Heavy Minerals LIMITED

ASX Announcement Date: 3 May 2023

RED HILL EXCEPTIONAL ASSAY RESULTS AND EXPLORATION TARGET

- **Potential long life, low cost, tier 1 asset identified within a developed mineral sands province with established operations and logistics routes to market.**
- **Final assay results from the maiden air core drilling campaign at Red Hill have been received with consistent thick intervals of elevated Total Heavy Mineral (THM) grades returned with some greater than 22% THM.**
- **An Exploration Target has been defined for Red Hill using cut-off grades for reporting of 3% THM and 1% THM and ranging from 90 to 150 Mt of material @ 5.4% to 4.1% THM. The Exploration Target also contains between 5 and 6 Mt of THM and 3.8 and 4.5 Mt of garnet (see Table 2). The potential quality and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration activity to determine a Mineral Resource estimate and it is uncertain if further exploration will result in the estimation of a Mineral Resource.**
- **Notable intersections (refer to Table 1) include:**
  - 8.8% THM over 36 m from surface (RHAC0007)
  - 7.6% THM over 51 m from surface (RHAC0008)
  - 7.1% THM over 41 m from 4 m downhole (RHAC0017)
  - 6.8% THM over 60 m from surface (RHAC0020)
  - 6.6% THM over 24 m from surface (RHAC0011)
  - 6.4% THM over 16 m from surface (RHAC0009)
  - 6.1% THM over 13 m from surface (RHAC0031)
  - 5.9% THM over 45 m from surface (RHAC0022)
  - 5.9% THM over 15 m from surface (RHAC0040)
  - 5.7% THM over 44 m from surface (RHAC0019)
  - 5.7% THM over 35 m from surface (RHAC0023)
- **Garnet percentages in Heavy mineral fractions range from 65% - 80%.**
- **Ilmenite fraction of THM reporting at between 5% and 15%.**

Heavy Minerals Limited (ACN 647 831 833) ("**HVY**", "**Heavy Minerals**" or the "**Company"**) is pleased to announce that the final batch of assays for its maiden 48 hole, 1815 metre Air Core drilling program at Red Hill have been received. This final batch of assays show outstanding mineralisation with the ore body open at depth, to the south and west. As communicated in early April the initial results were exceptional with the best intersect in hole RHAC0039 delivering 0 - 43 meters @ 6.2% THM with a weighted average garnet fraction of 75% and an ilmenite fraction of 10%. The second batch of results have returned additional high grades with the best intersect in hole RHAC0007 delivering 36 m @ 8.8% THM from surface and the longest intersect of 60 m from surface @ 6.8% THM in hole RHAC0020.

Non-Executive Chairman, Mr. Adam Schofield said:

"The Company is thrilled to have received the remaining assays from its maiden Air Core drilling program for Red Hill which further validate the large near surface, garnet-enriched mineralised sand package. The outstanding individual results from multiple drill holes (refer to Table 1) are indicative of a potential low-cost, long-life Tier 1 garnet asset. The Company has produced an Exploration Target and anticipates releasing a Mineral Resource estimate in the coming months.

The recent results add to the Heavy Minerals project portfolio with another large, potentially viable quality resource for development that gives the Company the potential to be one of the largest global suppliers of garnet for decades to come."

Summary of final drilling results from the Red Hill Maiden Drilling Campaign

This announcement refers to additional and final assays received associated with the 48 hole, 1815 metre Air Core drill program drilled at its Red Hill Project in January 2023 (refer to Figure 1). Of those holes, a total of 48 holes, 1815 metres were submitted for assay and now all of the assays have been returned. A total of 1815 samples were submitted to Diamantina Laboratories for assay by wet screening and THM float/sink using Tetrabromoethane (TBE). The drill results will be subjected to mineral assemblage assaying which is required to determine the mineral assemblage composition and grades. Mineral estimation of the THM sinks by Diamantina Laboratories for two holes (RHAC0038 and RHAC0039) has returned very encouraging results, indicating a weighted average percentage of around 75% for garnet and 10% for ilmenite. A complete summary of the drilling, sampling and assaying techniques is presented in Appendix 1.

The drilling program consisted of Air Core drilling to limestone/sandstone basement or where THM mineralisation closed out, on a regular spaced grid of 100 m south-west/north-east by 400 m south-east/north-west. All holes are vertical and targeted the dunal sand package that sits on top of the Tamala Limestone or its lateral sandy equivalent. Significant drill results are presented in Table 1 below and a complete list of results is provided in Appendix 2.

Diagrammatic cross-sections are shown in Figures 2, 3 and 4 with significant drill hole intercepts shown in Table 1.

Table 1: E70/5161 Tenement - Significant Summary Assay Results for Red Hill Maiden Drilling Campaign

HOLE_ID	EASTING	NORTHING	RL	EOH	DIP	AZIMUTH	FROM	TO	LENGTH	THM	SLIMES	OS
	(GDA94)	(GDA94)	(m)	(m)			(m)	(m)	(m)	(%)	(%)	(%)
RHAC0007	250480	6855971	66.5	46	90	360	0	36	36	8.8	6.3	6.2
RHAC0008	250542	6856053	60.4	51	90	360	0	51	51	7.6	7.6	6.7
RHAC0017	250254	6856018	62.1	45	90	360	4	45	41	7.1	6.9	8.0
RHAC0020	250171	6856223	57.3	60	90	360	0	60	60	6.8	7.7	7.9
RHAC0011	250901	6856382	73.5	73	90	360	0	24	24	6.6	8.0	15.0
RHAC0009	250730	6856104	78.5	45	90	360	0	16	16	6.4	5.0	10.7
RHAC0031	249484	6856096	18.4	32	90	360	0	13	13	6.1	10.4	6.7
RHAC0022	250390	6856453	63.5	46	90	360	0	45	45	5.9	8.7	5.6
RHAC0040 *	250096	6856728	73.1	36	90	360	0	15	15	5.9	4.6	4.9
RHAC0019	250387	6856158	70.1	44	90	360	0	44	44	5.7	8.1	9.2
RHAC0023	250481	6856531	59.2	39	90	360	0	35	35	5.7	8.1	8.0
RHAC0033	249611	6856246	40.4	38	90	360	0	13	13	5.7	7.4	10.5
RHAC0041 *	250192	6856799	64.6	36	90	360	0	34	34	5.5	9.4	8.1
RHAC0030	249407	6856031	19.9	18	90	360	0	6	6	5.4	5.6	8.8
RHAC0017	250254	6856018	85.1	45	90	360	0	3	3	5.4	16.9	0.6
RHAC0012	250976	6856447	75.0	33	90	360	0	20	20	5.3	8.7	10.6
RHAC0039 *	250037	6856663	73.0	43	90	360	0	20	20	5.0	10.2	5.0
RHAC0018	250326	6856090	70.9	39	90	360	0	22	22	4.7	11.1	13.2
RHAC0036 *	249831	6856448	82.3	42	90	360	0	6	6	4.7	13.4	19.5
RHAC0048	249828	6857014	56.1	33	90	360	0	7	7	4.6	10.3	12.1
RHAC0021	250256	6856301	87.0	33	90	360	0	9	9	4.4	10.9	7.9
RHAC0028	250815	6856871	84.0	30	90	360	0	13	13	4.2	9.8	2.6
RHAC0024	250534	6856574	65.5	22	90	360	0	21	21	4.1	10.3	6.1
RHAC0038 *	249960	6856583	83.3	42	90	360	0	8	8	3.7	16.9	4.8
RHAC0042 *	250247	6856857	59.6	39	90	360	2	21	19	3.6	10.7	12.0
RHAC0013	251035	6856516	69.8	57	90	360	2	21	19	3.5	10.0	4.3
RHAC0010	250761	6856238	73.6	37	90	360	1	9	8	3.5	12.9	5.2
RHAC0037 *	249891	6856518	76.7	42	90	360	4	7	3	3.4	6.4	9.8
RHAC0032 *	249551	6856172	29.1	33	90	360	2	17	15	3.2	9.5	6.1
RHAC0035 *	249760	6856385	67.7	36	90	360	5	16	11	3.2	9.2	5.2
RHAC0044	249547	6856745	69.7	33	90	360	0	3	3	3.2	17.2	0.4
RHAC0047	249766	6856955	62.5	33	90	360	0	9	9	3.1	10.6	5.3
RHAC0046	249686	6856878	66.1	34	90	360	0	6	6	3.0	16.8	7.4

Results are prepared from composited drill hole assays at a cut-off grade of 2% THM and all composited intervals are continuous and unbroken.
* Denotes previously reported intervals

