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De Grey confirms spodumene and extends strike length at King Col

Highlights

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Spodumene-quartz mineralisation identified within De Grey’s high-grade drill intercept of 17m @ 2.55% Li₂O.

Spodumene, a lithium bearing mineral, identified in petrology within the overall intercept of 17m @ 2.55% Li₂O from 13m in hole KRC012 (*previously reported*). Spodumene is the main lithium bearing mineral mined from most hard rock lithium mines around the world.

Spodumene-quartz mineralisation associated with the higher grade (4.84% Li₂O) portions of KRC012 intercept. Petalite and Lepidolite, both lithium bearing minerals, also confirmed.

Pollucite, a Cesium bearing mineral, also identified from the previously reported high grade Cesium intercept of 1m @ 8.63% Cs₂O from 25m in hole KRC011.

Encouraging soil sampling results substantially extend target strike length and define a second large anomaly;

- Main King Col lithium in soil anomaly extended from 2.0km to 4.8km long
- New 3.0km long anomaly defined to south east

A diamond drill hole planned in Q2 2018 will twin the high-grade lithium mineralisation of KRC012 to determine distribution and percentages of the lithium bearing mineral assemblage.

Technical Director, Mr. Andy Beckwith, commented:

“The recognition of spodumene rich mineralisation is a significant geological advance, as this is the most sought-after lithium rich mineral mined around the world. The nearby Pilgangoora and Wodgina deposits are both Tier 1 spodumene rich pegmatites.

The large lithium-in-soil anomalies now span over 7.5km of strike length with only a small portion having any drill testing to date, yet this limited drilling has yielded high-grade results in this early exploration phase.”

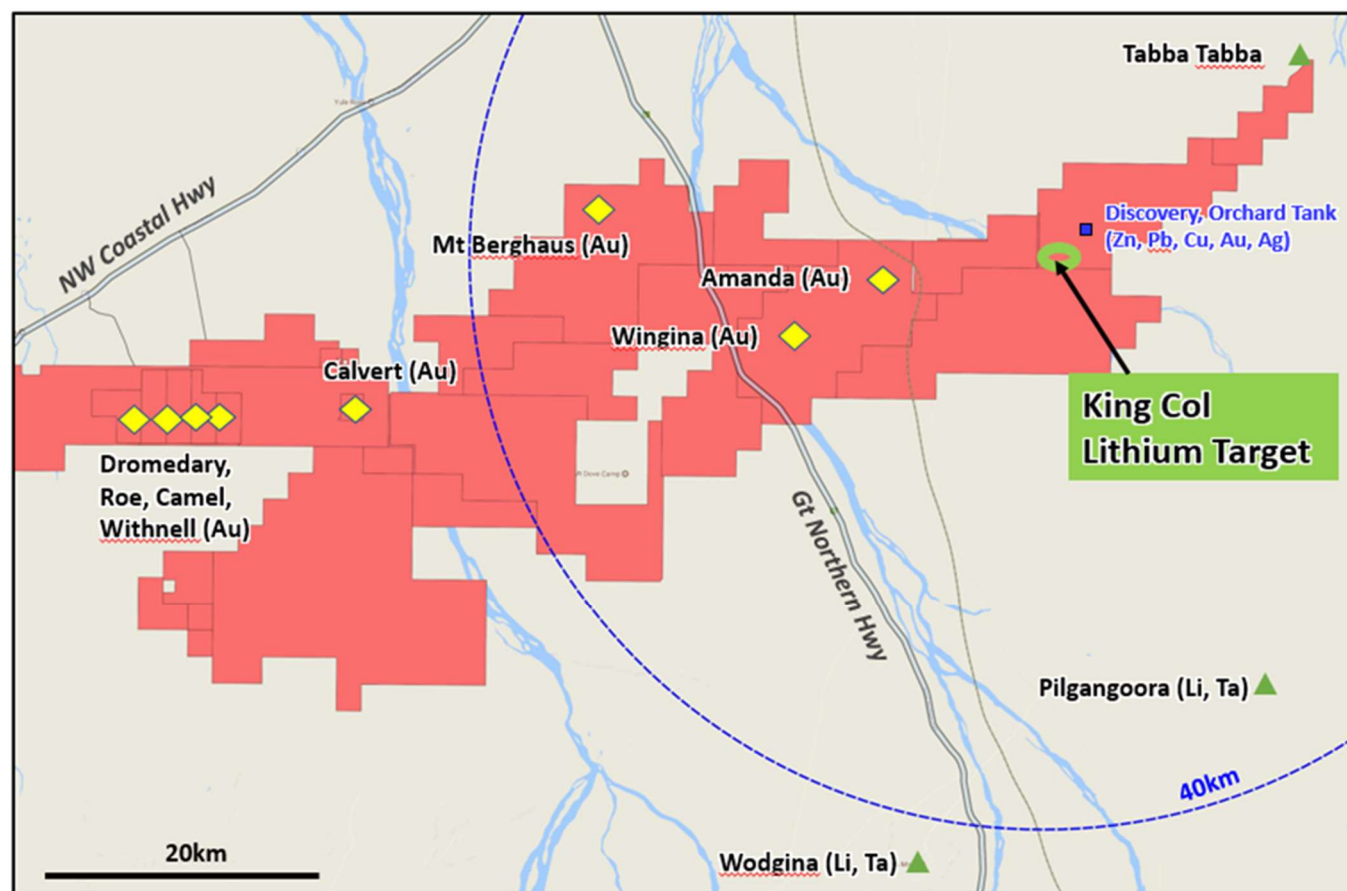
De Grey Mining Ltd (ASX: DEG, “De Grey”, “Company”) is pleased to advise that detailed petrology on drill chips from previously reported RC drilling has significantly advanced the project with the presence of spodumene confirmed in the samples and results from the recent King Col soil sampling program successfully defining substantial extensions to the overall anomalous lithium zones.

