ASX RELEASE

30 October 2015

LARGE INCREASE IN MINERAL RESOURCES FOR NOLANS PROJECT

- **Total contained rare earths in higher confidence Measured and Indicated Resources at Nolans Bore now approaching one million tonnes (up 38%)**
- **Substantial increase in Mineral Resources brought about by key EIS studies nearing completion**

Australian Rare Earths company, **Arafura Resources Limited** (**ASX: ARU**) ("**Arafura**" or the "**Company**") is pleased to announce a significant increase in Mineral Resources for the Nolans Rare Earths Project in Australia's Northern Territory.

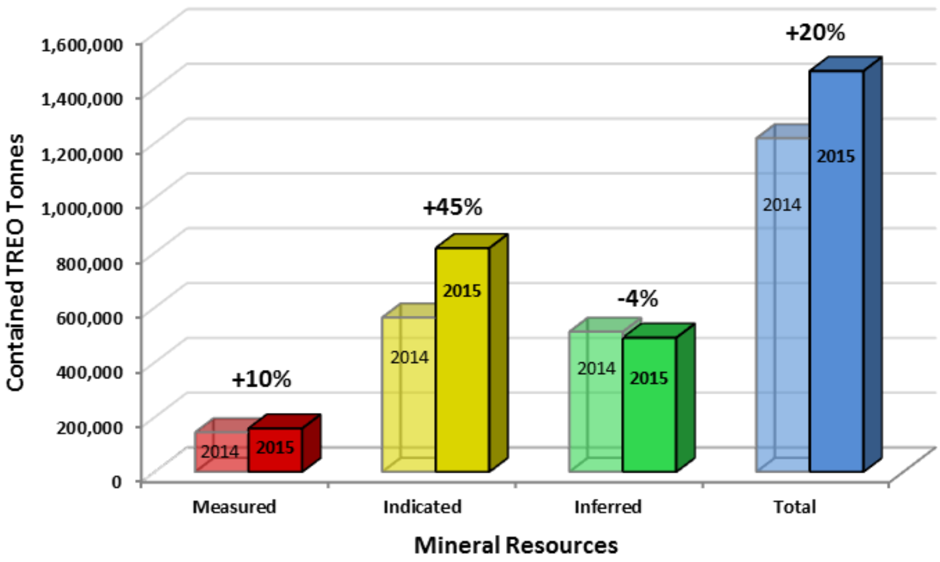
Total Mineral Resources at Nolans Bore are now estimated to be **56 million tonnes @ 2.6% total rare earth oxides ("TREO").** These have been classified into Measured, Indicated and Inferred Mineral Resources in Table 1 using a 1% TREO cut-off grade ("COG"). The contained (in-situ) resources of rare earths are also shown in the table, and a graphical comparison with the previous estimate reported in 2014 (ASX: ARU 09/12/14) in shown in Figure 1.

Table 1: Statement of Nolans Bore Mineral Resources at 30 October 2015 using a 1% TREO COG

RESOURCES	TONNES million	RARE EARTHS TREO %	TONNES TREO	PHOSPHATE P_2O_5 %	URANIUM U_3O_8 lb/t
Measured	4.9	3.2	158,000	13	0.54
Indicated	30	2.7	816,000	12	0.44
Inferred	21	2.3	489,000	10	0.36
TOTAL	56	2.6	1,462,000	12	0.42

Numbers may not compute exactly due to rounding. 1 lb/t U_3O_8 = 0.0454% U_3O_8.

Figure 1: Comparison between current (2015) and previous (2014) estimates (1% TREO COG)



AN EMERGING RARE EARTHS PRODUCER FOR USERS WORLDWIDE

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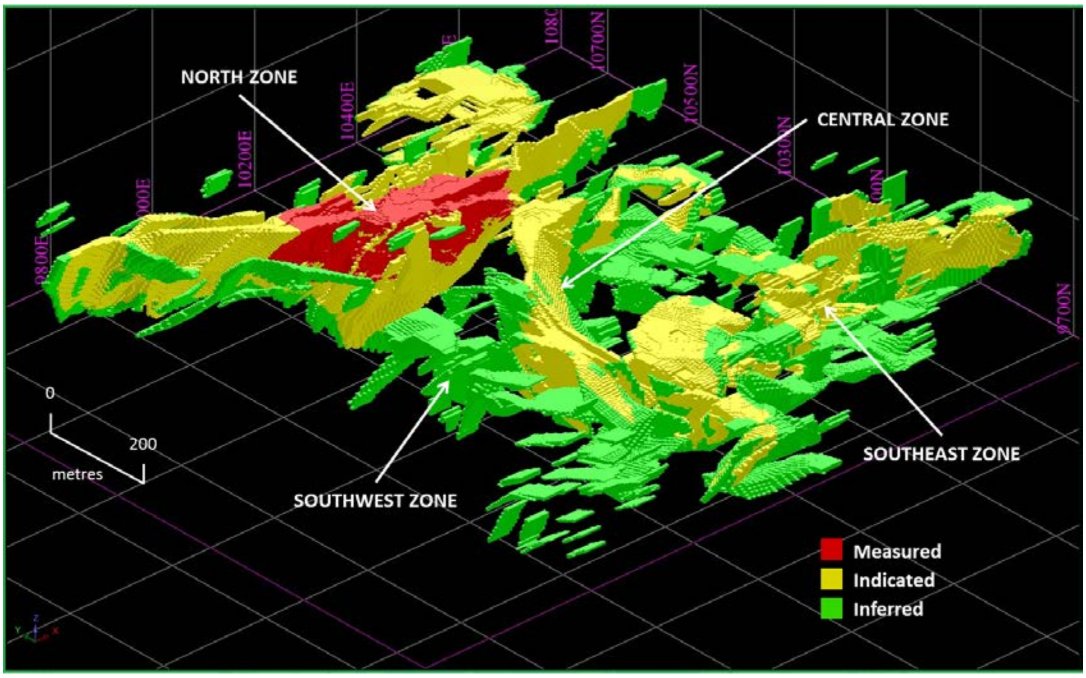
Both the current and previous resource estimates have been reported and classified in accordance with the guidelines of the 2012 edition of the JORC Code. The comparison between these estimates highlights increases in:

- Contained TREO in Measured Resources of 14,000 tonnes, or 10%;
- Contained TREO in Indicated Resources of 253,000 tonnes, or 45%; and
- Total contained TREO at Nolans Bore of 245,000 tonnes, or 20%.

Higher confidence Measured and Indicated ("M&I") Resources now account for two-thirds, or 974,000 tonnes, of the Nolans Project's total contained TREO. Their spatial distribution (using a 1% TREO COG) is shown in Figure 2 below, and this highlights the coherent nature of the substantially larger inventory of Indicated Mineral Resources across the North, Central and Southeast zones of the deposit.

Figure 2: Distribution of Measured, Indicated and Inferred Resources at Nolans Bore



The impetus for this resource update was the necessity to characterise the Project's life-of-mine waste rocks, including their radioactivity, which is a key component of the Nolans Environmental Impact Statement ("EIS") studies that are now nearing completion. This comprehensive review by Arafura's geologists led to the development of a new and improved geological model for mineralisation at Nolans Bore which has been adopted for this estimate.

While no additional drilling has occurred on the Project since the 2014 estimate, there are a number of important factors that have resulted in an overall increase in Mineral Resources and enabled the classification of more resources into the higher confidence M&I categories. They are:

- Revision and remodelling of the geometry of the deposit and related oxidation states;
- Where consistent with geological continuity, extrapolation of geological units from drill intersections by a distance equal to at least half the principal drill spacing so as

to ensure that waste rocks and mineralisation were equally represented in the new geological model. Some geological bodies were interpolated by more than this distance at depth but only where they were supported across multiple drill sections;

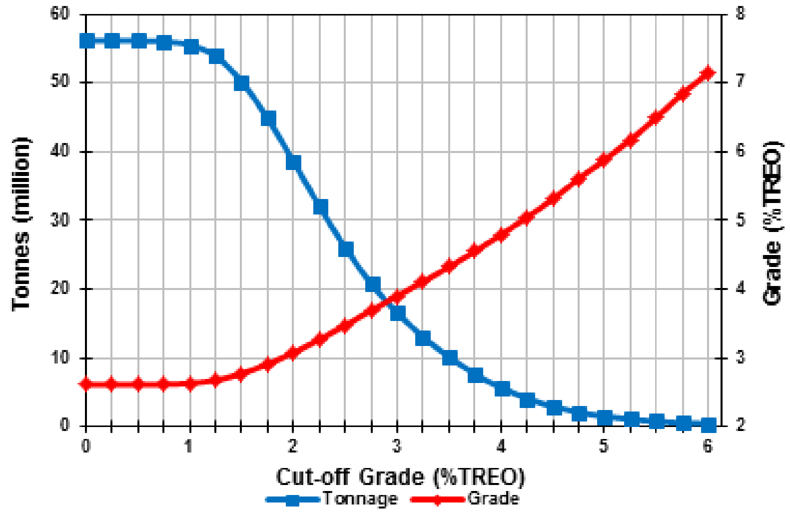
- Inclusion of a number of mineralised objects that were overlooked in the previous estimate (now 138, previously 102); and
- Adoption of 3D search parameters with steep or inclined down-dip orientations for the mineralisation, which differ from those used in the previous estimate.

The new resource classification is based on a 1% TREO cut-off grade and this classification might not be applicable to other cut-off grades. Total Mineral Resources reported at a range of cut-off grades is listed in Table 3 and shown graphically in Figure 3. This indicates that the Mineral Resources are insensitive to cut-off grade in the 0-1.5% TREO range.

Table 3: 2015 Mineral Resources reported at a range of COGs

CUT-OFF GRADE %	TONNES million	RARE EARTHS TREO %	PHOSPHATE P_2O_5 %	URANIUM U_3O_8 lb/t
0.5	56	2.6	11	0.41
1.0	56	2.6	12	0.42
1.5	50	2.8	12	0.44

Figure 3: 2015 estimate Grade-Tonnage Curve for Rare Earths



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Summary of Material Information

Mineralisation at Nolans Bore is a three-dimensional, stockwork vein-style deposit and is now broadly subdivided into the North, Central, Southeast and Southwest zones as shown in Figure 2. The geological model portrays the geometry of an enveloping surface that encompasses all Nolans Bore mineralisation and its associated alteration using a nominal 0.5% REE cut-off grade whilst minimising the amount of internal waste. Isolated narrow intervals of mineralisation have been excluded from the geological model where drill intersections are less than 2 metres and there is no support in adjacent holes.

