Heavy Minerals LIMITED

ASX Announcement Date: 02 May 2022

PORT GREGORY MAIDEN JORC MINERAL RESOURCE EXCEEDS TARGET

- Maiden JORC Mineral Resource estimate of **135 Mt @ 4.0% THM**
    - Indicated Mineral Resource of **88 Mt @ 3.8% THM**; and
    - Inferred Mineral Resource of **47 Mt @ 4.5% THM**.
- **90%** garnet fraction within the global total heavy mineral suite
- **4.9 Mt contained garnet (equivalent to 5 years of global demand)**
- Minor ilmenite and rutile credits
- **96%** Valuable Heavy Mineral (VHM) in the THM fraction exceeds all upper limit expectations
- Significant upside potential to the Mineral Resource with mineralisation open to the north and south within HVY's tenure
- Majority of Mineral Resource (65%) is in the Indicated JORC category
- Infill drilling planned to begin in Q3 2022 is aimed at increasing confidence in the deposit's JORC category and adding to the Mineral Resource footprint.

Heavy Minerals Limited (ACN 647 831 833) ("**HVY**", "**Heavy Minerals**" or the "**Company")** is pleased to announce the Maiden Mineral Resource estimate for the Port Gregory Garnet Project of 135 Mt @ 4.0% (THM) at a 2.0% THM cut-off grade. The 90% garnet fraction of the THM exceeded expectations resulting in 4.9 Mt of contained garnet. Significant upside also exists with mineralisation open to the north and south within HVY tenure (Figure 1).

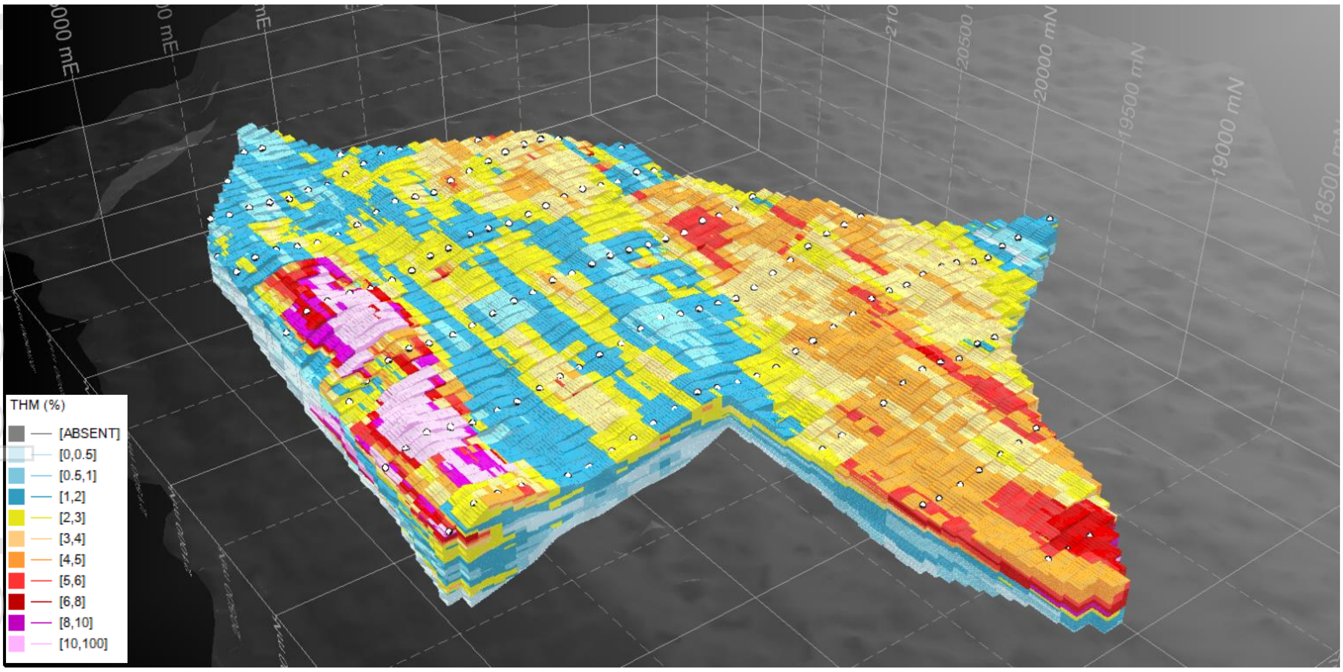

Figure 1: Port Gregory Block Model showing THM grade

Executive Director & CEO, Mr. Nic Matich said:

"The HVY board were confident that the Port Gregory Project was highly prospective, however the size and quality of the resource has exceeded all expectations and this positions HVY as the next potential garnet producer in the region. High grade, shallow mineralisation, lends itself to a low-cost mining operation. The Company is firmly of the view that the Port Gregory asset is a world-class deposit".

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Company Secretary: Stephen Brockhurst

JORC Mineral Resource Estimate

The Mineral Resource estimate for Port Gregory is reported in accordance with the JORC Code (2012 edition). Further information about the Port Gregory Mineral Resource is set out in the *Summary of Resource Estimate Reporting Criteria* section below and includes the information prescribed by ASX Listing Rule 5.9. This information should be read in conjunction with the applicable explanatory information provided for the purposes of Table 1 of the JORC Code, included in Appendices 1 to 3 of this announcement.

The Port Gregory Mineral Resource estimate is reported above a cut-off grade of 2.0% THM and is presented below in Table 1. This table conforms to guidelines set out in the JORC Code (2012).

The Mineral Resource outline for the Port Gregory deposit is presented in Figure 5 and the JORC Classification is presented in Figure 8.

At a cut-off grade of 2.0% THM the Port Gregory deposit comprises a total Mineral Resource of 135 Mt @ 4.0% THM, 10% SLIMES and 10% OS (Over Size) containing 5.4 Mt of THM with an assemblage of 90% garnet, 4% ilmenite, 1% rutile and 0.6% zircon. The JORC categories are specifically stated as:

- an Indicated Mineral Resource of 88 Mt @ 3.8% THM, 10% SLIMES and 9% OS containing 3.3 Mt of THM with an assemblage of 89% garnet, 4% ilmenite, 2% rutile and 0.6% zircon; and
- an Inferred Mineral Resource of 47 Mt @ 4.5% THM, 10% SLIMES and 11% OS containing 2.1 Mt of THM with an assemblage of 91% garnet, 4% ilmenite, 1% rutile and 0.5% zircon.

Table 1 Port Gregory – Mineral Resource Estimate

Summary of Mineral Resource estimate (1)							THM Assemblage (2)					
Classification		In Situ	In Situ									
	Material	THM	Garnet	THM	SL	OS	Garnet	Ilmenite	Zircon	Rutile	Anatase	Other
	(Mt)	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Indicated	88	3.3	3.0	3.8	10	9	89	4	0.6	2	0.4	4
Inferred	47	2.1	1.9	4.5	10	11	91	4	0.5	1	0.2	3
Grand Total	**135**	**5.4**	**4.9**	**4.0**	**10**	**10**	**90**	**4**	**0.6**	**1**	**0.3**	**4**

Notes:

(1) Mineral Resource reported at a cut-off-grade of 2.0% THM.

