

7 January 2020

Rare Earth Potential Highlighted for Kalkaroo & Other Prospects

HIGHLIGHTS

- Elevated levels of rare earth elements (**REE**) returned in re-assaying of Havilah drill samples.
- Two drill samples from **West Kalkaroo** contain elevated levels of higher value REE, with up to 1,355 ppm Neodymium (**Nd**) and 366 ppm Praseodymium (**Pr**).
- Eleven drill samples from the **Croziers copper prospect** are similarly elevated in REE, with up to 953 ppm Nd, 425 ppm Pr, 5,443 ppm Lanthanum (**La**) and 6,104 ppm Cerium (**Ce**).
- Studies have commenced on the **Kalkaroo copper-gold project** to investigate the potential for economic recovery of a **REE concentrate as a by-product**.
- REE are of relevance and strategic importance given the Australian Government's recent efforts in promoting international investment in the development of critical minerals resources within Australia.

Havilah Resources Limited (Havilah or Company) re-assaying of selected retained drill samples from the Kalkaroo copper-gold-cobalt deposit and the Croziers copper prospect has confirmed elevated levels of REE as highlighted in the 2019 AGM Technical Review presentation ([refer to ASX announcement of 18 December 2019, slide 15](#)).

Most historic exploration in the Curnamona Craton has been directed at base metal, uranium and gold mineralisation, meaning that REE were not routinely assayed. Given the current [strategic importance of REE](#), study of the REE distribution and grade across Havilah's deposits and prospects is warranted due to the potential opportunity to enhance the deposit and/or project economics.

Two copper-gold mineralised reconnaissance aircore drillhole samples, recently re-assayed from West Kalkaroo, show elevated levels of higher value REE, namely Nd, Pr, Dysprosium (**Dy**) and Terbium (**Tb**), as summarised in Table 1 below. These four REE make up approximately 80% of the potential value of REE in the two drill samples, which are from the soft clayey saprolite gold ore at West Kalkaroo. The levels of these REE in the underlying copper ore types (e.g. native copper, chalcocite and chalcopyrite) is yet to be determined, although it is noted that previous limited La assay values were generally elevated.

Composites of eleven drill samples also recently re-assayed from two Havilah reverse circulation drillholes at the Croziers copper prospect returned similarly elevated REE, although with higher relative proportions of the light-REE, namely La and Ce. REE analyses reported earlier by MMG Limited ('MMG') from diamond drillhole BNG13DD001 at Croziers compare favourably with Havilah's new assays. In all cases the higher value REE (namely Dy, Nd, Pr and Tb) on average make up approximately 75% of the potential value of REE. At Croziers, higher REE are spatially associated with the copper skarn mineralisation in both the fresh and oxidised zones (Figure 1). Exploration drilling planned for the first calendar quarter of 2020 will primarily target copper and

tungsten mineralisation at the Croziers copper prospect, but will also be designed to search for extensions of the associated untested REE mineralisation.

Table 1 New REE assays are from re-assaying of selected retained drill samples from West Kalkaroo and the Croziers copper prospect. REE assays are also presented for earlier MMG joint venture drilling at the Eurinilla and Birksgate prospects.

