

Completion of Air Core Drilling at Beharra Silica Sand Project

ASX RELEASE

1st April 2020

ASX: PEC

CORPORATE DIRECTORY

Non-Executive Chairman
Julian Babarczy

Executive Directors
Robert Benussi
George Karafotias

Company Secretary
George Karafotias

Silica Sand Project Portfolio

- Beharra
- Sargon
- Eneabba
- Eneabba North

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HIGHLIGHTS:

- *Air core resource definition drilling program completed*
- *Extensive thick intervals of white sands intersected*
- *Geological logging of all intervals approaching completion*
- *Samples to be submitted for analysis upon completion of logging - drill results expected by the end of April*
- *Resource estimation to commence upon receipt of laboratory analytical results*
- *Further metallurgical beneficiation testing to be undertaken*



Figure 1: AC55: surface to 12m

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Perpetual Resources Limited (ASX: PEC, “PEC” or “the Company”) is pleased to announce the completion of the maiden air core drilling program at PEC’s flagship Beharra Project (“Beharra”). PEC’s Managing Director, Mr Robert Benussi commented *“The air core drilling program was completed efficiently by Perpetual’s team and the visual logging has confirmed our view that the Beharra Project contains extensive white silica sands across a considerable area. We are eagerly awaiting the laboratory results from the drilling and will provide the market with further updates as they become available. The drilling undertaken at Beharra should allow the Company to move quickly to define a JORC compliant resource, so that PEC can rapidly progress the studies required to further progress this high quality silica sand project”*

Air core drilling program overview

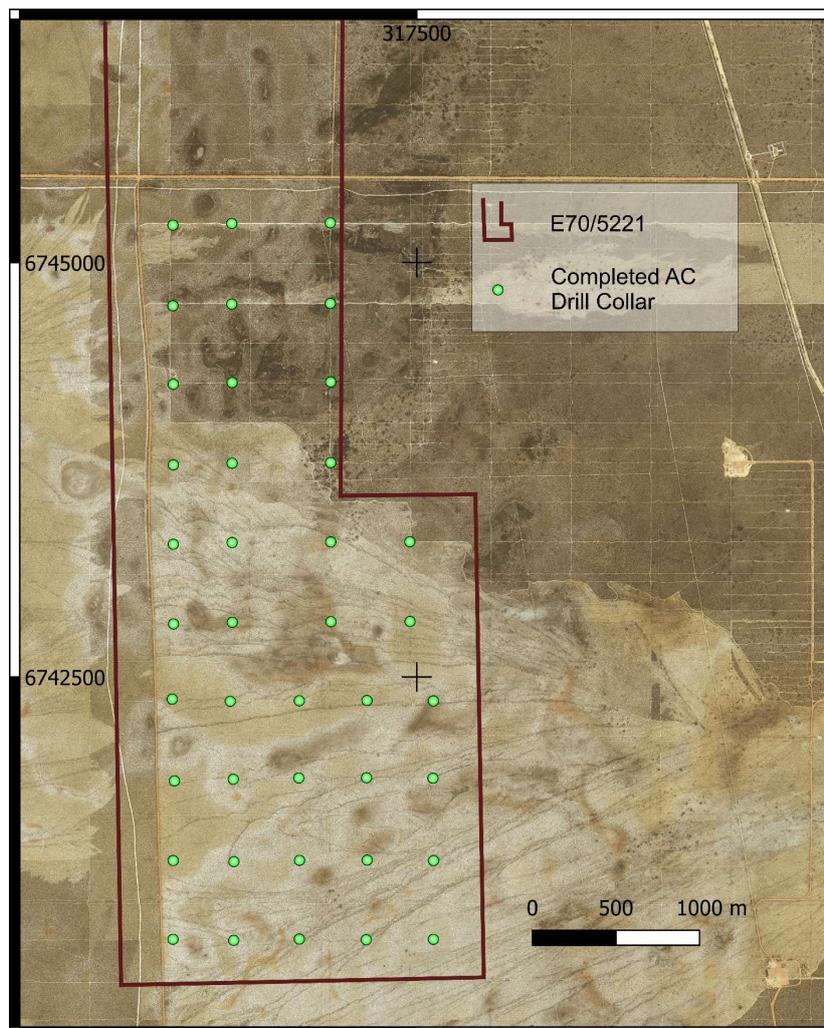


Figure 2: Air core Drilling Program Collar Plan

A total of 40 drill holes for 507.5m of drilling was completed across the southern area of the Beharra Project. Geological logging of all drill intervals will now be conducted and reviewed with all relevant field samples then submitted for laboratory analysis at Nagrom Analytical in Perth, WA. It is expected that the drilling results will be received by the Company by the end of April 2020. Further market updates will be provided upon receipt of the analytical results. Resource estimation will then commence with the aim of delineating PEC's inaugural JORC resource at Beharra.

