **UPCOMING NEWS**

- November 2022: Exploration Update Talga / Talga West, Kooline, Meekatharra, Nevada projects
- December 2022: Update on planned drilling at Paddys Well / Ti Tree
- December 2022: Results from ongoing surface mapping and rock chip sampling at Paddys Well / Ti Tree
- January 2023: Commencement of geophysical surveys at Paddys Well / Ti Tree
- February 2023: Drill results from Paddys Well / Ti Tree
- March 2023: Results from geophysical surveys; field reconnaissance update at Talga/TalgaWest, Kooline

# PREVIOUS RELATED MARKET ANNOUNCEMENTS

ASX:VSR <u>Lithium Potential Expanded at Gascoyne Project</u> 02/11/2022
ASX:VSR Rare Earths Confirmed at Gascoyne Project 13/10/2022

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#### **COMPETENT PERSONS STATEMENT**

The information in this announcement that relates to Exploration Results is based on and fairly represents information compiled by Mr Claudio Sheriff-Zegers. Mr Sheriff-Zegers is employed as an Exploration Manager for Voltaic Strategic Resources Ltd and is a member of the Australasian Institute of Mining and Metallurgy. He has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He consents to the inclusion in this announcement of the matters based on information in the form and context in which they appear.

#### FORWARD-LOOKING STATEMENTS

This announcement may contain forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future development



# **APPENDIX**

# **GASCOYNE REE & BATTERY METALS PROJECT**

The Gascoyne REE & Battery Metals project is situated ~100km east from the town of Carnarvon in Western Australia, covering a total area of ~1,136 km², comprising four regional Project areas: West Well / Paddys Well project; Talga / Talga West project; Ti Tree Project; and Kooline project.

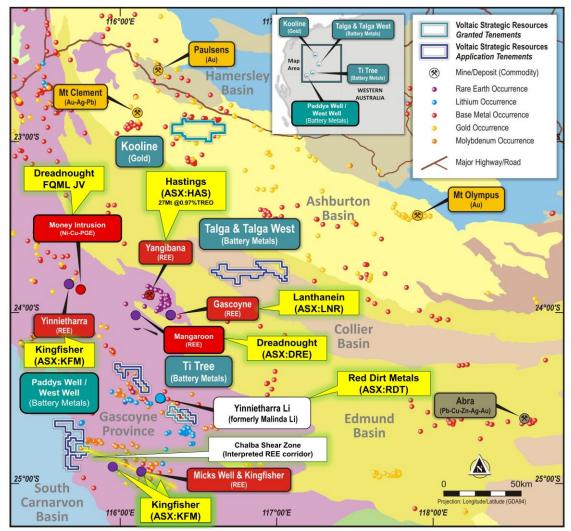


Figure 8: Location of the Company's Gascoyne Project in Western Australia

Table 1: Gascoyne Project Tenement List

Project Group	Tenement	Project Name	Primary Target	Status	Area (km²)
Gascoyne	E 09/2663	West Well	REEs	Application	46.7
	E 09/2669	West Well		Application	205.3
	E 09/2414	Paddys Well	REEs	Live	40.4
	E 08/3303	Talga	Ni-Cu-Co-PGE	Application	144.2
	E 08/3420	Talga West		Application	184.9
	E 09/2503	Ti Tree South	Lithium	Live	59.2
	E 09/2470	Ti Tree South	REEs	Application	43.6
	E 09/2522	Ti Tree North		Application	109.2
	E 08/3314	Kooline	Cu-Au Cu-Ag-Pb-Zn Gold	Live	302.7



Table 2: Rockchip Sample Data Taken from Paddys Well (EL09/2414)