| DRILLHOLE | FROM | TO | Cu | Au | Ce | Dy | Er | Eu | Gd | Ho | La | Lu | Nd | Pr | Sm | Tb | Tm | Y | Yb |
|----------------------------|---------------|-------|------|-------|------|-------|------|-------|-------|------|------|------|------|-------|-------|------|------|------|-------|
| KALKAROO | (metres) | | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| KKAC0421 | 72 | 73 | 3990 | 0.67 | 2030 | 103.5 | 51.3 | 51.2 | 186 | 18.8 | 2150 | 6.58 | 1355 | 366 | 236 | 21 | 6.85 | 572 | 41.9 |
| KKAC0421 | 74 | 75 | 1890 | 5.96 | 480 | 47.7 | 28.3 | 21.8 | 76.8 | 9.32 | 1140 | 3.82 | 602 | 172 | 99.1 | 9.2 | 3.94 | 329 | 23.7 |
| CROZIER | | | | | | | | | | | | | | | | | | | |
| CRR004 | 75-77 & 82-87 | | 5349 | 0.09 | 6104 | 7.63 | 2.67 | 8.92 | 21.0 | 1.09 | 5443 | 0.28 | 953 | 425 | 67.5 | 2.26 | 0.34 | 27.9 | 2.06 |
| CRR007 | 27 | 31 | 120 | 0.01 | 2395 | 7.9 | 3.12 | 7.86 | 17.79 | 1.27 | 1730 | 0.31 | 400 | 157 | 41.2 | 1.97 | 0.41 | 32 | 2.32 |
| BNG13DD001 | 244.5 | 245 | 210 | 0.004 | 5960 | 19.5 | 6.77 | 10.55 | 43.4 | 3.01 | 5410 | 0.78 | 1075 | 426 | 88.9 | 4.86 | 0.79 | 86.4 | 4.58 |
| EURINILLA | | | | | | | | | | | | | | | | | | | |
| EUR14DD008 | 137.5 | 139.5 | 5645 | 2.67 | 501 | 25.3 | 8.32 | 30.9 | 73.6 | 3.54 | 1775 | 1.30 | 2408 | 808 | 254 | 7.0 | 1.18 | 44.3 | 7.53 |
| EUR14DD003 | 180.5 | 181.5 | 1550 | 0.089 | 500 | 65.9 | 24.5 | 31.9 | 117.5 | 10.5 | 340 | 2.02 | 897 | 197.5 | 172.5 | 15.4 | 2.67 | 219 | 14.75 |
| BIRKSGATE | | | | | | | | | | | | | | | | | | | |
| BRK14DD007 | 291 | 292 | 253 | 0.008 | 501 | 17.65 | 5.02 | 17.65 | 66.9 | 2.36 | 2490 | 0.7 | 1585 | 537 | 193 | 5.5 | 0.66 | 56.5 | 3.94 |
| CRUSTAL ABUNDANCE * | | | | | 43 | 3.6 | 2.1 | 1.1 | 3.7 | 0.77 | 20 | 0.3 | 20 | 4.9 | 3.9 | 0.6 | 0.28 | 19 | 1.9 |

* Source for REE crustal abundance is from page 6 of the March 2019 Austrade publication titled '[Australian Critical Minerals Prospectus](#)'.

Note: ppm equals parts per million. The full names of all REE corresponding to the chemical symbols listed in the table can be found in the diagram in the "About Rare Earth Elements" section below.

The REE re-assaying reported here was prompted by Havilah's new management team's recent technical review of limited REE data that was available from earlier MMG joint venture diamond drillholes on several Havilah prospects, along with compilation of La and Nd data from a limited number of Havilah drillholes. MMG reported some elevated REE results from both the Eurinilla and Birksgate prospect areas, generally associated with copper-gold mineralisation (see Table 1 above). While the available limited REE results are promising, considerably more exploration drilling and assaying is required to determine the full extent of REE mineralisation associated with the stratabound replacement and vein style copper-gold mineralisation across Havilah's mineral tenements in the Curnamona Craton.

Accordingly, with respect to REE, over the next few months Havilah plans to initially focus its effort on the geologically better understood Kalkaroo copper-gold-cobalt deposit to determine:

1. The distribution and grade of REE mineralisation, especially at West Kalkaroo.
2. The host mineral(s) for the REE.
3. Whether the host mineral(s) can be concentrated by standard recovery processes as a by-product.

This will be in addition to milestone completion of the updated Kalkaroo project pre-feasibility study, which is currently well advanced.

The value upside for Havilah is that if REE can be economically recovered in a mineral concentrate as a by-product of the standard copper and gold recovery processes it potentially provides a further revenue stream for the Kalkaroo copper-gold project.

Commenting on the REE re-assaying Havilah’s Technical Director, Dr Chris Giles, said:

“The elevated REE levels in fairly typical West Kalkaroo saprolite gold ore drill samples clearly warrant careful follow up studies.

“The critical questions for Havilah are what mineral(s) host the REE and can the REE be recovered and concentrated to produce a saleable, direct shipping by-product along with copper concentrates?