(2) Mineral assemblage is reported as a percentage of in situ THM content.

Upcoming News:

- **May 2022**: Metallurgical Testwork results (Inhambane)
- **May 2022**: Scoping Study Commencement (Port Gregory)
- **May 2022**: DGPR survey at Red Hill prospect
- **June 2022**: Metallurgy results (Port Gregory)
- **3rd Quarter 2022**: Scoping Study delivery
- **3rd Quarter 2022**: Red Hill drilling and 2nd phase Port Gregory drilling

Port Gregory Project - CEO discussion

The Mineral Resource Estimate of 135 Mt @ 4.0% THM containing 4.9 Mt of garnet equates to approximately five years of global garnet demand. A Mineral Resource containing 4.9 MT garnet with an ilmenite/rutile credit is an enviable position for the Company to be in after only eight months of being listed on the ASX.

The assemblage of 90% Garnet, 4% Ilmenite, 1% Rutile and 0.6% Zircon, equates to a 96% VHM fraction which is higher than the Board expected and provides HVY with numerous options with respect to developing the project. With the Mineral Resource estimate now defined, the project moves into the scoping phase, which is where the team will gain a greater understanding of the project's true potential.

In the coming weeks, pit optimisation work will be undertaken by IHC Mining to test the areas of the deposit where mineralised zones could be converted into potential mining inventory with the aim of providing input to a Scoping Study. HVY's future exploration program at Port Gregory will then be driven by the results of the Scoping Study. The Company has the option of conducting infill and extension drilling to increase the JORC confidence of the Mineral Resource and potentially adding further tonnes to the resource inventory. These future activities will be reviewed as potential options, based on results from the Scoping Study and internal strategic discussions to determine which option(s) align with HVY's strategy to rapidly develop the project, whilst simultaneously adding shareholder value.

The project is located on private land with no identified heritage sites[1] and no known threatened ecological communities (TEC's). The current landowners are proactive in working with HVY and GMA on land access, exploration, and mining rights. These factors, though not definitive in ensuring a positive outcome for HVY moving to development, are certainly positive indicators for the future.

Zircon, rutile and ilmenite grades improve moving eastward across the resource. This may indicate that there is potential for heavy mineral sand deposits further to the east which appear to have a more varied and traditional mineral sands assemblage. The securing of tenement E70/5934 has proven to be a strategic and prudent addition, as the wide spaced step-out drilling to be undertaken in the second phase of the Port Gregory program will likely extend into this tenement. In preparation for this, land access agreements have been put in place for a significant portion of the tenure (E70/5934) and PoW (Program of Works) permits have been submitted.

The Company's potential is further enhanced by the greenfields discovery at the "Red Hill Prospect" which highlights the opportunity for additional mineral deposits across HVY's extensive tenure holding which will add to HVY's global resource package. Follow up drilling for the prospect in the third quarter of 2022 will test this potential.

[1] Schwede, M. 1993. The archaeology of the Geraldton Coastal Region. A Report for the Aboriginal Communities of the Geraldton Coastal Region.

Industrial garnet demand is forecast to outstrip supply in the coming years with a widening deficit forecast from 2024 onwards[2] (Figure 2) unless additional supply is brought to market. Pricing has responded accordingly with garnet pricing increasing 20% Y.O.Y in the USA, reaching US$325 per tonne (garnet concentrate) in 2021.

Future alluvial almandine garnet produced from the Port Gregory region can not only help fill this supply gap but is also likely to displace inferior hard rock garnet that is less preferred by end users, typically due to its reduced recyclability.

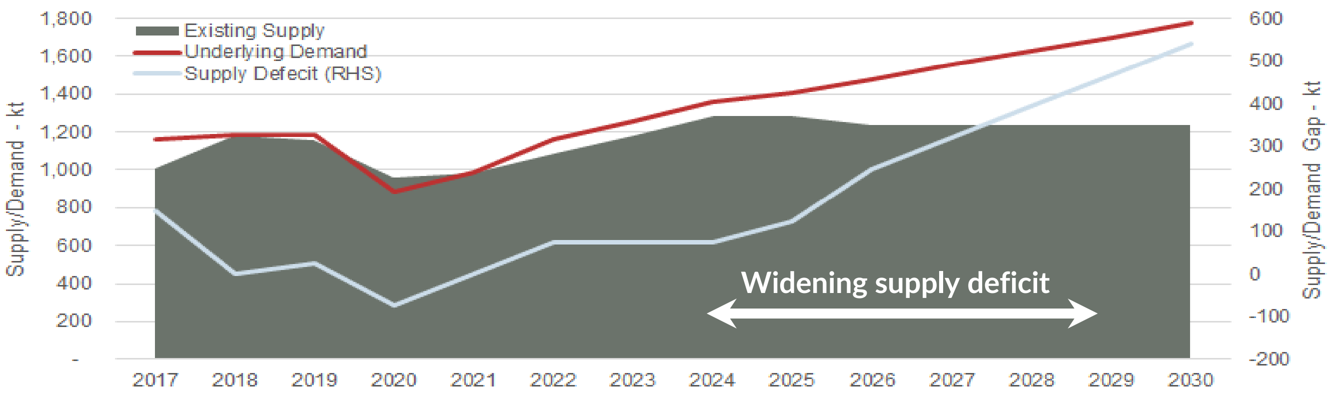

Figure 2: Garnet Supply/Demand Forecast

Key Appointment:

IHC Mining have been engaged as the Study Managers for the Port Gregory Scoping Study and Preliminary Economic Assessment (PEA). IHC Mining are an industry leading Mineral Sands Engineering Consultancy with over 100 years of mineral sands and execution experience. The Study Team selected for the project is led by Engineers that worked directly on the RDG Lucky Bay mine project within the last 2.5 years.

With extensive, in-house experience over a complete suite of services, IHC Mining's capabilities include:

- Geology;
- Metallurgical testwork;
- Mining Engineering and Mine Planning;
- Engineering;
- Equipment supply ; and
- Project delivery, including commissioning.

IHC are expected to deliver an industry leading and robust assessment, thereby maximising the value proposition for HVY for the Port Gregory project. This includes the most practical and economically feasible project development pathway for HVY, thereby delivering the maximum value for shareholders.

[2] [1]TZMI Garnet Market Data (Project 11759) Jan 2021.

Summary of Resource Estimate Reporting Criteria

Regional Geology:

The heavy minerals in the known deposits in Western Australia were ultimately, but indirectly, derived from the weathering of crystalline igneous rocks in the Archean Yilgarn Block. Heavy mineral grains derived from the Yilgarn Block were initially deposited in thick sequences of Mesozoic sediments that filled the Perth Basin. There was some local degree of concentration of heavy minerals in these sediments relative to the primary source areas, in places reaching potential ore grades. For example, the Beenup deposit is thought to be Mesozoic in age. Erosion and reworking of the relatively soft Mesozoic sediments, particularly those parts of the stratigraphic sequence dominated by coarse sandstones and grits, subsequently released the heavy minerals into the strand deposits.

The project area lies in the most northerly part of the Perth Basin, on the western side of the Northampton Block.