					2: Rockettip Sample Data Taken from Faddys Well (EL09/2414)
Easting	Northing	Sample ID	Sample Type	Lithology	Description Control of the Control o
374510	7257440	PR500001	Rock	Ferruginous calcsilicate	Ferruginous calcsilicate. Moderately weathered. Medium grained. Massive. Iron oxide. Tremolite. Carbonate? Quartz. Chalcedony minor. Red brown. Float.
374477	7257219	PR500002	Rock	Soil and float	Soil and float. Brown loam and mixed quartzite and quartz vein float over weathered strongly foliated gniss. Soil generates a high radiometric response
375642	7257314	PR500003	Rock	Calcsilicate	Calcsilicate. Fresh. Fine grained. Weakly foliated. Tremolite. Carbonate minor. Goethite minor. White and Light grey. Outcrop.
375645	7257324	PR500004	Rock	Calcsilicate	Calcsilicate. Fresh. Fine grained. Weakly foliated. Tremolite. Carbonate minor. Goethite minor. White and Light grey. Outcrop.
375648	7257334	PR500005	Rock	Calcsilicate	Calcsilicate-partially siliceous and ferruginous. Weakly weathered. Fine grained. Weakly foliated. Tremolite. Carbonate. Chert minor Goethite / limonite minor minor. White to brown to black. Subcrop and float.
375658	7257354	PR500006	Rock	Calcsilicate	Calcsilicate-partially siliceous and ferruginous. Weakly weathered. Fine grained. Weakly foliated. Tremolite. Carbonate. Chert minor Goethite minor. Mn-oxide. White to brown to black. Siliceous carbonate veins. Outcrop.
375661	7257375	PR500007	Rock	Calcsilicate	Calcsilicate-partially siliceous and ferruginous. Weakly weathered. Fine grained. Weakly foliated. Tremolite. Carbonate. Chert minor Goethite / limonite minor. White to yellow brown to black. Subcrop and float.
375440	7257337	PR500008	Rock	Ironstone	Ironstone. Strongly weathered. Fine grained. Massive. Goethite. Limonite. Mn-oxide. Black. Subcrop and float. Fe-Mn ironstone caprock of calcsilicate?
375454	7257350	PR500009	Rock	Calcsilicate	Calcsilicate-partially siliceous and ferruginous. Weakly weathered. Fine grained. Weakly foliated. Carbonate. Tremolite. Chert minor. Goethite minor. White to brown. Outcrop.
375468	7257355	PR500010	Rock	Calcsilicate	Calcsilicate. Weakly weathered. Medium grained. Weakly foliated. Tremolite. Carbonate. Silica/chert minor. Goethite minor. Mn-oxide minor. Light grey to brown to black. Outcrop. Silicified carbonate-goethite vein stockwork.
375479	7257371	PR500011	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Moderately foliated. Gneissose. Quartz. Feldspar. Muscovite. Tourmaline minor. White. Outcrop. Within calcsilicate carbonate sequence.
375490	7257377	PR500012	Rock	Calcsilicate	Calcsilicate carbonate. Fresh. Medium grained. Weakly foliated. Tremolite. Carbonate. Silica/chert minor. Goethite minor. Mn-oxide minor localised. White to light grey. Outcrop.
375509	7257383	PR500013	Rock	Calcsilicate	Calcsilicate carbonate. Fresh. Medium grained. Weakly foliated. Tremolite. Carbonate. Silica/chert minor. Goethite minor. Mn-oxide minor localised. White to light grey. Outcrop.
374511	7257199	PR500014	Rock	Schist	Mica-quartz schist. Weakly weathered. Medium coarse grained. Schistose. Muscovite. Quartz. Chlorite. Light green, white subcrop. High radiometric response
374511	7257199	PR500015	Rock	Soil	Soil. Highly weathered brown micaeous loam. High radiometric response
374482	7257215	PR500016	Rock	Soil	Soil. Highly weathered brown micaeous loam with quartzite and vein quartz float. High radiometric response
374446	7257227	PR500017	Rock	Soil	Soil. Highly weathered brown micaeous loam with quartzite and vein quartz float. Muscovite-chlorite schist outcrop. High radiometric response
374447	7257227	PR500018	Rock	Muscovite- chlorite schist	Muscovite-chlorite schist. Weakly weathered. Medium grained. Stongly foliated/cleaved. Muscovite. Chlorite. Quartz. Kspar?. Green. Outcrop and subcrop. Next to high radiometric response area
374421	7257228	PR500019	Rock	Soil	Soil. Highly weathered brown micaeous loam with quartzite and vein quartz float. Muscovite-chlorite schist outcrop adjacent. Mild radiometric response.
374421	7257227	PR500020	Rock	Muscovite- chlorite schist	Muscovite-biotite-chlorite schist. Weakly weathered. Medium grained. Stongly foliated/cleaved. Muscovite. Biotite. Chlorite. Quartz. Kspar? Green. Outcrop/subcrop. Next to area with moderate radiometric response
374439	7257228	PR500021	Rock	Soil	Soil. Highly weathered brown micaeous loam with quartzite and vein quartz float. Muscovite-chlorite schist outcrop adjacent. High radiometric response