“We plan to initiate some strategic metallurgical testwork to investigate these questions due to the potential opportunity to enhance the Kalkaroo project economics.

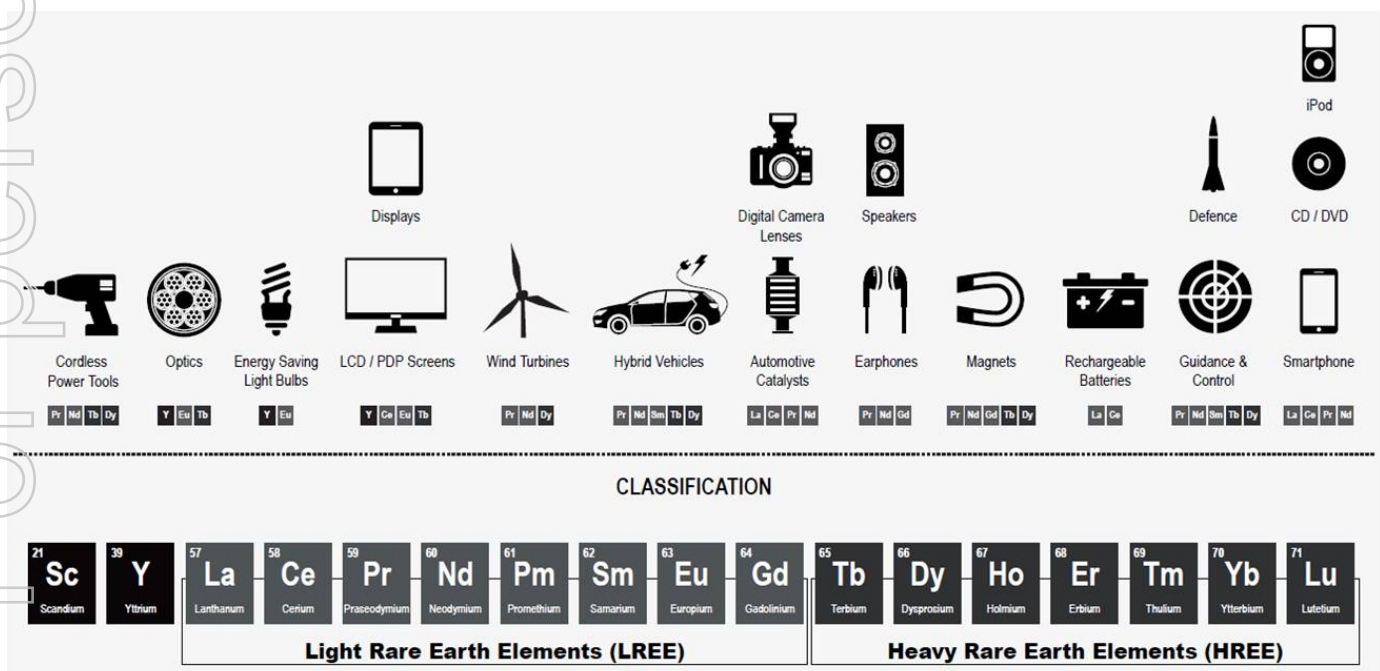
“While the Kalkaroo project will be the initial focus for REE testwork, in due course exploration drilling of the stratabound copper-gold mineralisation will also follow up the associated elevated REE at several other locations in the Curnamona Craton such as Croziers and Eurinilla.” he said.

About Rare Earth Elements

REE are a related group of 16 elements (lanthanides plus Yttrium) that are not particularly rare and are typically widely dispersed in the earth’s crust. However, there are limited minerals containing appreciable levels of REE and they tend to only form economic concentrations under rather uncommon geological conditions. For this reason REE are currently strategic and critical minerals for industry.

The lanthanide series of elements can be further subdivided into light-REE and heavy-REE. Light-REE are generally more abundant, and less valuable than the heavy-REE.

REE have a wide variety of important and often energy saving modern age usages because of their spectrum of slightly varying chemical behaviours. For example, modern brushless electric motors as used in power tools and many electric vehicles rely on powerful new generation magnets that use Nd, Dy, Pr, Tb compounds as vital components. Some of the many other uses of REE are summarised in the diagram below.