The Tamala Limestone, a belt of coastal limestone extends up to 8 km inland. It is composed of eolianite, which accumulated originally as coastal sand dunes in the late Pleistocene. This has developed over a basement of late Cretaceous age Winning Group sediments which can be seen outcropping near Yanganooka Well. Several erosional scarps have been developed on the seaward side of the Tamala Limestone, one of which is equivalent to the strand-line mineralisation to the south. Fossil crescent dunes can also be distinguished on top of the massive limestone area which may be of early Pleistocene age.

Mobile coastal dunes, equivalent to the Safety Bay Sand, are extensively developed and in the northern part transgress over the Tamala Limestone. They are divided into a coastal zone of large mobile longitudinal and crescent dunes, from an inner zone of older, stabilized and more sparsely distributed crescent dunes.

Project Geology:

The local geology is dominated by dunal accumulations of grey to brown to white sand and Limesand. These sediments are thought to be Quaternary in age and overlay Silurian aged Tumblagooda Sandstone which is composed of a Red-bed sequence of sandstone; siltstone; and minor conglomerate. They locally appear to have been deposited in an embayment eroded into the Tumblagooda Sandstone.

The Limesand has been partially indurated with carbonate cementation and sandy limestone is locally developed. The older the formation the more induration appears to be developed.

Drilling Techniques:

Aircore (AC) drilling was used to obtain samples for analysis with a total of 187 AC holes for 5,653.5 metres drilled to an average depth of 30 m. Three companies were ultimately engaged to conduct the program with the bulk of the work undertaken by Bostech Drilling (Figure 4) with their Truck mounted Drillboss 200 AC rig.

AC drill sample recovery is monitored by reviewing the sample mass of the total weight of the 1.0, 1.5 or 2.0 m interval weighed both on site as a wet sample and at the laboratory as a dried sample. The entire sample passes through the on-board rotary splitter and the sample collected in a pre-numbered calico bag. The bulk reject is not collected and is shovelled back down the hole upon completion

The drilling program was undertaken in dry conditions with holes drilled vertically and spaced at 100 m across strike and 500 m along, with 10 lines capturing the footprint of the defined Mineral Resource. The spacing / density of the holes is deemed to adequately define the mineralisation in the Mineral Resource estimate.

Sampling Techniques and Sample Analysis Methodology:

The aircore drill samples have an average range between 6 kg and 9 kg and were split using the rig based rotary splitter to between 1.5kg and - 2.5 kg. The split samples were “panned” and visually estimated for THM on site.

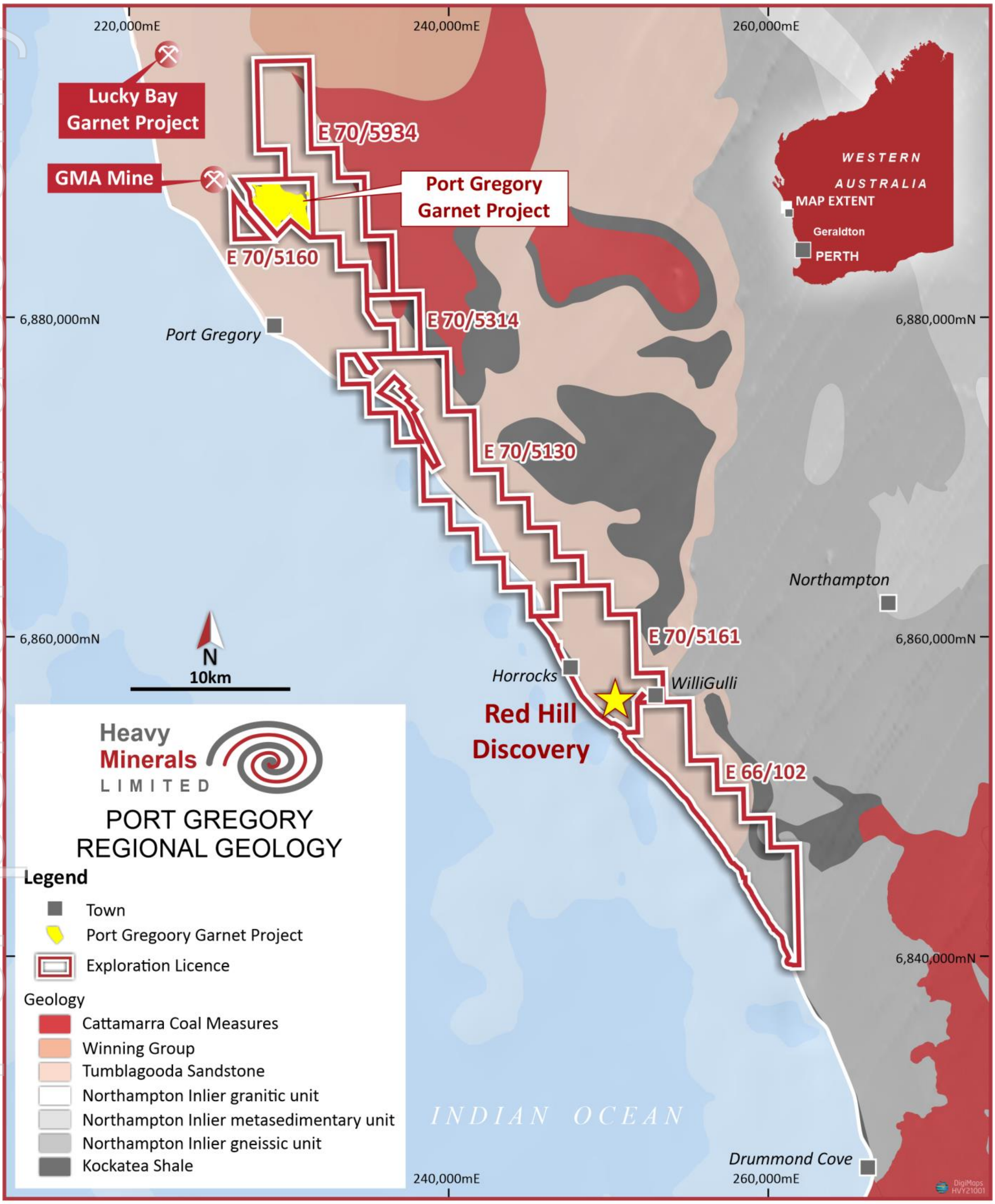

Figure 3: Port Gregory Regional Geology

Figure 4: Bostech drilling rig on site

The remainder of the split samples (laboratory sample) were transported to Diamantina Laboratories for assaying where the laboratory sample was dried for up to 24 hours @ 105-110 degrees Celsius. The sample was then loosened until friable and passed through 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.

This sampling and sample analysis technique is considered appropriate and reliable based upon accepted industry practice.

QA/QC:

Accuracy monitoring is achieved through submission of certified reference materials (CRM's). HVY uses externally sourced CRM's inserted into sample batches at a rate of 1 in 40. The externally sourced, certified standard reference material for HM and Slimes assessment is provided by Placer Consulting. HVY also adds field duplicate samples alternatively to CRM's at a rate of 1 in 40. Diamantina Laboratories conduct their own internal QA/QC checks and use internal CRM's at a rate of 1 in 40 and repeats at a rate of 1 in 40.