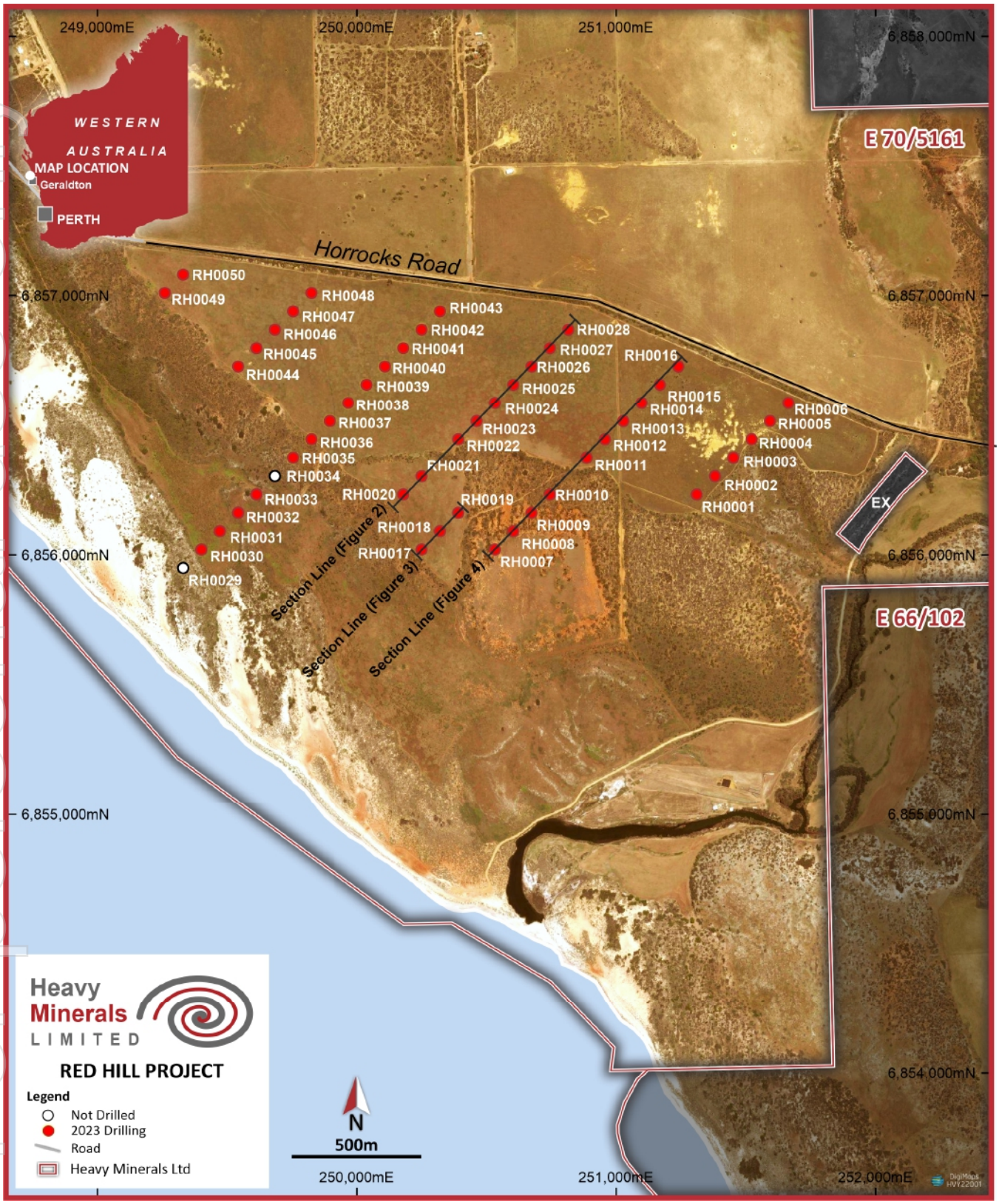

Figure 1: Drill collars referenced showing location of Figure 2, 3 & 4 drilling sections

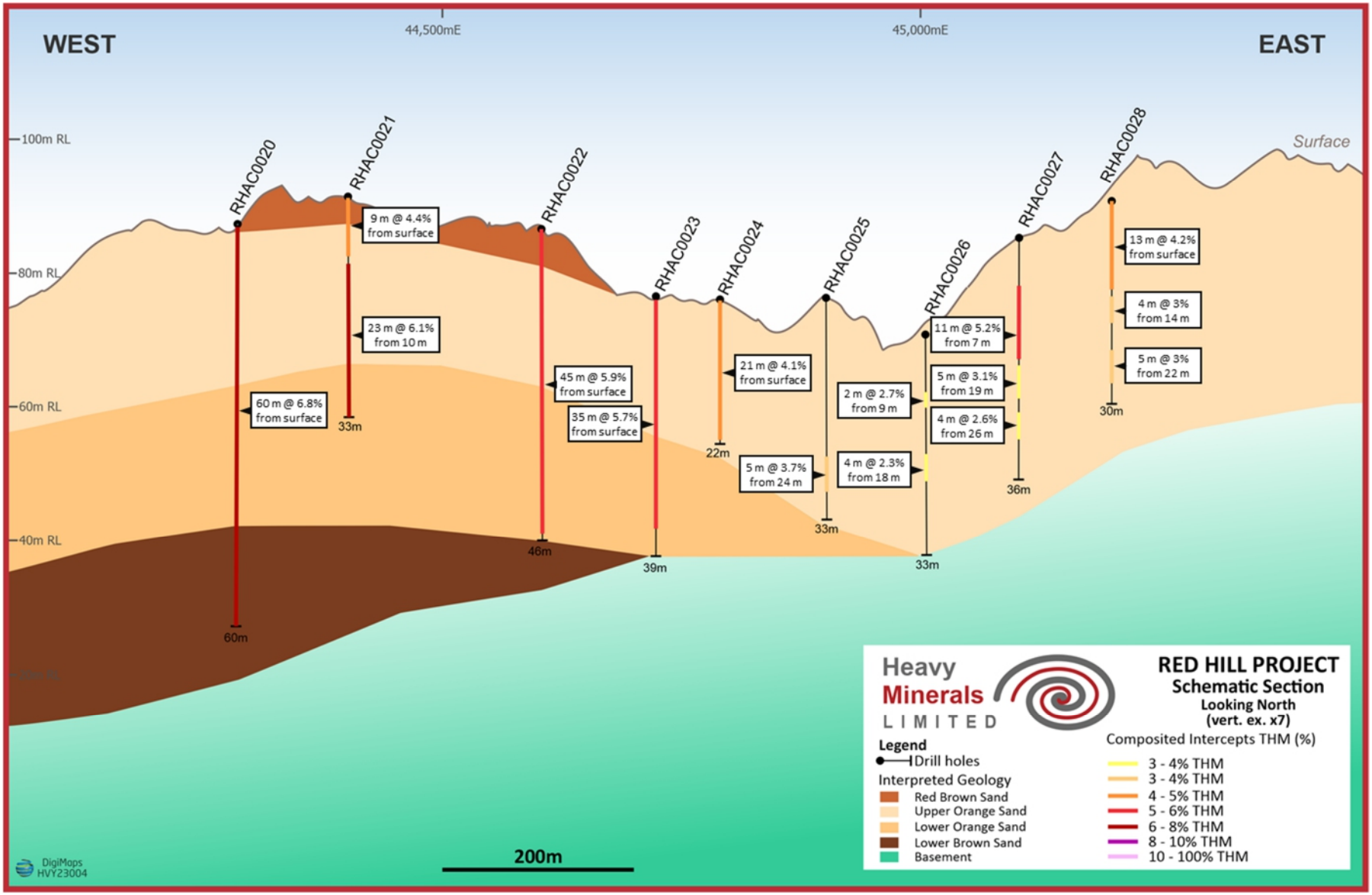

Figure 2: Drill section for Red Hill Maiden exploration campaign - Reference Figure 1 (Local grid, looking north, 7x vert. ex.)

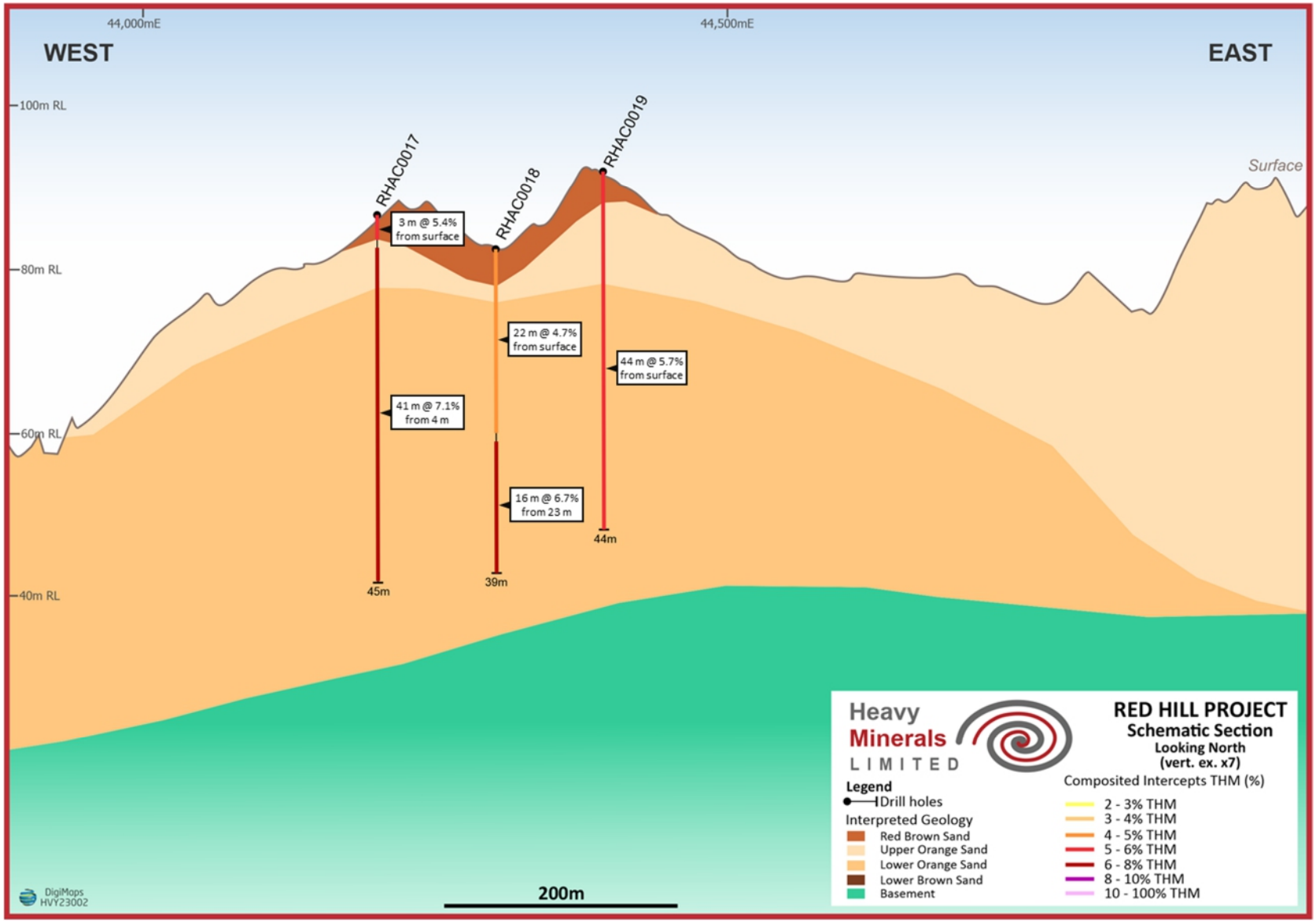

Figure 3: Drill section for Red Hill Maiden exploration campaign - Reference Figure 1 (Local grid, looking north, 7x vert. ex.)

