



3 July 2019

Company Announcements Office  
ASX Securities Limited,  
20, Bridge Street, Sydney,  
N.S.W. 2000

## JERVOIS VANADIUM PROJECT DEVELOPMENT PLAN`

Thor Mining Plc ("Thor") (AIM, ASX: THR) and Arafura Resources Limited ("Arafura") (ASX: ARU) are pleased to advise a plan to further advance exploration of and assess potential development options for the Jervois Vanadium Project in the Northern Territory of Australia.

The project is held in joint venture between Arafura (60%) and Thor (40%).

### Highlights

- Substantial exploration history including 60 RC (reverse circulation) holes drilled between 2006 and 2008 intersecting extensive potentially economic grades of vanadium and titanium.
- Selected samples from 14 holes only, assayed for gold and platinum group elements (PGEs), returned up to 1.59 ppm (grams/tonne) combined gold, plus platinum and palladium.
- Exploration Target range of 90 to 110 million tonnes @ 0.3% - 0.8% V<sub>2</sub>O<sub>5</sub>, and 4% - 8% TiO<sub>2</sub> determined from 1,295m of assayed mineralisation. *The potential quantity and grade of the Exploration Target is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*
- Substantial laboratory testwork has demonstrated potential to produce concentrates with grades of 1-2% V<sub>2</sub>O<sub>5</sub>, which are comparable to others around the globe, with attractive (61-69%) recoveries.
- Future work to focus on; resource drilling the Casper, Coco, and RD (previously known as "Misty") deposits, testing other prospects for potential economic grades of vanadium and titanium, and follow up work on the gold and PGE potential on all prospects. Subject to successful completion of these activities, next steps would include further metallurgical studies, along with environmental and social impact studies.
- The joint venture objective is to seek project level investors to advance this project through resource development and subsequent feasibility and permitting activities.

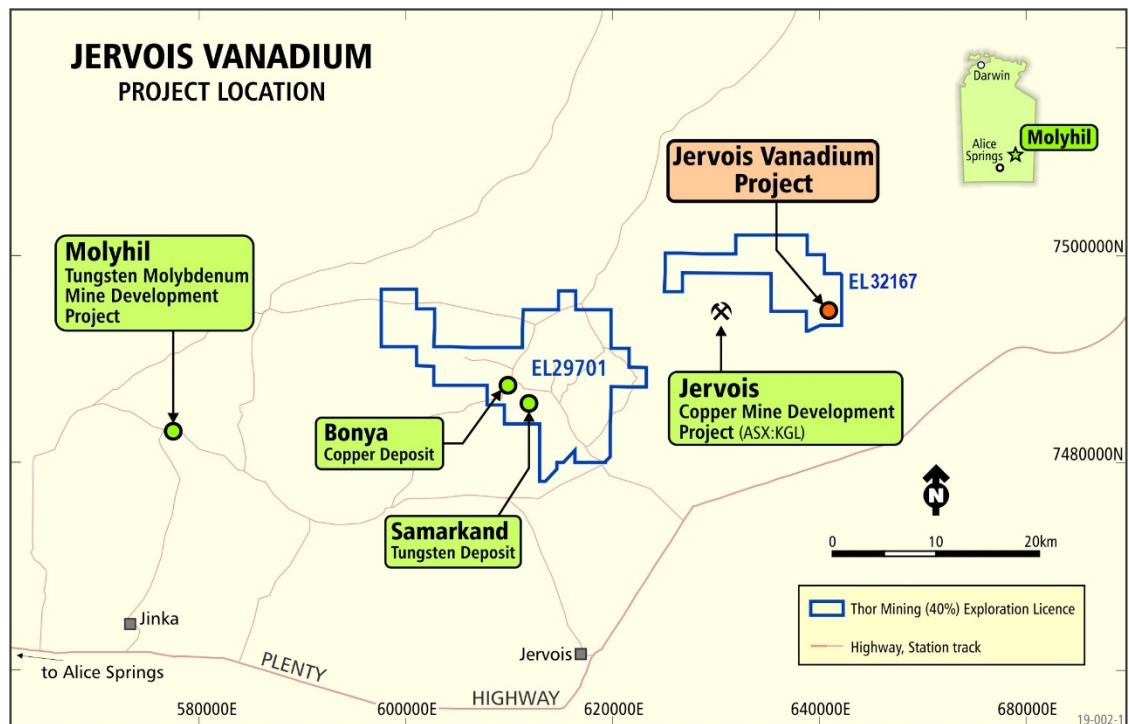


Figure 1: Map showing location of the Jervois vanadium project

### Project Location and Access

Jervois is located in the Northern Territory of Australia, approximately 290km east-northeast of and 360km by road (the first 170km sealed) from the nearest city Alice Springs (population 29,000).