Examination of the QA/QC sample data indicates satisfactory performance of field sampling protocols and assay laboratories providing acceptable levels of precision and accuracy.

Geological Interpretation and Mineralogical Determination

THM sinks were logged by Diamantina Laboratories using rapid scan optical mineralogy techniques to identify the gross mineralogy breakdown. Estimates were rounded to the nearest 5%, in the exception of trace minerals which were determined to be 1%. This visual mineralogy estimation was then used to assist in the interpretation and domaining of the geology and for the development of mineral assemblage composites.

The geological interpretation was undertaken by IHC Mining in collaboration with the company's Executive Director and then validated using all logging and sampling data and observations. Current data spacing and quality is sufficient to indicate grade continuity with a moderate level of confidence.

Interpretation of modelling domains was restricted to the main mineralised envelopes utilising THM, SLIMES, oversize, mineralogy and geological logging. The interpretation of domains was also aided by the utilisation of lithological colour logging which assisted with distinguishing domain boundaries.

There is a moderate to high degree of confidence in the geological interpretation and of the enclosed mineralised envelopes. Grade trends have been used with cross-sectional data and variography analysis to define search ellipsoid orientation and size in controlling the grade interpolation and for populating the grade block model.

Four geological domains and a basement zone were identified and are used as constraints in the grade block model and for reporting the Mineral Resource Estimation.

There are two primary geological domains for the deposit, an upper near surface high THM grade domain (Zone 1) and a lower low THM grade domain (Zone 2) (refer to Figure 5).

There are also two smaller discontinuous geological domains located at the western and eastern extents of the deposit. Zone 3 is a very high THM grade domain located at depth along the western edge of the deposit exhibiting elevated garnet grades. Zone 4 is a low THM grade unit near surface which exhibits slightly elevated ilmenite and rutile grades when compared with the rest of the deposit.

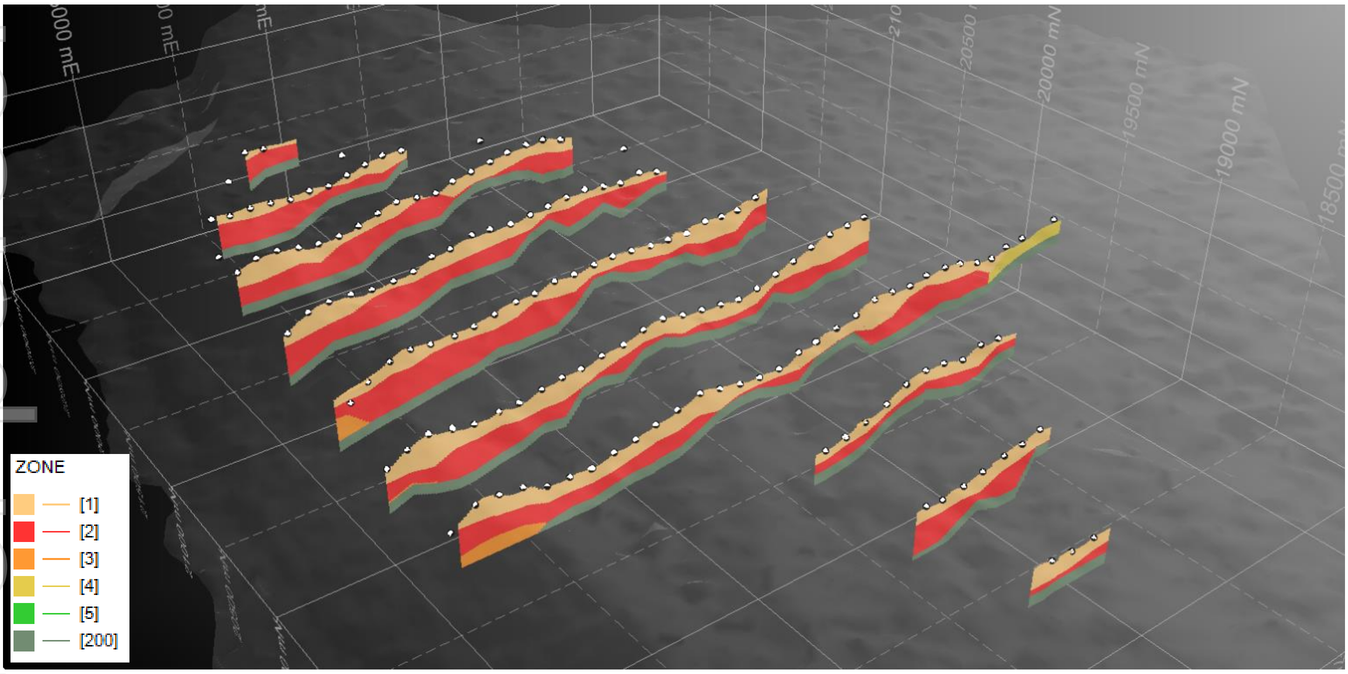

Figure 5: Section slices through the block model showing domains used for grade and mineralogical interpolation

A total of 77 composites were developed from the interpretation to ensure that there was enough identification of the variability of the mineralisation and mineralogy to ensure a moderate to high confidence in the Mineral Resource estimate. A coloured model image (Figure 6) shows the assignment of the mineral assemblage composites to the block model. These sample numbers correspond to the mineralogy table for the QXRD results presented in Appendix 3.

Once the mineral assemblage composites were prepared (by splitting the THM sink samples down on a weighted basis), the samples were sent off to Bureau Veritas Minerals Pty Ltd in South Australia for whole rock XRF and QXRD analysis.