The geological model builds on all geological, geophysical, and geochemical data systematically acquired by Arafura since 2000 and has greatly benefited from targeted drilling in different directions. The current resource model is based on sectional interpretations, wireframing and three dimensional solid geological models of the mineralised zones. Not all mineralisation has been captured in the resource model however more material is included in the current model.

There is only a limited number of basement outcrops with most of the area covered by a thin veneer of soil, alluvium, colluvium and calcrete. Drilling indicates the widespread presence of mineralised veins up to tens of metres in thickness and hundreds of metres in length, extending below 215 metres depth across parts of the deposit. The full extent of the deposit is yet to be outlined but deeper drilling has demonstrated mineralisation and alteration at about 430 metres depth in the North Zone.

The fluorapatite mineralisation ranges from discrete narrow fine-grained veins to wide intervals of massive coarse-grained breccias. The fluorapatite-rich rocks contain up to about 95% fluorapatite and typically contain abundant mineral inclusions of REE-bearing minerals, such as monazite group minerals, allanite, thorite and numerous other REE phosphates, silicates and carbonates. The fluorapatite itself contains variable amounts of REE but a higher proportion of REE is hosted in the mineral inclusions.

A total of 87,081 metres of reverse circulation ("RC") and diamond core drilling plus 1,112 metres of costeans has been included in the database used for the current estimate of Mineral Resources. The proportion of diamond drill core is sufficiently high (31%) to provide a good geological understanding of the deposit. The deposit has been systematically drilled using a nominal 40 metre x 40 metre spaced collars inclined at -60° along drill sections oriented at 145 degrees true. Closer spaced 20 metre x 20 metre infill drilling has occurred in the North Zone. A number of holes have also been drilled in other directions for geotechnical purposes and to resolve geological complexities in the model. Data from 1,656 metres of bulk sample metallurgical drilling was used to support geological interpretation, but in the absence of representative assays was excluded from the grade estimate.

A set of sectional geological interpretations that define the enveloping surface for all identified REE mineralisation were created using a 0.5% REE cut-off grade. Geological objects were edited and modified using Surpac v6.6, referring back to the original sectional interpretation as appropriate. New surfaces were also generated for the topography, base of soil, standing water level, base of oxidation and top of fresh. All surfaces and geological objects were then rotated to a new local grid and validated.

No new samples were analysed for the current estimate. All primary samples have been analysed by ICPMS/OES using Arafura's standard Nolans Bore assay scheme and suite of elements. The precision and accuracy of the results from the primary laboratory has been monitored by determinations on certified and internal standards. These standards show the data from the primary laboratory are well constrained and under control for the elements of interest. Laboratory and field blanks demonstrate there are no significant contamination issues and laboratory duplicates show that laboratory practices and protocols are repeatable to a high degree of precision. One in twenty of these assays has been validated by a referee laboratory.

The drill hole database used in the current estimate is in essence identical to that used in the 2014 estimate. Data was imported into Surpac v6.6 to construct wireframes and to compile the block model. Grade estimation was completed using ordinary kriging ("OK"). Lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium were summed as standard oxides to obtain TREO and estimated. Phosphate (P_2O_5) and uranium (U_3O_8) have also been estimated.

Mineral Resources were estimated using OK in Surpac v6.7 for the wireframed geological model for mineralisation. Density was estimated using inverse distance squared. ("ID^2"). Detailed in-house modelling by Arafura and consideration of mining, metallurgical and pricing assumptions, whilst not rigorous, suggests that material exceeding 1% TREO has a reasonable prospect for eventual economic extraction. This cut-off grade is the same as that used in the 2014 estimate.

Following the estimation process, Mineral Resources were assessed using a number of measures to develop an overall classification strategy. At Nolans Bore this strategy is based on the continuity of geology, mineralisation and grade, using measures such as the quality of the geological model, drill spacing, number of informing samples, average assay sample spacing, density data and quality, variography, and estimation pass and statistics. Most blocks within the central part of the North Zone were filled during the first estimation pass with the maximum number of informing samples. This coincides to an area of more closely spaced (20 metre x 20 metre) drilling and is classified as Measured Resources (Figure 2). Parts of the Central and Southeast zones were also filled during the first pass of the estimation process; however these zones were not classified as Measured because they lacked the geological confidence and continuity observed in the North Zone. Most of the remainder of the North, Central and Southeast zones were filled during the second estimation pass. Accordingly a large proportion of these blocks were classified as Indicated Resources (Figure 2). Parts of the Southeast and most of the Southwest zones did not fill during the second estimation pass and have been classified as Inferred Resources.

Following the initial assignment of categories, blocks on the margins of each category were inspected and re-evaluated on a section by section basis and in 3D. Where appropriate, resource classifications were manually adjusted based on geological continuity and estimation data.

Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources 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.

JORC TABLE 1 ASSESSMENT CRITERIA FOR NOLANS BORE MINERAL RESOURCE STATEMENT AS AT 29 OCTOBER 2015

Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Senior Geologists, including Competent Person (Kelvin Hussey) and former Competent Person (John Goulevitch), have ensured sampling is to industry standard across all exploration and resource definition campaigns at Nolans Bore. Quality of sampling and all relevant sampling details were continuously monitored and recorded by the responsible Geologist during all drilling operations. Results of the sampling programs detailed below are included in the geological model and Mineral Resource estimate as outlined. Results of samples collected from surface mapping, shallow pits and the wide diameter core/auger holes were not included in the Mineral Resource estimate but were considered in the development of the geological model. Drilling has involved both Reverse Circulation (RC) and diamond core drilling. Most drill holes were systematically drilled towards the southeast (145 degrees true) at an inclination of -60 degrees. Drilling has been completed across most of the area at nominal 40m x 40m grid pattern with infill to 20m x 20m in the central parts of the North Zone (CNZ). Wider spaced exploration RC drilling occurs on the periphery of the main resource. 10 vertical RC holes have been drilled at Nolans Bore and are used to abstract or monitor groundwater. 25 inclined diamond core holes have been drilled to the east or west (true) on 100 metre-spaced sections to resolve complexities in the geological model in the Central Zone. 19 inclined diamond core holes have been drilled in various other directions. The quantum of drill core at Nolans Bore is sufficiently high and widespread to ensure adequate sampling and a geological understanding of the deposit. RC drilling was conducted in 2001, 2004, 2005, 2007-08, 2010, 2011 and 2013. All RC drilling campaigns have employed a 140mm diameter face sampling hammer with sufficient air to ensure adequate representative sample was collected. A total of 63,053 metres in 589 RC drill holes have been completed at Nolans Bore and its immediate surrounds. A total of 532 of these RC holes (60,021 metres) have been drilled in the main area considered in the current resource assessment. RC drill chips were collected at one-metre sample intervals. Assay samples were automatically split via a 12.5/87.5 riffle splitter at the drill rig and averaged about 4 kg. The entire 2007-08 RC program and all other wet samples were manually split to size using Arafura's 50/50 riffle splitter after the residues were allowed to air dry. One 2011 drill rig was adequately setup to enable automated splitting of wet samples. An assessment of wet and dry splitting at this rig and a comparison with the other rigs showed no material biases with acceptable sample sizes. The drill rig cyclone and splitter were thoroughly washed and air dried after each rod in the clay-rich parts of the deposit to limit cross-contamination of samples and smearing of grade. Automatically split assay sample sizes were typically considered acceptable. However in some instances, the residue was manually re-split again to achieve an average 4kg assay sample.
Sampling techniques	Diamond core drilling was done in 2004, 2005, 2006-07, 2009 and 2011. A total of 27,060 metres have been drilled at Nolans Bore with 92 holes cored from surface and 136 RC holes extended by cored tails; all of which are HQ3, NQ2 or NQ3 in size. Four RC holes have two core tails making 140 cored tails in total. Most diamond core drilling has used a triple-tube configuration to gain the maximum possible recovery. Orientated diamond core drilling was initially attempted in 2006 but was abandoned due to technical difficulties in the kaolin- and clay-altered zones in the CNZ. Systematic orientated diamond core drilling occurred in 2009 and 2011.

Criteria	Commentary
Sampling techniques	Diamond core assay samples were collected by cutting the core in half using a diamond saw and sampled to lithological boundaries and core loss breaks. Assay samples are continuous intervals and do not include core loss intervals. Core loss is recorded as no recovery and a zero grade is assumed for the interval. Geotechnical and metallurgical drill core has been sampled at metre marks where possible, but has also been sampled to lithological boundaries. Holes cored for metallurgical purposes are typically twins of a previous RC or cored hole, and were quartered for assay. The minimum sample size was nominally set at 25 cm although smaller sample intervals were collected, mostly due to core loss. Most of the drill core assay sample length ranged from 0.25-2.5m in length. All drill core samples were assayed as individual samples. Duplicates were prepared from split of the coarse crush. RC samples were sub-sampled using both rig-mounted and stand-alone riffle splitters into one-metre samples of 3-6 kg in size. Most samples were collected dry with a small proportion collected moist due to ground conditions or excessive dust suppression. Wet samples were allowed to air-dry in the sun before manual riffle splitting. One RC drill rig in 2011 collected and split samples wet. Detailed analysis conducted by the Competent Person shows no material biases in this sampling technique compared to the other RC rigs operating in 2011. As instructed, RC samples were composited on an equal weight basis at the laboratory, typically as 2 metre assay samples although both 1m and 3m RC assay samples do occur. Field duplicates are targeted one-metre assay samples that have been specifically selected as representing geological boundaries or corresponding to an anticipated high, medium or low grade based on radiometric and geological logging. Costeaning was conducted in 2000 and 2007. Nine 1-2.5 metre deep costeans totalling 1,222 metres have been excavated across the mineralisation. Costeans have been mapped and then representatively channel-sampled by hand at a constant depth below the ground surface along one side of the costean. A summary of the drilling and costeaning data used for geological logging and sampling is presented below.