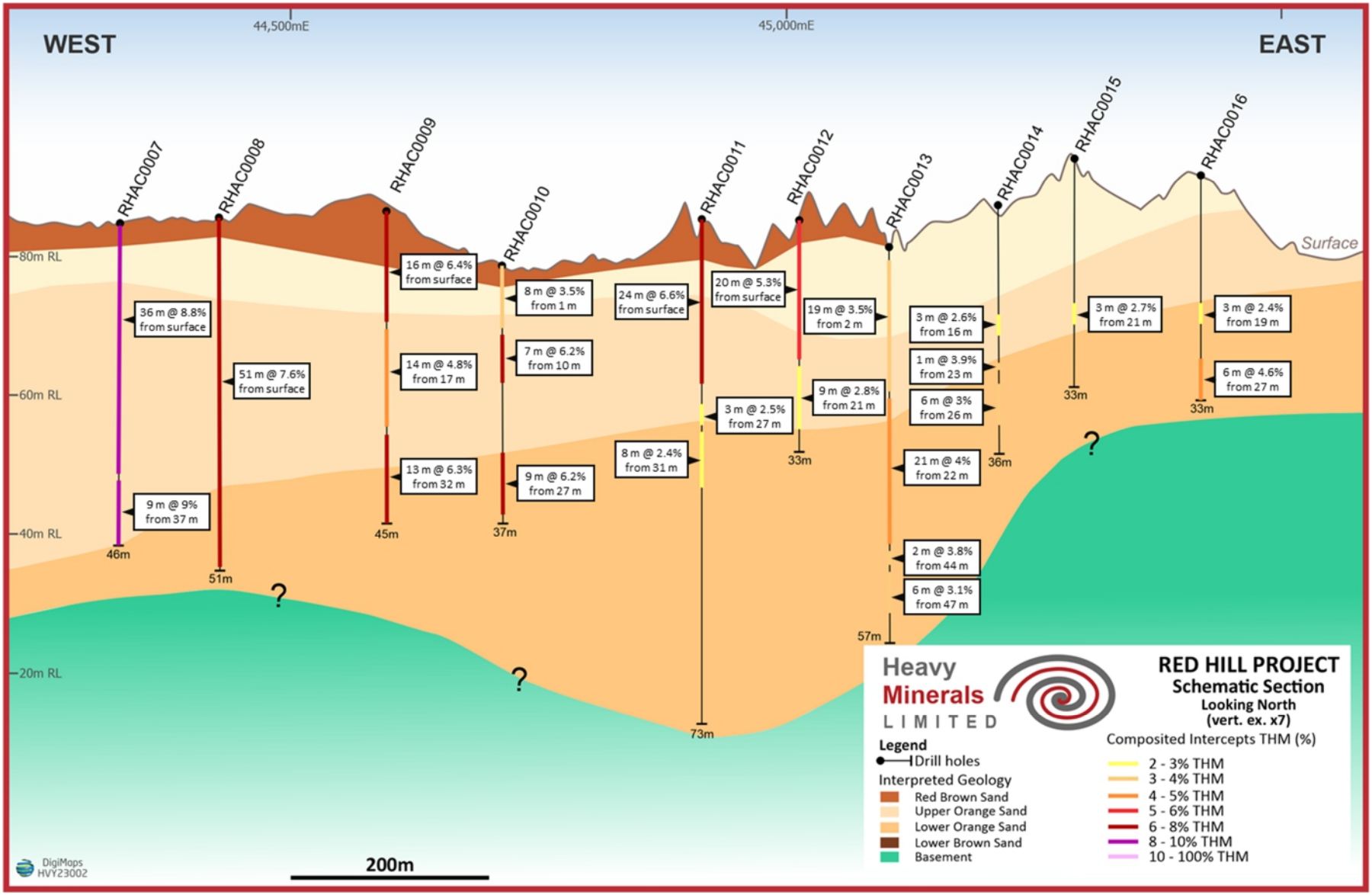

Figure 4: Drill section for Red Hill Maiden exploration campaign - Reference Figure 1 (Local grid, looking north, 7x vert. ex.)

Exploration Target

Table 2: E70/5161 Tenement - Exploration Target

Summary of Exploration Target[1]							HM Assemblage[2]		
	Material (Mt)	In Situ HM (Mt)	In Situ Garnet (Mt)	HM (%)	SL (%)	OS (%)	Garnet (%)	Ilmenite (%)	Trash (%)
Exploration Target	90 - 150	5 - 6	3.8 - 4.5	5.4 - 4.1	8	8	75	10	15
Total	**90 - 150**	**5 - 6**	**3.8 - 4.5**	**5.4 - 4.1**	**8**	**8**	**75**	**10**	**15**

Notes:

(1) Exploration Target reported at an upper cut-off-grade of 3% HM and a lower cut-off grade of 1%.

(2) Mineral assemblage is reported as a percentage of in situ HM content and is based on visual estimates from Diamantina Laboratories.

The potential quality and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration activity to determine a Mineral Resource estimate and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Exploration Target Development

Exploration drilling programs were carried out by HVY on tenement E 70/5161 utilising conventional drilling and assaying techniques for the mineral sands industry. A total of 48 holes for 1815 m was completed, and 1815 assays were submitted to Diamantina Laboratories and subsequently returned to the Company. Assay results included THM, SLIMES and OS. After reviewing the assay results, selected holes (RHAC0038 and RHAC0039) were submitted for visual logging estimates of mineralogy by Diamantina Laboratories. These results have been used to estimate mineralogy for the Exploration Target.

The drill hole and assay information was used to develop a 3D block model (Figure 5 to 7) in Datamine using the following steps:

- The 48 holes were projected to a publicly sourced DTM generated from SRTM (Shuttle Radar Topography Mission) data.
- The end of hole was used as the lower basement constraint. These constraints were selected to prevent assay grades from being interpolated below maximum drill hole depths.
- A perimeter string was developed around the drill hole collar locations with an offset of approximately 200 m north and south and 80-100 m east and west.
- A block model was created by filling cells between the two constraining surfaces using a parent cell size of 50 x 100 x 1 m in XYZ.
- Assay grades were interpolated into the block model using inverse distance weighting (cubed).
- No assumed minimum thicknesses or other constraints were used to estimate the Exploration Target.
- An assumed bulk density of 1.75 gcm^{-3} was used to estimate material tonnages.
- An Exploration Target was estimated by reporting tonnages between two grade cut-off ranges, the lower at 1% HM and the upper at 3% HM.

It is planned to submit drill hole assay results for analysis via QXRD (Quantitative X-Ray Diffraction) to determine the mineralogy. Once this has been completed, it is anticipated that a Mineral Resource estimate will be able to be prepared.

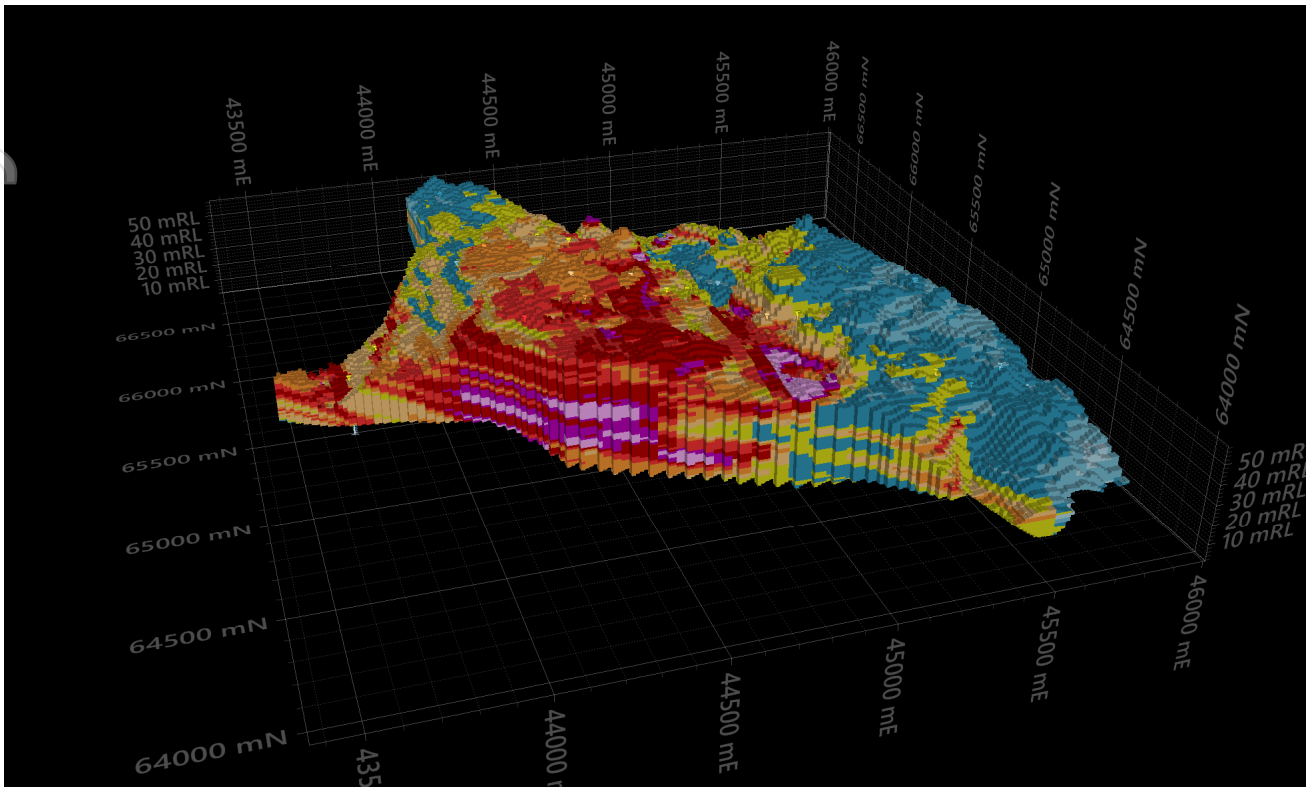

Figure 5: 3D Block Model (Local grid, looking north, 7x vert. ex.)

