ASX Announcement

Initial Results from New Drilling Program at Nolans Bore

17 December 2019

- **Results consistent with expectations and include an interval of 43.62 metres @ 6.0% TREO and 28% P_2O_5 from 19 metres in hole NBDH1103**
- **Selected drill core samples included in recent metallurgical variability program**

Arafura Resources Limited (**ASX: ARU**) (**Arafura** or the **Company**) is pleased to announce initial assay results from the recent drilling program at its 100 per cent-owned Nolans Bore Neodymium-Praseodymium (NdPr) deposit in the Northern Territory.

The drilling and associated metallurgical program were highlighted in the use of funds from the recently completed fully underwritten $23.2 million entitlement offer *(refer to ASX announcement 20 June 2019)*. The primary objective of these programs is to increase the mine life of the Nolans Project beyond 23 years.[1]

Phase 1 of the drilling program targeted shallow Indicated Resources and material types in the Southeast Zone of the deposit, primarily modelled and estimated using data from previous reverse circulation (RC) drilling campaigns. A total of five shallow infill resource definition core holes (NBDH1103-5, 1107-8) were drilled across the Southeast Zone in this phase to confirm detailed geological and material type information which will ultimately be used to refine resource modelling and better inform mine planning. Representative core samples of mineralized material types 5A1 and 5A2 were also selected from the first three holes drilled in Phase 1 for flotation variability test work. The results and positive implications of this metallurgical program have been reported separately *(refer to ASX announcement 16 December 2019)*.

Assay results have been received from the first two core holes from Phase 1. These results are consistent with expectations and are presented below in Table 1. All drill samples, including those from four deep exploration holes drilled as Phase 2 of the program (NBRD1101-2, 1106, 1109), have been submitted for assay. Assay jobs are in progress with final assays expected from all remaining holes during Q1 CY2020.

[1] *Information in relation to the mine life included in this announcement is extracted from an ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study). Arafura Resources confirms that all material assumptions underpinning the mine life set out in the announcement released on 7 February 2019 continue to apply and have not materially changed.*

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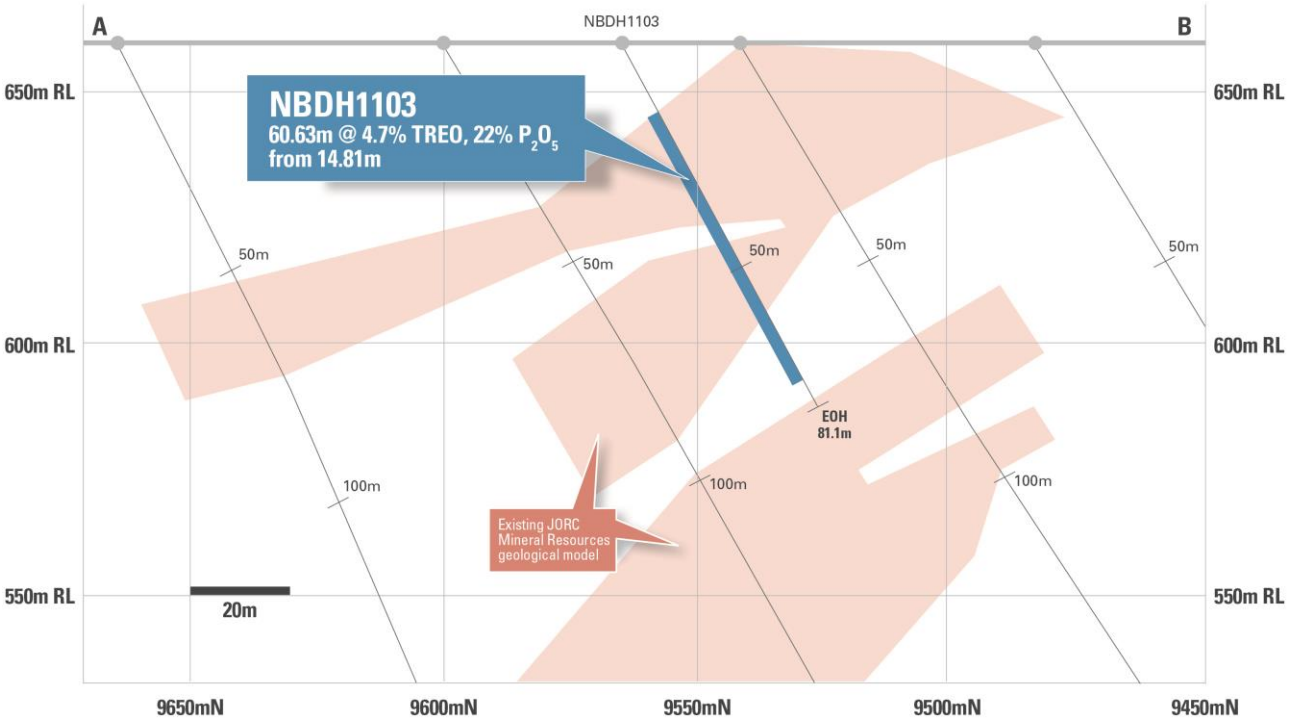
Figure 1: Schematic cross-section (A-B) showing assay results and mineralized interval in NBDH1103. See Figure 2 for location of cross-section. Holes from previous RC drilling campaigns also shown.