Year	Costean		RC		Core		
	number	metres	number	metres	number from surface	number of tails	cored metres
2000	6	890					
2001			12	856			
2004			20	1,525	5		518
2005			58	7,532	1	11	1,042
2006			41	3,462	17		1,322
2007	3	222	103	10,018	6	3	704
2008			85	7,815			
2009					7		793
2010			9	992			
2011			208	27,761	56	126	22,681
2013			1	60			
Total	**9**	**1,112**	**536**	**60,021**	**92**	**140**	**27,060**

Criteria	Commentary
Sampling techniques	Not all drilling was sampled or assayed. Samples were selected for assay by the Competent Person or Senior Geologist following Arafura's standard sampling procedures and protocols. Assayed intervals typically include samples with logged mineralisation, alteration, or samples above background levels of radioactivity plus adjacent material up to at least two metres away from possible alteration/mineralisation. Additional follow up sampling is conducted when appropriate.
Drilling techniques	Reverse Circulation (RC) drilling employed a 140mm diameter face sampling hammer with drill hole depths ranging from 18-210 metres. The drill rig's air capacity was typically boosted via an auxiliary compressor to ensure adequate sample recovery and the driest possible sample. Water injection was used to minimize dust emissions at the rig. Diamond core drilling mostly employed HQ3 and NQ3 to ensure maximum recovery via triple-tube configurations with a maximum drilling depth of 492 metres. Drill holes cored from surface are HQ3 in size while cored tails were typically NQ2 in size. 11 twinned holes have been completed to investigate differences between the two drilling techniques with proximal comparisons of RC vs core, and core vs core. Despite some short range variability, twinned RC vs core and core vs core generally yield similar assay results for composited intervals with no material differences observed between the two drilling techniques in most areas. A direct comparison of core vs core shows that the recoveries in highly variable ground conditions can be problematic and to a large extent depend on driller's competence and supervision by Arafura. Hence despite lower RC sample recovery in clay-altered zones and a small reduction in grade in medium-high grade zones, the core vs core twins showed that coinciding core loss in mineralisation is a more significant issue than lower RC sample recovery. Drill collars were sited and pegged by hand-held GPS in 2001-2004 with subsequent drill collar locations surveyed and pegged by professional surveyor prior to drilling. All completed drill collars were accurately re-surveyed. Hole orientations were surveyed by the driller typically at 30 metre intervals using Eastman or single shot digital cameras. Where possible all holes were open hole surveyed by Borehole Wireline Pty Ltd (Borehole Wireline) and survey data recorded at 5 cm intervals as Log ASCII Standard (LAS) data
Drill sample recovery	To ensure representivity and maximum sample recovery, the responsible Geologist was present during all drilling operations to monitor the drilling and sampling process. RC sample recovery and moisture content was routinely recorded by the responsible Geologist and is entered into the database. RC sample recovery is based on a subjective assessment of the volume recovered and has been recorded as high (H), medium (M) or low (L), and since 2007 has also been determined via the weight of the bulk sample returned, averaging about 75-80% nominal mass recovery. RC recoveries are generally considered acceptable although lower volumes are recovered at depths greater than about 100-150 metres in areas of large groundwater volumes. Lower recoveries are also typically observed in the kaolin- and or clay-altered zones. Assessments indicate that RC sample recovery is typically adequate for the first 150m although the deepest RC hole (210m) returned adequate sample throughout. RC holes deeper than 150 metres make up only a small fraction and most RC holes are terminated in favour of cored tails and better recoveries. RC holes were typically terminated when recovery was too low. Drill core recovery is typically 95-100% although moderate to significant core loss is recorded in scattered intervals in some holes. The host rocks and the more massive mineralised zones tend to show good recoveries in most cases. Higher core losses typically correspond to clay-rich zones with rare intervals showing 10-20% recovery per run although most runs achieve 50-100% core recovery in poor ground. Some low recovery intervals are coincident with strongly mineralised zones. Core loss intervals are recorded as no recovery (NREC) and have a zero grade in the database. Based on an analysis of twinned core holes, grade may be significantly understated due to the assignment of zero grade to core loss intervals.

Criteria	Commentary
Drill sample recovery	The largest amount of diamond core drilling occurred in 2011 (84% of total drill core metres) and achieved a total recovery of 98.7%. However 14 cored holes from 2011 only achieved 80-95% recovery. The results achieved in 2011 are very similar to previous core drilling campaigns although the 2006-07 core drilling campaign provided the best recovery and record of strongly mineralised intervals in poor ground conditions. Arafura's constant supervision of cored holes informed the drillers of expected ground conditions and aided higher recoveries in the clay rich zones.
Logging	Qualitative geological logging has occurred for all holes in their entirety using in-house pre-designed paper log sheets. Completed log sheets have been scanned and the data manually entered into Arafura's GeoBank database. Experienced senior geologists have provided guidance and overseen all logging and sampling based on the recorded logging details and measured radioactivity. Arafura has reviewed all geological logging information and developed synthesised geological summaries for each drill hole. Arafura's revision process has modified some of the originally logged boundaries and rock types. Geological summaries have been entered into the database using formatted spreadsheets with validation rules to minimise data entry errors. Geological summaries have been internally reviewed for consistency and audited, and used together with assay and geophysical logging data to construct the geological model for Nolans Bore. The mineralised intervals were extracted from the geological model and have been reviewed and reclassified into six material types representing two broad mineralisation styles which were entered into the database. RC holes were logged at one-metre intervals at the rig by the Geologist. RC chips were collected from the polyweave bag, sieved and washed clean for geological logging purposes. Every individual one-metre drill interval was logged in detail by the responsible Geologist, recording sample ID, sample recovery information, grainsize, texture, colour, mineralogy and rock type. The background radioactivity and the radioactivity of each one-metre polyweave bagged sample was measured with a Geiger meter and the dosage recorded. Representative RC chips for each metre interval were placed into pre-numbered chip trays by the responsible Geologist. These are retained and stored in Darwin for reference. Chip trays were routinely reviewed and relogged where necessary as part of the geological synthesis and the material type reclassification. Diamond core was logged by the responsible Geologist in the coreyard at Aileron or Nolans Bore. All diamond core was carefully reconstructed, cleaned and marked up prior to logging. For orientated core, bottom of hole (BOH) marks were extended where reliable and consistent in accordance with industry standards to allow pertinent structural information to be accurately recorded. RQD logs were completed by either the responsible Geologist or a trained field assistant. All diamond core was geologically logged in detail at intervals consistent with recovered geological boundaries. After all logging, assay sample ID and cut-marks were clearly marked on the core by the responsible Geologist. All diamond core was photographed wet and dry showing metre marks and assay sample intervals prior to the sampling process. Down hole geophysical logging data (azimuth, inclination, total magnetic field, natural gamma, gamma density, caliper and resistivity) was collected for all drill holes where possible using open-hole survey methods and a number of different geophysical tools. Down hole geophysical probes were routinely run through the Nolans Bore test hole at the start of each logging campaign to confirm the tools were operating correctly and performing within accepted margins of error. A comprehensive comparison of all azimuths for 2007/08 holes tailed in 2011 shows a consistent error for some of the downhole probes used in 2007. Accordingly the reported azimuth data has been thoroughly reviewed and adjusted by 4 or 8 degrees as appropriate. These corrections were overlooked in the previous model because all pre-2011 LAS data was not loaded into the database and deviations of 5 degrees inclination and 10 degrees in azimuth were considered acceptable. The oxidation state, lithology and form of all RC chips and drill core were reviewed and re-assessed in 2m intervals in 2015 as part of waste rock characterisation studies for the EIS. This level of logging detail and its assessment supports appropriate Mineral Resource estimation, mining studies and metallurgical studies.

Criteria	Commentary
Sub-sampling techniques and sample preparation	RC chip samples averaging ~4kg were automatically collected via riffle splitter into a pre-numbered calico bag for each one-metre interval drilled. A consistent sample size of 3-6 kg has been achieved across all RC drilling campaigns. Following an assessment by the Competent Person, all 2007/08 RC samples were manually riffle split to avoid potential sampling biases at the rig. With the exception of one RC rig in 2011, all wet samples have been manually riffle split after air drying. Where possible small (<2kg) automatically split RC samples were manually riffle split to achieve the desired ~4kg sample size. Assay samples were collected within 1-3 days, placed in polyweave bags in lots of 4-5 samples and kept dry after collection. Where possible a composited two metre interval was used for RC assay samples. One- and three-metre assay intervals have also been used. Not all RC drilling was assayed. RC assay sample selection was done by the Competent Person or a Senior Geologist and involved an assessment of logged geology and radiometric data. As a general rule, composited samples were broadly similar in lithology, radioactivity and sample recovery. Assay samples typically extended at least two metres past identified mineralisation and where possible follow up sampling occurred to close off mineralisation. Field duplicate RC samples were routinely collected in all programs about every 20 RC samples to monitor the precision of the field sampling process. Field duplicate samples were selected by the Competent Person or a Senior Geologist to span the range of expected grades, including waste, and to confirm lithological variations and or contacts. Field duplicate samples always corresponded to individual one-metre RC assay samples. Follow up check samples were also collected to confirm unexpected or unusual assay results. Checks and field duplicates were assigned to the same number series but different to the routine samples. Diamond core was cut in half with a diamond saw and sampled to major lithological boundaries and core loss breaks. Assayed core sample intervals range from 0.08-4.03 metres but intervals less than 0.2 metres and greater than 3.0 metres are not common. In 2011, the most significant diamond core drilling campaign, 99.4% of core samples ranged from 0.2-2.5 metres in length averaging 1.32 metres. The 2006/07 core assay interval averaged 1.41 metres while the 2005 campaigned averaged 1.77 metres largely because the minimum length limit was set at 0.5 metres in 2005. Metallurgical and geotechnical holes have been sampled to a combination of metre-marks and lithological boundaries. Metallurgical holes were typically sampled as quarter core for assay. Duplicate core samples were collected at the preparation lab in Pine Creek in 2007 and at Nolans Bore in 2011 by taking a 50/50 split of the coarse crush prior to milling. Core duplicate samples were pre-determined by the Competent Person or a Senior Geologist and assigned to a different number series. Sample preparation was conducted at North Australian Laboratories (NAL) in Pine Creek up to 2008, at Northern Territory Environmental Laboratories (NTEL) in Darwin in 2009-10 and at Arafura's onsite preparation laboratory in 2011. Arafura's onsite preparation laboratory was supervised by the Competent Person or an experienced Senior Geologist and operated by experienced technical staff supplied by Intertek Pty Ltd. Assay sample preparation typically comprised of oven drying, coarse crush of entire assay sample to -2.0 mm nominal size, pulvervising a 1-1.5kg split to plus 80% passing 100 microns, and then compositing as per instruction lists. Pulp sizing has not occurred, but NTEL and Genalysis have advised that samples have easily met this specification given material types and milling times. Compositing instructions were provided for all RC samples and this was done in clean rooms at NAL in Pine Creek and on site at Nolans Bore. A 200-500g master pulp was collected and retained for each milled sample. All diamond core and a portion of the RC samples were analysed as individual samples. The two- and three-metre composited RC assay samples were prepared by combining equal weights from the master pulp of each consecutive one-metre RC sample and thoroughly mixing to form a homogenised composited master pulp. The composited master pulp was sub-split into a 50g assay pulp and a stored master sample pulp. All master and assay pulps have been recovered and are safely stored in Arafura's warehouse in Darwin. Some of the pre-2007 assay masters were destroyed by termites while in storage at NAL in Pine Creek.