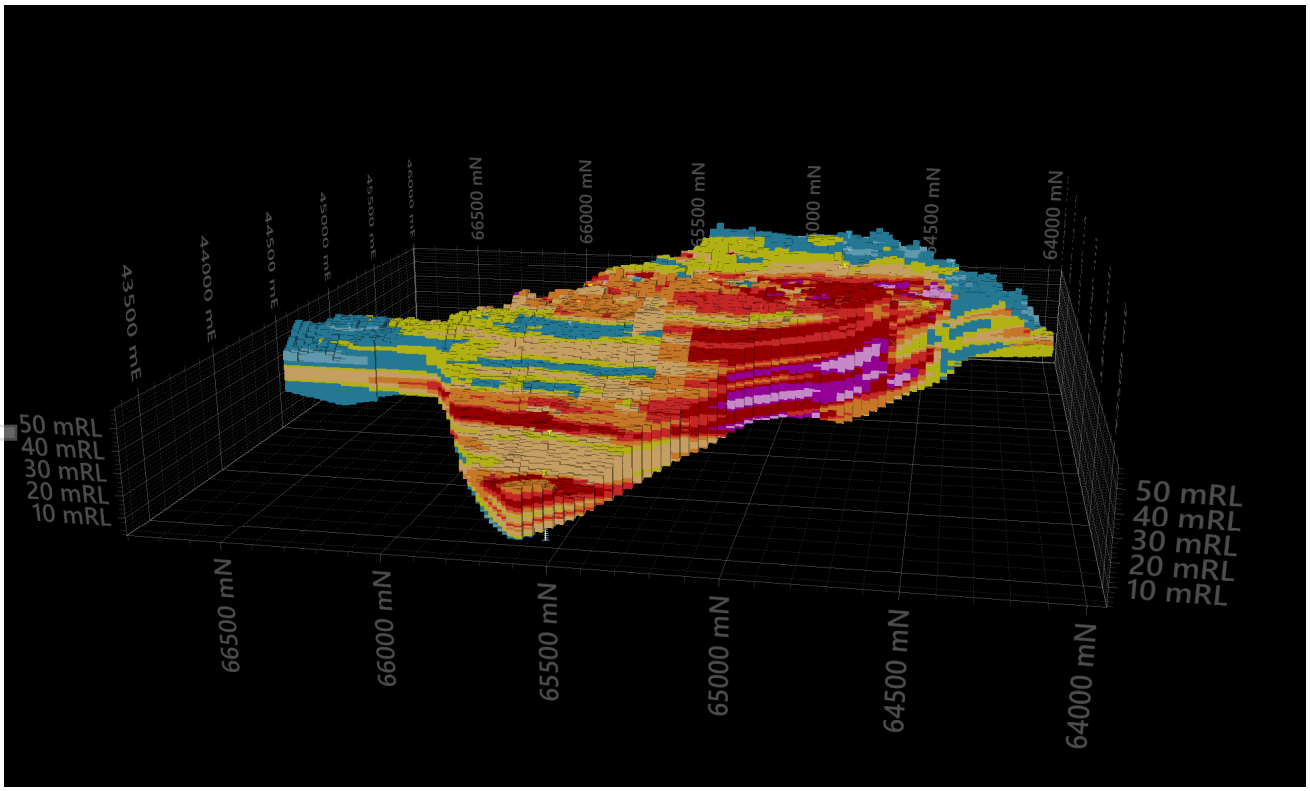

Figure 6: 3D Block Model (Local grid, looking north-east, 7x vert. ex.)

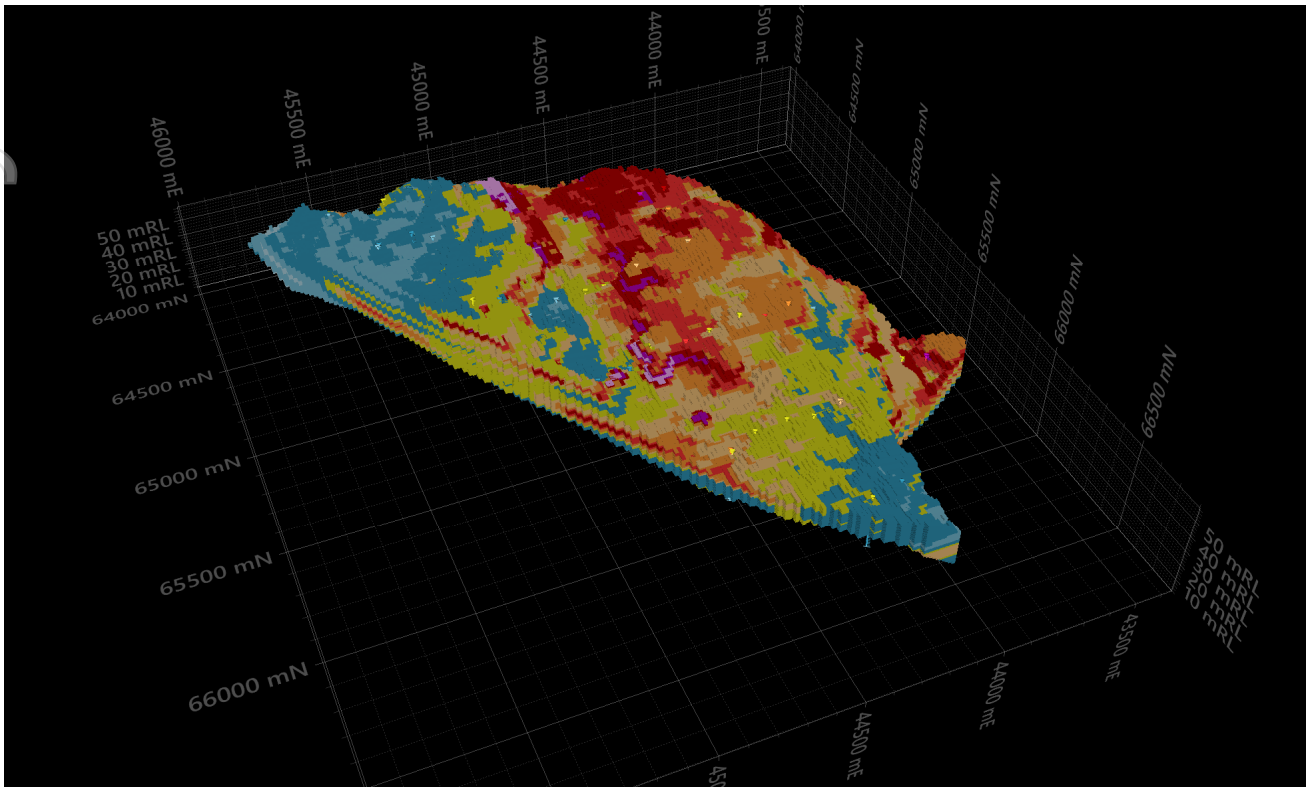

Figure 7: 3D Block Model (Local grid, looking south-west, 7x vert. ex.)