Note: Coordinates shown are local grid coordinates.

Table 1: Significant results for the initial batch of samples from the 2019 drill program

Hole	Depth From (metres)	Depth To (metres)	Interval (metres)	TREO %	NdPr Enrichment %	P_2O_5 %
NBDH1103	14.81	75.44	60.63	4.7	25.0	22
includes	19	62.62	43.62	6.0	26.2	28
NBDH1104	17.00	41.24	24.24	3.4	25.8	15
NBDH1104	49.99	73.01	23.02	2.4	24.6	11

Note: All mineralization has been sampled and assayed in these holes. The composited drill intercepts above contain narrow discrete intervals of both weakly mineralized material and unmineralized host rock. A 1% TREO lower cut-off grade has been adopted for mineralization. No top cut has been applied. The stated intercepts are based on drill metres and they are not a true thickness. "NdPr Enrichment" is the proportion of TREO comprising neodymium oxide Nd_2O_3 and praseodymium oxide Pr_6O_{11}.

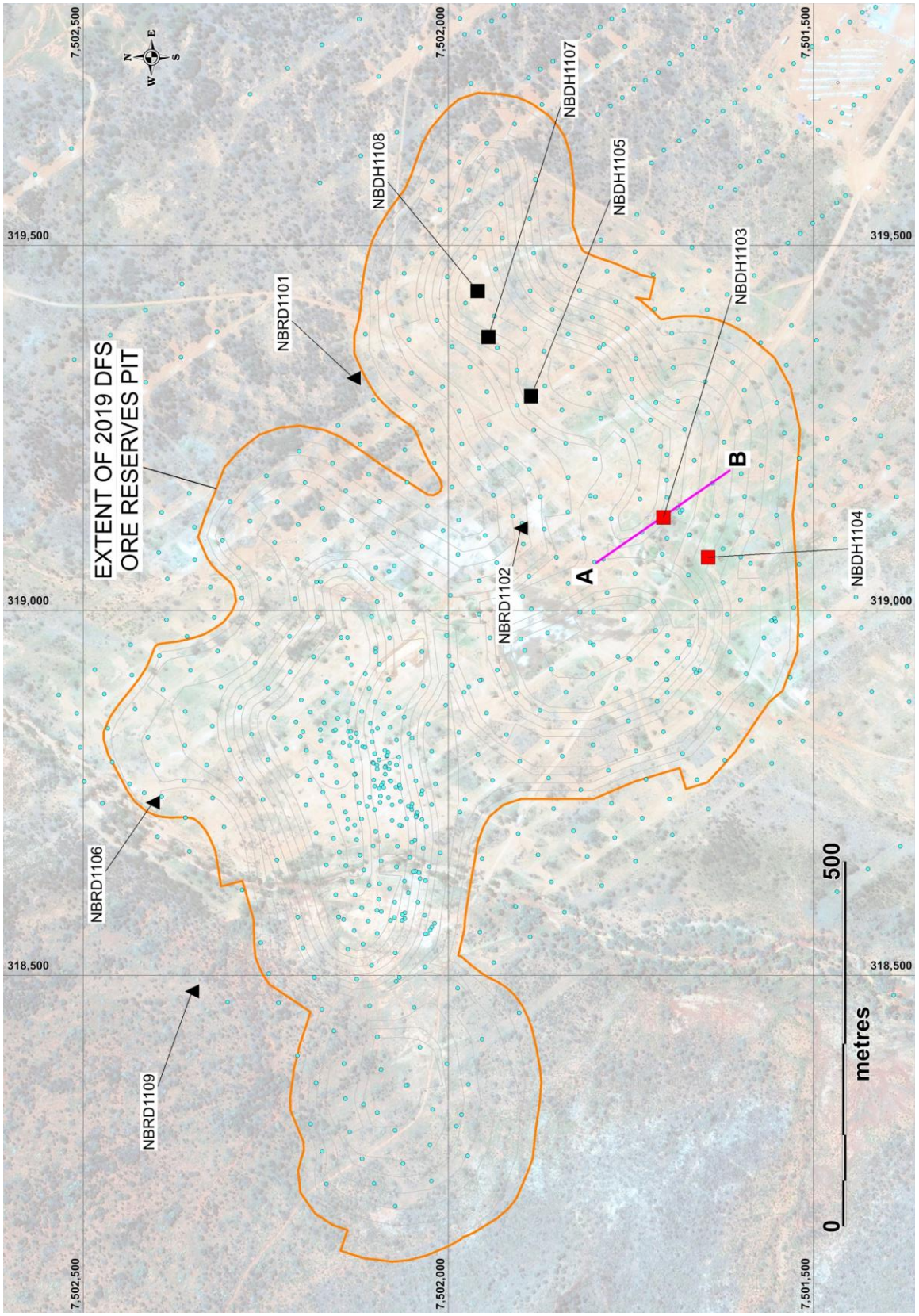
Figure 2: NdPr-rich apatite intersection (51.12m – 59.66m) in drill core from hole NBDH1103. Assays from this intersection are included in the assay interval presented in Table 1 above.