Criteria	Commentary
Sub-sampling techniques and sample preparation	The confirmatory inter-laboratory assay samples were prepared at NTEL from a sub-split of the original assay sample submitted to them, and dispatched to the referee laboratory by NTEL. Internal standards are sourced from typical Nolans Bore type mineralisation and host rocks using representative assay samples or its master pulp sample after confirmatory inter-laboratory analysis. In 2011, blind standards were inserted by the Competent Person or Senior Geologist at about 1 in 40 basis before dispatch to the assay lab. Blind standards were identical in appearance to the submitted assay pulps and used the same SampleID number series as the field duplicates. The primary sample size is considered appropriate to correctly represent this style of rare earth element (REE) mineralisation and associated alteration, the thickness and consistency of the intersections, sampling methodology, and the assay ranges for the primary elements of interest.
Quality of assay data and laboratory tests	Almost all routine laboratory analyses have been conducted at NTEL in Darwin (now Intertek NTEL) or its predecessor Chemnorth. All primary samples have been analysed by ICPMS/OES using Arafura's standard Nolans Bore assay scheme and suite of elements. Assay samples were digested using NTEL's G321 scheme which uses $HCl/HNO_3/HClO_4$ and is an "ore-grade" digest suitable for Nolans Bore-type mineralisation. The assay values for Al, Ba, Ca, Ce, Dy, Er, Eu, Fe, Gd, Ho, La, Lu, Nd, P, Pr, Sm, Sr, Tb, Th, Tm, U, Y and Yb were then determined by ICPMS/OES. Eu values were not reported for one NTEL assay job (EL03639). Arafura has used the same three-acid digest method and ICPMS/OES assay scheme for all assays of Nolans Bore material. Hence all results are comparable. Minor amendments were made to NTEL's digest protocols in 2005. This minor revision solved some digest solution issues and improved the repeatability of REE results at NTEL. Some early routine and confirmatory analyses were conducted at AMDEL Adelaide using IC3EX and IC3MX which is analogous to NTEL's digest and assay methods. Early confirmatory analyses at AMDEL Adelaide also involved the use of four-acid digest methods (IC4 and IC4R) to confirm their three-acid digest values. Most confirmatory inter-laboratory assays (93.8%) were conducted at Genalysis Laboratories (Perth) using fusion and ICPMS/OES determinations. These data strongly support the NTEL values and attest to the accuracy and precision of NTEL data for elements of interest. Arafura adopts strict QA/QC protocols using blind standards, laboratory and field blanks and duplicates, Certified Reference Material and internal reference standards all supported by systematic 1:20 inter-laboratory check assays. Assay jobs are rejected and the laboratory instructed to repeat the entire job if the reported assay values for the standards fail to be within tolerance limits. In addition to a thorough assessment of the standards and laboratory duplicate assay results, all laboratory results since 2009 have been carefully evaluated by the Competent Person (Kelvin Hussey) by assessing key elemental ratios prior to loading into the database. All suspect results have been confirmed by repeat assay of the assay pulp or the primary sample as appropriate. Up until 2008, the assessment of all assay results was done by Mr John Goulevitch of Exploremin Pty Ltd. His assessment is considered appropriate as the individual REE, P and U levels of the internal standards and P/REE of all samples were closely monitored. The data used in the 2008 Mineral Resource estimate is accepted, however it is again noted that the AMDEL assays are less precise and of slightly lower quality than the NTEL data. The AMDEL data is generally considered conservative for REE and the results of a single twinned interval of mineralisation comparing AMDEL and NTEL data is comparable to other twinned intervals at Nolans Bore. A total of 1,942 field duplicate samples have been routinely collected at a rate of about 1 in 20 of the assayed samples. Field duplicates were selected by the Competent Person or a Senior Geologist as individual samples that cover the variations in measured radioactivity and logged mineralisation intensity and also include non-mineralised country rocks and lithological contacts to confirm the accuracy of the sampling protocols. RC field duplicate assay samples have been manually riffle split and assigned to a different number series. Assay mis-matches are typically investigated by repeat sampling and assaying of the original RC sample and the two adjacent samples. Core duplicates were sampled as 50/50 splits of the coarse crush. Despite a small number of mis-matches, the outcomes of the field duplicate assay samples are within acceptable tolerance limits with similar results achieved across all programs. The duplicate samples confirm the integrity of the assay sampling

Criteria	Commentary
Quality of assay data and laboratory tests	protocols and indicate that confidence in sampling protocols and the assay database is sufficiently high to be reliable. Since 2009, there have been slight modifications to Arafura's protocols for assay QA/QC. These changes bring Arafura's data collection and QA/QC in-line with industry standards and include the systematic inclusion of Certified Reference Material. Despite the absence of Certified Reference Material in routine assay jobs at the primary laboratory prior to 2009, Arafura's systematic use of internal standards is sound practice and the routine assaying of 1:20 inter-laboratory check assays against Certified Reference Material at an independent referee laboratory confirms the primary laboratory results are acceptable. The precision and accuracy of the results from the primary laboratory has been monitored by 3,216 determinations on 64 internal standards from 2000 to present. In addition to these internal standards, a total of 917 determinations on Arafura's CRM ARA09-01 have also been completed as part of routine assay programs since 2009. These standards show the data from the primary laboratory are well constrained and under control for the elements of interest. Laboratory and field blanks demonstrate there are no significant contamination issues and laboratory duplicates show that laboratory practices and protocols are repeatable to a high degree of precision. A total of 1,881 determinations have been conducted on 1,702 duplicate assay samples by secondary laboratories as part of confirmatory referee analyses throughout the history of the project. 1,770 of these determinations or 93.8% of this duplicate assay population have been assayed at Genalysis Laboratories (Perth) since 2007. Genalysis has also systematically assayed CRM ARA09-01 a total 34 times and was involved in the certification of ARA09-01. Despite a small proportion of sample mis-matches, the positive outcomes of the inter-laboratory assay dataset is sufficiently well constrained and indicates the independent inter-laboratory check assays are within the 10% accuracy and precision quoted by primary laboratory. The inter-laboratory assays strongly support and confirm NTEL's assay data and attest to its accuracy and precision for mineralised samples. NTEL's assay values for Al, Ba, Ca and Fe are considered indicative only, and especially for waste rocks. The inter-laboratory check assays also support rare unusual elemental ratios reported by NTEL and indicate that these are real geochemical features. Results for the main elements of interest in the mineralised samples closely match and are strongly supported by referee laboratories. However, NTEL's results are slightly understated in comparison for very low levels of REE, Y, P, U and Th. This difference is most likely due to the three-acid partial digestion technique used at NTEL and appears to be mostly attributable to trace amounts of digest resistant minerals in low-grade country rocks. Despite both Genalysis and NTEL now being owned by the same parent company (Intertek), the individual laboratories, digest methods and laboratory protocols are sufficiently different to offer an objective and independent opinion of the assay results. Clearly, Genalysis' total digest method should be regarded as the benchmark, however, Genalysis' results are essentially identical to NTEL's results for mineralised samples. As such, the systematic inter-laboratory check assays confirm and strongly support reported assay results for Nolans Bore. The Chain of Custody for all assay samples are routinely monitored by Sample Tracker since 2009. All dispatch samples have been received and all accepted results are loaded and randomly audited to ensure the veracity of the database. As an added QA/QC process all previous data was randomly audited and reviewed in 2011. Prior to 2009, Chain of Custody for all assay samples was closely monitored by Mr John Goulevitch of Exploremin Pty Ltd. Down hole geophysical probes have been calibrated by Borehole Wireline and were routinely run through Arafura's calibration test hole at Nolans Bore at the start of the logging campaign to ensure and monitor the quality of the logging data.
Verification of sampling and assaying	Geologists have logged all recovered RC chip and diamond core samples and conducted a review of all geological data. Diamond core has been photographed with metre-marks and sample intervals clearly labelled. Significant intersections have been independently reviewed and verified by alternative company personnel and the Competent Person.

Criteria	Commentary
Verification of sampling and assaying	The Competent Person has inspected the sample preparation facility at North Australian Laboratories in Pine Creek, at Intertek NTEL in Darwin, and supervised sample preparation onsite at Nolans Bore. A total of 413 routine jobs have been assayed and officially reported by NTEL Darwin and its predecessor Chemnorth between 2000 and 2012. This represents the bulk of the routine and QAQC assay data with an additional four routine assay and QAQC jobs also conducted in 2005 by Amdel Adelaide. Confirmatory inter-laboratory and QAQC assays have been predominantly conducted and reported by Genalysis Laboratories Perth since 2007 (16 jobs) with AMDEL Adelaide conducting three confirmatory assays jobs prior to this. All confirmatory assay samples were prepared from the same pulp assayed by NTEL and dispatch directly to the referee laboratory by NTEL on behalf of Arafura. No adjustments have been made to assay data as officially reported, apart from the conversion to equivalent elemental oxides, the addition of elements or oxides as shown below, and as appropriate, the conversion from ppm values to % values. The reported elemental data is stored in the Company's database, except for assays that produced below detection limit values which are stored as negative detection value and reset to view on export as positive half detection value. Eu values were not reported by NTEL job EL03639 and have been recorded as NULL. Selected elemental oxides or summed elemental/oxide products are exported as defined fields from the database and are clearly labelled to avoid any confusion. Yttrium is exported as Ytm to avoid any confusion with Y as Northing. Summed rare earth values are calculated and exported from the database using the following formula: REE = La + Ce + Pr + Nd + Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Lu TREE = La + Ce + Pr + Nd + Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Lu + Y The oxides are calculated from the reported elemental values according the following factors listed below: La_2O_3: 1.173 (i.e. ppm La x 1.173 = ppm La_2O_3); CeO_2: 1.228; Pr_6O_{11}: 1.208; Nd_2O_3: 1.166; Sm_2O_3: 1.160; Eu_2O_3: 1.158; Gd_2O_3: 1.153; Tb_4O_7: 1.176; Dy_2O_3: 1.148; Ho_2O_3: 1.146; Er_2O_3: 1.143; Tm_2O_3: 1.142; Yb_2O_3: 1.139; Lu_2O_3: 1.137; Y_2O_3: 1.270; U_3O_8: 1.179; and P_2O_5: 2.291. Total rare earth oxide is the industry standard and accepted form of reporting rare earths. The TREO (Total Rare Earth Oxide) is calculated as follows: TREO = $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$. The Competent Person has used geological logs, assay results and selected geochemical ratios to determine and assess the REE mineralisation.
Location of data points	The grid system for Nolans Bore has historically been based on GDA94 and MGA94 Zone 53 coordinates. All drill collars up to 2004 were pegged by hand-held GPS or by compass and tape with an accuracy of about five metres prior to drilling. All drill collars since 2005 have been accurately pegged by a professional Surveyor (Brain Blakeman Surveys). All drill collars were capped and clearly labelled when completed and have been accurately re-surveyed after drilling by Brian Blakeman Surveys. All collars except for the Nolans Bore calibration test hole have been cut, capped and buried in accordance with rehabilitation guidelines. Down-hole directional surveys have been routinely determined by the relevant Driller at 30m intervals by either single-shot Eastman camera surveys or single shot electronic orientation probes. Down hole directional surveys have been acquired by Borehole Wireline for all open holes. Borehole Wireline have been able to survey most holes to some extent with accurate surveys collected for more than 60% of the drilled metres. All LAS data for all holes is loaded into the database and assigned a unique label based on the SITE_ID and the downhole survey run number based on the surveyed date. The results from holes surveyed more than once have all been compared against each other and the data for relevant calibration hole