Acknowledgement of source for the above diagram: China Water Risk report “Rare Earths: Shades of Grey-Can China continue to fuel our clean and smart future?” (published June 2016).

Cautionary Statement

This announcement contains certain statements which may constitute 'forward-looking statements'. Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, performance or achievements to differ materially from those expressed, implied or projected in any forward-looking statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Competent Person's Statement

The information in this announcement that relates to Exploration Results and Mineral Resources is based on data and information compiled by geologist, Dr Chris Giles, a Competent Person who is a member of The Australian Institute of Geoscientists. Dr Giles is Technical Director of the Company, is employed by the Company on a consulting contract and is a substantial shareholder. Dr Giles has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Giles consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

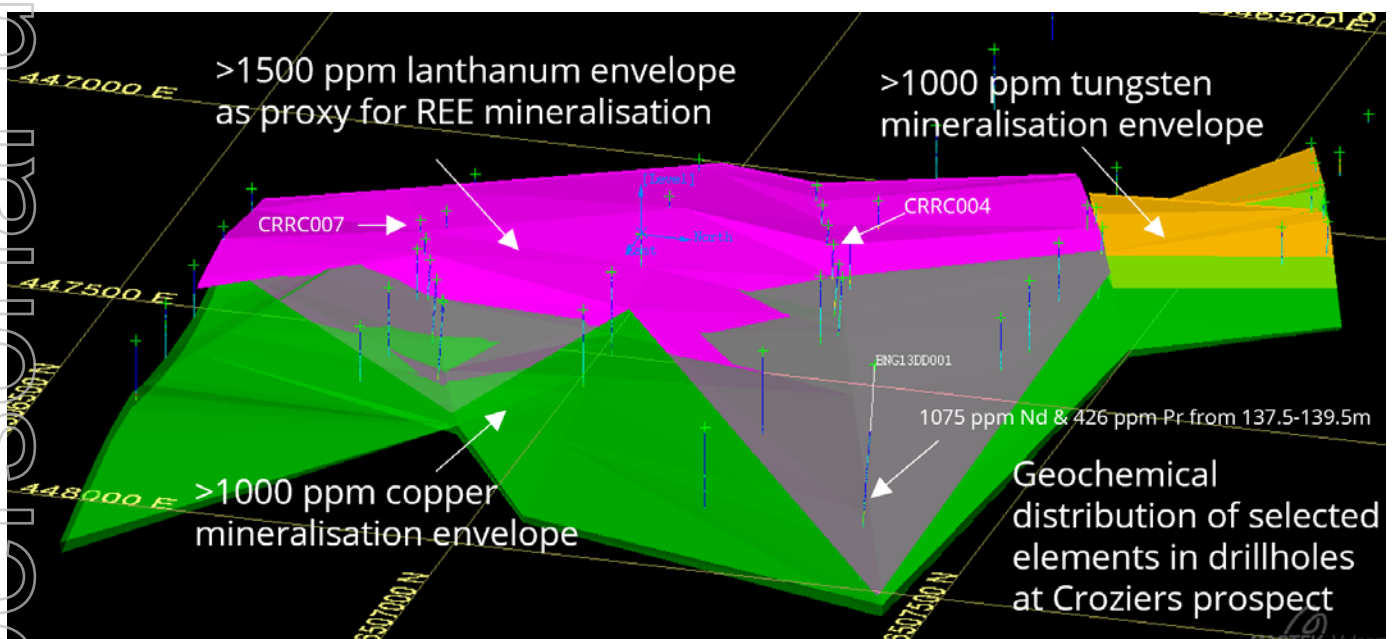


Figure 1 Limited assays available for the Croziers copper prospect indicate potentially elevated levels of the higher value REE. Using the light-REE La as a proxy for these elements it has been possible to broadly outline a REE mineralisation envelope at Croziers (pink and grey). This envelope partially overlaps a copper mineralised envelope (green) and abuts a potential tungsten mineralised zone (yellow).