Table 2: Details of all holes in the 2019 drill program at Nolans Bore. All holes were initially collared at about -60˚ to 145˚ true. Phase 1 holes were drilled as HQ3 diamond core from the surface (infill resource definition) whereas Phase 2 holes were drilled using a combination of RC and HQ3 diamond core tails.

Hole	MGA94E (m)	MGA94N (m)	RL (m)	EOH (m)	Phase
NBRD1101	319318.028	7502129.998	658.702	351.60	2
NBRD1102	319112.236	7501901.098	658.766	372.53	2
NBDH1103	**319127.180**	**7501705.561**	**658.930**	**81.10**	**1**
NBDH1104	**319072.527**	**7501644.260**	**658.465**	**77.10**	**1**
NBDH1105	319293.413	7501886.790	659.372	125.00	1
NBRD1106	318736.494	7502405.073	655.710	491.46	2
NBDH1107	319374.511	7501945.157	659.441	101.70	1
NBDH1108	319437.242	7501960.101	659.554	101.00	1
NBRD1109	318477.804	7502351.379	658.207	500.00	2

Note: The two drill holes whose assay results are being reported here are highlighted in bold text.

Figure 3: Location of drill collars for 2019 Nolans Bore drill program. Phase 1 drill collars are shown as squares and Phase 2 collars as triangles. Section A-B is shown in Figure 1. Drill collars from previous campaigns are shown as blue circles.