Criteria	Commentary
Location of data points	checked. This process lead to the identification of systematic errors in the reported azimuth values for holes surveyed by two different probes in 2007/08 (NB0171-NB0315 inclusive). The surveys conducted in October-December 2007 require an average correction of -4 degrees for holes (NB0171-NB0260). This error in azimuth was within the 5 degree tolerance and was not identified until all data was loaded and thoroughly analysed. The surveys acquired in February 2008 for holes NB0261-NB0315 were substantially out of calibration, requiring a systematic average correction of -8 degrees. This azimuth error was initially identified in 2008 at the end of the survey period when the data was report however it was thought that the error was around 6 degrees. The data was considered marginal and the tool removed from site. The azimuth error in the February 2008 tool was accepted in former models because it was within the 10 degree tolerance for azimuths. As a result of detailed analysis in 2015, the azimuth values for all holes were again re-assessed and new values assigned and prioritised as appropriate. As part of the azimuth revision and correction process the actual magnetic declination for the project area was also applied for the first time (ie. 4.7 degrees, instead of 3.5 which has been uniformly applied since the project commenced). All geological objects have been re-snapped to the new holepath locations. These small changes have no material impact on the model as almost all of the new locations are within 5m of their former position. This level of accuracy is sufficient for the scope of the program undertaken. Brian Blakeman Surveys has surveyed and prepared a Digital Elevation Model (DEM) for the Nolans Mineral Lease application area. This DEM was amended in 2015 by including the additional surveyed collars for 2011 drilling program. The surface RL for a number of wide-diameter holes and one RC hole outside of the Mineral Resource were adjusted to match this new DEM. In 2015, a standard local metre-based grid system was developed for Nolans Bore. This local grid system is based on the tie-points used to define the primary drill section (Section "O") which has a bearing of 145. The local grid has been developed such that section O is now 10,000m E and most of the NZ occurs north of 10,000mN. The NW end of section "O" occurs at 318579.7mE 7502623.7mN in MGA94 Zone 53 coordinates which corresponds to 10000mE 10630mN in the local grid. The SE end of section "O" occurs at 319579.9mE 7501201mN in MGA94 Zone 53 coordinates which corresponds to 10000mE 8890.898mN in the local grid. All locations were transformed into the local grid system using SURPAC v6.6 and the corresponding local coordinates extracted and added back into new local coordinate fields in database. Geological objects and surfaces were also transformed into the new grid system using a combination of Surpac v6.6 and v 6.7.
Data spacing and distribution	The principal drilling grid is orientated at 145 degrees from true North and with a nominal 40m x 40m spacing over the main parts of Nolans Bore and localised infill drilling to a nominal 20m by 20m spacing in the central North Zone. The deposit has been systematically drilled to about 150-180m drilling depth in most places with systematic deeper diamond core drilling to 250m drilling depth on every second drill section across most of the deposit. Wider spaced RC drilling occurs in the peripheral areas. A local grid system has been developed for the 2015 Mineral Resource estimate such that the principal drilling direction is aligned to the local grid.
Orientation of data in relation to geological structure	The deposit has been systematically defined using drill holes inclined at -60 towards 145 degrees. The costeans also closely match this principal drilling direction which typically yields geological data at a moderate to high angle to the general strike and dip of the mineralisation in the North and Southeast Zones of the deposit. In 2011 it was realised that a massive body of mineralisation trends close to north-south in the Central Zone. Hence 24 diamond core holes were specifically drilled from surface on six 100-metre spaced east-west sections to resolve the geological complexity of the zone.

Criteria	Commentary
Sample security	The project area is remote and no unauthorised persons entered the property during drilling and sampling operations. Up to 2008, all RC assay samples were collected from the drill site and placed into sealed polyweave bagged lots of four to five samples. These were then placed in one tonne bulka bags which were temporarily stored at Aileron in readiness for transport by freight companies to NAL in Pine Creek. The bulka bags were loaded into locked shipping containers and transported to the laboratory for sample preparation. Drill core samples were logged, marked up and photographed at Aileron before the trays were palletised and transported to NAL in Pine Creek for SG determinations, cutting and sampling. Drill core assay samples were bagged and delivered directly to the preparation facility at NAL, Pine Creek. Assay sample pulps were dispatched in batches by courier from NAL to NTEL in Darwin. Back up master assay pulps were stored on pallets at Pine Creek until no longer needed. In 2009, drill core was logged, cut and sampled on site at Nolans Bore and assay samples placed in polyweave bags, stored in 205 litre steel drums and transported to NTEL in Darwin for sample preparation and analysis. In 2010, RC samples were placed in sealed polyweave bagged lots of four to five samples, placed in drums and transported to NTEL in Darwin for sample preparation and analysis. In 2011, RC assay samples were collected from the drill site, placed in sealed polyweave bagged lots of four to five samples and temporarily stored at onsite in a fenced laydown storage area adjacent to Arafura's preparation facility. Cut core samples were individually bagged and temporarily stored on pallets in the laydown area. RC and core assay samples were then "delivered" in batches to a designated area adjacent to the preparation laboratory. Prepared assay sample pulps were checked by the Competent Person or Senior Geologist, and blind standards were inserted before transporting to the Alice Springs and then on to NTEL in Darwin in sealed space-cases. Master pulps were stored in a locked shipping container adjacent to the onsite preparation laboratory. Chain of custody documentation and lists of all submitted samples was included with all assay jobs. Assay sample pulps have been recovered from the laboratory for safe long-term storage at Arafura's exploration storage facility in Darwin. All drill core has been transported to Darwin for safe long term storage.
Audits or reviews	Arafura's Geologists have reviewed and audited all geological data in the database. The Competent Person has randomly audited the reported assay data against that loaded in the database. The geology of all mineralised intersections in the model were reviewed as part of a new material type classification.

Section 2: Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	The Nolans Bore deposit is located wholly within Exploration Licence (EL) 28473 which is 100% owned by Arafura Resources Ltd. The deposit lies within the area covered by Mineral Lease (ML) application 26659 which is 100% owned by Arafura Rare Earths Pty Ltd., a wholly-owned subsidiary of Arafura Resources Ltd. Mineral Lease applications 30702, 30703 and 30704 have also been lodged over the proposed processing and camp site. These are also 100% owned by Arafura Rare Earths Pty Ltd. The tenement is situated on Pastoral Land and the known mineralisation spans the boundary between Aileron (PPL 1097) and Pine Hill (PPL 1030) Stations however all reported Mineral Resources are in Aileron. Arafura Resources has executed a Native Title Exploration Agreement with the Central Land Council (CLC) on behalf of the Native Title Holders for this tenement. The Nolans project is subject to Native Title Claims and Arafura is currently in the process of completing an Agreement with the Native Title Holders. Arafura was issued Sacred Site Clearance Certificates which provides clearance for the exploration and drilling activities conducted at Nolans Bore. Arafura Rare Earths has also applied for a water abstraction licence to support the development of this project At the time of reporting, there are no known impediments to obtaining a license to operate in the area and the tenement is in good standing.
Exploration done by other parties	PNC Exploration (Australia) Pty Ltd conducted regional exploration programs in the project area in 1994-1996. They discovered the Nolans Bore prospect by following up a substantial airborne radiometric anomaly. PNC conducted ground radiometric surveys, and sampled and assayed the surface outcrops. No other work has been done at Nolans Bore by other parties.
Geology	The Nolans Bore REE-P-U deposit is a complex, 3D stockwork vein-style deposit which occurs in the Aileron Province of the Arunta Region in the Northern Territory, Australia. Isolated parts of the deposit crop out but for the most part it is concealed beneath a thin layer of alluvial and colluvial transported cover. The deposit is characterised by massive fluorapatite mineralisation which ranges from discrete narrow fine-grained veins to wide intervals of massive coarse-grained breccias. The massive fluorapatite-rich rocks contain up to about 95% fluorapatite and typically contain abundant mineral inclusions of REE-bearing minerals, such as monazite group minerals, allanite, thorite and numerous other REE phosphates, silicates and carbonates. The fluorapatite itself contains variable amounts of REE but a higher proportion of REE is hosted in the mineral inclusions. The associated calcsilicate style of mineralisation can contain fluorapatite and other REE-bearing minerals and are typically dominated by pyroxene, amphibole, epidote-allanite, carbonate, quartz, plagioclase, zeolites, garnet, scapolite and titanite. The calcsilicate rocks are strongly associated with the massive fluorapatite mineralisation but tend to be lower grade where mineralised. The Nolans Bore mineralisation and its associated alteration are hosted by metamorphosed Palaeoproterozoic igneous and sedimentary rocks of the Aileron Province in the Arunta Region. Some of the country rocks also contain low grade REE mineralisation (e.g. the coarse-grained to pegmatitic granitoid commonly contains up to 0.3% REE and can locally exceed 1% REE in metamorphic monazite) but these rock types and grades markedly contrast with the typical Nolans Bore mineralisation and have not been included in the resource estimate.