Metallurgical beneficiation testwork will also be conducted concurrently with the resource estimation. The aim of this testing is to refine the previously published specifications capable of being produced from Beharra's silica sand product suite. This potential product analysis will be undertaken in consultation with end users, and should allow for initial discussions on potential product off-take.

This ASX announcement has been authorised for release by the Board.

-ENDS-

For enquiries regarding this release please contact:

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The information in this announcement that relates to the Exploration Results for the Beharra Project and is based on information compiled and fairly represented by Mr. Colin Ross Hastings, who is a Member of the Australian Institute of Mining & Metallurgy and consultant to Perpetual Resources Ltd. Mr. Hastings is also a shareholder of Perpetual Resources Ltd. Mr. Hastings has sufficient experience relevant to the style of mineralisation and type of deposits under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Hastings consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Appendix 2: JORC Tables

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Sampling referred to in this announcement relates to samples that have been obtained from air core drilling to a maximum depth of 20m. A total of 40 drill holes were completed for an average depth of 12.7 meters Samples were collected from each meter drilled or part meter if the hole was not ended on a full meter. The entire sample was recovered and bagged, no splitting on the rig was undertaken. Representative samples of each interval drilled were placed in a chip tray for reference.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Drilling was undertaken using a track mounted Hitachi hydraulic top drive rig coupled to a 130cfm/100psi compressor. A 76mm air core bit was fitted to 70mm twin tube rod string. Samples were collected via cyclone, the entire sample for each 1 meter drill interval was collected and placed in a calico sample bag. The sample was labelled with the drill hole number and sample interval, and a waterproof tag nominating a sample number was placed in the bag and then sealed with a tie. All holes were drilled vertically.
Drill sample recovery	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Each sample bag was weighed to determine the actual sample recovery, which resulted in an average sample weight of about 8kg/meter of sample. Sampling was typically terminated on reaching the water table which occurred around 10m below surface level.

Criteria	JORC Code explanation	Commentary
	<p><i>sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	
Logging	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The samples have been initially logged including estimates of grain size, sorting and texture, and colour. Particular attention has been taken to ensure a more scientific and less subjective approach to colour has been adopted because colour (white to grey shades, and pale yellow shades) is one of the targeting features.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Samples have been transported to Welshpool in Perth and locked in a secure storage shed. • The samples will undergo further logging and splitting into approximate 400 gram sub samples for assay. • Samples will be submitted to Nagrom Metallurgical Analytical Laboratories for drying, further splitting, and pulverization in a zircon bowl. A sub sample of 100g with a P₉₀ -75µm particle size is utilised for analysis. The sample preparation method is considered the industry standard for silica sands. Records were kept describing whether the samples were submitted wet or dry. • The sample size taken is appropriate for the sand being targeted.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Assaying of samples is pending. • Proposed test method is pulverising to P₉₀ of -75 micron in a zirconia bowl, followed by XRF analysis of prepared sample that is fused in a lithium flux with lithium nitrate additive. LOI is also carried out at 1,000°C • Internal laboratory QAQC which includes duplicates, standards and blanks will be applied • No geophysical tools were utilised for the process • A process of utilising duplicate samples has been implemented to ensure the level of quality controls required
Verification of sampling and	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. 	<ul style="list-style-type: none"> • Verification is pending receiving assay results. • Some of the drill holes for the metallurgical testing program represent

Criteria	JORC Code explanation	Commentary
assaying	<ul style="list-style-type: none"> Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> two holes of previous auger drilling campaigns. All primary information was initially captured in a written log, data entered, imported then validated and stored in a geological database No adjustments to assay data have been performed.
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The position of the hole locations was determined by a GPS model Garmin GPS Map 64s with an accuracy of 5m. The CRS used was GDA94/MGA Zone 50 The topography at the project site currently under exploration is flat to gentle undulating terrain. Topographic control is presently via the GPS coordinates, a UAV survey is planned to be conducted to obtain a $\pm 50\text{cm}$ DTM across the entire project area.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> The drill holes were spaced on an approximate 350m to 600m (east west) x 500m along strike (north south) grid. The adopted spacing at this time is sufficient based on the geological continuity of the sand formation being tested, and sufficient to be applied in a resource estimation. Sample compositing of holes has yet to be undertaken
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The orientation utilised for the air core drilling campaign represents the entire strike length of the initial prospective target and as such is not expected to introduce any particular bias.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> All samples have been bagged and removed from site and are under the care of the contract senior geologist who will carry out the logging and sample preparation. Samples are to be delivered to Nagrom Metallurgical Analytical Laboratories. The laboratory will provide a sample reconciliation report which was audited against the sample submission sheet.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> None undertaken at this time