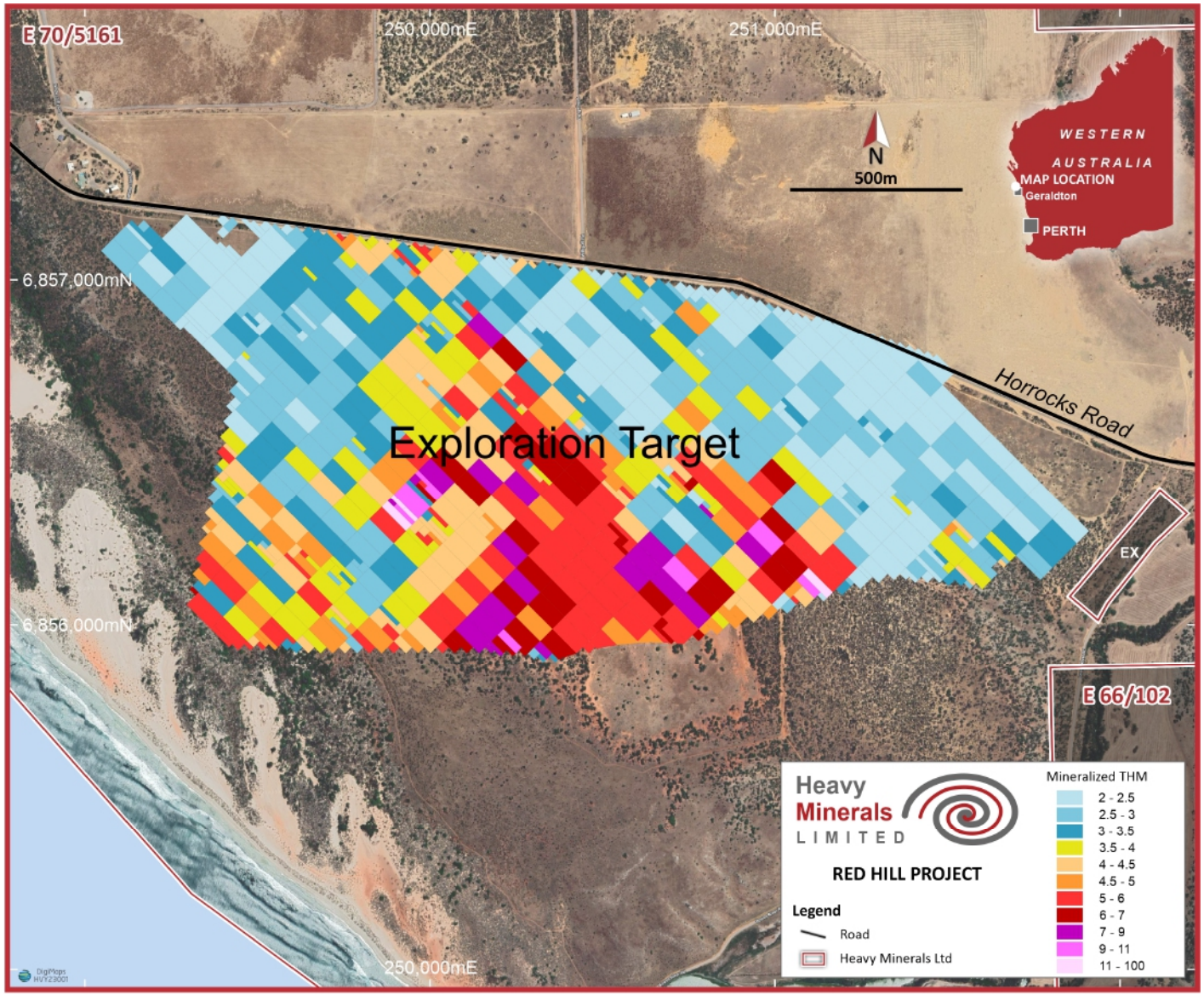

Figure 8: THM heat map (MGA, plan view)

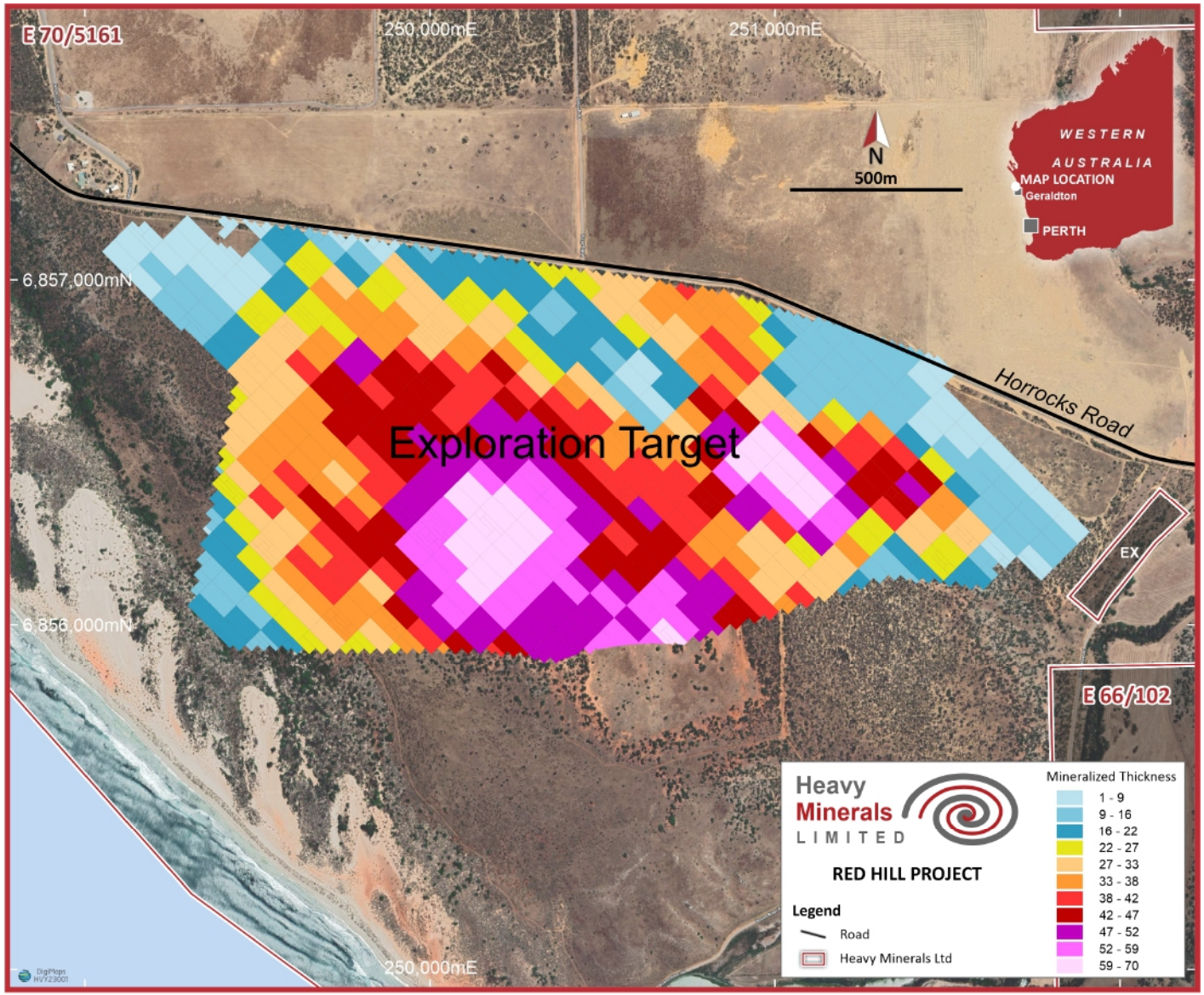

Figure 9: THM Grade heat map (MGA, plan view)

Upcoming News Events:

- **April 2023**: Airborne LiDAR surveys at Port Gregory and Red Hill
- **May 2023**: Further assay results for Port Gregory drilling campaigns
- **May 2023**: Updated Port Gregory JORC Mineral Resource (date subject to QXRD results being received)
- **May 2023**: Commencement of Port Gregory Pre-Feasibility Study
- **June 2023**: Maiden Red Hill JORC Resource (date subject to QXRD results being received)
- **June 2023**: Red Hill Scoping Level Metallurgical Study

This announcement has been authorised by the Board of Directors of the Company.

Ends

For further information, please contact:

Heavy Minerals Limited

Adam Schofield
Non-Executive Chairman
Ph: +61 (08) 9481 0389
E: info@heavyminerals.com

Andrew Taplin
Chief Executive Officer
Ph: +61 (08) 9481 0389
E: andrew@heavyminerals.com

Media & Investor Enquiries

Peter Taylor, NWR Communications Ph: +61 (0) 412 036 231
E: Peter@nwrcommunications.com.au

About Heavy Minerals Limited

Heavy Minerals Limited (ASX: HVY) is an Australian listed industrial mineral exploration company.

The Company's projects are prospective for industrial minerals including but not limited to Garnet, Zircon, Rutile and Ilmenite. The Company's initial focus is the Port Gregory and Red Hill Garnet Projects with Port Gregory having a JORC (2012) Inferred and Indicated Mineral Resource of 135 million tonnes @ 4.0% Total Heavy Minerals. This includes 4.9 million tonnes of contained Garnet and 220 thousand tonnes of ilmenite [1].

The Company's other project is the Inhambane Heavy Mineral Project in Mozambique which contains a JORC (2012) Inferred Mineral Resource of 90 million tonnes @ 3.0% Total Heavy Mineral [2].

To learn more please visit: www.heavyminerals.com

[1] https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02516855-6A1089842?access_token=83ff96335c2d45a094df02a206a39ff4
[2] https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02462745-6A1067130?access_token=83ff96335c2d45a094df02a206a39ff4