374440	7257228	PR500022	Rock	Muscovite- chlorite schist	Muscovite-biotite-chlorite schist. Weakly weathered. Medium grained. Stongly foliated/cleaved. Muscovite. Biotite. Chlorite. Quartz. Kspar? Green. Outcrop and subcrop. Next to area with moderate radiometric response
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Easting	Northing	Sample ID	Sample Type	Lithology	Description Control of the Control o
374692	7257138	PR500023	Rock	Soil	Soil. Highly weathered brown micaeous loam with quartzite and vein quartz float. Quartz-muscovite schist outcrop adjacent. Moderate radiometric response
374691	7257138	PR500024	Rock	Schist	Muscovite-quartz schist. Fresh h. Medium grained. Strongly foliated. Quartz. Muscovite. Light grey white. Subcrop. Adjacent to area with moderate radiometric response
375180	7257473	PR500025	Rock	Granite gneiss	Granite gneiss. Fresh. Coarse grained. Moderately foliated. Kspar. Quartz. Muscovite minor. White to light grey. Outcrop. Probable deformed granite pegmatite intrusive.
375275	7257411	PR500026	Rock	Granite gneiss	Granite gneiss. Fresh. Coarse grained. Moderately foliated. Kspar. Quartz. Muscovite and biotite minor. White to light grey. Outcrop. Probable deformed granite pegmatite intrusive.
374712	7257198	PR500027	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Limonite. Chert. Dark brown to orange to yellow. Outcrop. Prominent small ridge. Grades to ferruginous chert.
374868	7257292	PR500028	Rock	Granite gneiss	Granite gneiss. Fresh. Coarse grained. Moderately foliated. Kspar. Quartz. Biotite and muscovite minor. White. Outcrop. Probable deformed granite intrusive.
374882	7257525	PR500029	Rock	Ferruginous chert	Ferruginous chert. Moderately weathered. Weakly foliated. Bedded? Rhomboid mineral pseudomorphs. Chert. Goethite. Gypsum? pseudomorphs. Dark brown. Outcrop. Quite siliceous.
374948	7257521	PR500030	Rock	Ferruginous chert	Ferruginous chert. Moderately weathered. Weakly foliated. Bedded? Chert. Goethite. Dark brown. Outcrop.
374272	7256914	PR500031	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Mn-oxide. Silica. Black. Float. Moderate radiometric response within area on margin of ironstone patch.
374273	7256914	PR500032	Rock	Soil	Soil. Brown loam with white vein quartz and black ironstone float. On margin of ironstone patch.
374311	7256955	PR500033	Rock	Soil	Soil. Brown loam with white vein quartz float. Near white quartz vein subcrop.
374271	7256880	PR500034	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Mn-oxide. Silica. Black. Large ironstone float patch.
374267	7256871	PR500035	Rock	Granite gneiss.	Granite gneiss. Weakly weathered. Coarse grained. Kspar. Quartz. Muscovite. White. Outcrop.
377058	7256978	PR500036	Rock	Schist	Schist. Weakly weathered. Medium grained. Strongly foliated. Quartz. Biotite. Muscovite. Kspar. Light grey white. Outcrop.
377051	7256981	PR500037	Rock	Pegmatite	Pegmatite. Fresh. Coarse grained. Weakly foliated. Kspar. Quartz. Muscovite minor. Tourmaline trace. White. Outcrop.
377030	7256977	PR500038	Rock	Ferruginous chert	Ferruginous chert. Highly weathered. Very fiine grained. Coarse to very coarse pseudomorphs (casts). Chert. Goethite minor. Brown. Float. Abundant coarse euhedral rhomboid casts (after sulphides?).
377035	7256970	PR500039	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Mn-oxide. Black. Float and subcrop. Associated with calcsilicate.
377026	7257041	PR500040	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Banded. Kspar. Quartz. Muscovite. Biotite. White. Outcrop. 340cps TC.
377094	7256777	PR500041	Rock	Granite gneiss	Granite gneiss. Fresh. Medium to course grained. Strongly foliated. Grading to schistose.Banded. Kspar. Muscovite. Biotite. Quartz. White. Outcrop.
377075	7256813	PR500042	Rock	Felsic schist	Felsic schist. Fresh. Medium grained. Strongly foliated. Quartz. Kspar. Muscovite. Biotite. White. Outcrop. Mixed granite gneiss and felsic schist sequence. Ribbon quartz veins parallel to schistosity.
377083	7256844	PR500043	Rock	Felsic schist	Felsic schist. Fresh. Medium grained. Strongly foliated. Kspar. Muscovite. Biotite. Quartz. Light grey. Outcrop. Mixed granite gneiss and felsic schist sequence.
377067	7256871	PR500044	Rock	Pegmatite	Pegmatite. Fresh. Coarse grained. Weakly foliated. Kspar. Muscovite. Quartz. White. Outcrop. Associated blue grey quartz veins. Possible variety of granite gneiss.