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COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled by Mr Kelvin Hussey (BSc (Hons), FGS), a Competent Person who is a Member of the Australian Institute of Geoscientists (MAIG). 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 this report of the matters based on his information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The 2019 sampling program employed both Reverse Circulation (RC) and diamond core drilling techniques to obtain representative material for geological logging and assays. The locations of drill holes and hole depths are provided in the appendix of this report. All nine holes in this program were systematically drilled towards the southeast (collars set up at about -60 to 145 degrees true). • This report focusses on the initial results from two shallow HQ3 diamond core holes (NBDH1103 and NBDH1104) that were cored from surface and drilled to confirm the Ore Reserves model and supply representative materials for metallurgical test work. • The lithology, mineralogy and colour of Nolans Bore-type mineralization is distinct and aids in the identification and the sampling of all mineralized intervals. Radioactivity is also a diagnostic feature of all Nolans Bore-type mineralization and a key tool used to identify mineralization. A calibrated Atomex AT6130 Geiger meter was used to systematically measure and record the radioactivity of all recovered material in the 2019 program. • The Competent Person ensured all sampling was to industry standard and in-line with previous sampling protocols. Sample quality and all relevant sampling details were continuously monitored and recorded.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Drilling techniques in this report were diamond core. Drilling was carried out by GMP Exploration Drilling under contract to United Drilling Services and utilized a Hankins 35 multi-purpose track mounted rig. Core drilling employed a HQ3 triple-tube configuration to provide maximum recovery of orientated core. These drill holes were cored from surface in areas dominated by RC drilling and were drilled as infill resource definition holes specifically targeted to obtain material for metallurgical test work. • Reflex Act III orientation tools were used to obtain bottom-of-hole marks on the core for each rod pull. • Drill collar locations were pegged by professional surveyor prior to drilling. The collars of completed drill holes have been accurately surveyed by a professional surveyor.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• The core was cleaned and carefully reconstructed before being marked up for logging. A core block was placed in the tray to show the amount and position of the core loss. • Diamond core recoveries are logged and recorded on paper log sheets. Recovery is also recorded via a digital photograph of all core trays. • Drill core was typically intact, and core recovery was very good for most core runs. There was no core loss in NBDH1103 however minor core loss did occur in several runs in NBDH1104 (~98.7% recovered). • Intervals of core were unable to be re-orientated in parts due to the broken or clayey nature of the recovered core and mark-up protocols. • Care was taken to ensure the core was representatively sampled in the broken or friable zones and that sample intervals aligned with core loss.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Drill core has been geologically logged to the same standard as previous exploration and resource definition holes used in the current Mineral Resources and Ore Reserves for Nolans Bore. • The core has been quantitatively logged for lithological, mineralogical, radiological, and recovery and geotechnical data. • Structural data has been systematically logged with alpha and beta measurements recorded where the core is able to be orientated. Arafura's mark-up procedures require three consecutive BOH marks to align within 5˚. Alpha angles are recorded where accurate re-alignment was not possible. • All core has been geologically logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Core was sampled by cutting to geological or material type boundaries. • Intervals of 0.25-2m of core were cut in half lengthwise along pre-determined cut-lines. samples collected into pre-numbered calico bags. Friable core was sampled in half lengthwise using spoons/scoops to minimize the disturbance to the remainder. Duplicate samples were collected as quarter core samples matching the same interval as the routine half-core sample. • All core samples are treated individual assay samples irrespective of their sample interval. Care was taken to ensure the assigned sample ID is unique, and that the corresponding drill hole and sample interval were accurately recorded on the sample log sheet. Routine assay samples employ a sequential 7-digit number. Field duplicates and checks use a 5-digit number. This process ensures the incorporated check samples are assayed blind as a check on sampling protocols. • All core samples are representative of their geological and material type. Larger,1-2m half core samples are preferred where possible, however this is not always possible due to geological variability. Core sample intervals have