Criteria	Commentary
Geology	The deposit is hosted by metamorphosed Proterozoic sedimentary and igneous rock units that have undergone high-grade metamorphism during the 1525-1600 Ma Chewings Orogeny and are interpreted to be parts of the Aileron Metamorphics, Lander Rock beds and the Boothby Orthogneiss as mapped in nearby outcrops. Large intrusive bodies of coarse-grained to pegmatitic granitoid form a major component of the host country rocks at Nolans Bore. These units can be traced as coherent bodies (dykes and sills) and can be differentiated geophysically and geochemically from other country rocks and mineralisation. As such, these rocks form important marker units. The interpreted geological distribution suggests these granitoid bodies are mutually exclusive of mineralisation. However, relationships in drill core clearly indicate the mineralisation postdates the granitoids. The currently favoured geological model suggests that mineralisation is preferentially formed in strain zones within the country rock gneisses and schists adjacent to the more competent, massive coherent coarse-grained to pegmatitic granitoid bodies. This structural relationship was first proposed in 2006 and is still supported. Nolans Bore-type mineralisation and its associated alteration is geologically and geochemically distinct from the surrounding host rocks and clearly post-dates the high-grade metamorphism in the host rocks. Large parts of the deposit remain relatively undeformed however some parts are overprinted by the Devonian-Carboniferous Alice Springs Orogeny and Cainozoic weathering. Despite localized overprinting effects, the geochemistry of the mineralisation is very similar throughout, hence the mineralisation is defined by an enveloping surface which encompasses all Nolans Bore-type mineralisation at a cut-off of >0.5% REE. Systematic drilling indicates the widespread presence of mineralised veins up to tens of metres in thickness and hundreds of metres in length, extending below 250 m drilled depth across parts of the deposit. The full extent of the deposit is yet to be outlined but deeper drilling has demonstrated mineralisation and alteration at about 490 m drilled depth in the central North Zone. Nolans Bore-type mineralisation and associated alteration has been recognised in surface exposures and drilling over an area of about 3 km x 3 km.
Drill hole information	This section is not relevant to reporting Mineral Resources. No exploration results have been reported in this release
Data aggregation methods	This section is not relevant to reporting Mineral Resources. No exploration results have been reported in this release.
Relationship between mineralisation widths and intercept lengths	This section is not relevant to reporting Mineral Resources. No exploration results have been reported in this release.
Diagrams	This section is not relevant to reporting Mineral Resources. No exploration results have been reported in this release.
Balanced reporting	This section is not relevant to reporting Mineral Resources. No exploration results have been reported in this release.
Other substantive exploration data	Arafura acquired a detailed, low-level airborne magnetic and radiometric survey over the Aileron-Reynolds project area in 2008. This survey covers the Nolans Bore deposit with additional adjoining airborne surveys acquired in 2011 and 2013. Arafura's proprietary airborne surveys are in addition to the publicly available airborne geophysical datasets. An airborne hyperspectral survey was done in the Aileron-Reynolds project area in 2008. This survey covers the Nolans Bore deposit and surrounds.

Criteria	Commentary
Other substantive exploration data	Arafura acquired detailed World View 2 satellite imagery (0.5m pixel resolution) over the Nolans Bore project area in 2012. Additional regional and less detailed SPOT5 satellite imagery (2.5m pixel resolution) was also purchased over the project area in 2012. Arafura has recently acquired additional adjoining detailed World View imagery cover the proposed developments in the Nolans Project area. Arafura has collected extensive geological, geotechnical and metallurgical data from the Nolans Bore deposit and surrounds in support of its exploration and resource definition programs. Arafura has collected a substantial biogeochemical orientation dataset over the Nolans Bore deposit and surrounds and is using this to assist in targeting exploration in areas under cover (eg Mulga prospect ASX: ARU 8/11/2013). Arafura has discovered substantial ground water resources to the south and southwest of Nolans Bore and has applied for a water abstraction licence (ASX: ARU 22/10/2014).
Further work	At this stage no further resource definition drilling is planned at Nolans Bore. Grade control and sterilisation drilling programs are planned. Detailed gravity and magnetic surveys are planned with modelling to investigate the depth potential of the deposit. Additional waste rock characterisation and modelling is planned in line with Arafura’s Radiation Management Strategy and the proposed development of Nolans Bore. Geological mapping and prospecting is planned at exploration targets in Arafura’s Aileron-Reynolds land package

Section 3: Estimation and Reporting of Mineral Resources.

Criteria	Commentary
Database Integrity	All relevant data is stored in Arafura's SQL Geobank database. Arafura's database was originally developed and populated in 2009/10 in conjunction with Micromine. Prior to this all digital data was stored in various master spreadsheets populated and held by Exploremin Pty Ltd. Micromine assisted Arafura in the development of its relational database structure with internal checks and validation procedures as per industry standard. Primary data sources were used during the initial database load to minimise transcription or keying load errors. The data was audited during the initial load stage however a small number of non-material issues have since been discovered and rectified. Minor structural changes were made to the database since its inception. The structural changes made in 2014/15 have no material impact on the current resource estimate as no new assay data has been added within the Mineral Resource. The database has routinely scheduled back ups and all data entries or modifications are date stamped with the responsible person's name. Only trained personnel approved by Arafura's database administrator can add or edit data, and all new data is audited on import to ensure integrity. All data is captured in the database and can be viewed. However exported data is prioritised where appropriate such that only priority values can be used for certain fields. For example, 'check' assays are not exported with routine assays. Extracted database views and a Microsoft Access database snapshot for the current estimate is stored digitally in the Nolans project directory on Arafura's server as a permanent record of the data used in this estimate. All RC logging data and all geological summaries for the RC and drill core have been transferred to digital form and loaded into the database. All drillhole information was originally logged directly onto paper logging sheets by the geologist, then scanned and securely filed or stored digitally in the Nolans Bore project directory on Arafura's server. The paper logsheet and the scanned copy are available for all drill holes and have been used to validate and cross-reference audits, edits and geological reviews. Extensive geological descriptions were allowed for and acquired by most geologists on the drill core logsheets. Concise lithological summaries have been developed for the drill core following geological revision, synthesis and recoding with standardised lithological information by Arafura and have been entered into the database instead of the more extensive entries. The digital capture process involved data entry using specifically formatted spreadsheets with drop-down lists and built-in validation checks to minimize transcription and keying load errors. The database administrator has carefully checked and audited all digitally captured data. Arafura have conducted a number of in-house workshops to review and re-interpret geological summaries for each drill hole. In 2011, geological summaries were prepared by the responsible geologist on the formatted spreadsheet, and reviewed and checked by the Arafura team for internal consistency. Earlier drillhole summaries used in the previous resource estimate were reviewed in 2011 to ensure internal consistency across all programs. All geological summaries were reviewed audited for consistency by Arafura's database administrator. All logging and survey information was reviewed by the responsible rig Geologist prior to the Senior Geologist and team review. The data was again reviewed by the database administrator prior to the final data load into the database. The rig Geologist is the first to validate of the field data by the reviewing the geological log and chips checking sample ID, missing data entries, obvious logging errors or atypical surveys or radiometric readings. The next stage occurs as part of the assay sample selection process by the onsite Senior Geologist or Competent Person. The third stage occurred during the data entry and load supervised by the Database Administrator. The fourth stage occurred during the review and synthesis of the geological summaries when all data was exported from the database and reviewed prior to the development of the geological model and mineral resource estimate. During this stage geological summary is again checked for its integrity against its associated downhole logging data and the drill chips, core photographs or drill core (if required) to ensure the validity of the data.

Criteria	Commentary
Database Integrity	Sample identification numbers are unique. Routine sample number series differ to field duplicate and any supporting field check samples. Certified and Internal Standards and blanks are assigned unique numbers in the database to match their assay job number. Since 2010, all assay samples have been dispatched and receipted using the Sample Tracker module in Geobank. This ensures all assay results from the laboratory are accounted for and loaded against the correct sample. All specifically dispatched samples have been specifically receipted. Assays within the database are accepted as final once they passed the Competent Person's (Kelvin Hussey) review. The QAQC process involved an initial assessment by database administrator of La, Ce, Nd, P and U values for the certified and blind standard, inserted in each assay job, against automated QAQC reports. The assay data was then thoroughly reviewed by the Competent Person, checking REE, P, U, Th for the internal standards, blanks, lab duplicates and inter-element ratios for all unknown samples. The results were only accepted and loaded once they passed the QAQC process. Assay samples prior to 2009 were re-dispatched and re-receipted as part of a bulk load soon after the database was developed. A small number of load errors identified during the previous resource estimate have been corrected in 2014. No other data load or export issues have been detected. Assay loads are validated by manually checking the reported results of at least two samples per assay job on the laboratory assay certificate against the results loaded and stored in the database. All downhole logging is fully loaded into the database based on LAS data files supplied by Borehole Wireline. This includes the 2015 revisions and Borehole Wireline's corrections to the 2007/08 density probe values. The database has views and tables of the 10m survey data as well as density and gamma data are routinely picked at or averaged over one metre-intervals using database routines. The LAS survey data has highest priority and is used instead of the driller's single shot survey. The driller's single shot survey records are used where LAS survey data is not available, providing the single shot survey records passed tolerance limits. The combined 10 m survey data is checked for azimuth and inclination deviations >5 degrees. Excessive deviations are considered unlikely and not accepted. The survey data was loaded in Surpac for 3D spatial viewing to ensure the conformity of the surveyed drillhole path. GeoBank has internal validation procedures that must be met when new data is loaded into database. The database is routinely backed up and all entries and modifications to the database are date stamped and include the responsible person's name. Export rules have been developed and verified to ensure that only the designated data is exported for use in geological interpretation and resource estimation. The Competent Person checked the data for missing intervals, missing samples, downhole survey deviations of ±10º in azimuth and ±5º in inclination when loading into SURPAC.
Site Visits	Kelvin Hussey is a full time employee of Arafura Resources and regularly visits Nolans Bore during site operations.
Geological interpretation	Other styles of REE mineralisation were originally considered however many do not have the same geological host rocks, alteration styles or mineralogy as Nolans Bore. Structurally controlled vein deposits show similarities to Nolans Bore. The mineralisation is hosted within structurally controlled veins and breccias, with localised structural reworking and overprinting alteration causing some geological complexity. The geometry of the deposit is 3D and complex and typically shows a close spatial relationship to sheared contacts to adjacent coarse-grained to pegmatitic granitoids/orthogneisses. Geological observation has underpinned the geological model and the resource estimation. Rock type, mineralogy, alteration style, geochemistry and radioactivity were used to define the geological boundaries. The geological model was developed as an iterative process of checking against logging, geological summaries, photography, radiometric data, geochemistry and re-assessing drill core and drill chips where necessary. Interpretation of the massive pegmatitic units and the adjacent mineralised bodies are considered important aspects of the deposit's geological model.