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Easting	Northing	Sample ID	Sample Type	Lithology	Description Control of the Control o
377068	7256898	PR500045	Rock	Pegmatite	Pegmatite. Fresh. Coarse grained. Weakly foliated. Kspar. Quartz. Muscovite. White. Outcrop. Associated white quartz veins. Possible variety of granite gneiss.
376970	7256986	PR500046	Rock	Granite gneiss	Felsic gneiss. Fresh. Medium to coarse grained. Strongly foliated. Kspar. Quartz. Muscovite White. Grading towards schist.
376940	7257007	PR500047	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Haematite. Chert. Dark brown. Subcrop. Grades to ferruginous chert.
376924	7256973	PR500048	Rock	Ferruginous saprock	Ferruginous saprock. Highly weathered. Fine grained. Massive. Goethite. Clay. Mn-oxide. Brown with black surface coating. Outcrop. Possible ferruginous calcsilicate?
376856	7256985	PR500049	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Gothite. Mn-oxide. Chert. Dark brown black. Outcrop. Grades to ferruginous chert.
376452	7256991	PR500050	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Mn-oxide. Dark brown black. Large ironstone float patch.
376400	7257085	PR500051	Rock	Ferruginous chert	Ferruginous chert. Weakly weathered. Fine grained. Massive. Chert. Goethite minor. Brown with patchy white coating. Outcrop. High radiometric response area
376405	7257071	PR500052	Rock	Calcsilicate	Calcsilicate. Fresh. Medium grained. Weakly foliated. Tremolite. Carbonate minor. Light yellow. Outcrop. High radiometric response area.
376404	7257058	PR500053	Rock	Soil	Soil. Brown loam with mica flakes. Abundant black ironstone float.
376403	7257058	PR500054	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Mn-oxide. Dark brown black. Large ironstone float patch. Ironstone outcrop 10m south.
376402	7257040	PR500055	Rock	Ironstone	Ironstone. Highly weathered. Fine grained. Massive. Goethite. Mn-oxide. Dark brown black. Outcrop.
376034	7257096	PR500056	Rock	Ferruginous chert	Ferruginous chert. Highly weathered. Fine grained. Moderately foliated. Chert. Goethite minor. Brown with patchy white coating. Outcrop. High radiometric response that disappears along strike. Within calcsilicate sequence.
376021	7257136	PR500057	Rock	Ferruginous chert	Ferruginous chert. Highly weathered. Fine grained. Weakly foliated. Chert. Goethite minor. Brown with patchy white coating. Outcrop. High radiometric response. Within calcsilicate sequence.
376037	7257190	PR500058	Rock	Pegmatite granite	Pegmatite granite. Fresh. Coarse grained. Massive to weakly foliated. Kspar. Quartz. White. Outcrop.
376038	7257253	PR500059	Rock	Schist	Schist. Fresh. Fine grained. Stongly foliated. Chlorite. Muscovite. Quartz. Light green. Subcrop and outcrop. Radiometric anomaly associated with calcrete-rich soil.
376047	7257256	PR500060	Rock	Calcrete	Calcrete. Highly weathered. Fine grained. Massive. Carbonate. White. Outcrop caprock. Associed with chlorite schist. Pronounced radiometric anomaly.
376046	7257245	PR500061	Rock	Ferruginous chert	Ferruginous chert. Highly weathered. Fine grained. Massive. Chert. Goethite. Brown with patchy white coating. Outcrop. Pronounced radiometric anomaly.
376045	7257243	PR500062	Rock	Calcrete	Calcrete. Highly weathered. Fine grained. Massive. Carbonate. White. Outcrop caprock. Adjacent to ironstone Pronounced radiometric anomaly.
376038	7257273	PR500063	Rock	Schist	Schist. Weakly weathered. Medium grained. Strongly foliated. Kspar. Quartz. Muscovite. Biotite. Light grey.
376038	7257274	PR500064	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Massive. Kspar. Quartz. Chlorite. White.
376520	7257335	PR500065	Rock	Biotite schist	Biotite schist. Fresh. Mediun grained. Strongly foliated. Quartz. Kspar. Biotite. Grey. Outcrop. Next to white quartz vein. Probable biotite alteration.
376575	7257421	PR500066	Rock	Biotite gneiss	Biotite gneiss. Weakly weathered. Medium grained. Kspar. Quartz. Biotite. Muscovite. Grey. Next to white quartz vein.