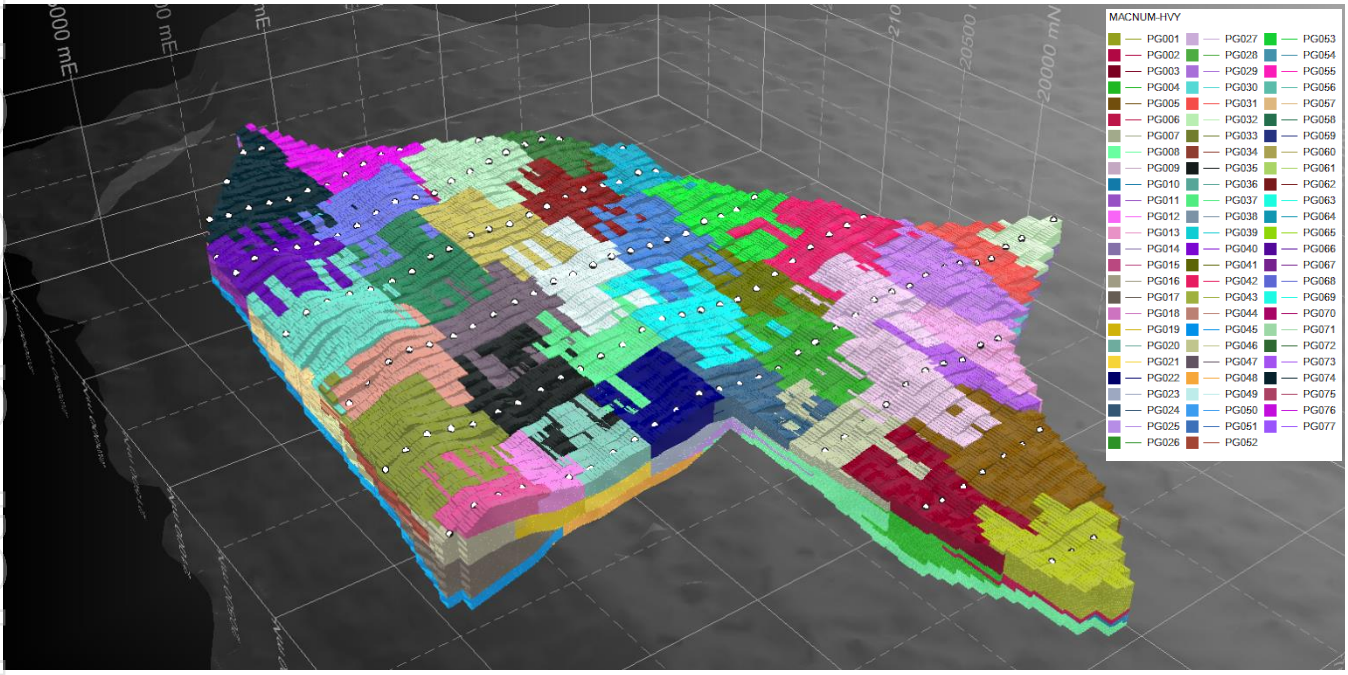

Figure 6: Block model coloured on assignment of mineral assemblage composites used for the mineralogy assignment

Estimation Methodology

Construction of the geological grade model was based on a combination of coding model cells in drill holes below open wireframe surfaces, including topography, mineralisation and basement and inside closed wireframes defined by the mineralised and non-mineralised domains.

The dominant drill grid spacing for the Port Gregory deposit was 500 m north-south and 100 m east-west. Some infill bridging holes were completed at 250 m spacing in the north-south direction.

A parent cell dimension of 50 m x 250 m x 1 m in XYZ was selected as this represents half the distance between drill holes spacing in the easting and northing directions for most of the model area and reflects the dominant down hole sample spacing.

The selected X and Y model origin coordinates are such that the model cell centroid is centred on the dominant drill hole X and Y coordinates (and given that the drill grid was regularly spaced, this was an effective method).

Inverse distance cubed (ID3) was used along the nearest neighbour to interpolate grades and values into the block model. Kriging was also used to interpolate grades into the model as a check against the Inverse distance cubed interpolation method.

The kriging check against ID3 demonstrated that results of both methodologies were within <5% difference which is considered to be very satisfactory. This provides significantly more confidence in the grade interpolation of the model. It also shows a very firm understanding of the geological domaining and grade continuity of the deposit (especially for the Indicated classified material).

Part of the rationale for using both ID3 and kriging is centred around the continuity of the mineralisation (low nugget effect as determined from the experimental variograms), the drill hole and assay spacing (regular east-west and north-south) and the nature of sampling process.

Effectively there is an averaging over the length of the sample interval down hole (in this case being 1, 1.5 m and 2 m). There is already a dilution effect on any potential high grade mineralisation leading to inverse distance being a less complex and more straightforward methodology.

JORC Classification

The JORC classification was developed on the level of confidence of a number of criteria, namely:

- Support of the drilling spacing, both in the XYZ directions by variography;
- The number of mineral assemblage composites to establish clearly the distribution of mineralogy throughout the deposit;
- The continuity of the geology and consistency in the logging;
- The broad nature and relatively continuous grade of the mineralisation in a dunal-style deposit which makes up the majority of the project area; and
- The continuity and reproducibility of the THM, SLIMES and OS grades from twinned drilling and general QA/QC sampling.

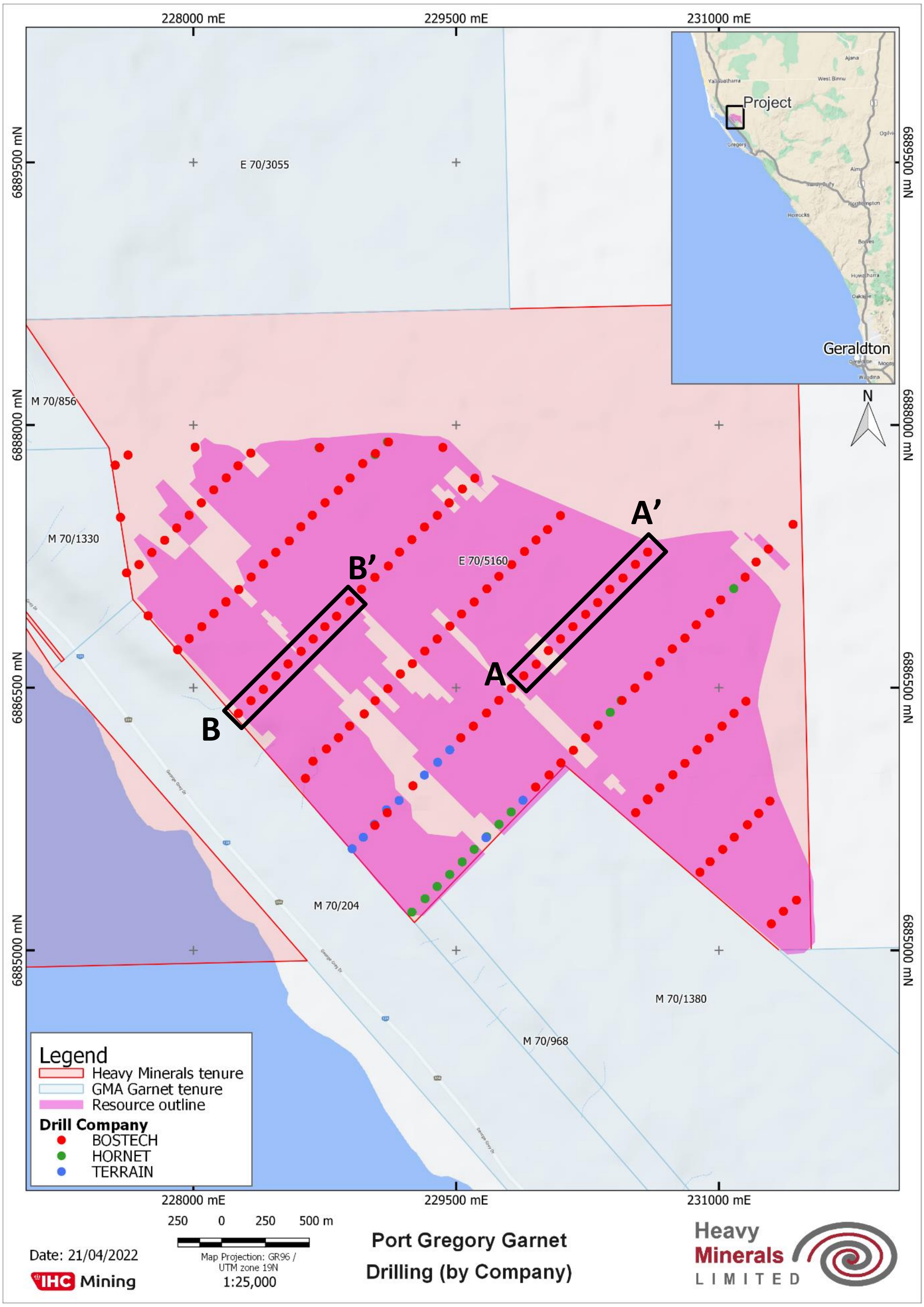

Figure 7: Mineral Resource outline and drilling by company, showing type sections