### Historical Exploration and Evaluation Activity

Whilst substantial work was performed by others previously, in 2004, Arafura completed a review of all of the previous exploration data available for the Jervois Project area. From this work, the Attutra Metagabbro was identified as an area of interest for Fe/V and Au/PGE potential.

In 2005, Arafura commissioned a high-resolution airborne magnetic/radiometric survey over the project area. This survey highlighted several magnetic targets within the Attutra Metagabbro.

Between November 2006 and June 2008, a total of 60 RC holes for 5,774m were drilled at the Jervois Project (refer to appended drill hole location table). This drilling successfully targeted numerous magnetite rich zones of the Attutra Metagabbro for Fe/V mineralisation.

The original objectives of the exploration drilling programs were to:

- drill test the Casper, Coco and RD magnetic anomalies
  - determine continuity and source of these magnetite bodies
  - confirm V recovery and variability
  - assess the overall size potential and geometry of magnetite bodies that demonstrated a potential for significant V recovery, based on the 2006 results
- determine the amount of intrusive granite and/or pegmatite within the magnetite bodies
- better understand the geological relationships and controls on mineralisation.

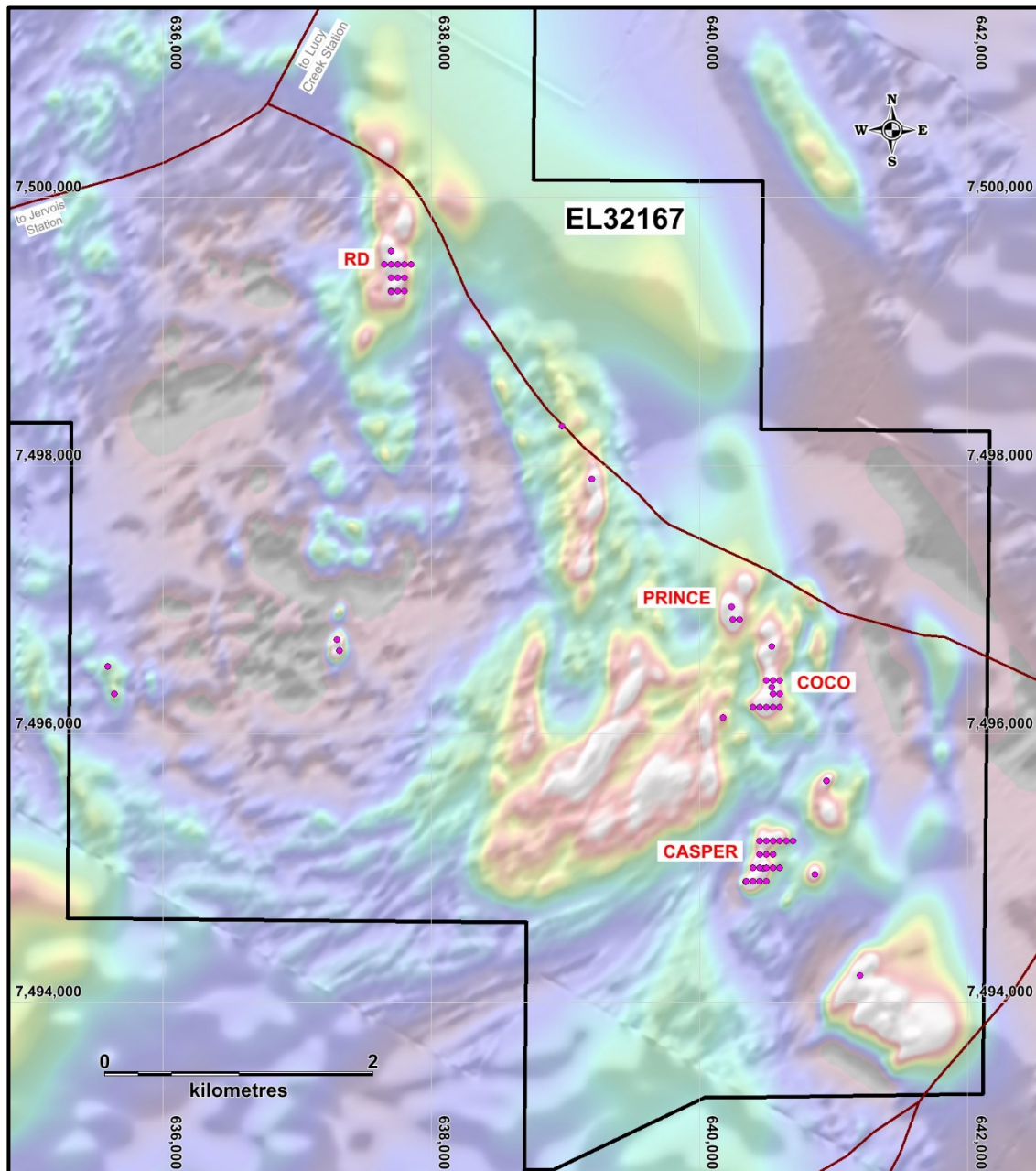


Figure 2: Drill hole plan and location of Coco, Casper, Prince, and RD prospects overlain on an aeromagnetic image.

During the 2006 drilling campaign, 1m samples were collected and analysed in June 2007 as part of preliminary metallurgical testwork. The samples were composited together into between 1 and 22m composites. These composites were selected based on drill logs, magnetic susceptibility measurements and composite requirements.

The 2008 drilling program was designed to further test and explore the mineralisation. 1m samples were collected and composited together and analysed. Composites of between 2 and 6m were determined for 11 of the 45 holes drilled.