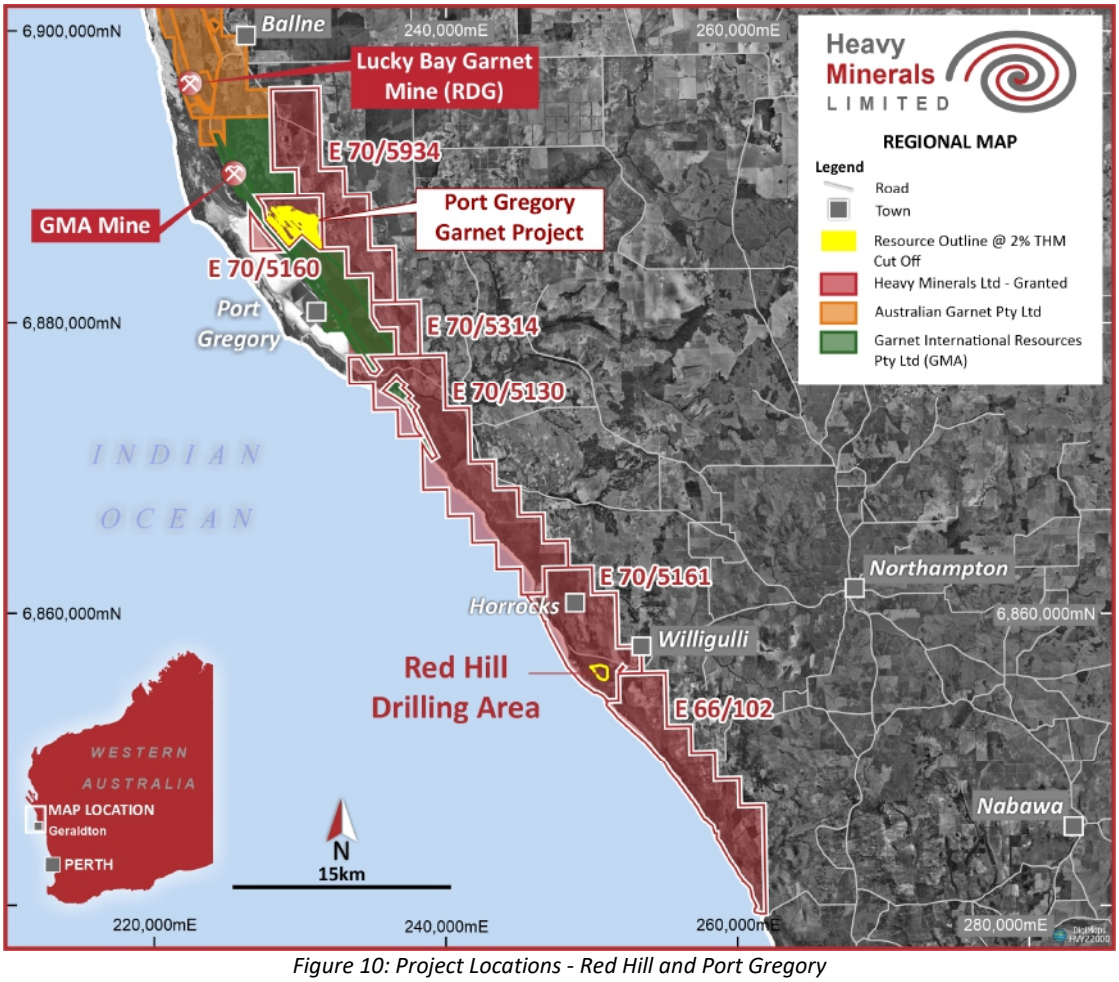

Figure 10: Project Locations - Red Hill and Port Gregory

Competent Persons Statement(s)

The information in this announcement that relates to Exploration Results and Exploration Targets has been prepared, compiled and reviewed by Mr. Greg Jones (FAusIMM) who is a Non-Executive Director of the Company.

Mr. Jones is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being reported on to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

Mr. Jones has reviewed this report and consents to the inclusion in the report of the matters in the form and context with which it appears.

Cautionary Statement

Estimates by experienced, competent geoscientists are considered to be reliable and reproducible semi-quantitative estimates of the abundance of minerals present in a sample. Visual estimates of heavy mineral and mineral assemblage abundance should, however, never be considered a proxy or substitute for laboratory analyses where mineral concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding potential impurities or deleterious physical properties relevant to valuations of industrial minerals.

Appendix 1: JORC Code Table 1

Section 1 Sampling Techniques and Data		
Criteria	**Explanation**	**Comment**
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• *Aircore drilling was used to obtain samples for analysis at 1.0 m intervals* • *Each 1.0 m sample was homogenized within the sample bag by rotating the sample bag* • *A appropriate sample of sand, approx. 70 g (or the size of a matchbox), is scooped from the sample bag for an initial visual THM% estimation and logging. A similar sample mass is used for every pan sample for visual THM% estimation* • *The standard sized sample is to ensure calibration is maintained for consistency in visual estimation* • *A sample ledger is kept at the drill rig for recording sample numbers* • *The 1.0 m aircore drill samples have an average range between 5 kg and 7 kg and were split down using a rig based rotary splitter to 1.0 to 1.5 kg.* • *Samples were transported to Diamantina Laboratories for assaying.* • *The laboratory sample was dried for up to 24 hours @ 105-110 degrees Celsius.* • *The sample was then loosened until friable and put over a rotary splitter to take a 250 g sub-sample.* • *This sub-sample was then wet screened on a Sweco vibrating screen deck at a top aperture of 1 mm (oversize - OS) and a bottom screen of 45 µm (SLIMES fraction).* • *The sand fraction containing the THM (-1 mm and +45 µm) is then dried and a sub-split of approximately 100 g is taken using a micro riffle splitter and used for heavy liquid separation using funnels and a heavy liquid, Tetrabromoethane (TBE), with a density of between 2.92 and 2.96 gcm-3 to determine total heavy mineral (THM) content.*
Drilling techniques	• *Drill type (e.g. 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).*	• *Aircore drilling with inner tubes for sample return was used* • *Aircore is considered a standard industry technique for HMS mineralisation. Aircore drilling is a form of reverse circulation drilling where the sample is collected at the face and returned inside the inner tube* • *Aircore drill rods used were 3 m long* • *NQ diameter (76mm) drill bits and rods were used* • *All drill holes were vertically*

Criteria	Explanation	Comment
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *AC drill sample recovery is monitored by reviewing the sample mass of the total weight of the 1.0 m interval weighed both on site as a wet sample and at the laboratory as a dried sample* • *Industry leading mineral sand drilling specialists were engaged to drill the holes with experienced drillers to maximize drill recovery such as maintaining drill penetration rates, airflow and water injection* • *While initially collaring the hole, limited sample recovery can occur in the initial 0 m to 1 m sample interval owing to sample and air loss into the surrounding loose soils* • *The initial 0 m to 1 m sample interval is drilled very slowly in order to achieve optimum sample recovery* • *The entire 1.0 m sample passes through the on board rotary splitter and the 1.0 m sample collected in a pre-numbered calico bag. The bulk reject is not collected and is shovelled back down the hole upon completion* • *About 10 1.0 m samples are placed in numbered poly weave bags and secured with a cable tie* • *All samples were drilled in dry conditions, with no groundwater encountered. Water injection was used to keep dust down and maintain the integrity of the drill hole.* • *At the end of each drill rod, the drill string is cleaned by blowing down with air/water to remove any clay and silt potentially built up in the sample hose* • *The cyclone sampling lid is also opened up with a quick release latch and the inside is manually scraped down by the off-sider to release any material build-up* • *The twin-tube aircore drilling technique is known to provide high quality samples from the face of the drill hole*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• *The 1.0 m aircore samples were each qualitatively logged using a field laptop (Toughbook) an entered into Field Marshall* • *The aircore samples were logged for lithology, colour, grainsize, rounding, hardness, rock type, sorting, estimated THM%, estimated Slimes% and any relevant comments* • *Every drill hole was logged in full with detailed logging based on a small sample of sand taken from the split sample to improve representivity* • *Logging is undertaken with reference to a Drilling Guideline with codes prescribed and guidance on description to ensure consistent and systematic data collection*

Criteria	Explanation	Comment
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• *The 1.0 m AC drill sample collected at the source was split down to 1.0 to 2.0 kg using a rig based rotary splitter* • *The sample sizer and process is considered an appropriate technique for mineral sands* • *The sample sizes were deemed suitable to reliably capture THM, slime, and oversize characteristics, based on industry experience of the geologists involved and consultation with laboratory staff* • *Field duplicates of the samples were completed at a frequency of 1 per 40 primary samples* • *Standard Certified Reference Material samples are inserted into numbered sample bags in the field at a frequency of 1 per 40 samples*
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• *The wet panning at the drill site provides an estimate of the THM% which is sufficient for the purpose of determining approximate concentrations of THM in the first instance* • *Individual 1.0 m aircore sub-samples (approximately 1.0 - 2.0 kg) were analysed by Diamantina Laboratories in Perth, Western Australia* • *Diamantina Laboratories is considered to be a mineral sands industry leading laboratory* • *The as received sample was dried for up to 24 hours @ 105-110 degrees Celsius.* • *The sample was then loosened until friable and put over a rotary splitter to take a 250 g sub-sample.* • *This sub-sample was then wet screened on a Sweco vibrating screen deck at a top aperture of 1 mm (oversize - OS) and a bottom screen of 45 µm (SLIMES fraction).* • *The sand fraction containing the THM (-1 mm and +45 µm) is then dried and a sub-split of approximately 80 g is taken using a micro riffle splitter and used for heavy liquid separation using funnels and a heavy liquid, Tetrabromoethane (TBE), with a density of between 2.92 and 2.96 gcm-3 to determine total heavy mineral (THM) content.* • *This is an industry standard technique*

Criteria	Explanation	Comment
		• *Field duplicates and HM Standards are alternatively inserted into the sample string at a frequency of 1 per 40 primary samples* • *Diamantina completed its own internal QA/QC checks that included laboratory repeats at a rate of 1 in 40 and the insertion of Standard Certified Reference Material at a rate of 1 in 40 prior to the results being released* • *Analysis of QA/QC samples show the laboratory data to be of acceptable accuracy and precision.* • *Any batches that failed QAQC validation were repeated in total* • *The adopted QA/QC protocols are acceptable and equal to accepted best industry practice*
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• *All results are checked by the Competent Person* • *The Competent Person makes periodic visits to the laboratory to observe sample processing* • *A process of laboratory data validation using mass balance is undertaken to identify entry errors or questionable data* • *Field and laboratory duplicate data pairs (THM / OS / SLIMES) of each batch are plotted to identify potential quality control issues* • *Standard Certified Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<2SD) and that there is no bias or drift* • *The field and laboratory data has been updated into a Microsoft Access database and then imported into Datamine drill hole files.* • *Data validation criteria are included to check for overlapping sample intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files, duplicate sample numbers and other common errors* • *No adjustments are made to the primary assay data*
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• *Down hole surveys for shallow vertical aircore holes are not required* • *A handheld GPS was initially used to identify the positions of the drill holes in the field. The handheld GPS has an accuracy of +/? 5m in the horizontal* • *Adjusted SRTM (Shuttle Radar Topography Mapping) at 30 arc seconds was used for indicative topography and RL prior to a LiDAR survey that is planned to take place once field cropping is completed. At this stage of the exploration program this is considered to be of adequate indicative accuracy.* • *The datum used is GDA94 and coordinates are projected as UTM zone 50*