Criteria	JORC Code explanation	Commentary
		typically averaged about 1.3-1.5 metres across all drill programs at Nolans Bore and the 2019 core program is consistent with this. • Duplicates are selected and taken at about every 20th assay samples. Experience gained at this deposit indicates that the chosen sample size is typically representative and assay results reproducible in most duplicate samples. • At least one-quarter core remains in the core tray after sampling, except where half core samples were collected for metallurgical test work.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The assay methods are appropriate for this style of mineralization and consistent with those used for the current Mineral Resources estimate. • Core samples were submitted to Intertek NTEL in Darwin for assay sample preparation. Prepared 50g assay pulps were then transported to Intertek Genalysis Perth for assay. • All pulps were assayed using combination of fusion/XRF (method FB1/XRF74-901 for Al_2O_3, BaO, CaO, CeO_2, Eu_2O_3, Fe_2O_3, Gd_2O_3, K_2O, La_2O_3, MgO, MnO, Na_2O, Nd_2O_3, P_2O_5, SrO, Pr_6O_{11}, SO_3, SiO_2, Sm_2O_3, ThO_2, TiO_2, U_3O_8 and Y_2O_3), LOI at 1000˚C and fusion/ICPMS (method FB6/MS for Ba, Be, Ce, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Sm, Sn, Ta, Tb, Th, Tm, U, W, Y, Yb and Zr). A small subset of samples was targeted for F and C assays. • Arafura requested the laboratory assay at least 4 different Certified Reference Material (CRM) with every assay job. The chosen CRM cover the typical range of rare earth and phosphate results expected at Nolans Bore. Arafura also systematically inserted its own CRM and internal standards into assay jobs as blind standards together with blanks and field duplicates. The results of all standards and duplicates were carefully assessed to ensure the reported results are acceptable and within tolerance limits. On occasions, it was noted that individual analytes in a standard were flagged as being slightly low but the results were within tolerance limits in the other standards or by the other assay method used in this job. Analysis by the Competent Person indicates the reported results are acceptable. • The ICPMS data has been used instead of the XRF grades where comparative plots show the accuracy, precision and use of the low grade XRF data is questionable. • A calibrated Atomex AT6130 Geiger meter was used to systematically measure and record the radioactivity of all recovered core. Activities were measured and recorded after instrument stabilized and the stated accuracy of the readings dropped to 10% or less.
Verification of sampling and	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.*	• The sampling was verified by alternative company personnel. • These drill holes are considered infill resource definition holes and were drilled to confirm the current Mineral Resources/Ore Reserves model in

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assaying	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	areas dominated by RC drilling. • Primary geological and sampling data was recorded on paper log sheets. These have been scanned and all relevant data loaded into spreadsheets, for uploading into the company database. All drill core was photographed wet and dry as marked up with sampling information prior to cutting and sampling. • The assay data were received electronically from the laboratory in two forms (i.e. a spreadsheet of results and a pdf copy of the final report). A comprehensive digital record all data is stored on the Company's server. • REE oxides were calculated for all reported ICPMS results. The oxides were calculated according the following factors listed below: o 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 • 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 La_2O_3, CeO_2 and Nd_2O_3 XRF data are typically used for all samples of Nolans Bore type mineralization where TREO exceeds about 1% and the Pr_6O_{11} XRF result used where TREO is about 2% or more. The remainder of the rare earth values come from the ICPMS determinations which have been converted to oxides. Because the XRF rare earth results are often too low, the ICPMS assay values are typically used for host rocks and low-grade mineralization.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The drill collars have been accurately surveyed by a professional surveyor using the Nolans Bore base station and RTK methods. The reported coordinates use GDA94 and are in MGA94 Zone 53. • The local grid is based on the original section "O" being 10,000m E. The NW end of section "O" occurs at 318579.7mE 7502623.7mN in MGA94 Zone 53 coordinates and corresponds to 10000mE 10630mN in the local grid. The SE end of section "O" occurs at 319579.9mE 7501201mN in MGA94 Zone 53 coordinates and corresponds to 10000mE 8890.898mN in the local grid. • Hole paths have been systematically surveyed at 30m intervals by the drillers. The collection of detailed down hole geophysical data, including azimuth and orientation data, was in progress at the time of this report.
Data spacing	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the*	• The results being reported here are considered as infill Resource Definition