Background

The King Col Pegmatite is located on De Grey’s 100% owned E45/2533, located approximately 50km south of Port Hedland and 35km north of the world class Pilgangoora Lithium-Tantalum Mine and 45km from the Wodgina Lithium Mine. The Tabba Tabba Tantalum Mine is also located 20km away and within the same greenstone belt that hosts the King Col Pegmatite (Figure 1).

In October 2017, a limited scout RC drilling program of 22 shallow holes was undertaken to test portions of the previously defined 2km long lithium-in-soil anomaly (*refer to the De Grey Mining Limited ASX release, dated 16 October 2017*). This drilling successfully intersected potentially economic widths of lithium rich mineralisation, including 17m @ 2.55% Li₂O from 13m depth and 8m @ 1.0% Li₂O from 27m depth. The soil anomaly remained open to the northeast and follow-up soil sampling has recently been completed to cover the remaining 5km of potential strike length.

Figure 1 King Col Lithium Target location plan



Petrology study

A review of the previous drilling results (*ASX release dated 16 October 2017*) showed geological logging had identified petalite and lepidolite (lithium bearing minerals), however spodumene was not confidently visually logged as it is difficult to distinguish in hand specimen. Subsequently several selected drill chip samples were collected in the higher grade Li_2O zones within the drill holes to determine if spodumene was present in the deposit.

The petrology results show that within the high grade 17m @ 2.55% Li_2O zone in KRC012, a higher-grade intercept grading 4.84% Li_2O from 21-22m was associated with spodumene-quartz rich mineralisation within this interval. Petalite and lepidolite were also confirmed within the samples as expected. The cesium-bearing mineral, Pollucite, was identified in the high-grade cesium intercept within KRC011. Further detailed diamond drilling will be required to provide a representative assessment on the distribution and quantities of each lithium mineral present across the entire mineralised interval.