# **ASX / Media Release**

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Easting	Northing	Sample ID	Sample Type	Lithology	Description
376617	7257528	PR500067	Rock	Schist	Schist. Moderately weathered. Medium grained. Strongly foliated. Quartz. Kspar. Biotite. Muscovite. Orange brown.
376652	7257635	PR500068	Rock	Schist	Schist. Moderately weathered. Medium grained. Strongly foliated. Kspar. Biotite. Muscovite. Quartz. Orange brown to light grey.
376667	7257655	PR500069	Rock	Granite	Granite. Fresh. Coarse grained. Massive. Kspar. Quartz. Light orange.
376513	7257281	PR500070	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Moderately foliated. Gneissose. Kspar. Quartz. Biotite. Muscovite. White
376465	7257250	PR500071	Rock	Saprolite	Saprolite. Highly weathered. Fine grained. Moderately foliated. Kaolin. Carbonate? Quartz. White. Outcrop. Weathered granite gneiss. White saprolite clay at base of granite gneiss ridge. High radiometric response area
375900	7257239	PR500072	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Weakly foliated. Kspar. Quartz. Muscovite minor. White. Outcrop.
375905	7257220	PR500073	Rock	Ferruginous chert	Ferruginous chert. Moderately weathered. Fine grained. Massive. Chert. Goethite. Mn-oxide. Dark brown to black. Subcrop. Associated with and probably capping calcsilicate.
375645	7256718	PR500074	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Strongly foliated. Kspar. Quartz. Muscovite. Biotite. White. Outcrop Broad zone radiometric anomaly. Trending towards schistose.
375664	7256715	PR500075	Rock	Granite gneiss	Granite gneiss. Moderately weathered. Medium grained. Strongly foliated. Kspar. Quartz. Muscovite. Biotite. Orange brown to light grey. Outcrop. Broad zone radiometric anomaly. Trending towards schistose.
375630	7256836	PR500076	Rock	Granite gneiss	Granite gneiss. Fresh. Medium grained. Strongly foliated. Kspar. Quartz. Biotite. Muscovite. Light grey white. Outcrop. Broad zone radiometric anomaly. Trending towards schistose.
377012	7256996	PR500077	Rock	Granite gneiss	Granite gneiss. Fresh. Coarse grained. Weakly foliated. Pegmatoidal. Kspar. Quartz. Muscovite minor. White. Outcrop.
375090	7265261	MR400001	Rock	Pegmatite	Pegmatite. Fresh. Very coarse grained. Kspar. Quartz. Muscovite. White. Dyke 5m wide. More pegmatite bodies in vicinity.