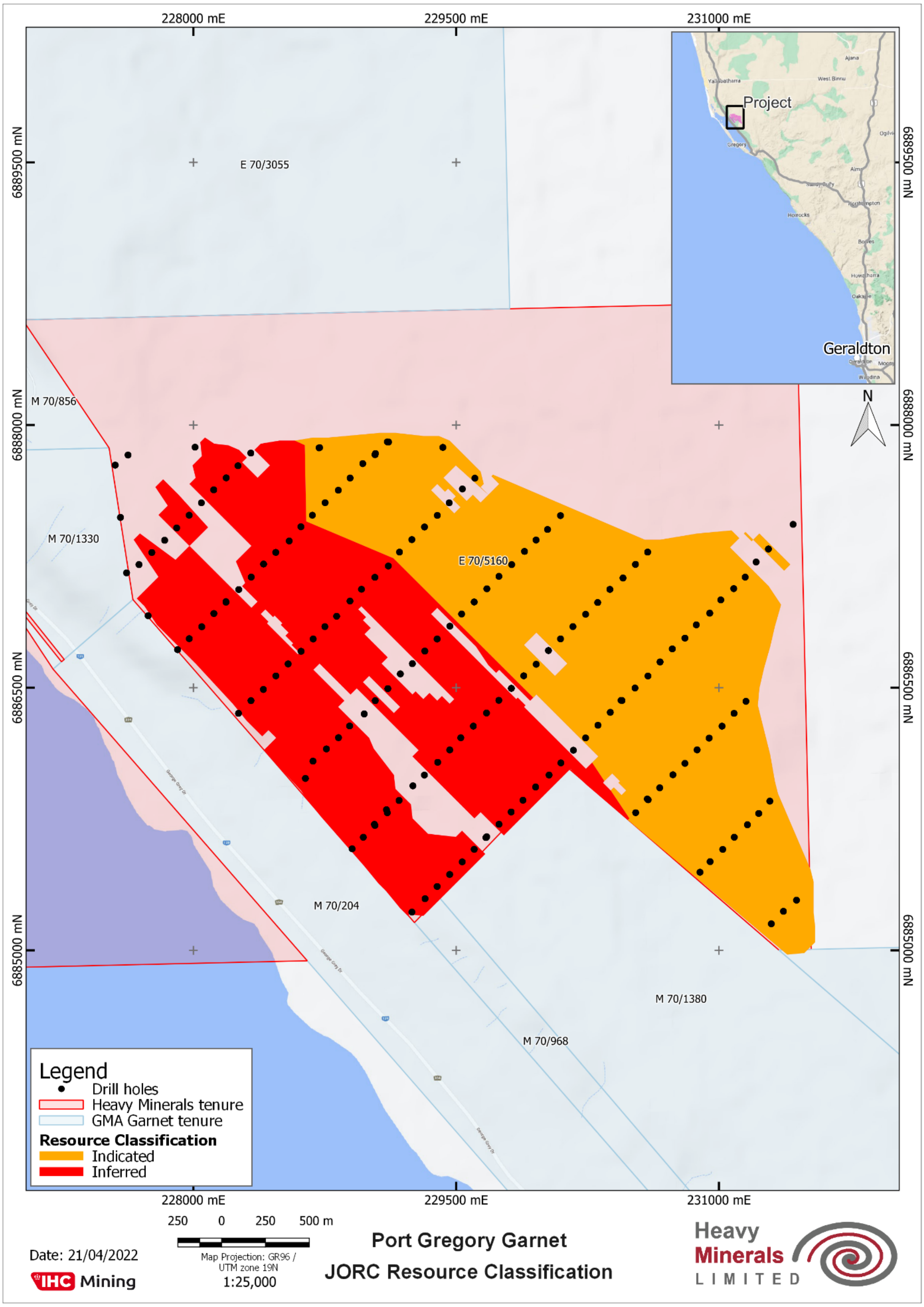

Figure 8: JORC Mineral Resource Classification

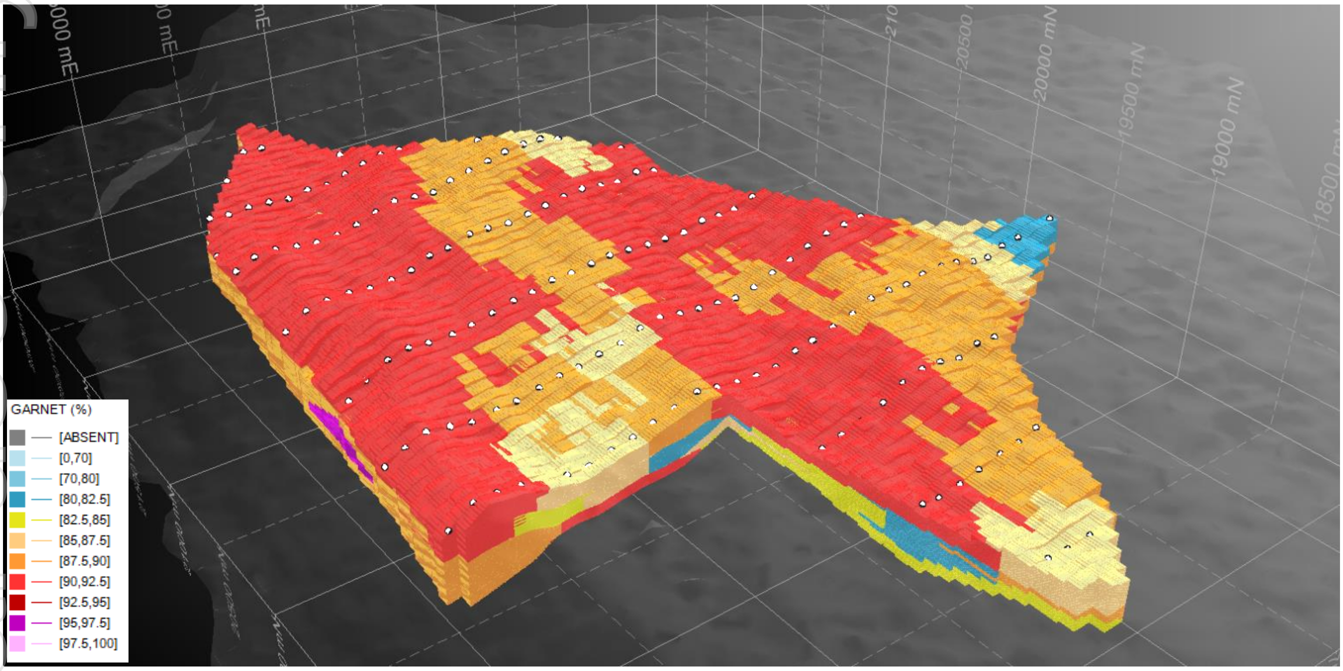

Figure 9: Garnet distribution throughout the Port Gregory block model

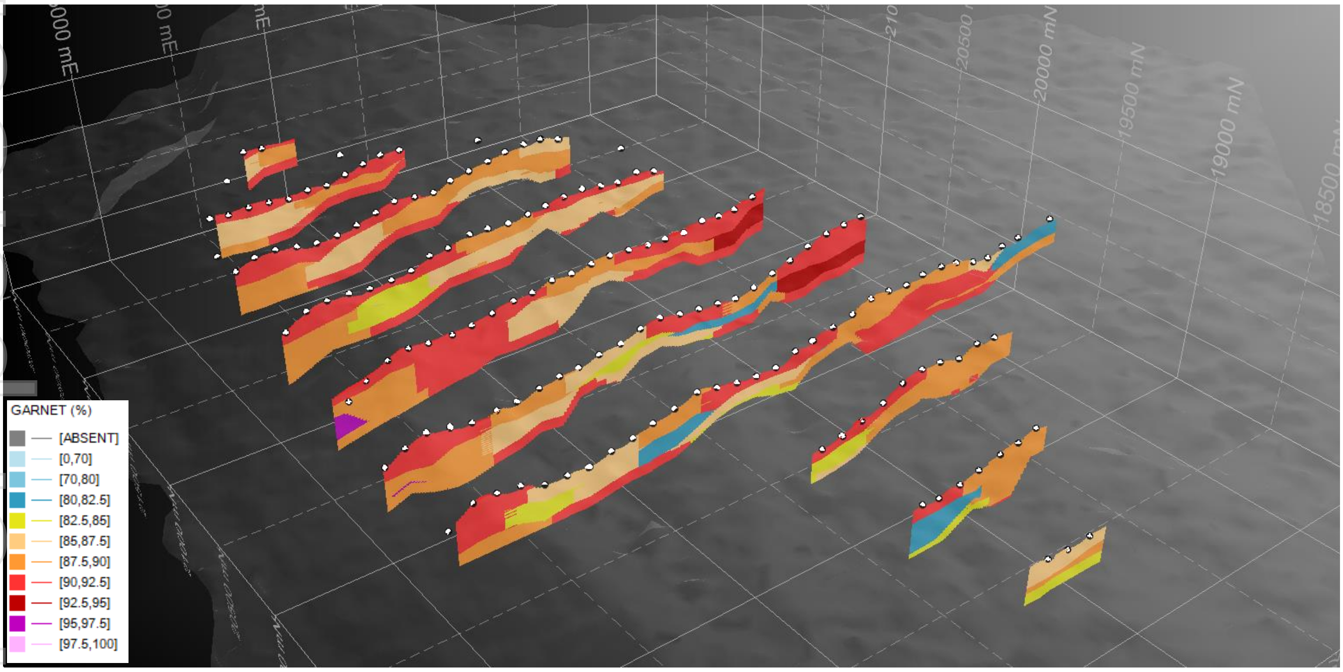