For further information visit www.havilah-resources.com.au
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Appendix 1

Sections 1 and 2 below provide a description of the sampling and assaying techniques in accordance with Table 1 of The Australasian Code for the Reporting of Exploration Results. Havilah confirms that it is not aware of any new information or data and that all material assumptions and technical parameters underpinning results published in the earlier market announcements continue to apply and have not materially changed.

Details for drillholes reported in text

| Hole Number | Easting m | Northing m | RL m | Grid azimuth | Dip degrees | EOH depth metres |
|----------------------|-----------|------------|------|--------------|-------------|------------------|
| KKAC0421 (Havilah) | 454564 | 6488751 | 120 | 154 | -70 | 122 |
| CRRC004 (Havilah) | 447391 | 6507209 | 96 | 251 | -60 | 112 |
| CRRC007 (Havilah) | 447454 | 6506802 | 99 | 251 | -60 | 82 |
| BNG13DD001 (MMG) | 447678 | 6507337 | 99 | 236 | -70 | 284 |
| EUR14DD003 (MMG) | 461587 | 6524116 | 66 | 45 | -70 | 239 |
| EUR14DD008 (MMG) | 463065 | 6526121 | 63 | 315 | -70 | 222 |
| BRK14DD007 (MMG) | 438551 | 6535739 | 50 | 279 | -70 | 318 |
| Datum: AGD66 Zone 54 | | | | | | |

Section 1 Sampling Techniques and Data

| 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"> Samples for which results are presented in Table 1 were derived from a variety of earlier Havilah and MMG aircore ('AC'), reverse circulation ('RC') and diamond drillholes, as documented in the table above. RC and AC assay samples averaging 2-3kg were riffle split as 1-2m intervals. Drill-core samples were mostly collected as half core over 1m intervals, unless the geological boundaries dictated otherwise. All Havilah and MMG AC, RC and core samples were collected into pre-numbered calico bags and packed into polyweave bags by Havilah staff for shipment to the assay lab in Adelaide. |
| 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 | <ul style="list-style-type: none"> All RC holes were drilled using a standard face-sampling bits, with bit size of 146mm. All samples were collected via riffle splitting |

| Criteria | JORC Code explanation | Commentary |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p><i>standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></p> | <p>directly from the cyclone.</p> <ul style="list-style-type: none"> All AC holes used a 121mm blade bit. Diamond core sizes ranged from NQ (48mm) to HQ (64mm). Triple tube methods were used where required to maximize core recoveries. Drill core was routinely orientated where ground conditions allowed, using a Reflex downhole orientation tool. |
| <p>Drill sample recovery</p> | <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"> Overall, RC sample recoveries and diamond drill core recoveries were considered to be quite acceptable for interpretation and modelling purposes. Core recovery for MMG diamond drillholes was measured directly and averaged >95 %. The sample yield and wetness of the RC and AC samples was routinely recorded in drill logs. Very few samples were too wet to split. No evidence of RC sample bias due to preferential concentration of fine or coarse material was observed. Sample recoveries were continuously monitored by the geologist on site and adjustments to drilling methodology were made to optimise sample recovery and quality where necessary. |
| <p>Logging</p> | <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> <i>The total length and percentage of the relevant intersections logged.</i> | <ul style="list-style-type: none"> All RC and AC samples and drillcore was logged by experienced geologists directly into a digital logging system with data uploaded directly into an Excel spreadsheet and transferred to a laptop computer. All drillcore and RC chip trays have been photographed. All drillcore and RC chip sample trays and some back-up samples are stored on site at Kalkaroo. All RC and AC samples were logged in detail by experienced geologists directly into a digital logging system with data uploaded. Logging is semi-quantitative and 100% of reported intersections have been logged. Logging is of a sufficiently high standard to support any subsequent interpretations, resource estimations and mining and metallurgical studies. |
| <p>Sub-sampling techniques and sample</p> | <ul style="list-style-type: none"> <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> | <ul style="list-style-type: none"> RC or AC drill chips were received directly from the drilling rig via a cyclone and were riffle split as 1-2m intervals to obtain 2-3kg |