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# **JORC TABLES**



# **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Historical AC/RC drill samples were collected at 1m intervals and composited to 4m lengths for analysis.</li> <li>The 4m composite or 1m sample (where submitted) were crushed and a sub-fraction obtained for pulverisation.</li> <li>Rock chip samples were taken as individual rocks representing an outcrop (or grab samples). Surface rock samples can be biased towards higher grade mineralisation.</li> <li>Historical drillcore sampling was completed throughout drillholes by compositing variable widths (predominantly 5m) with a representative a 5cm half core sample, representing each respective drill meter.</li> <li>Historical soil samples were collected as grab samples as randomised intervals and were sent for multielement analysis</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Historical AC/RC drilling was completed by PNC Exploration/ESSO/Cameco utilising AC/RC drill methods</li> <li>Historical drilling by Cameco used Wallis Drilling to undertake diamond drilling using a UDR-1000 drill rig. The drilling was completed using HQ (63.5mm) &amp; NQ (47.6mm) from surface for the collection of drill core samples.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Cameco reported drill recoveries as being close to 100% for the historical drilling.</li> <li>Drill sample bias has occurred given only 5cm of respective 1m core sample interval run was submitted through composite sampling.</li> <li>A review is being undertaken to assess the potential to re-submit entire mineralised intervals; where drill core has been found and identified, and interval runs remain complete.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>PNC Exploration Pty Ltd logged historical soil results for lithology using methods consistent with industry standards.</li> <li>Cameco logged historical drill holes for geology, mineralisation, structure, and alteration. The geological and geotechnical logging is consistent with industry standards.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Historical drillcore sampling was completed throughout drillholes by compositing variable widths (predominantly 5m) with a representative a 5cm half core sample, representing each respective drill meter. Sampling measured spectral parameters using the PIMA II spectrometer and also assayed as lithology-based composites.



Criteria	JORC Code explanation	Commentary STRATEGIC RESOURCES			
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>PNC Exploration Pty Ltd soil samples were analysed by Ultratrace Pty Ltd using ICP-OES and ICP-MS to analyse 16-34 elements.</li> <li>Cameco drill core samples were analysed by Chemnorth using four assay methods, ICP-OES, ICP-MS, AAS and gravity to analyse 32-53 elements.</li> </ul>			
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The procedures for verification of historical PNC Exploration Pty Ltd or Cameco sampling and assaying are not known.</li> <li>Rare earth element analyses were originally reported in elemental form but have been converted to relevant oxide concentrations as in the industry standard to:         <ul> <li>TREO = La<sub>2</sub>O<sub>3</sub> + CeO<sub>2</sub> + Pr<sub>6</sub>O<sub>11</sub>+Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub></li> </ul> </li> <li>MREO = Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Dy<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub></li> </ul>			
		Conversion factors from element to oxide:  Element Oxide Conversion Factor Equivalent Oxide			
Location of data	Accuracy and quality of surveys used to locate drill holes (collar and down-hole)	Ce         1,2284         CeO2           Dy         1,1477         Dy2O3           Er         1,1435         Er2O3           Eu         1,1579         Eu2O3           Gd         1,1526         Gd <sub>2</sub> O <sub>3</sub> Ho         1,1455         Ho <sub>2</sub> O <sub>3</sub> La         1,1728         La <sub>2</sub> O <sub>3</sub> Lu         1,1371         Lu <sub>2</sub> O <sub>3</sub> Nd         1,1664         Nd <sub>2</sub> O <sub>3</sub> Pr         1,2082         Pf <sub>6</sub> O <sub>11</sub> Sc         1,5338         Sc <sub>2</sub> O <sub>3</sub> Sm         1,1596         Sm <sub>2</sub> O <sub>3</sub> Tb         1,1762         Tb <sub>4</sub> O <sub>7</sub> Tm         1,1421         Tm <sub>2</sub> O <sub>3</sub> Y         1,2699         Y <sub>2</sub> O <sub>3</sub> Yb         1,1387         Yb <sub>2</sub> O <sub>3</sub> * The Cameco holes were surveyed using the UTM coordinate system. The survey			
points	surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  Specification of the grid system used.  Quality and adequacy of topographic control.	method and accuracy were not reported.  Downhole surveys were completed using an Eastman downhole survey tool.			
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	Cameco early-stage exploration was completed to verify previous explorers interpretation and pursue lateral extents of uranium mineralisation.			
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The drilling that has been completed to date has not been structurally reviewed or validated to confirm the orientation of interpreted mineralisation</li> <li>Rock chip samples were selected to target specific geology, alteration and mineralisation. The samples were collected to assist historical explorers develop their</li> </ul>			