Figure 10: Garnet distribution throughout the Port Gregory block model by sections (showing drill collar locations)

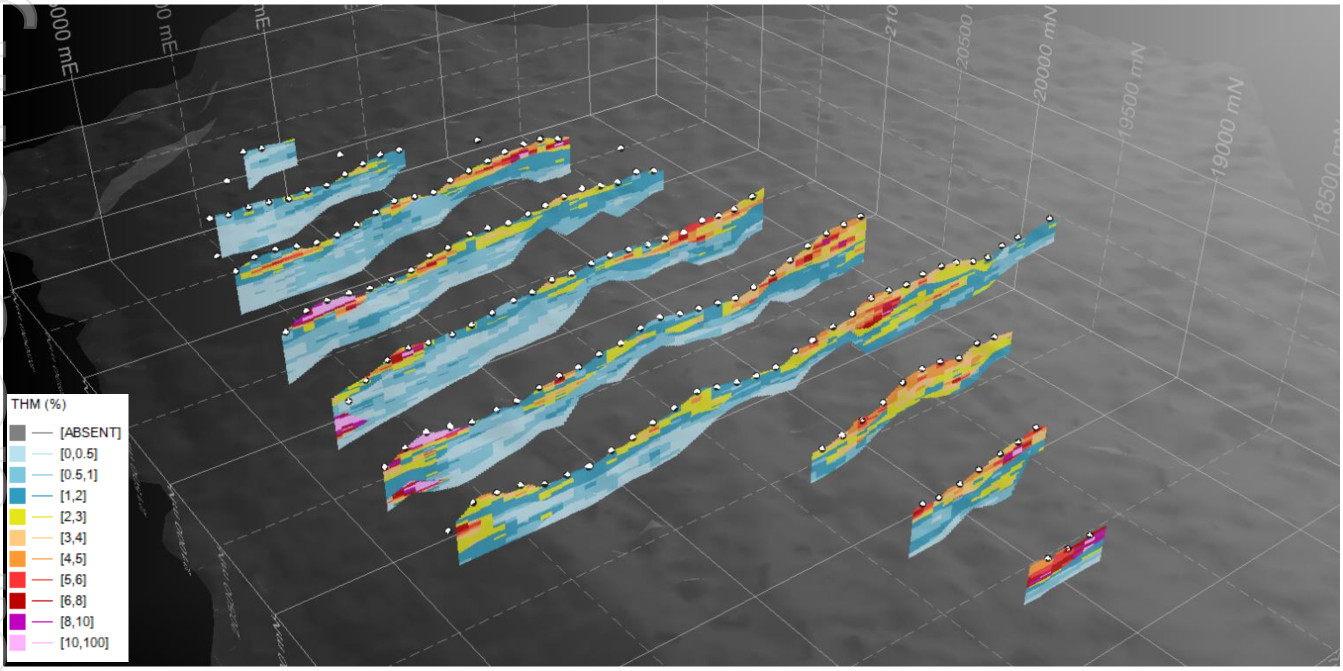

Figure 11: THM distribution throughout the Port Gregory block model by sections (showing drill collar locations)