The spodumene occurs as roughly prismatic to blocky crystals to 10mm, in association with quartz as intergrowths (Photograph 1 and 2), some vein-like <10-mm, spotty masses of <1-mm and semi-radiating columnar prismatic to almost fibrous spodumene, and <2.5-mm intergrowths of anhedral spodumene. The spodumene occurs with quartz intergrowths and is interpreted to represent alteration of the lithium mineral petalite as cooling of the pegmatite body occurred. Similar alteration and quartz intergrowths is evident in other pegmatite orebodies around the world.

Photograph 1 Select drill chips with spodumene identified (height of slide ~26mm)



Photograph 2 Spodumene with quartz intergrowths (field of view ~3.7mm)



Soil Sampling Program

The recent soil sampling program comprised of lines 400m apart, with samples spaced at 25m intervals along the lines and covered an additional 5km strike length to the east. A total of 565 soil samples were collected in this program (Figure 2).

The results are encouraging with the main anomalous zone, the King Col Anomaly, extended a further 2.5km to the ENE with a peak of 344ppm Li₂O. A second and new anomalous 3km long zone is also defined south of the drainage system and shows a peak of 624ppm Li₂O. Several smaller zones are also apparent and further infill sampling is planned to confirm and better define the anomalous zones and future drill targets.

Overall, the King Col Pegmatite Trend is 7.5km long with two main anomalies defined within this strike length based on mapping, rock chip sampling and soil sampling. The recently completed RC drilling intersected the first “discovery” mineralisation at the western most portion of the soil anomalies providing substantial strike length remaining to be tested.

Key statistics of the 565 new soil samples

	Li₂O (ppm)	Cs (ppm)	Nb₂O₅ (ppm)	Rb (ppm)	Ta₂O₅ (ppm)
Max	624	32	136	464	128
% > 100ppmLi ₂ O	17				
% > 200ppmLi ₂ O	3.7				
% > 20ppmTa ₂ O ₅					3

Forward program

De Grey is very encouraged with the latest soil and petrology results and is planning to complete further infill soil sampling (200m x 25m spacing) along the new anomalous zones to better define potential drill targets.

A diamond drill hole is also planned to twin the high-grade lithium mineralisation of KRC012 to determine distribution and percentages of each lithium bearing mineral.

The infill soil sampling and diamond drilling is planned to be completed during Q2 2018. This diamond drill hole is co-funded under the WA Government's Exploration Incentive Scheme (EIS).

Further drill testing will be planned once the infill soils and diamond drilling results are received.

For further information:

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*The information in this report that relates to **Exploration Results** is based on, and fairly represents information and supporting documentation prepared by Mr. Philip Tornatora, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr. Tornatora is an employee of De Grey Mining Limited. Mr. Tornatora 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 Resource and Ore Reserves". Mr. Tornatora consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