Criteria	Explanation	Comment
Data spacing and distribution	• *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.*	*Aircore Drilling* • *The planned drill density was 100 m south-west/north-east by 400 m south-east/north-west.* • *This spacing is designed for supporting the development of Mineral Resource Estimation pending that the ensuing results of drilling and assaying will support the development of a Mineral Resource estimate* • *Each aircore drill sample is a single 1.0 m sample of sand intersected down the hole* • *No compositing has been applied for values of THM, slime and oversize, other than the summary reporting of mineralisation intervals in this announcement* • *It is planned to prepare compositing of heavy samples for mineral assemblage determination via QXRD* • *Preliminary sachet scanning of heavy mineral sinks (THM) was undertaken to determine an approximate gross mineralogy*
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *The aircore drilling section lines were oriented perpendicular to the strike of mineralisation* • *The strike of the mineralisation is sub-parallel to the contemporary coastline and is interpreted to be controlled by limestone basement* • *Drill holes were vertical because the nature of the mineralisation is relatively horizontal* • *The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralisation limiting bias*
Sample security	• *The measures are taken to ensure sample security.*	• *Aircore samples remained in the custody of Company representatives until they were trucked to Perth using an independent contractor or samples were transported by Company representatives* • *The samples were transported to Perth and delivered directly to the laboratory along with a sample manifest for checking of samples* • *The laboratory inspected the packages and did not report tampering of the samples*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *Internal reviews were undertaken and Richard Stockwell of Placer Consulting Pty Ltd was engaged to undertake supervision and training of onsite Company engaged contractors.*

Section 2 Reporting of Exploration Results		
Criteria	**Explanation**	**Comment**
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *The completed drilling lies within the granted exploration licence E70/5161.* • *At the time of reporting all tenure was secure and any administrative costs or fees were fully paid up.*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• *No previous exploration has been undertaken on the tenement*
Geology	• *Deposit type, geological setting and style of mineralisation.*	• *The deposit style is a combination of dunal and fluvial / marine sediments. Heavy mineral accumulations are preserved throughout the stratigraphic sequence.*
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* - *easting and northing of the drill hole collar* - *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* - *dip and azimuth of the hole* - *down hole length and interception depth* - *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Independent Geologist should clearly explain why this is the case.*	• *All significant drill results have been identified in Appendix 2 of this report.* • *No relevant material data has been excluded from this report.*

Criteria	Explanation	Comment
Data aggregation methods	• *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.*	• *All length weighted intervals are reported for each hole in (Appendix 2) for grades above 2.0% THM*
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• *All drill holes are vertical and perpendicular to the dip and strike of mineralisation and therefore all interceptions are approximately true thickness.* • *Drill holes are inferred to intersect the mineralisation approximately perpendicularly.* • *The deposit style is flat-lying and so the vertical holes are assumed to intersect the true width of any mineralisation.*
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• *Figures and plans are displayed in the main text of the Release*
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• *All drill results > 2.0% THM have been reported and tabulated in Appendix 2.*
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *Samples have not yet been tested for in situ density.* • *Deep Penetrating Ground Radar (DPGR) has been completed along the drill lines.* • *Processing of the DGPR surveys is still ongoing however preliminary results correlate to the identification of bands of limestone and calcrete in the drilling carried out to date.*

Criteria	Explanation	Comment
Further work	• *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.*	• *Further work including mineral assemblage composite sampling and analysis by QXRD is planned to be carried out.* • *Once QXRD results have been returned, it is planned to develop a Mineral Resource estimate for the Red Hill project.* • *Drilling shows that mineralisation is still open to the south and south-west, however access to this area is restricted by a lodged but not registered Aboriginal Heritage Place.* • *Refer to the main body of the release for further information regarding diagrams.*

Appendix 2: Summary Results for Aircore Drilling

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZIMUTH	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
RHAC0001	251308	6856234	67.1	33	90	360	5	6	1	2.1	11.3	0.7
RHAC0001	251308	6856234	60.1	33	90	360	10	15	5	3.4	6.2	21.0
RHAC0001	251308	6856234	47.1	33	90	360	22	29	7	2.7	6.1	5.0
RHAC0002	251371	6856306	79.1	39	90	360	1	4	3	2.4	10.3	0.5
RHAC0002	251371	6856306	71.1	39	90	360	10	11	1	3.3	7.5	5.7
RHAC0002	251371	6856306	54.6	39	90	360	15	39	24	4.4	10.9	9.6
RHAC0003	251448	6856374	75.9	20	90	360	0	3	3	2.5	9.5	5.8
RHAC0003	251448	6856374	71.9	20	90	360	5	6	1	2.2	5.0	2.8
RHAC0003	251448	6856374	68.4	20	90	360	7	11	4	2.5	9.7	3.1
RHAC0003	251448	6856374	58.9	20	90	360	17	20	3	6.4	8.2	8.1
RHAC0004	251537	6856459	53.8	48	90	360	14	15	1	2.2	4.4	0.1
RHAC0004	251537	6856459	47.8	48	90	360	20	21	1	2.4	14.0	11.4
RHAC0004	251537	6856459	41.8	48	90	360	26	27	1	2.3	9.0	7.4
RHAC0004	251537	6856459	39.3	48	90	360	28	30	2	3.4	4.9	17.3
RHAC0004	251537	6856459	36.3	48	90	360	31	33	2	6.1	3.6	12.3
RHAC0004	251537	6856459	29.8	48	90	360	34	43	9	2.8	4.9	15.1
RHAC0005	251601	6856520	65.2	36	90	360	10	11	1	2.1	3.2	0.5
RHAC0005	251601	6856520	58.7	36	90	360	16	18	2	2.5	7.3	4.8
RHAC0007	250480	6855971	66.5	46	90	360	0	36	36	8.8	6.3	6.2
RHAC0007	250480	6855971	43.0	46	90	360	37	46	9	9.0	5.7	2.5
RHAC0008	250542	6856053	60.4	51	90	360	0	51	51	7.6	7.6	6.7
RHAC0009	250730	6856104	78.5	45	90	360	0	16	16	6.4	5.0	10.7
RHAC0009	250730	6856104	62.5	45	90	360	17	31	14	4.8	4.1	2.8
RHAC0009	250730	6856104	48.0	45	90	360	32	45	13	6.3	7.3	7.0
RHAC0010	250761	6856238	73.6	37	90	360	1	9	8	3.5	12.9	5.2
RHAC0010	250761	6856238	65.1	37	90	360	10	17	7	6.2	2.6	2.4
RHAC0010	250761	6856238	53.1	37	90	360	25	26	1	2.2	5.6	0.5
RHAC0010	250761	6856238	47.1	37	90	360	27	36	9	6.2	4.2	9.8
RHAC0011	250901	6856382	73.5	73	90	360	0	24	24	6.6	8.0	15.0
RHAC0011	250901	6856382	57.0	73	90	360	27	30	3	2.5	5.0	13.8
RHAC0011	250901	6856382	50.5	73	90	360	31	39	8	2.4	7.5	6.5
RHAC0011	250901	6856382	35.0	73	90	360	50	51	1	2.4	16.7	15.8
RHAC0011	250901	6856382	32.5	73	90	360	52	54	2	2.3	3.4	4.1
RHAC0011	250901	6856382	24.5	73	90	360	60	62	2	2.5	8.8	17.4
RHAC0011	250901	6856382	22.0	73	90	360	63	64	1	2.8	17.2	9.8
RHAC0011	250901	6856382	17.5	73	90	360	65	71	6	6.0	7.0	5.4
RHAC0011	250901	6856382	13.0	73	90	360	72	73	1	2.3	6.2	16.7
RHAC0012	250976	6856447	75.0	33	90	360	0	20	20	5.3	8.7	10.6
RHAC0012	250976	6856447	59.5	33	90	360	21	30	9	2.8	6.1	5.3
RHAC0013	251035	6856516	80.8	57	90	360	0	1	1	2.1	10.0	0.5
RHAC0013	251035	6856516	69.8	57	90	360	2	21	19	3.5	10.0	4.3
RHAC0013	251035	6856516	48.8	57	90	360	22	43	21	4.0	9.9	13.5