| Criteria | JORC Code explanation | Commentary |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>preparation</p> | <ul style="list-style-type: none"> <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> | <p>samples.</p> <ul style="list-style-type: none"> Half core samples were collected at 1m intervals, unless otherwise dictated by the geology. Sampling size is considered to be appropriate for the style of mineralisation observed. Assay repeatability for gold and other metals has not proven to be an issue. All Havilah samples were collected in numbered calico bags that were sent to ALS assay lab in Adelaide. At ALS assay lab the samples are crushed in a jaw crusher to a nominal 6mm (method CRU-21) from which a 3kg split is obtained using a riffle splitter. The split is pulverized in an LM5 to 85% passing 75 microns (method PUL-23). These pulps are stored in paper bags. All samples are then analysed for a 33 element package using ALS's ME-ICP61 suite, whereby samples undergo a 4 acid digest and analysis by ICP-atomic emission spectrometry and ICP mass spectrometry. Over limit Cu, Pb and Zn are re-assayed using ME-OG62. Gold is analysed by 50g fire assay, with AAS finish using ALS method Au-AA26. The total assay methods are standard ALS procedure and are considered appropriate for the main economic elements sought (i.e. Cu and Au). Pulps are retained by Havilah and for the CRRC004, CRRC007 and KKAC0421 drillholes, relevant samples were retrieved and submitted to ALS for selected elemental analysis by lithium borate fusion and ICP-MS (ALS method ME-MS85). The chosen elements included all REE plus Cs, Hf, Rb, Sn, Y and Zr. MMG followed similar sampling and assaying procedures for the diamond core samples. |
| <p>Quality of assay data and laboratory tests</p> | <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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been</i> | <ul style="list-style-type: none"> According to ALS analysis precision expectation is +/-5%. Due to the small number of samples and the fact that the assays were not proposed to be used for resource estimations, Havilah did not run any of its internal standards, duplicates or blanks as would normally be the case. Checking of the new REE data against previous La, and in some cases Ce analyses where available, indicates good correlation. |

| Criteria | JORC Code explanation | Commentary |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Verification of sampling and assaying | <p><i>established.</i></p> <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"> Checking of the new REE data against previous La, and in some cases Ce analyses where available, indicated good correlation. Rigorous internal QC procedures are followed to check all assay results. All data entry is under control of the responsible geologist, who is responsible for data management, storage and security. |
| 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"> MMG diamond drillholes were surveyed at approximately 30m downhole intervals using a Reflex downhole digital survey camera. The Croziers RC holes were surveyed in the rods at approximately 30m intervals with only dip measurements recorded. AC hole KKAC0421 was not surveyed. Drillhole collar coordinates are surveyed in UTM coordinates using a differential GPS system with an x:y:z accuracy of 20cm:20cm:40cm and are quoted in AGD 66 Zone 54 datum. |
| 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"> Havilah drilling was completed at 25m intervals on nominal 25m sections perpendicular to the strike of the primary copper mineralisation at West Kalkaroo. RC holes at Croziers were completed at 50m intervals on sections 200m to 400m apart. MMG diamond drillholes were drilled at various oblique angles and directions to test specific targets. Hole BNG13DD001 was drilled perpendicular to strike. Sample compositing was not used. |
| 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"> The drillhole azimuth and dip was chosen to intersect the mineralised zones as nearly as possible to right angles and at the desired positions to maximise the value of the drilling data. At this stage, no material sampling bias is known to have been introduced by the drilling direction. |
| Sample security | <ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> | <ul style="list-style-type: none"> RC and AC chip samples are directly collected from the riffle splitter in numbered calico bags. Several calico bags are placed in each polyweave bag which are then sealed with cable ties. The samples are transported to the assay lab by Havilah personnel at the end of |

| Criteria | JORC Code explanation | Commentary |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>each field stint.</p> <ul style="list-style-type: none"> • There is minimal opportunity for systematic tampering with the samples as they are not out of the control of Havilah until they are delivered to the assay lab. • This is considered to be a secure and reasonable procedure and no known instances of tampering with samples occurred during the drilling programs. • MMG diamond core samples were collected using a very similar methodology. |
| 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"> • Ongoing internal auditing of sampling techniques and assay data has not revealed any material issues. • Robert Dennis who is employed by consulting firm RPM Global Asia Limited ('RPM') visited Kalkaroo during November 2016 and found field procedures to be of acceptable industry standard. • RPM completed independent re-sampling and assaying for Kalkaroo and found results to be reliable. |