Section 2 Reporting of Exploration Results

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

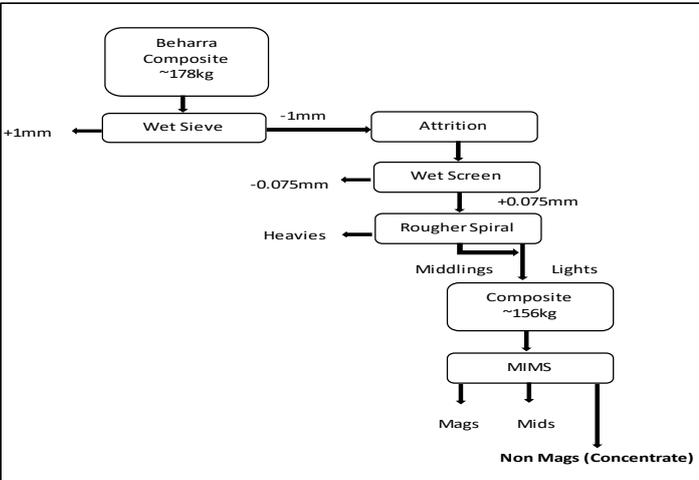
Criteria	JORC explanation	Code	Commentary																																																												
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint 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. 		<ul style="list-style-type: none"> E70/5221 is currently live and in full force. EL70/5221 was awarded on the 13th June 2019, comprising effective land area of 56.8km². The tenement is in the name of Peter Romeo Gianni. The licence is currently being transferred to Perpetual Resources Limited in line with an option to acquire the tenement, refer to release dated 6th February 2019. Located approximately 20km SE of Dongara, WA, 96km south of Geraldton. The southern section of the licence area which is the current focus of exploration is covered by Crown Land. The licence area north of the Crown land is Freehold/Leasehold land A 1% gross revenue royalty applies to the sale of all minerals from E70/5221 100,000,000 Performance Shares vest on the Company announcing an Inferred Mineral Resource in accordance with JORC 2012 Edition Guidelines of a minimum 50 million tonnes of white sands (at a minimum of 99% SiO₂) within the Project, or first shipment of a minimum of 20,000t of white sands (at a minimum of 99%SiO₂) 																																																												
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 		<ul style="list-style-type: none"> Past exploration by others targeting heavy mineral sands. Refer to release dated 6th February 2019, historical exploration. 																																																												
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 		<ul style="list-style-type: none"> Unconsolidated Quaternary coastal sediments, part of the Perth Basin. Aeolian quartz sand dunes overlying Pleistocene limestones and paleo-coastline. 																																																												
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> 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 		<p>Beharra Silica Sand Project E70 5221</p> <table border="1"> <thead> <tr> <th>Hole id</th> <th>East MGA</th> <th>North MGA</th> <th>~RLm</th> <th>EOH m</th> </tr> </thead> <tbody> <tr> <td>AC_16</td> <td>316022</td> <td>6745237</td> <td>32</td> <td>12</td> </tr> <tr> <td>AC_17</td> <td>316399</td> <td>6745239</td> <td>32</td> <td>13</td> </tr> <tr> <td>AC_18</td> <td>316974</td> <td>6745231</td> <td>29</td> <td>8</td> </tr> <tr> <td>AC_19</td> <td>316046</td> <td>6744734</td> <td>46</td> <td>20</td> </tr> <tr> <td>AC_20</td> <td>316397</td> <td>6744754</td> <td>46</td> <td>11</td> </tr> <tr> <td>AC_21</td> <td>316974</td> <td>6744753</td> <td>38</td> <td>13</td> </tr> <tr> <td>AC_22</td> <td>316041</td> <td>6744268</td> <td>31</td> <td>12</td> </tr> <tr> <td>AC_23</td> <td>316400</td> <td>6744280</td> <td>26</td> <td>12</td> </tr> <tr> <td>AC_24</td> <td>316992</td> <td>6744294</td> <td>27</td> <td>13</td> </tr> <tr> <td>AC_25</td> <td>316035</td> <td>6743795</td> <td>36</td> <td>15</td> </tr> <tr> <td>AC_26</td> <td>316401</td> <td>6743797</td> <td>36</td> <td>12</td> </tr> </tbody> </table>	Hole id	East MGA	North MGA	~RLm	EOH m	AC_16	316022	6745237	32	12	AC_17	316399	6745239	32	13	AC_18	316974	6745231	29	8	AC_19	316046	6744734	46	20	AC_20	316397	6744754	46	11	AC_21	316974	6744753	38	13	AC_22	316041	6744268	31	12	AC_23	316400	6744280	26	12	AC_24	316992	6744294	27	13	AC_25	316035	6743795	36	15	AC_26	316401	6743797	36	12
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Criteria	JORC explanation	Code	Commentary				
	the hole	AC_27	316983	6743803	34	17	
	o down hole length and interception depth	AC_28	316044	6743314	34	11.2	
	o hole length.	AC_29	316392	6743313	34	13	
	• 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.	AC_30	316970	6743314	21	13	
		AC_31	317465	6743315	29	14	
		AC_32	316039	6742810	31	13	
		AC_33	316398	6742834	30	13	
		AC_34	316980	6742834	31	12	
		AC_35	317464	6742834	23	14	
		AC_36	316071	6742379	59	14	
		AC_37	316407	6742347	47	14	
		AC_38	316796	6742356	29	12	
		AC_39	317208	6742355	26	13	
		AC_40	317596	6742355	21	11.5	
		AC_41	316041	6741875	36	14	
		AC_42	316408	6741880	35	13	
		AC_43	316789	6741883	29	13	
		AC_44	317201	6741885	35	13	
		AC_45	317586	6741893	27	11.5	
		AC_46	316037	6741397	38	14	
		AC_47	316399	6741393	26	10.5	
		AC_48	316804	6741394	26	13	
		AC_49	317209	6741400	34	7.5	
		AC_50	316042	6740913	32	11.5	
		AC_51	316401	6740916	37	12	
		AC_52	316795	6740914	36	12	
		AC_53	317196	6740901	26	12	
		AC_54	317594	6740912	34	12	
		AC_55	317602	6741399	31	12	
Data aggregation methods	<ul style="list-style-type: none"> 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 						<ul style="list-style-type: none"> Length weighted averages pending yet to be applied. The relatively consistent nature of the mineralisation means that the datasets are not affected by exceptionally high grade narrow intervals