Criteria	Commentary
Geological interpretation	The mineralisation and its associated alteration has a characteristic and uniform REE signature which together with P, U, Th and Sr clearly differentiates it from all surrounding host rocks. The pegmatitic granitoid units typically contain up to 0.3% REE although locally they can exceed 1% REE. The REE, Th, U and P signature of the pegmatite units are distinctly different from typical Nolans Bore type mineralisation and unless the pegmatite is internal waste or overprinted by Nolans Bore type alteration, it has been excluded from the mineralised bodies in the geological interpretation. The observations regarding the geological model and the extent of the interpreted mineralised envelope are typically robust. However parts of the Southeast and Southwest Zones are less certain geologically given the small amount of near surface drill core and the wider spaced drilling in this area. All geological units were revised and updated in 2015. The geological model for Nolans Bore is subdivided into the following geological units: • MIN; • RAD; • PEGMATITE; • GNEISS; • SCHIST; and • SOIL. Surfaces were also modelled for • Topography • Standing Water Level • Base of complete oxidation • Top of Fresh Apart from SOIL, all geological units are widespread across the deposit and occur at all depths. The RAD unit was modelled as an all-encompassing interconnected unit that attempts to capture all potentially radioactive material. This unit was modelled because all Naturally Occurring Radioactive Material (NORM) which has an activity greater than 1Bq/g needs to be managed once disturbed. The RAD unit includes a mixture of geological rock types, including MIN, that were considered potentially radioactive based on assays and measurements radioactivity downhole probes and hand-held Geiger counters. Mineralised drill intersections of less than 2m with no geological support in adjacent holes are not included in a MIN object and have not been classified as Mineral Resources but in almost all cases this mineralisation has been captured within RAD. The RAD unit was modelled primarily to assist with the estimation of volumes and radioactivity in waste rocks as part the Arafura's EIS process. The lithological units outside of the RAD DOMAIN can essentially be regarded as benign non-radioactive material. The 2015 MIN objects are numbered into DOMAINs and ZONECODEs using a different schema to avoid any confusion with the former (2012) geological model (see Table below). To aid in the analysis and estimation process, all 138 MIN DOMAINs have been subdivided into nine distinct ZONECODEs based on their geographic location and geological character, chemistry, OXSTATE and size. The number of samples within each ZONECODE was also considered for each geographical grouping with a lower limit of no less than 300 composited samples applied to each for statistical purposes. Where possible large DOMAINs were subdivided using their OXSTATE. This was done to limit smearing between fresh and oxidised material, and was considered geologically important in the North and Central Zones. For example, DOMAIN 101 is a large inter-connected object spanning most of the North Zone and contrasts with the other smaller DOMAINs in the North Zone that are often not as deeply weathered. Also DOMAINs 143 and 144 have been specifically differentiated from DOMAIN 101. This is because the oxidised mineralisation contained within DOMAINs 143 and 144 are characterised by a different P/REE ratio and contrasts with the surrounding geology in DOMAIN 101 (ZONECODE11).

Criteria	Commentary
	It was considered important to develop a robust hard boundary for this geochemically different material to limit smearing across geological boundaries. A very small part of DOMAIN 335 also contains some mineralisation similar to that in DOMAINs 143 and 144 but the volume is way too small to be treated separately.

Mineralised DOMAINs and ZONECODEs used in the 2015 Mineral Resource Estimate.

LOCATION	UNIT [1]	ZONECODE	DOMAIN	OXSTATE
North	MIN	11	101	Oxide/mixed
North	MIN	12	101	Fresh
North	MIN	13	102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142	All
North	MIN	14	143, 144	All
Central	MIN	21	201, 202, 203, 204, 205	Oxide /mixed
Central	MIN	22	201, 202, 203, 204, 205	Fresh
Southeast	MIN	31	335, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357	All
Southeast	MIN	32	301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 314, 313, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 336, 337, 338, 339	All
Southwest	MIN	40	401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432	All

[1]All MIN objects are clipped to the base of SOIL.

The extents of the geological model were constrained by drilling and costeaning data. Geological boundaries had only minimal extrapolation beyond drilling and the uniform 20m extrapolation distance following the same geological trend is in line with an industry standard of half-principal drill spacing. This extrapolation is considered conservative and typically avoids excess volume. This methodology also provides an equal representation of both mineralisation and waste. Given the absence of uniform deeper drilling on all sections, geological boundaries were sometimes interpolated between every second principal drill section at depth, but only where the model is supported on multiple drill sections and in line with inferred resource classifications. This interpolation methodology is geologically justified for this deposit type, and removes unrealistic zig-zag shapes at depth.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Geological interpretation</td><td>Key factors that are likely to affect the continuity of grade are:
The inherent variability of brecciated rocks. Breccia characteristics can change rapidly on a centimetre to metre scale.
The inherent variability of veins. The continuity and thickness of veins can change along strike. The veins can show sharp but irregular boundaries. The vein intensity and amount of altered host rocks included with the mineralised vein system can change.
Overprinting structures can disrupt or influence the continuity of the mineralised system.</td></tr>
<tr><td>Dimensions</td><td>The Nolans Bore mineralisation is mostly concentrated in an area of about 1,100m north-south by 1,500m east-west. Systematic drilling has typically confirmed down dip extensions from the surface or near surface down to vertical depths of 215m, with many veins and zones remaining open at depth.

The North Zone has a strike length of around 1,000m and local deep drilling has demonstrated mineralised veins and bodies extending from surface or near surface down dip to a vertical depth of about 400m in the central parts of the North Zone. The main mineralised lodes in the North Zone collectively trend slightly north of east with the main lodes predominantly aligned with the strike direction at approximately 060º, dipping steeply to the north. The main mineralised lodes in the central zone strike approximately north-south and have a strike extent of about 500m. Parts of the North and Central Zones have mineralised bodies that are more than 50m thick. Mineralised lodes in the southeast zone are up to 350m long and defined into two broad zones dominated by a southeast to northwest strike of approximately 330º and an approximate east-west strike of approximately 075º to 080º. All dips are steep to sub-vertical and are to the north-north- west in the north and south-east zones and are a combination of east and north-north- east dips in the central area.</td></tr>
<tr><td>Estimation and modelling techniques</td><td>The Access database was cut up into DOMAINs using the defined geological boundaries as hard boundaries. The mineralisation was then flagged for ZONECODEs, OXSTATE and INSITU. Assay data was composited into 2m intervals for statistical analysis and estimation purposes.

A volume model was created for the mineralisation using the same wireframes used for sample flagging. The volume model was developed such that its extent exceeds the defined Mineral Resources and the topography. The volume model was developed based in the local grid coordinate system as shown below.

<table>
<tr><th>Axis</th><th>Minimum coordinates (local grid m)</th><th>Maximum coordinates (local grid m)</th><th>Parent Cell Dimensions (m)</th><th>Number of Parent Cells</th><th>Number of Splits</th><th>Smallest sub-cell Size</th></tr>
<tr><td>X</td><td>8900</td><td>10760</td><td>20</td><td>93</td><td>4</td><td>5</td></tr>
<tr><td>Y</td><td>9000</td><td>10700</td><td>20</td><td>85</td><td>4</td><td>5</td></tr>
<tr><td>Z</td><td>300</td><td>730</td><td>5</td><td>86</td><td>4</td><td>1.25</td></tr>
</table></td></tr>
</table>

Criteria	Commentary
Estimation and modelling techniques	The volume model blocks are aligned to the local grid and their parent size is equal to half of the systematic deposit-wide drill spacing (ie. blocks are 20m x 20m in X and Y whereas the principal drill spacing is nominally 40m x 40m). This model adequately accommodates the infill 20m x 20m drilling in the North Zone and the more widely spaced 40m x80m spaced drilling at depth. This block model contrasts with the previous model. Density was estimated into each ZONECODE by ID^2 using Geovia Surpac v 6.7. Geological and OXSTATE boundaries were used as hard boundaries for all informing density data. A series of three successive estimation passes were run for each oxidation state in each ZONECODE, doubling the search distance after each pass. The initial search distance for each pass was derived from the initial 3D variogram search distance used for grade estimation. Average density values for each ZONECODE and OXSTATE were assigned in a fourth pass if a value was not estimated during the third pass. The average density of the 2015 Mineral Resource estimate is consistent with that of the former model. Grade estimation was completed using Ordinary Kriging for the Mineral Resource, using Geovia Surpac version 6.7. The potentially economic lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium are summed as standard oxides and exported from the database to obtain Total rare earth oxide (TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 +Yb_2O_3 + Lu_2O_3 +Y_2O_3). TREO has been estimated. Individual rare earth oxides are yet to be estimated into the entire block model however as expected, the estimated results from the North Zone confirm that the sum of the individual rare earth oxides estimated into each block yields an identical result to that of the estimated TREO. Hence despite a requirement for the individual rare earth oxides to be fully estimated in the model, the estimated TREO result provides a robust value that can be reported here to expedite the reporting of this material change in the Mineral Resources. In addition to rare earths, the potentially economic phosphate (P_2O_5) and uranium (U_3O_8) have been estimated. Composite statistics for the three primary variables for estimation (TREO, P_2O_5 and U_3O_8) were analysed to determine if any domain had unusually high grade outliers that would need to be top-cut. All of the ZONECODE divisions have very low coefficients of variation, usually less than 1.0. No ZONECODE had any values that necessitated top-cut strategies for TREO%, P_2O_5 and U_3O_8. However ZONECODE 14 contains a 8-10 of borderline high TREO and U_3O_8 values. To limit the impact of these borderline high values to the estimate, the impact of these higher grade values were restricted to 25% of the initial search distance. Variography was performed on the three main variables (TREO, P_2O_5 and U_3O_8) to determine the best estimation strategy for each ZONECODE. 3D anisotropic variograms were modelled for ZONECODEs 11, 14, 21 and 32. These are the only areas with sufficient data to generate robust 3D variograms. The remaining mineralisation ZONECODEs use the most appropriate variogram from the same geological zone and lithology, scaled to the local variance. No variography was performed on the waste domains. All variography was completed in three-dimensional space, to allow for any plunge component to be modelled. The maximum continuity directions were steeply down-dip for ZONECODE11, steeply inclined for ZONECODEs 21 and 32 and a flat horizontal for ZONECODE14. These directions are consistent with anticipated geological search parameters. Downhole variograms generally show low to moderate nugget values, reflecting the generally low coefficient of variation values seen in the descriptive statistics. All grades were estimated into parent cells, with all sub-cells receiving the same grade as their parent. Cell discretisation was set to 5, 5, and 5 in the cell X, Y and Z directions respectively. Constraints and parameter files were created for search, variogram and estimation parameters. Initial search ellipses were set to the directions and ranges of the respective variograms. These were tested by iterative means and the final ellipses were chosen to be approximately half to two-thirds the longest variogram ranges in each direction, with the longest axis (for the anisotropic searches) being down-dip or steeply inclined within the strike of the major continuity direction for most ZONECODEs.