In total, 1,295m of mineralisation was assayed for  $V_2O_5$ ,  $TiO_2$  and Fe.

Significant drill intersections include:

- 44m @ 0.76%  $V_2O_5$  & 8.30%  $TiO_2$  in UNRC001 – reported 19 June 2010
- 22m @ 0.77%  $V_2O_5$  & 8.13%  $TiO_2$  in UNRC002 – reported 19 June 2010
- 21m @ 0.62%  $V_2O_5$  & 7.56%  $TiO_2$  in UNRC005 – reported 19 June 2010

- 49m @ 0.96% V<sub>2</sub>O<sub>5</sub> & 8.55% TiO<sub>2</sub> in UNRC018 – reported 29 July 2010
- 54m @ 0.72% V<sub>2</sub>O<sub>5</sub> & 6.89% TiO<sub>2</sub> in UNRC019 – reported 29 July 2010
- 50m @ 0.62% V<sub>2</sub>O<sub>5</sub> & 5.65% TiO<sub>2</sub> in UNRC024 – reported 29 July 2010
- 35m @ 0.60% V<sub>2</sub>O<sub>5</sub> & 5.70% TiO<sub>2</sub> in UNRC043 – reported 26 April 2012
- 23m @ 0.50% V<sub>2</sub>O<sub>5</sub> & 5.60% TiO<sub>2</sub> in UNRC044 – reported 26 April 2012
- 34m @ 0.40% V<sub>2</sub>O<sub>5</sub> & 4.40% TiO<sub>2</sub> in UNRC057 – reported 26 April 2012

Drilling results reported to ASX by Arafura on 19 June 2007 can be accessed via the following link:

<https://www.asx.com.au/asxpdf/20070619/pdf/3130nxq19wp71q.pdf>.

Drilling results reported to ASX by Arafura on 29 July 2010 can be accessed via the following link:

<https://www.asx.com.au/asxpdf/20100729/pdf/31rkpl7q8yfn81.pdf>.

Drilling results reported to ASX by Arafura on 26 April 2012 can be accessed via the following link:

<https://www.asx.com.au/asxpdf/20120426/pdf/425v5kmj6n796n.pdf>.

These significant intersections are spread across four of the known magnetic targets including the Casper, Coco and RD anomalies, with thicknesses and grades in line with known gabbro-hosted vanadium-bearing magnetite elsewhere within Australia.

Composites were also submitted for Davis Tube Recovery (“DTR”) analysis. Laboratory testing at grind sizing using 100% passing 75micron typically shows DTR concentrate grades of 61-69% Fe and 1-2% V<sub>2</sub>O<sub>5</sub>, considered very acceptable for this type of activity.