# **ASX / Media Release**

# 18 November 2022



Criteria	JORC Code explanation	Commentary		
		understanding of the geology and exploration potential of historical tenure.		
Sample security	The measures taken to ensure sample security.	<ul> <li>Sample security was not reported by PNC Exploration Pty Ltd or Cameco. Samples were given individual samples numbers for tracking.</li> </ul>		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The sampling techniques and analytical data are monitored by the Company's geologists.		
		A review of the historical core and compiled data is being undertaken to confirm historical results and assist in interpretation and targeting of further exploration.		

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria listed in the	preceding section also apply to this section.)  JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The project area is located approximately 60km northeast of the Gascoyne Junction and 220km east of Carnarvon.</li> <li>The Paddys Well project comprises one granted Exploration Licence, E09/2414, and the West Well project comprises two Exploration Licence Applications: E09/2663 and E09/2669.</li> <li>The tenements lie within Native Title Determined Areas of the Yinggarda, Baiyungu and Thalanyji People and Gnulli People.</li> <li>All the tenements are in good standing with no known impediments.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Numerous exploration campaigns have been completed in the general area since the early 1970's focusing predominantly on uranium and diamonds, however work within tenement area E09/2414 has been limited and there is no documented exploration targeting rare earth elements or lithium.</li> <li>From 1974-1983 companies including Uranerz, Agip Nucleare, AFMECO, ESSO Minerals and Urangesellschaft explored the Gascoyne Region for uranium with little success. Most anomalies identified were limited to secondary uranium occurrences in basement metamorphic sequences (including some occurrences associated with pegmatites) and surficial groundwater calcrete sheets (WAMEX REPORT A 87808).</li> <li>Subsequently from 1992 – 1996, PNC Exploration explored the southern Gascoyne area actively targeting basement-hosted uranium mineralisation within the Morrissey Metamorphics (WAMEX REPORT A 46584).</li> <li>The exploration focussed on determining the source of U anomalies and their association with EM conductors. This led PNC to undertake nearly 100-line km of a Questem airborne EM survey as a follow-up to five regional traverses across regional geological trends. Additional EM was flown, as well as detailed airborne radiometrics, which identified several anomalies (WAMEX REPORT A 49947). Eleven (11) shallow percussion holes (average depth of ~60m) intersected strongly chloritised and graphitic metasedimentary rocks within a broader marble-calc-silicate gneiss sequence. The RC drilling program returned numerous +100 ppm U intercepts, including:         <ul> <li>GA9514: 22-28m (6m) at 633 ppm U, including 1m at 1400 ppm U (22-23m).</li> <li>GA9520: 19-28m (9m) at 633 ppm U, including 0.5m at 3900 ppm U (25.25m – 25.75m) and 0.25m at 1000 ppm U (26.50 – 26.75m).</li> </ul> </li> </ul>