Section 2 Reporting of Exploration Results

| 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 license to operate in the area.</i> | <ul style="list-style-type: none"> • Security of tenure is via current mining lease over Kalkaroo and exploration licences covering the Croziers, Eurinilla and Birksgate prospects, are all owned 100% by Havilah. |
| 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"> • Kalkaroo was explored by a number of major mining groups in the past including Placer Pacific Limited, Newcrest Mining Limited and MIM Exploration Pty Ltd, who completed more than 45,000m of drilling in the region. • Croziers, Eurinilla and Birksgate prospects have been explored by Pasminco Limited and MMG in the past. • All previous exploration data has been integrated into Havilah's databases. |
| Geology | <ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> | <ul style="list-style-type: none"> • Kalkaroo, Croziers, Eurinilla and possibly Birksgate consist of stratabound replacement and vein style copper-gold mineralisation within Willyama Supergroup rocks of the Curnamona Craton. • At Kalkaroo, the stratabound mineralisation is uniformly distributed along more than 3 km |

| Criteria | JORC Code explanation | Commentary |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>of strike that follows an arc around the 35 degree dipping northern nose of the Kalkaroo south dome. It is hosted by an 80m-120m thick mineralised horizon that is sandwiched between psammitic footwall rocks and a thick pelitic hangingwall sequence.</p> <ul style="list-style-type: none"> • In part, the mineralisation is associated with near-vertical, mineralised quartz vein breccia fracture/fault fillings, which probably formed channel ways for the mineralising fluids. Interference folding resulted in dome structures which probably acted as structural traps for the rising mineralising fluids carried by these vertical structures. • The mineralising events were associated with iron-rich and sodium-rich alteration fronts, which are manifest as widespread fine-grained magnetite in the lower sandy formations and as pervasive albite alteration, overprinted by later potassic veining and alteration. • Erosion in the Mesozoic and Tertiary period exposed the region to prolonged and deep weathering. Consequently, the original sulphide mineralisation shows typical supergene enrichment features in its upper part, caused by oxidation of the primary sulphides in the weathering zone, forming a soft clay rich rock called saprolite. This is manifest in a sub-horizontal stratification of the ore minerals from top to bottom; <ol style="list-style-type: none"> 1. Supergene free gold in saprolite, with generally minor copper, recoverable by gravity and cyanide leaching methods. 2. Native copper and gold in saprolite, largely recoverable by gravity methods. 3. Chalcocite dominant with gold, recoverable by conventional flotation. 4. Chalcopyrite dominant with gold and locally rich molybdenum, recoverable by conventional flotation. |
| <p>Drill hole information</p> | <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 the hole ○ down hole length and interception depth | <ul style="list-style-type: none"> • This information is provided in the accompanying table for the relevant drillholes. |

| Criteria | JORC Code explanation | Commentary |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none"> ○ 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. | |
| Data aggregation methods | <ul style="list-style-type: none"> • 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. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated. | <ul style="list-style-type: none"> • Not applicable as not reporting mineral resources. |
| 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 (e.g. 'down hole length, true width not known'). | <ul style="list-style-type: none"> • Down-hole lengths are reported. Drillholes are always oriented with the objective of intersecting mineralisation as near as possible to right angles, and hence down-hole intersections in general are as near as possible to true width. • For the purposes of the geological interpretations and resource calculations the true widths are always used. |
| 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"> • Not applicable as not reporting a mineral discovery. |
| Balanced Reporting | <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. • 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"> • Not applicable as not reporting mineral resources. |
| 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"> • Relevant geological observations are reported. |

| Criteria | JORC Code explanation | Commentary |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Further work | <ul style="list-style-type: none"> <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> | <ul style="list-style-type: none"> Additional drilling may be carried out in the future to explore strike and depth extensions and for resource delineation. |

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