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and distribution	*degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	data and will be added to the next Mineral Resources estimate. There is no sample compositing in these holes. All samples have been cut to geological and material type boundaries. • Drilling has been completed across most of the deposit at nominal 40m x 40m spacing on a local 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. 10 vertical RC holes have been drilled into Nolans Bore and are used to abstract or monitor groundwater. 25 inclined diamond core holes have been drilled nominally east or west (true) on 100 metre-spaced sections to resolve complexities in the geological model in the Central Zone. 19 inclined core holes have been drilled in various other directions. The quantum of drilling and drill core at Nolans Bore is sufficiently high and widespread to ensure adequate sampling and a geological understanding of the deposit.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drilling was consistent with the principal drilling direction across the deposit and between existing holes. • The reported interval is not a true thickness because the deposit is modelled as a complex 3D shape. It is based on the drill intercept. • The results are considered unbiased and consistent with historic data including those holes drilled in different directions.
Sample security	• *The measures taken to ensure sample security.*	• Core was collected daily for the rig and transported to Arafura's nearby core processing and logging facility where it is temporarily stored in readiness for processing. This processing site is securely fenced and remote to prevent interference by animals and other people. The assay samples were immediately placed into pre-numbered bags and stored in steel drums in readiness for transport to the lab. • Chain of custody documentation including a list of all samples was included with the assay job.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No external audits or reviews have been done on this data. • The geological and assay data from these holes were checked and reviewed by the Competent Person using the database and core photographs.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Nolans Bore deposit is located wholly within Exploration Licence (EL) 28473 which is 100% owned by Arafura Resources Limited. The deposit lies within Mineral Lease (ML) application 26659 which is 100% owned by Arafura Rare Earths Pty Ltd., a wholly owned subsidiary of Arafura Resources Limited. Mineral Lease applications 30702, 30703 and 30704 have been lodged over the proposed processing site and accommodation village. These are also 100% owned by Arafura Rare Earths Pty Ltd. Arafura Resources Limited also has 100% ownership of ELs which cover all proposed project infrastructure, including the bore field (ELs 28498, 29509, 31224, 31284 and 31957) • The deposit is situated on Pastoral Land with known mineralisation spanning the boundary between Aileron (PPL 1097) and Pine Hill (PPL 1030) Stations. All stated Mineral Resources and Ore Reserves lie on Aileron. • Arafura Resources has executed an 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 a Mining 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. A comprehensive clearance has recently been issued for the project area. • Arafura Rare Earths Pty Ltd 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	• *Acknowledgment and appraisal of exploration by other parties.*	• PNC Exploration (Australia) Pty Ltd explored the project area in 1994-1996. They discovered the Nolans Bore prospect by following up a substantial airborne radiometric anomaly. PNC completed ground radiometric surveys and they sampled and assayed the surface outcrops. No other exploration work has been done at Nolans Bore by other parties.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• 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. Small isolated parts of the deposit crop out, but most of it is concealed beneath a thin layer of alluvial and colluvial

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		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 zones and breccias. The massive fluorapatite-rich rocks contain up to about 95% fluorapatite and typically contain abundant fine-grained REE-bearing mineral inclusions, 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 fine-grained mineral inclusions. The associated calcsilicate style of mineralisation can contain fluorapatite and other REE-bearing minerals and is 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 deposit is hosted by metamorphosed Palaeoproterozoic igneous and sedimentary rocks of the Aileron Province. Some of these host rocks also contain low grade REE mineralisation (e.g. the coarse-grained to pegmatitic granitoids and granitic gneisses in the area commonly contain up to 0.3% REE and can locally exceed 1% REE, present as metamorphic monazite) but these rock types and REE grades and mix markedly contrast with the typical Nolans Bore mineralisation and have not been included in the resource estimate. • The metamorphosed Palaeoproterozoic sedimentary and igneous rock units that host the deposit have undergone high-grade metamorphism during the 1600-1525Ma 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 from the other host 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, drill core relationships 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

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		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 (all) parts are overprinted by the Devonian-Carboniferous Alice Springs Orogeny. Cainozoic weathering and oxidation also occurs. Despite localized overprinting effects, the geochemistry of the mineralisation is 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% TREO. • 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 extent of the deposit is yet to be fully outlined. • Nolans Bore-type mineralisation and associated alteration has been recognised in exploration drilling and surface exposures over an area of about 4 km x 3 km.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• See table provided in Appendix
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown*	• The reported exploration results are length-weighted averages based on individual sample intervals and grades. A 1% TREO lower cut-off grade has been applied to all reported grades and considers the geology and material types included in each mineralized interval. Dilution has been kept to a minimum (maximum of 6m) and only included where the grade carries. The geological model for Nolans Bore encompasses bodies of mineralization to a 0.5% TREO lower cut-off grade. This geological boundary is often coincident with the 1% TREO cut-off because there is typically a sharp drop-off in