Criteria	JORC Code explanation	Commentary
Criteria	JONG Code expranation	Test work determined that both secondary and primary (uraninite) mineralisation is present, and that the chemical signature of the chlorite alteration is similar to that at Jabiluka. A follow-up program of RC drilling in 1996 (17 holes/1217m) returned several well mineralised intercepts at the main anomaly:  GAR9630: 41-49m (8m) at 860 ppm U, including 1m at 3700 ppm U, and 53-58m (5m) at 568 ppm U from 53m, incl. 1m at 1200 ppm U).  GAR9625: 22-26m (4m) at 585 ppm U, including 1m at 1800 ppm U.  GAR9626: 20-29m (9m) at 275 ppm U.  In 1999 Cameco completed a programme of two diamond holes for a total of 411 m, followed by another four diamond drill holes for a total of 863.3m in 2000. The drilling programme aimed to test depth and lateral extensions to the mineralisation identified in the percussion holes; however, it failed to return intercepts of economic uranium grades. Cameco concluded that the strong structural disruption, radiometric response (peaked at 58 ppm U) and presence of graphite appear to be favourable for uranium mineralisation but went on to say that the minor remobilisation of radiogenic lead sourced from the decay of uranium downgrades the U potential of the area. Core samples were systematically analysed with a Portable Infrared Mineral Analyser (PIMA) and sent for petrophysical and petrographic characterisation as well as for Pb isotopes studies (WAMEX REPORT A 61566). Despite the presence of some marked hydrothermal alteration along brittle small scale structures, it failed to identify potential indicators of significant uranium mineralisation  PNC Exploration Pty Ltd & U308 Ltd reviewed the area from 2006-2010, and carried out an airborne magnetic and radiometric surveys, as well as reconnaissance field work with grab sampling for geochemical and petrographic studies (WAMEX REPORT A 49947, A 84272).
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The project area has historically been considered prospective for unconformity vein style uranium, although it equally considered prospective for rare earth element (REE) mineralisation hosted in iron-rich carbonatite dykes or intrusions, or lithium-caesium-tantalum (LCT) pegmatites.</li> <li>The project area encompasses a portion of the Gascoyne Province of the Capricorn Orogen. This geological belt is positioned between the Archaean Yilgarn Craton to the south, and the Archaean Pilbara Craton to the north, and largely consists of a suite of Archaean to Proterozoic gneisses, granitic and metasedimentary rocks.</li> <li>REE discoveries in the Gascoyne area, such as Yangibana, are associated with ironstone (weathered ferrocarbonatite) host rocks whereby weathering has enriched the REEs in situ. Yangibana is approximately 100km NE from the Paddys Well/West Wel project area and contains widespread occurrence of ironstone dykes that are spatially associated with the ferrocarbonatite intrusions. The deposit overlays the Gifford Creek Ferrocarbonatite Complex, which is located in the Neoarchean—Palaeoproterozoic Gascoyne Province, and comprises sills, dykes, and veins of ferrocarbonatite intruding the Pimbyana Granite and Yangibana Granite of the Durlacher Supersuite and metasedimentary rocks of the Pooranoo Metamorphics.</li> <li>The ironstone dykes are commonly surrounded by narrow haloes of fenitic alteration, and locally associated with quartz veining. Fenite is a metasomatic alteration associated particularly with carbonatite intrusions</li> </ul>



	STRATEGIC RESOURCES	
Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>Historic soil sample data was previously reported by PNC Exploration Pty Ltd Limited and are available in open file (WAMEX REPORT A 49947).</li> <li>Historic drill holes collar and interval data were previously reported by Cameco and are available in open file (WAMEX REPORT A 61566).</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Intervals that comprise more than one sample have been reported using length-weighted averages.</li> <li>A cut-off grade of 350ppm TREO (with a maximum 2m of internal waste) has been used for the reported drill intercepts.</li> <li>A cut-off grade of 40ppm TREO has been used for the reported surface rockchip samples</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>The orientation of the mineralisation is interpreted and yet to be structurally validated.</li> <li>All reported intervals, therefore intercepts, are down hole lengths.</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Historical map plan figures were registered utilising 2-D software and respective coordinate datums.</li> <li>Hole drill collar ground truthing is expected to fine-tune actual collar positions.</li> <li>Workspaces of current and historical exploration have been constructed utilising 2&amp;3D GIS software.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>No inference to economic mineralisation has been stated.</li> <li>A cut-off of 350ppm TREYO was used in reporting of exploration results, to aid dismissing interpreted unrealistic anomalous mineralised sub-zones.</li> <li>A cut-off grade of 40ppm TREO has been used for the reported surface rockchip samples</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>All of the relevant historical exploration data has been included in this report.</li> <li>All historical exploration information is available via WAMEX.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>On-going field reconnaissance exploration in the area continues and is a high priority for the Company.</li> <li>Exploration is likely to include further lithological and structural mapping; rockchip sampling; acquisition of high-resolution geophysical radiometric and magnetic data to assist geological interpretation, target identification; as well as auger and percussion drilling of ranked drill targets.</li> </ul>

# **REFERENCES:**

Cameco Australia Pty Ltd, 2000, Exploration Licences E09/567, 916, Gascoyne Project, Western Australia, 1999-2000 Annual Report, Final Report, WAMEX A61566. PNC Exploration Australia Pty Ltd, 1996, Gascoyne Project 1996 Annual Report Exploration Licence 09/567, WAMEX A49947.