A review of the quality and recovery of DTR concentrates reported to ASX by Arafura on 11 July 2007 can be accessed via the following link:

<https://www.asx.com.au/asxpdf/20070711/pdf/313dgxv7kvsz9t.pdf>.

Significant exploration potential still exists and therefore it is possible to define an Exploration Target based on the knowledge gained from the existing drilling and assaying together with the magnetic data and modelling.

In addition, multiple other prospective magnetic targets remain untested.

### Exploration Target

The Exploration Target has been divided into two parts based on the confidence in the expected geology.

Table A: Summary of Exploration Target

Target Type	Volume (m <sup>3</sup> )	Tonnage Range (Mt)*	V <sub>2</sub> O <sub>5</sub> % Range	Fe <sub>2</sub> O <sub>3</sub> % Range	TiO <sub>2</sub> % Range
Known Gabbro Hosted	18,000,000	50 – 60	0.3 – 0.8	25 - 45	4 – 8
Gabbro Below Schist	15,000,000	40 – 50	0.3 – 0.8	25 - 45	4 – 8
<b>Total</b>	<b>33,000,000</b>	<b>90 – 110</b>	<b>0.3 – 0.8</b>	<b>25 - 45</b>	<b>4 – 8</b>

\* Totals subject to rounding

*The potential quantity and grade of the Exploration Target is conceptual in nature as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

Some of the assumptions made in determining the Exploration Target are:

- Magnetic bodies are sub vertical in nature similar to those modelled and have a mineralised vertical extent of 50m,
- Volumes are determined by multiplying the surface area of each prospect shape by the vertical extent,

- Specific gravity values used to determine the tonnages vary between 3.0 and 3.4 g/cm<sup>3</sup>,
- The grade ranges for V<sub>2</sub>O<sub>5</sub>, Fe<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> are determined from the range of results for each element from the drilling already undertaken by Arafura.

In 2012, further representative drill intervals of the magnetite mineralisation from Coco and RD magnetic anomalies were tested to determine their Fe-Ti-V mineral potential. Representative sample intervals from Casper, Coco and RD were also selected for Au-Pt-Pd assays.

### Precious Metal Potential

536 samples from the 2008 drilling were analysed for Au, Pt and Pd. Samples were selected from 14 holes from across the major magnetite rich areas. The samples represented the same magnetite rich intervals that were sampled and analysed for Fe/Ti/V mineralisation.

The precious metal analysis was undertaken on single metre samples as opposed to the composite samples used for the Fe/Ti/V analysis.

### Summary of the Precious Metal Analyses

All of the mean values are low for the whole population, however, maximum values for Pd in particular provide encouragement that economic levels of mineralisation may be present.

Metal	Max (ppm)	Min (ppm)	Mean (ppm)	n
Au	0.389	0.001	0.013	536
Pd	1.555	0.001	0.074	536
Pt	0.562	0.003	0.034	536
Pd+Pt	1.777	0.003	0.108	536
Au+Pd+Pt	1.808	0.004	0.121	536

- RD Prospect
  - UNRC052 9m @ 0.52 ppm Au+Pd+Pt from 70m  
Incl 2m @ 1.09 ppm from 70m
  - UNRC057 10m @ 0.60 ppm Au+Pd+Pt from 47m  
Incl 6m @ 0.85 ppm from 51m
- Coco Prospect
  - UNRC038 9m @ 0.42 ppm Au+Pd+Pt from 0m
- Casper Prospect
  - UNRC032 47m @ 0.57 ppm Au+Pd+Pt from 26m  
Incl 2m @ 1.59 ppm from 26m  
Incl 2m @ 1.30 ppm from 32m  
Incl 4m @ 1.37 ppm from 69m

These results were reported to ASX by Arafura on 26 April 2012 and can be accessed via the following link:

<https://www.asx.com.au/asxpdf/20120426/pdf/425v5kmj6n796n.pdf>.

Although elevated levels of all three elements were identified, there is little correlation between the higher-grade intersections due to the drill hole spacing and the sample selection process.

However, many of the holes tested are isolated and therefore remain open with regard to the precious metal concentrations. This is the case both up and down dip as well as along strike.

The best example is the large intersection in UNRC032 at the Casper Prospect. Hole UNRC032 occurs at the northern end of the prospect and therefore the mineralisation identified in this hole remains



open to the north. Furthermore, no other holes have been assayed for Au, Pd and Pt on this section or the section immediately to the south, leaving room for expansion of this mineralization.