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	in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	grades for Nolans Bore-type mineralization. The incorporated internal dilution is consistent with the Mineral Resources/Ore Reserves model however additional material is occasionally included within the geological model due to a lack of infill drill hole data and 3D modelling difficulties. • No intervals of extreme high-grade mineralization were encountered in this drill core. • No metal equivalents have been used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• The widths of mineralisation reported in this announcement are not true widths. They are based on drill intercepts. The geological model for the deposit is complex three-dimension shape. The drill holes reported here penetrate the mineralised bodies at moderate to high angle.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See Figures and Tables in the Appendix of this report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All significant drill intercepts of mineralization in these drill holes have been assayed and reported.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Arafura has drilled 548 RC and diamond core holes into Nolans Bore between 2001 and 2013, for a total of 87,081 metres. These holes together with data from 9 costeans (1,112m) have been used to outline and define the identified Mineral Resources at Nolans Bore. In addition to these Arafura has drilled 48 wide-diameter (780mm) holes (1,658m) into the deposit and excavated a number of small pits for exploration and geotechnical purposes in and around Nolans Bore. Additional drilling has been done to the N, SE and SW of the deposit. • Arafura acquired a detailed low-level, 50m spaced N-S airborne magnetic and radiometric survey over Nolans Bore and surrounds in 2008. Additional adjoining 100m spaced N-S regional airborne surveys were acquired across other parts of the Aileron-Reynolds project area in 2011 and 2013. • A detailed airborne hyperspectral survey was acquired over most of the Aileron-Reynolds project area in 2008. This survey covers the Nolans Bore

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		and surrounds and was used to explore the regional for similar mineralogy. • Arafura acquired aerial photography over the deposit in 2008. This resulted in a detailed orthophoto coincident with a professionally surveyed detailed DEM over most of ML26659. This detailed DEM has been updated and revised several times based on new survey data. • Arafura acquired detailed World View 2 satellite imagery (0.5m pixel resolution) over Nolans Bore in 2012. Additional regional and less detailed SPOT5 satellite imagery (2.5m pixel resolution) was also purchased over the project area in 2012 for the project's Environmental Impact Statement (EIS) studies and regional exploration. Arafura also acquired additional World View imagery covering the proposed developments to the S and SE of Nolans Bore in 2013. • Arafura acquired detailed imagery via a drone survey with an associated DEM over the main project area in 2018. • 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 dataset over the Nolans Bore deposit and surrounds and has used this to assist in targeting exploration in areas of cover (*e.g*. Mulga prospect ASX: ARU 8/11/2013). • Arafura discovered substantial ground water resources to the S and SW of Nolans Bore and has applied for a water abstraction licence (ASX: ARU 22/10/2014). • Arafura's EIS for the Nolans project gained regulatory approval from the Northern Territory Environment Protection Authority (NTEPA) in December 2017 and from the Australian Government's Department of Environment and Energy in May 2018. Amendments to the project configuration were also approved by the NTEPA in September 2019. • Arafura has acquired onsite environmental data since 2008 (dust and weather information). Arafura has also routinely collected baseline groundwater information since 2010. Additional baseline environmental data (chemical and radiation) was collected from 25 sites during EIS studies. • Arafura investigated the sulfide content of the waste rocks during the EIS completed AMD studies. As expected, the results were very low however twelve representative samples have been subjected to barrel leach test work to satisfy the Northern Territory Department of Primary Industry and Resources (NTDPIR) and NTEPA. • Arafura obtained additional representative whole rock assays and updated

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		the material types and Mineral Resources in 2016-18. • Arafura completed detailed metallurgical and mining studies resulting in a Definitive Feasibility Study (DFS) and updated Ore Reserves for the Nolans project in 2019 (ASX: ARU 07/02/19).
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Assay for the remainder of 2019 drill program are in progress. • Arafura is intending to mine and process this world-class rare earth deposit with additional work likely as the project develops.