Criteria	Commentary
Estimation and modelling techniques	Each grade estimate is performed in a series of three passes, with cells not estimated in the first pass were estimated using an expanded search ellipse for the second pass and likewise for the third pass. The expansion factors are times 2.5 for the second pass and times 4 for the third pass. The maximum number of composite samples allowed for the first pass estimate ranges from 25, with a minimum of ten. The third pass uses a maximum of 25 samples and a minimum of two. ZONECODEs 11 and 12, and 21 and 22, were estimated independently using hard boundaries to limit smearing of grades between different OXSTATEs. A small number of grades were not estimated and fourth pass was run in some ZONECODEs (ie 12, 21 and 22). This pass had identical search parameters to the third pass, but used the informing data from the adjacent OXSTATE. A fourth pass was also run in the Southwest (ZONECODE40) using a six times expansion and a minimum of 2 samples. During the estimation, kriging weights were allowed to be negative and a maximum of six samples were allowed per drillhole. The variogram and search parameters for each estimated ZONECODE domain used the TREO% variables from the initial estimate. This strategy is sensible as the individual rare earths, TREO, P_2O_5 and U_3O_8 are all in general strongly to very strongly correlated. The geological interpretation was used to define the mineralised domains. The oxidation state was also used to define hard boundaries where substantial data existed in the North and Central Zones. The mineralised domains were used as hard boundaries to select sample populations for data analysis. The same geological boundaries were used for estimation, however both hard and soft domaining strategies were used. The final model was validated both visually and statistically. The model was compared with drillholes and wireframes on sections to check for errors. Block model volumes were also crosschecked against wireframe volumes. Plots were produced comparing the estimated model grades (TREO%) with the composite grades in a series of slices through the model and data. The model profiles are generally slightly smoother than the composite profiles (ie. show less variance) but are usually still constrained between the extremes of the composite data. This is expected, as the estimation process normally selects multiple data in overlapping search ellipses and smooths the more variable drillhole data by placing one discrete value per parent cell volume. All of these models had hard boundaries so that no grade from the mineralisation was smeared into the background waste domains.
Moisture	All tonnages are estimated on a dry basis.
Cut-off parameters	The geological model was developed using all available geological data and uses a 0.5% REE (excluding Y) lower cut-off grade. This geological model differentiates typical Nolans Bore-type mineralisation from the pegmatitic granitoids in the area which typically assay up to about 0.3% REE. The resources were estimated using the wireframed geological model and a 1% TREO lower cut-off.
Mining factors or assumptions	It is assumed that the deposit will be mined using traditional drill and blast open-cut methods.
Metallurgical factors or assumptions	Metallurgical information is based on an extensive dataset of various material types sourced from 2004-2011 exploration programs at Nolans Bore using representative RC drilling residues and HQ3 drill core intervals, plus larger bulk samples obtained from two shallow (2.5 metre deep) costeans and deeper material collected from wide-diameter augered/cored holes (7-64.5m deep). The sampled material is considered representative of the first 7 years of production from the mine.

Criteria	Commentary
Metallurgical factors or assumptions	Initial variability and comminution studies have been conducted on representative intervals using RC and drill core samples. Further work is in progress. Qualitative mineralogical and geochemical analysis of 19 bulk samples submitted for metallurgical test work has been completed. This assessment has addressed all material types and a range of head grades typical of Nolans Bore type mineralisation. A comparative detailed study has been completed on 21 thin sections selected from representative type examples in drill core with supportive and less detailed microanalysis conducted on about 50 other thin sections. Lab scale and pilot metallurgical test work programs using the various material types have demonstrated that Nolans Bore type mineralisation can be beneficiated into a rare earth mineral concentrate. Arafura designed and developed a flowsheet that lead to the processing of Nolans Bore-type mineralisation and the recovery of five separate REO products that meet customer specifications and requirements. Arafura is currently reviewing and assessing alternative flowsheet designs and improvements.
Environmental factors or assumptions	Baseline and environmental studies for mining are well advanced and have not highlighted any environmental issues likely to be detrimental to the prospects for extraction of this mineral resource. Arafura has discovered and pump tested a substantial aquifer to the south of Nolans Bore. Arafura believes this ground water resource has the potential to supply to required water volumes for the life of the planned operation. Arafura is conducting environmental studies on the impact of abstracting water from this Cainozoic basin and has recently applied for a Water Extraction Licence (ASX: ARU 22/10/14).
Bulk density	A minimum of one or two representative drill core samples were typically selected from each core tray in mineralised zones while one sample per two core trays was selected for country rock intervals. A total of 7725 physical determinations were done on drill core using the Archimedes' principal, weighing in air and then in water. Friable and porous samples were weighed wet inside cling film with excess air removed to ensure the sample did not fall apart and to account for void space. Density data was also determined by a calibrated downhole geophysical probe. Downhole probe data was collected in 5cm increments and the average for each metre exported from the database and loaded into Surpac for spatial analysis and estimation. Probe density data was acquired for the entire open hole, in holes selected by the Competent Person during 2007/08 and again in 2011. Density probe values are only calibrated for measurement in water and hence those values that were reported above the Standing Water Level were filtered out in Surpac and not used in the analysis and estimation process. The density result for the lowermost downhole surveyed metre or so may be erroneous due to calliper errors and the settlement of debris and fines. Hence the lowermost value was analysed for each downhole survey and omitted if it appeared inconsistent with the geology and the surrounding values. In holes with repeat downhole density surveys, the 2011 values are typically given priority although a number of a deeper 2007/08 surveys exist and were used instead. A total of 16,613 x1metre-averaged density probe values are considered valid and available for use at Nolans Bore. This represents a 47% increase in the combined amount of informing density data at Nolans Bore compared to the previous estimate. This increase is due to the loading of all historic down hole LAS data and the re-calculation of density values from 2007/08 downhole surveys by Borehole Wireline using 2011 calibrations. This re-calculation was deemed necessary as the original reported values were consistently too high in mineralisation and too low in non-mineralised rocks. Comparative analysis demonstrates that the re-calculated 2007/08 data closely matches the 2011 density probe values in holes that were re-surveyed. Detailed analysis shows the density probe values closely matched the drill core determinations.

Criteria	Commentary
Bulk density	The combined density data was cut with mineralised wireframes for DOMAIN, ZONECODE and OXSTATE. About 28% of the informing density values are within MIN and the breakdown is show below. The combined density data for ZONECODEs 31 and 32 have been merged into ZONECODE 30 to ensure a more robust average in ZONECODE 31.

ZONECODE	OXSTATE	Number	Min	Max	Mean
11	Oxidised	485	0.84	3.21	2.34
11	Transitional/mixed	1781	0.89	3.58	2.58
12	Fresh	321	1.29	3.24	2.85
13	Oxidised	15	2.23	3.05	2.50
13	Transitional/mixed	149	1.31	3.11	2.59
13	Fresh	107	2.24	3.21	2.74
14	Oxidised	155	1.26	2.60	2.01
21	Oxidised	273	1.27	3.22	2.38
21	Transitional/mixed	753	1.51	3.43	2.88
22	Fresh	840	2.00	3.73	3.02
30	Oxidised	74	1.82	3.15	2.60
30	Transitional/mixed	810	1.76	3.25	2.72
30	Fresh	832	1.69	3.80	2.93
40	Oxidised	14	2.29	2.99	2.69
40	Transitional/mixed	108	1.79	3.13	2.68
40	Fresh	131	2.42	3.26	2.81

Despite top and bottom of hole filtering 6 x 1m density probe values have averages less than one in the North Zone. While density values of less than 1t/m3 are considered unrealistic, they are surrounded by valid data and they have been included because rare cavities have been encountered during drilling in this area. Furthermore values approaching an SG of 1 have been measured in core and hence the probe values might be within error of reality. Whether these six suspect values are included or excluded from the informing data has no material impact on the estimated density.

Analysis of the valid density database for Nolans Bore shows slightly different distributions for the two methods. This is because the drill core was focussed in areas with more mineralisation whereas the RC drilling included a greater component of unmineralised country rock. This result is notb surprising and reflects real spatial and lithological differences at Nolans Bore. The quantum and distribution of density data is enough to provide a realistic estimation of density at Nolans Bore.

Criteria	Commentary
Classification	Classification for Nolans Bore is based on the continuity of geology, mineralisation and grade, using measures such as the quality of the geological model, drill spacing, number of informing samples, average assay sample spacing, density data and quality, variography, and estimation pass and statistics. The 3D search parameters used in this estimate have steep or inclined down-dip orientations for the mineralisation and differ from those used in the previous estimate. Nolans Bore is systematically drilled on a nominal 40 m x 40 m drill hole spacing on the local grid with localised drilling at nominal 20 m x 20 m spacing in the central North Zone. In general, the estimates have been classified as Measured Resource in the central North Zone where closest spaced drilling occurs and the confidence in the estimate is high. The outer peripheries and deepest parts of the modelled deposit are generally classified as Inferred Resource where there is lower confidence in the estimate. This lower confidence corresponds to systematic 40 m x 40 m drill hole spacing at surface and at depth some parts are 40 m x 80 m. The addition of east-west drilling in the Central Zone and targeted geotechnical drill holes has provided extra information in different drilling directions which has allowed some parts to be classified as Indicated Resources corresponding to moderate levels of confidence in the estimate. The peripheral parts of the deposit are poorly supported by drilling and these areas have not been classified as Mineral Resource. Following the estimation process, the Mineral Resource was assessed using a number of iterative measures to develop an overall classification strategy. Following this, an initial classification wireframe was constructed for Measured and Indicated using a series of 20m-spaced vertical sections through the block model. Blocks inside the Measured wireframe were assigned to Measured. Blocks that were inside the Indicated wireframe, and not assigned to Measured, were assigned to Indicated. Mineralised blocks outside of the Indicated wireframe were then assigned to Inferred. Following this initial assignment of categories, blocks on the margins of each category were inspected and re-evaluated on a section by section basis and in 3D, and resource categories manually adjusted for each block where appropriate based on geological continuity and estimation data. Most blocks within the central part of the North Zone were filled during the first estimation pass with the maximum number of informing samples. This coincides to an area of more closely spaced drilling and is classified as Measured Resources. Parts of the Central and Southeast Zones were also filled during the first pass of the estimation process, however these zones were not classified as Measured because they lacked the geological confidence and continuity observed in the North Zone. Most of the remainder of the North, Central and Southeast Zones were filled during the second estimation pass. Accordingly a large portion of these blocks were classified as Indicated Resources. Parts of the Southeast and most of the Southwest did not fill during the second estimation pass and have been classified as Inferred. Even though parts of the Southwest Zone were filled during the second pass, all of the Southwest was classified as Inferred because the blocks filled in the second pass formed an isolated body. Furthermore the estimation search criteria were borrowed from parameters developed using data in the Southeast Zone and may not be suited to higher confidence assignments in a different zone. The Competent Person believes that the classification appropriately reflects its confidence in and the quality of the grade estimates.
Audits and reviews	The Mineral Resource has not been audited.
Discussion of relative accuracy/confidence	The Mineral Resource classification applied to Nolans Bore implies a confidence level and level of accuracy in the estimates. These levels of confidence and accuracy relate to the global estimates of grades and tonnes for the deposit. No production data is available as mining has not commenced at the date of this report.