### **Commodity Prices**

Prices for each of the commodities at the date of writing this report are extracted from Argus Metals as follows:

- Vanadium – US\$34.25/Kg in Ferro vanadium
- Titanium - US\$4.60/Kg in Ferro titanium
- Gold – US\$1,388 /oz
- Palladium – US\$1,549 / oz
- Platinum – US\$837 / oz

### **Current and Future Steps**

The eastern portion of EL29701 was recently split-off and assigned a new EL number (EL 32167) for the current project. This will facilitate the development of the Jervois Vanadium opportunity separate to other titles in the area.

Planned subsequent steps for the project include the following:

- Resource drilling at Casper, RD, and Coco deposits
- Drill test other deposits identified as magnetic targets
- Follow up gold, and platinum group element intersections

Subject to successful outcomes from these activities, next steps would include detailed metallurgical testwork, and other technical activities, plus environmental and social impact studies aimed at progressing feasibility and mine development permitting.

The joint venture parties plan to actively seek third party project investment in the Jervois Vanadium Project, with all potential options canvassed, to take this exciting project opportunity forward.

For further information, please contact:

#### **THOR MINING PLC**

Mick Billing Executive Chairman  
+61 8 7324 1935

#### **ARAFURA RESOURCES LIMITED**

Gavin Lockyer, Managing Director  
+61 8 6210 7666

### **Competent Person's Report**

The information in this report that relates to Exploration Target is based on, and fairly represents, information and supporting documents compiled by Dr Graeme McDonald (BSc(Hons)Geol, PhD). Dr McDonald is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute's codes and recommended practices and acts as an independent consultant to Thor Mining PLC. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr McDonald consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled by Mr Kelvin Hussey, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Hussey is a full-time employee of Arafura Resources Limited. Mr Hussey has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hussey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

*Drillhole collar location summary*

Hole ID	MGA94E	MGA94N	RL	AzimuthGrd	Inclination	EOH
UNRC001	640345	7494899	303	360	-90	60
UNRC002	640475	7494996	299	360	-90	66
UNRC003	640862	7494951	297	360	-90	82
UNRC004	640179	7496122	310	360	-90	50
UNRC005	640501	7496200	300	360	-90	67
UNRC006	640538	7496349	300	360	-90	70
UNRC007	640538	7496652	299	360	-90	74
UNRC008	640241	7496947	300	360	-90	73
UNRC009	637299	7496702	330	360	-90	25
UNRC010	637315	7496619	329	360	-90	65
UNRC011	635590	7496501	327	360	-90	55
UNRC012	635640	7496301	331	360	-90	40
UNRC013	640950	7495649	297	360	-90	70
UNRC014	641200	7494201	297	360	-90	70
UNRC015	637751	7499499	307	360	-90	70
UNRC016	638974	7498294	300	270	-90	40
UNRC017	639200	7497900	300	270	-90	91
UNRC018	640350	7494900	303	270	-60	72
UNRC019	640400	7494900	301	270	-60	75
UNRC020	640450	7494900	300	270	-60	120
UNRC021	640500	7494900	299	270	-60	114
UNRC022	640400	7495000	300	270	-90	100
UNRC023	640450	7495000	299	270	-60	114
UNRC024	640500	7495000	298	270	-60	114
UNRC025	640550	7495000	298	270	-60	114
UNRC026	640600	7495000	298	270	-60	114
UNRC027	640450	7495100	299	270	-60	114
UNRC028	640500	7495100	299	270	-60	114
UNRC029	640550	7495100	299	270	-60	118
UNRC030	640450	7495200	299	270	-90	100
UNRC031	640500	7495200	299	270	-60	114
UNRC032	640550	7495200	298	270	-60	114
UNRC033	640600	7495200	298	270	-60	114
UNRC034	640650	7495200	298	270	-60	114
UNRC035	640700	7495200	298	270	-60	114
UNRC036	640400	7496200	301	270	-90	100
UNRC037	640450	7496200	301	270	-60	114
UNRC038	640500	7496200	300	270	-60	114
UNRC039	640550	7496200	299	270	-60	114
UNRC040	640600	7496200	299	270	-60	114
UNRC041	640550	7496300	298	270	-60	115
UNRC042	640600	7496300	299	270	-60	114
UNRC043	640550	7496400	300	270	-60	114
UNRC044	640600	7496400	299	270	-60	120
UNRC045	640500	7496400	300	270	-90	100
UNRC046	640250	7496850	300	270	-90	100
UNRC047	640300	7496850	300	270	-60	97
UNRC048	637650	7499500	307	270	-90	100
UNRC049	637700	7499500	307	270	-60	114
UNRC050	637750	7499500	307	270	-60	114
UNRC051	637800	7499500	307	270	-60	114
UNRC052	637850	7499500	307	270	-60	114
UNRC053	637800	7499400	307	90	-90	100
UNRC054	637750	7499400	307	90	-60	115
UNRC055	637700	7499400	307	90	-60	115
UNRC056	637700	7499300	307	270	-60	114
UNRC057	637750	7499300	306	270	-60	114
UNRC058	637800	7499300	306	270	-60	114
UNRC059	637702	7499298	307	90	-60	96
UNRC060	637700	7499600	307	90	-60	112



## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation drilling with 140mm diameter face sampling hammer was used to obtain samples from one metre drill intervals. Most samples were collected dry although slightly moist samples were occasionally recovered from depth in a few holes.</li> <li>Subsamples of approximately 3-6kg were automatically collected at the rig for each drill interval using a three-tier riffle splitter mounted beneath the cyclone.</li> <li>Chip tray samples were collected and geologically logged using representative washed and sieved subsamples.</li> <li>Samples were collected into pre-numbered plastic (87.5 vol%) and calico (12.5 vol%) bags with sampling integrity monitored by the rig geologist. Calico bags were all double-tied and checked by the geologist to ensure the subsample was secure and prevent any cross-contamination.</li> <li>Industry standard QAQC protocols were adopted with field duplicates collected by manually riffle splitting the preserved RC residues at approximately 1 in 20 of the assay sample population.</li> <li>Individual samples were dried, coarsely crushed and subsampled at ALS in Alice Springs. A subsample of each sample was sent to ALS Perth for assay/DTR. The remainder of the primary sample was retained in Alice Springs until no longer needed.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>Standard reverse circulation drilling techniques were used and involved either an Edson or Gemco rig mounted on a small 4WD truck with a 140mm diameter face sampling RC hammer boosted by a separate ancillary compressor to ensure adequate air supply.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and grade</i></li> </ul>	<ul style="list-style-type: none"> <li>Samples were neatly stacked in drilling sequence near the rig to visually estimate and gauge sample recoveries throughout the hole.</li> <li>Good sample recovery was obtained in all holes, after the initial collar sample. The ground is generally hard with fresh rock and good drilling conditions were encountered in all areas. Recoveries were consistent</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<p>across different rock units and in all holes. No drilling biases were observed.</p> <ul style="list-style-type: none"> <li>• Samples were mostly collected dry although a few moist samples were recovered. Despite the presence of groundwater in some holes, there was enough air capacity to ensure wet samples were not recovered.</li> <li>• There is no drill core, so no comment can be made on the loss/gain of fine/coarse material in RC drilling.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• RC samples were geologically logged for the entire length of each hole with the data entered on to formatted paper log sheets. The logs have been scanned and data loaded into spreadsheets.</li> <li>• The mineralised magnetite-rich and unmineralised zones were easily determined based on geological observations and routine hand-held magnetic susceptibility measurements using a KT9 instrument.</li> <li>• Logging is qualitative for recovery and moisture contents, and quantitative for geological and geophysical logging.</li> <li>• The median of three separate magnetic susceptibility measurements was recorded for each drill interval. Measurements were made on the outside of the residual RC sample (nominally at the bottom, middle and top of each bag).</li> <li>• The RC holes have not been logged by geophysical probes.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 3-6kg subsamples for laboratory analysis were automatically collected into pre-numbered calico bags using a three-tier (87.5/12.5) riffle splitter mounted beneath the rig cyclone for all primary samples. Similar sized field duplicates were collected using the same riffle splitter at the end of each hole in 2006 (UNRC001-015). A separate 50/50 riffle splitter was used for duplicates from the remainder of the holes.</li> <li>• The primary and duplicate assay sample size of 3-6kg is appropriate for one metre RC samples of fine to medium grained metamorphic host rocks (igneous and sedimentary) and this style of mineralisation.</li> <li>• The drilling was interrupted for short periods at each metre interval by pulling back slightly to allow all drill cuttings to be fully recovered for each sample. This quality control prevents the smearing of grade across sample intervals. It also ensures that the recovered sample is</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<p>representative of that interval and not impacted by the slightly denser nature of the target mineralisation in comparison to the host rocks.