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZIMUTH	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
RHAC0013	251035	6856516	36.3	57	90	360	44	46	2	3.8	5.5	5.0
RHAC0013	251035	6856516	31.3	57	90	360	47	53	6	3.1	13.5	10.1
RHAC0014	251120	6856586	80.9	36	90	360	6	7	1	2.4	8.8	1.2
RHAC0014	251120	6856586	78.9	36	90	360	8	9	1	2.4	2.2	1.0
RHAC0014	251120	6856586	69.9	36	90	360	16	19	3	2.6	8.8	2.7
RHAC0014	251120	6856586	63.9	36	90	360	23	24	1	3.9	10.6	7.4
RHAC0014	251120	6856586	58.4	36	90	360	26	32	6	3.0	8.1	6.6
RHAC0014	251120	6856586	53.9	36	90	360	33	34	1	2.0	11.2	4.5
RHAC0015	251168	6856646	79.6	33	90	360	14	15	1	2.4	6.1	7.3
RHAC0015	251168	6856646	74.6	33	90	360	19	20	1	2.2	4.5	2.0
RHAC0015	251168	6856646	71.6	33	90	360	21	24	3	2.7	7.1	1.6
RHAC0015	251168	6856646	65.1	33	90	360	28	30	2	2.8	11.3	10.0
RHAC0015	251168	6856646	62.1	33	90	360	31	33	2	2.5	9.2	11.0
RHAC0016	251250	6856744	83.6	33	90	360	8	9	1	2.7	2.4	0.3
RHAC0016	251250	6856744	71.6	33	90	360	19	22	3	2.4	2.8	0.2
RHAC0016	251250	6856744	62.1	33	90	360	27	33	6	4.6	5.0	1.1
RHAC0017	250254	6856018	85.1	45	90	360	0	3	3	5.4	16.9	0.6
RHAC0017	250254	6856018	62.1	45	90	360	4	45	41	7.1	6.9	8.0
RHAC0018	250326	6856090	70.9	39	90	360	0	22	22	4.7	11.1	13.2
RHAC0018	250326	6856090	50.9	39	90	360	23	39	16	6.7	4.4	1.3
RHAC0019	250387	6856158	70.1	44	90	360	0	44	44	5.7	8.1	9.2
RHAC0020	250171	6856223	57.3	60	90	360	0	60	60	6.8	7.7	7.9
RHAC0021	250256	6856301	87.0	33	90	360	0	9	9	4.4	10.9	7.9
RHAC0021	250256	6856301	70.0	33	90	360	10	33	23	6.1	6.3	4.5
RHAC0022	250390	6856453	63.5	46	90	360	0	45	45	5.9	8.7	5.6
RHAC0023	250481	6856531	59.2	39	90	360	0	35	35	5.7	8.1	8.0
RHAC0024	250534	6856574	65.5	22	90	360	0	21	21	4.1	10.3	6.1
RHAC0025	250607	6856657	49.7	33	90	360	24	29	5	3.7	6.3	13.6
RHAC0026	250678	6856731	60.8	33	90	360	9	11	2	2.7	8.3	1.9
RHAC0026	250678	6856731	58.3	33	90	360	12	13	1	2.2	5.1	1.7
RHAC0026	250678	6856731	50.8	33	90	360	18	22	4	2.3	5.5	6.9
RHAC0026	250678	6856731	47.3	33	90	360	23	24	1	3.0	6.2	7.8
RHAC0026	250678	6856731	44.3	33	90	360	26	27	1	2.8	10.9	5.6
RHAC0026	250678	6856731	41.3	33	90	360	29	30	1	2.2	7.3	8.9
RHAC0027	250752	6856796	82.6	36	90	360	2	3	1	2.1	12.3	0.7
RHAC0027	250752	6856796	80.1	36	90	360	4	6	2	2.2	11.0	0.9
RHAC0027	250752	6856796	72.6	36	90	360	7	18	11	5.2	8.6	15.8
RHAC0027	250752	6856796	63.6	36	90	360	19	24	5	3.1	9.9	16.1
RHAC0027	250752	6856796	57.1	36	90	360	26	30	4	2.6	2.3	1.6
RHAC0027	250752	6856796	52.6	36	90	360	32	33	1	2.2	2.9	6.7
RHAC0027	250752	6856796	49.6	36	90	360	35	36	1	3.4	10.6	6.7
RHAC0028	250815	6856871	84.0	30	90	360	0	13	13	4.2	9.8	2.6
RHAC0028	250815	6856871	74.5	30	90	360	14	18	4	3.0	4.5	12.9
RHAC0028	250815	6856871	70.0	30	90	360	20	21	1	2.2	7.0	30.2
RHAC0028	250815	6856871	66.0	30	90	360	22	27	5	3.0	5.0	5.6
RHAC0028	250815	6856871	61.0	30	90	360	29	30	1	2.2	4.5	18.1

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZIMUTH	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
RHAC0030	249407	6856031	19.9	18	90	360	0	6	6	5.4	5.6	8.8
RHAC0030	249407	6856031	14.4	18	90	360	8	9	1	8.7	3.4	16.9
RHAC0030	249407	6856031	11.4	18	90	360	10	13	3	4.4	8.4	21.7
RHAC0030	249407	6856031	7.9	18	90	360	14	16	2	3.2	16.7	12.6
RHAC0031	249484	6856096	18.4	32	90	360	0	13	13	6.1	10.4	6.7
RHAC0031	249484	6856096	9.4	32	90	360	14	17	3	2.7	9.5	1.8
RHAC0032	249551	6856172	38.1	33	90	360	0	1	1	3.0	5.9	31.8
RHAC0032	249551	6856172	29.1	33	90	360	2	17	15	3.2	9.5	6.1
RHAC0032	249551	6856172	18.1	33	90	360	18	23	5	3.2	13.4	8.2
RHAC0032	249551	6856172	13.6	33	90	360	24	26	2	2.6	24.7	1.1
RHAC0032	249551	6856172	11.1	33	90	360	27	28	1	2.3	16.0	0.5
RHAC0033	249611	6856246	40.4	38	90	360	0	13	13	5.7	7.4	10.5
RHAC0033	249611	6856246	28.9	38	90	360	15	21	6	4.9	13.5	1.4
RHAC0033	249611	6856246	15.4	38	90	360	27	36	9	4.4	10.1	16.7
RHAC0035	249760	6856385	74.7	36	90	360	3	4	1	2.0	6.8	16.0
RHAC0035	249760	6856385	67.7	36	90	360	5	16	11	3.2	9.2	5.2
RHAC0035	249760	6856385	57.7	36	90	360	19	22	3	3.6	10.0	6.1
RHAC0035	249760	6856385	54.2	36	90	360	23	25	2	2.3	7.5	0.5
RHAC0035	249760	6856385	49.7	36	90	360	27	30	3	3.3	3.9	1.0
RHAC0035	249760	6856385	44.7	36	90	360	31	36	5	5.0	3.7	0.5
RHAC0036	249831	6856448	82.3	42	90	360	0	6	6	4.7	13.4	19.5
RHAC0036	249831	6856448	75.8	42	90	360	9	10	1	3.2	12.1	9.0
RHAC0036	249831	6856448	71.8	42	90	360	11	16	5	2.9	7.1	0.6
RHAC0036	249831	6856448	67.8	42	90	360	17	18	1	2.9	6.0	0.5
RHAC0036	249831	6856448	60.8	42	90	360	24	25	1	2.1	14.5	13.1
RHAC0036	249831	6856448	51.8	42	90	360	26	41	15	4.8	6.0	4.8
RHAC0037	249891	6856518	81.2	42	90	360	0	2	2	4.1	19.4	15.9
RHAC0037	249891	6856518	76.7	42	90	360	4	7	3	3.4	6.4	9.8
RHAC0037	249891	6856518	69.7	42	90	360	10	15	5	3.1	5.7	0.6
RHAC0037	249891	6856518	60.7	42	90	360	16	27	11	5.4	8.3	5.3
RHAC0037	249891	6856518	47.2	42	90	360	28	42	14	4.3	3.5	2.4
RHAC0038	249960	6856583	83.3	42	90	360	0	8	8	3.7	16.9	4.8
RHAC0038	249960	6856583	77.3	42	90	360	9	11	2	2.5	5.9	1.7
RHAC0038	249960	6856583	71.3	42	90	360	13	19	6	4.0	8.5	1.0
RHAC0038	249960	6856583	56.3	42	90	360	20	42	22	6.6	8.4	4.6
RHAC0039	250037	6856663	73.0	43	90	360	0	20	20	5.0	10.2	5.0
RHAC0039	250037	6856663	52.0	43	90	360	21	41	20	8.2	7.8	4.1
RHAC0039	250037	6856663	40.5	43	90	360	42	43	1	2.1	3.9	7.2
RHAC0040	250096	6856728	73.1	36	90	360	0	15	15	5.9	4.6	4.9
RHAC0040	250096	6856728	62.6	36	90	360	16	20	4	3.6	8.0	5.7
RHAC0040	250096	6856728	52.1	36	90	360	21	36	15	4.9	6.6	9.3
RHAC0041	250192	6856799	64.6	36	90	360	0	34	34	5.5	9.4	8.1
RHAC0042	250247	6856857	59.6	39	90	360	2	21	19	3.6	10.7	12.0
RHAC0042	250247	6856857	48.1	39	90	360	22	24	2	2.4	5.4	9.7
RHAC0043	250324	6856944	65.2	33	90	360	3	7	4	2.7	13.1	11.1
RHAC0043	250324	6856944	57.7	33	90	360	8	17	9	4.9	6.0	9.0

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZIMUTH	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
RHAC0044	249547	6856745	69.7	33	90	360	0	3	3	3.2	17.2	0.4
RHAC0044	249547	6856745	66.7	33	90	360	4	5	1	2.1	18.4	30.2
RHAC0044	249547	6856745	61.2	33	90	360	7	13	6	2.5	9.3	8.5
RHAC0044	249547	6856745	55.7	33	90	360	14	17	3	2.5	14.8	3.9
RHAC0044	249547	6856745	44.7	33	90	360	20	33	13	4.5	6.0	0.7
RHAC0045	249615	6856806	63.5	33	90	360	0	5	5	2.8	16.1	1.6
RHAC0045	249615	6856806	58.0	33	90	360	7	9	2	3.1	10.8	8.1
RHAC0045	249615	6856806	51.0	33	90	360	12	18	6	2.8	9.7	6.1
RHAC0045	249615	6856806	45.5	33	90	360	19	22	3	3.3	6.1	1.8
RHAC0045	249615	6856806	38.5	33	90	360	23	32	9	3.0	5.6	1.0
RHAC0046	249686	6856878	66.1	34	90	360	0	6	6	3.0	16.8	7.4
RHAC0046	249686	6856878	55.1	34	90	360	13	15	2	2.3	7.3	2.6
RHAC0046	249686	6856878	50.1	34	90	360	17	21	4	3.1	7.8	5.2
RHAC0046	249686	6856878	41.6	34	90	360	23	32	9	4.3	7.6	5.1
RHAC0046	249686	6856878	35.6	34	90	360	33	34	1	2.9	4.2	1.4
RHAC0047	249766	6856955	62.5	33	90	360	0	9	9	3.1	10.6	5.3
RHAC0047	249766	6856955	56.0	33	90	360	10	12	2	2.2	10.4	11.4
RHAC0047	249766	6856955	45.0	33	90	360	14	30	16	3.5	8.3	9.0
RHAC0048	249828	6857014	56.1	33	90	360	0	7	7	4.6	10.3	12.1
RHAC0048	249828	6857014	42.6	33	90	360	16	18	2	2.7	8.3	2.6
RHAC0049	249264	6857011	62.0	33	90	360	6	9	3	2.2	10.0	3.8
RHAC0049	249264	6857011	48.0	33	90	360	17	26	9	3.5	8.0	3.4
RHAC0050	249333	6857086	65.1	33	90	360	0	1	1	2.8	7.2	11.2
RHAC0050	249333	6857086	58.1	33	90	360	6	9	3	2.1	9.1	3.7