Figure 2 King Col Pegmatite Trend – Two main anomalies over 7.5km

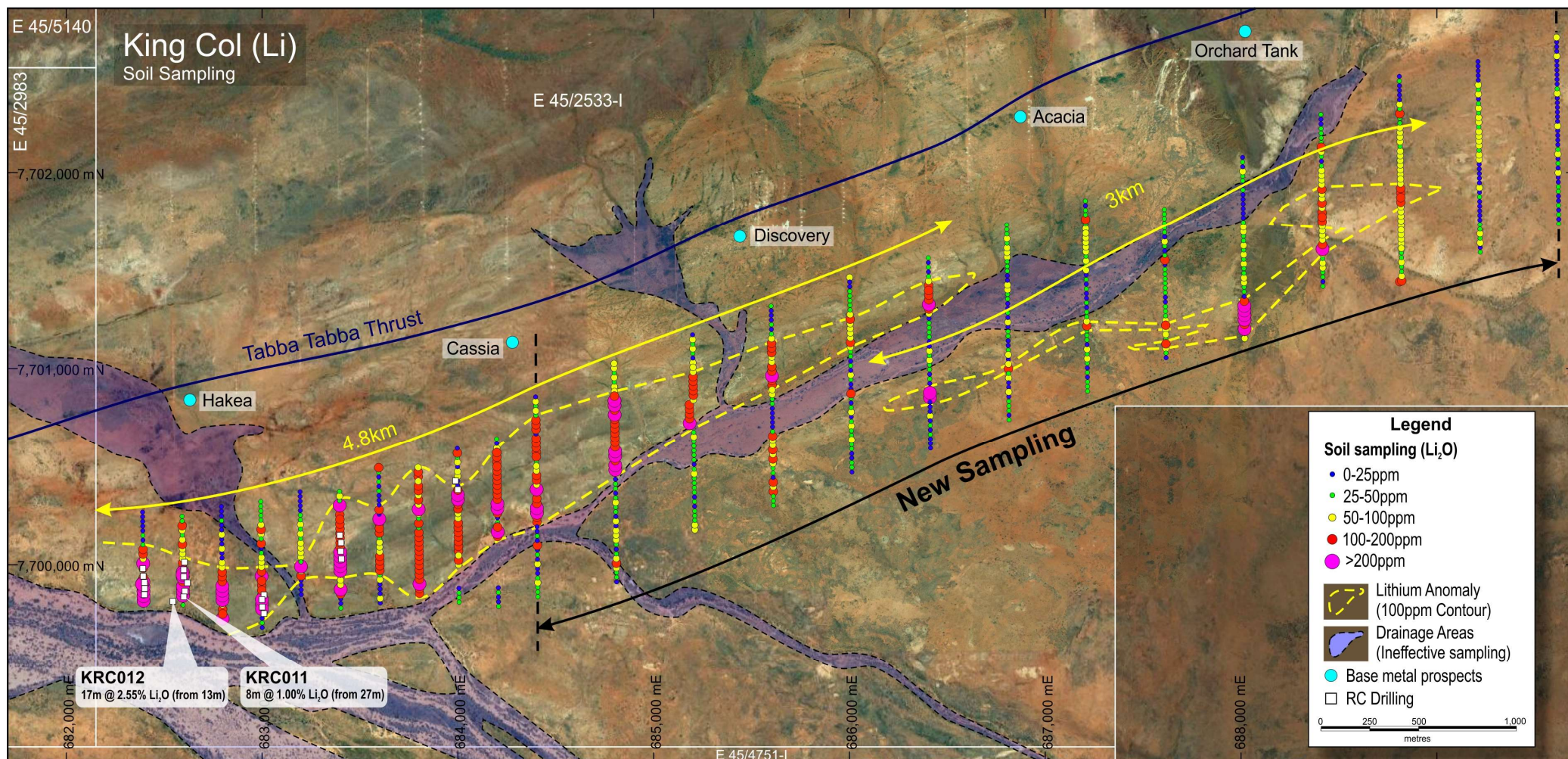


Table JORC Code, 2012 Edition
Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> • <i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i> 	<ul style="list-style-type: none"> • Results in this report relate to reconnaissance soil sampling undertaken over the King Col pegmatite trend by De Grey Mining. • The samples comprised sieved soil samples of a size fraction >1.7mm and <7mm. • Samples were taken at a point location on a 400m x 25m grid pattern. • Assays were undertaken at an industry standard independent laboratory. • Samples submitted for petrological analysis comprised hand-picked RC chips from a previous drill program.
Drilling techniques	<ul style="list-style-type: none"> • <i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i> 	<ul style="list-style-type: none"> • No drilling undertaken
Drill sample recovery	<ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • No drilling undertaken
Logging	<ul style="list-style-type: none"> • <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i> 	<ul style="list-style-type: none"> • A brief description of soil characteristics was recorded