</p> <ul style="list-style-type: none"> <li>• Samples were composited at the laboratory following instructions from the Competent Person. Composited samples were typically a continuous interval of the same rock type with minimum dilution. Only samples with significant visual magnetite or elevated magnetic susceptibility were assayed.</li> <li>• Pt, Pd and Au assays were done well after the Fe-V-Ti assays using a subset of individual assay samples from the 2008 program. One metre intervals were selected from one or two holes per prospect, based material that was available at that time.</li> </ul> <ul style="list-style-type: none"> <li>• Industry standard Davis Tube Recovery (DTR) analyses were completed on composited samples of magnetite mineralisation, and their concentrates were assayed along with an industry standard whole rock assays for the same composite sample interval to assess both recovery and grades.</li> <li>• DTR procedures for sample preparation were based on test work and recommendations by Promet Engineers. Samples for DTR were initially ground for a period of 120 seconds and then wet sieved to remove the oversized fraction. The oversized material was then re-ground and processed according to set procedures.</li> <li>• DTR analyses and chemical assays were completed at ALS Chemex Perth on 100% passing 75 micron material using an standard fusion XRF assay technique designed for magnetite-rich Fe-V-Ti mineralisation (ME-XRF11b for Al<sub>2</sub>O<sub>3</sub>, Ba, CaO, Cl, Co, Cr<sub>2</sub>O<sub>3</sub>, Cu, Fe, K<sub>2</sub>O, MgO, Mn, Na<sub>2</sub>O, Ni, P, Pb, S, SiO<sub>2</sub>, Sn, Sr, TiO<sub>2</sub>, V, Zn, Zr and LOI at 1000°C by ME-GRA05).</li> <li>• An external laboratory (NTEL Darwin) was used in the 2006 to address and verify concerns around unrealistic vanadium values and calculated recoveries in the preliminary ALS Chemex report. This was resolved by via standards and re-calibration of the XRF assay suite to suit these high grade vanadium-rich magnetite samples. Samples from 2008 drill program used the same revised assay protocols and calibrations.</li> <li>• Results have been independently confirmed using fusion XRF methods on check samples and standards at Ultratrace Perth.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>A selection of the individual drill samples from the 2008 drilling program were assayed trace level Pt, Pd and Au using a standard 50g fire assay and ICPMS determination (PGM-ICP24) at Ultratrace Perth.</li> <li>Results are supported by laboratory assays of CRM, blanks and duplicates.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Significant mineralised intersections have been reported and correspond with visually significant magnetite and elevated magnetic response of recovered samples. Contact geologists and in-house geological staff were present on site and confirmed these significant intersections.</li> <li>No holes have been twinned.</li> <li>No assay data has been adjusted. The geochemical data has been used to determine recoveries in DTR concentrates.</li> <li>Blind field duplicates have been used confirm the sampling and assay results.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reported locations are based on GDA94 datum and MGA94 Zone 53 coordinates.</li> <li>All RC drill collars were pegged and located by hand-held GPS with most locations initially targeting the approximate centre of detailed low-level aeromagnetic RTP anomalies. The reported collar locations were resurveyed on completion as a check and are considered accurate to within about 5m in both northing and easting.</li> <li>Collar locations for drill holes UNRC001-UNRC015 were accurately surveyed by a professional surveyor in 2007. Benchmarks were also established at the time.</li> <li>The collars for the second round of drilling (UNRC016-UNRC060) were pegged and re-surveyed on completion by hand-held GPS in 2008. The surface RL of these collars were determined by using a dumpy level and looped surveys constrained by previously surveyed drill collars and control points. The loops generally closed to within less than 10mm suggesting the collar RLs are likely to be of a similar accuracy. UNRC016 and UNRC017 were assigned an approximate nominal elevation of 300m consistent with the surrounds.</li> <li>No detailed topographic model exists for the area. A gridded DTM is</li> </ul>