Criteria	JORC explanation	Code	Commentary
	<p>grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</p> <ul style="list-style-type: none"> The assumptions used for any reporting of metal equivalent values should be clearly stated. 		
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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'). 		<ul style="list-style-type: none"> The high purity silica mineralisation is associated with aeolian dunes which are predominantly flat It is expected that the vertical drilling intersects the silica sands on a true width of mineralisation
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 		<ul style="list-style-type: none"> A map of the drill collars with calculated silica values is incorporated in this release of 1st^h April 2020.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades 		<ul style="list-style-type: none"> Air core sampling assay results pending

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Other substantive exploration data	<p>and/or widths should be practiced to avoid misleading reporting of Exploration Results.</p> <ul style="list-style-type: none"> 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. 		<ul style="list-style-type: none"> Previous beneficiation testing studies have been described reported including market releases including the latest report dated 24th February 2020, “High Purity Silica Results A flowsheet of the metallurgical testing program is detailed below:  <pre> graph TD A[Beharra Composite ~178kg] --> B[Wet Sieve] B -- "+1mm" --> C[Attrition] B -- "-1mm" --> D[Wet Screen] D -- "-0.075mm" --> E[Rougher Spiral] E -- "+0.075mm" --> F[Composite ~156kg] E --> G[Heavies] F --> H[Mags] F --> I[Mids] F --> J[Non Mags Concentrate] </pre>
Further work	<ul style="list-style-type: none"> 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. 		<ul style="list-style-type: none"> Air core drill has been completed. Planning and permitting is underway in order to test the further extents of high grade silica mineralisation. Further releases will be provided to market upon finalising drill plans. JORC 2012 Resource Estimate will be undertaken based on the air core drill data. Snowden Group has been engaged to do this work