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>The total length and percentage of the relevant intersections logged.</i> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • The samples comprised a sieved soil sample of a size fraction >1.7mm and <7mm, weighing around 200g • Samples were bagged and sent to the independent laboratory for assay where they were pulverised and assayed. • The samples are considered appropriate for first pass reconnaissance assessment of the area for this style of mineralisation. • Independent Standard reference material was inserted by De Grey at a rate of 3 standards per 100 samples. • Further detailed sampling along strike is planned
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> • <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> • The samples were analysed by an independent industry laboratory and are considered appropriate for this style of mineralisation • Independent Standard reference material was inserted by De Grey at a rate of 3 standards per 100 samples. • Duplicates and standards were also inserted by the laboratory.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Sampling was carried out by contract field personnel engaged by De Grey and procedures were checked by the CP in the field. • The analytical data has been reviewed by De Grey staff (CP) • Data was entered by field personnel in a digital format in the field, then imported (together with assay results) into De Grey's externally housed database, by independent database consultants. • No adjustment was made to assay data, apart from conversion to oxides using standard values.
Location of data points	<ul style="list-style-type: none"> • <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • All sample locations are derived from handheld GPS and are accurate +/- 5m. • GDA94 Zone 50

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Samples were collected on a spacing of 400 x 25m • Total of 565 samples were taken along an approximately 6km trend. • Sampling is of insufficient density to determine a resource estimate. Additional detailed follow-up sampling is recommended to qualify and quantify the anomalous areas in greater detail prior to drill testing if warranted.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<ul style="list-style-type: none"> • Samples were collected on lines at approximately 90 degrees to the strike of lithological contacts. • Orientation of sample lines is not expected to contribute to sampling bias.
Sample security	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • Samples were collected by contractors and the sampling was checked by the CP in the field. • Samples were then sent via transport contractor direct to the laboratory.
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • No audits have been completed • The CP has reviewed the data and considers the data is appropriate for this style of mineralisation and sampling type.

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	<ul style="list-style-type: none"> • <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> • <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i> 	<ul style="list-style-type: none"> • Sampling carried out on Tenement E45/2533 which is owned 100% by De Grey Mining or its wholly owned subsidiaries
Exploration done by other parties	<ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> • Pegmatite related results reported in this report are based on work completed by De Grey. • De Grey has also undertaken a considerable amount of sampling and drilling on other portions of this tenement including the definition of two base metal resources and numerous other gold and base metal targets requiring additional follow-up • Historic stream sediment sampling has been undertaken on the tenement however this sampling did not cover this portion of

Criteria	JORC Code explanation	Commentary
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<p>the tenement</p> <ul style="list-style-type: none"> • The mineralisation targeted is rare metal pegmatite hosted mineralisation including Tantalum and Lithium similar to the Tabba Tabba Tantalum Mine located immediately to the north of E45/2364 and the Lithium rich Pilgangoora deposit located approximately 40km to the south.
Drill hole Information	<ul style="list-style-type: none"> • <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> • <i>easting and northing of the drill hole collar</i> • <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> • <i>dip and azimuth of the hole</i> • <i>down hole length and interception depth</i> • <i>hole length.</i> • <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i> 	<ul style="list-style-type: none"> • RC drilling was previously undertaken by De Grey on the western portion of the King Col pegmatite trend (refer to De Grey Mining Limited ASX release, dated 16 October 2017). • No additional drilling was undertaken.
Data aggregation methods	<ul style="list-style-type: none"> • <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i> • <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i> • <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> • Samples relate to a point soil sample from which material is generally expected to be sourced from the immediate vicinity. • No lower or upper cuts, aggregate intervals or metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’).</i> 	<ul style="list-style-type: none"> • Only soil samples taken • Unknown at this stage
Diagrams	<ul style="list-style-type: none"> • <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations</i> 	<ul style="list-style-type: none"> • Plans of sample locations and table are provided in report.

Criteria	JORC Code explanation	Commentary
Balanced reporting	<p><i>and appropriate sectional views.</i></p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All results from reported program are included.
Other substantive exploration data	<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"> 22 RC drill holes, totaling 1684m have been drilled in the west of the area reported in this release De Grey has acquired an extensive gold and base metal dataset including geochemical, geophysical and drilling data over the tenement areas however this data has not specifically targeted pegmatite style mineralisation. Further work is required to test of this style of mineralisation although it is noted the region host a number of pegmatite hosted deposits.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. 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"> De Grey is planning further detailed field reconnaissance investigations to validate the pegmatite related mineralisation potential. A diamond drill hole is planned for the area previously RC drilled to investigate mineralogy.