Criteria	JORC Code explanation	Commentary
		available for the area covered by the detailed aeromagnetic survey.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 60 vertical and inclined holes have been drilled, including a shallow vertical hole for the camp water supply (UNRC016). The initial drilling used widely-spaced targeted vertical RC drill holes to explore various magnetic anomalies over about a 5km x 5km area (UNRC001-015). The follow up drilling program was mostly concentrated at several prospects and largely 50m spaced collars on 100m spaced east-west sections.</li> <li>• No Resource or Reserve is being reported.</li> <li>• Samples were composited for Fe-V-Ti determinations of the magnetite mineralisation, mostly as up to 5 metre intervals.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The relationship between drilling orientation and mineralisation is uncertain, especially at the larger magnetic bodies. Multiply layered, laterally persistent, thin, shallowly dipping magnetite-rich units were observed in surface outcrops near UNRC010 and UNRC011. Vertical drill testing near these outcrops yielded discrete zones of magnetite-rich mineralisation whose intercepts are likely to be close to true widths. Outcrops of massive magnetite occur at the Casper and Coco prospects. These appear to be much larger bodies rather than discrete magnetite layers. Drill sections were designed along east-west sections to intersect the magnetic anomalies at a high angle to their overall magnetic trend.</li> <li>• Geological observations and drilling indicate the metagabbro locally contains granitic to tonalitic bodies. Field relationships indicate these are intrusive and likely to be detrimental, cutting off magnetite mineralisation.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The project is located in a remote region of the Northern Territory. No unauthorised personnel visited the site during operations. Assay samples were collected from each hole immediately after drilling. Samples were transported to base camp daily for safe storage. Samples were securely packaged and delivered to a secure storage area at Baikal for collection by a transport company to deliver to ALS's preparation facility in Alice Springs. All submitted samples were receipted by the laboratory.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration activities were completed on EL10215. This tenement was granted 100% to Arafura Resources on 6 December 2001. The title was twice renewed before Arafura secured EL29701 over the same area. EL29701 was recently split to form a new tenement, EL32167 which covers the Fe-V-Ti prospects.</li> <li>Arafura Resources was the owner/operator and held an approved MMP for the reported exploration activities on EL10215. The area has been since been rehabilitated in accordance with government regulations.</li> <li>EL32167 covers parts of Perpetual Pastoral Lease 962, Jervois.</li> <li>Arafura holds Work Authority Certificate C2006/080 issued by the Northern Territory Aboriginal Areas Protection Authority. This clearance shows there are no restricted areas or sites of significance near these prospects.</li> <li>A Native Title claim exists for the project area and covers the Jinka-Jervois pastoral leases.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Hunter Resources explored the Attutra Metagabbro in 1987-1989, concentrating on its PGE potential.</li> <li>There was no previous drilling at these prospects.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The prospects occur in the eastern Arunta Region and are metamorphosed orthomagmatic Fe-V-Ti deposits hosted within magnetite-rich zones of the Attutra Metagabbro. The Attutra Metagabbro intruded into the Bonya Schist at about 1780 Ma and is also intruded by slightly younger granitoids. The region was deformed and metamorphosed during the c. 1720 Ma Strangways Orogenic Event.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>◦ <i>easting and northing of the drill hole collar</i></li> <li>◦ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>◦ <i>dip and azimuth of the hole</i></li> <li>◦ <i>down hole length and interception depth</i></li> <li>◦ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Plan and table of collar and drill hole information is provided in this release.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant results have been reported previously (see links in this announcement).</li> <li>• Reported grades are length weighted. Composited intervals of 4-5m of magnetite-rich mineralisation were typically assayed wherever possible, however narrower zones and lower grade material were also assayed.</li> <li>• No cut-off grades were applied. Samples with low magnetite content and low magnetic susceptibility were not generally assayed.</li> <li>• No metal equivalents have been reported.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• The exploration results refer to down hole intercept lengths. True widths are not known.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• See announcement and links to other announcements.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Summary tables are presented in this release. See links to previous reports noted in this announcement.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Detailed low-level aeromagnetic survey was acquired to identify magnetic targets within the Attutra Metagabbro on EL10215 (now EL32167). Holes were initially targeted based on reduced to pole (RTP) aeromagnetic data and reconnaissance geological mapping.</li> <li>Ground-based gravity and magnetic surveys were acquired over the Casper and Coco prospects. These data were acquired and modelled as part of an B.Sc. Honours project by Jodi Fox at the University of Tasmania in 2007.</li> <li>Gravity and magnetic targets were modelled in 2008.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Additional drilling and DTR test work are recommended to further evaluate the identified prospects.</li> </ul>