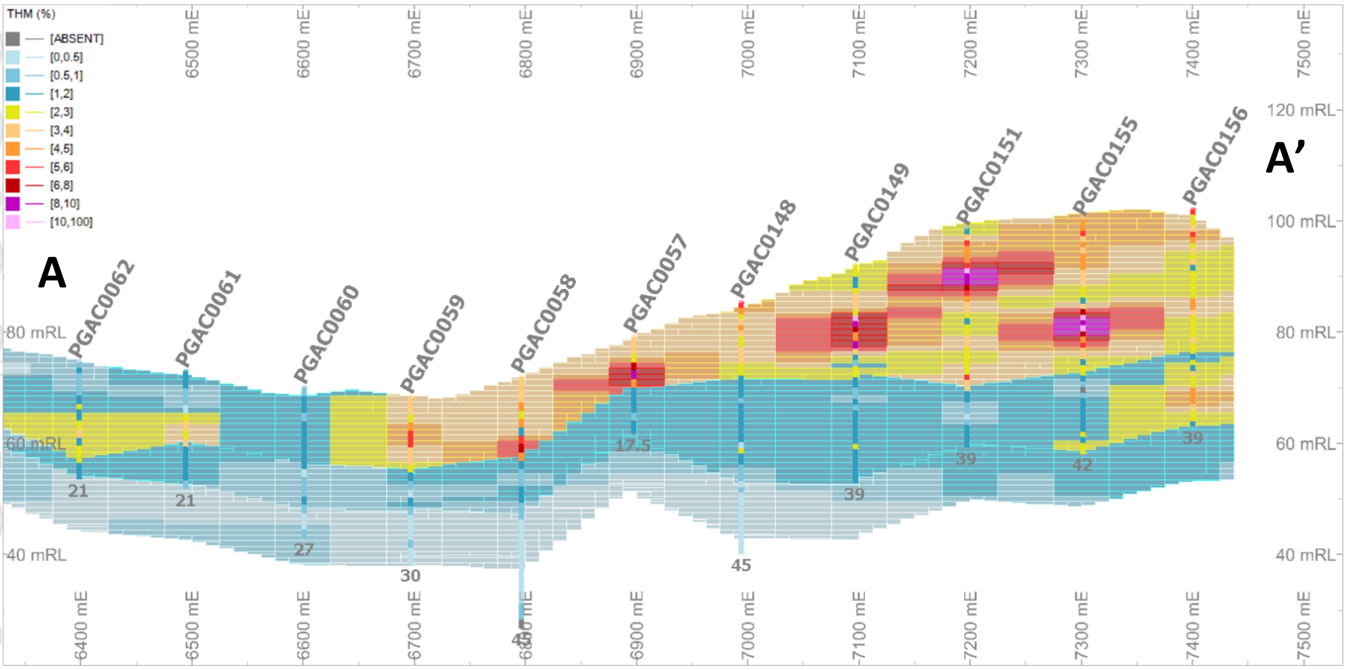

Figure 12: Cross section through eastern area showing drilling and block model coloured on THM grade (5x vert ex)

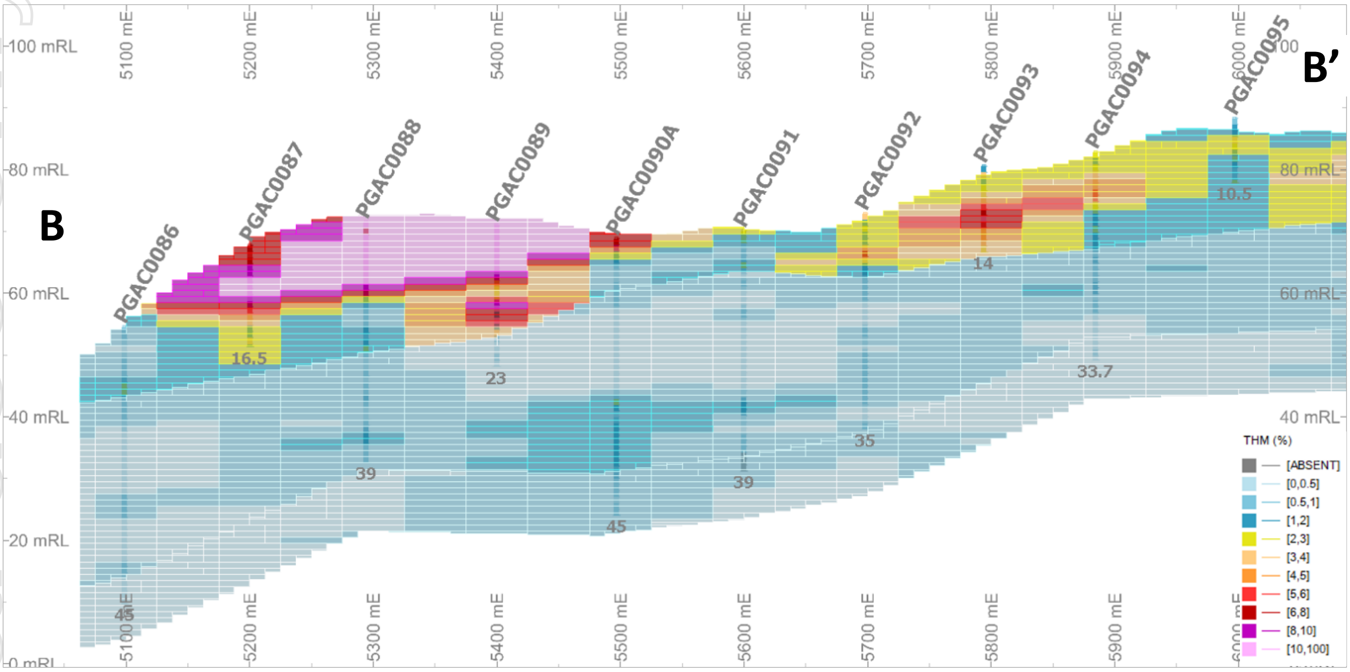

Figure 13: Cross section through western area showing drilling and block model coloured on THM grade (5x vert ex)

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

Ends

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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 Garnet Project which has a JORC Mineral Resource estimate of 135 Mt @ 4.0% (THM) or 4.9 Mt Contained Garnet. The Company's other project is the Inhambane Heavy Mineral Sands Project in Mozambique which has an ilmenite dominated JORC Inferred Mineral Resource of 90 Mt @ 3.0% THM

To learn more please visit: www.heavyminerals.com

Competent Person Statement

The information in this announcement that relates to Mineral Resource estimates is based on and fairly represents information and supporting documentation prepared, compiled and reviewed by Mr. Greg Jones (FAusIMM) who is an Independent 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.

The Exploration Results referred to in this announcement were first reported in accordance with ASX Listing Rule 5.7 in the Company's ASX announcements dated 23rd November 2021, 7th February 2022 and the 14th March 2022 and released on the ASX market announcements platform on the same day as the announcement date. The Company confirms that it is not aware of any new information or data that materially affects the information included in the prospectus.

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 a mixture of 1, 1.5 and 2 m intervals* • *Each 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 aircore drill samples have an average range between 6 kg and 9 kg and were split down using a rig based rotary splitter to 1.5 to 2.5 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 passed through 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, 1.5 or 2.0 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* • *The drilling and sampling used in the Mineral Resource estimate was dominantly completed by Bostech, with over 80% - the remainder being split between Hornet Drilling and Terrain* **Drilling Company / Metres / %**: BOSTECH 4225.50 82%; HORNET 516.80 10%; TERRAIN 427.00 8%; **Total 5169.30 100%** • *Bostech used a Drillboss 200 mounted on a 4WD truck, with compressor specifications of 600 CFM and 250 PSI mounted onboard the rig* • *Hornet used a Mantis 75 mounted on a 6WD Toyota Landcruiser, with compressor specifications of 160 CFM and 125 PSI mounted onboard the rig* • *Terrain used a TD150 rig mounted on a MAN 4WD, with compressor specifications of 200-400 CFM and 160 PSI mounted onboard the rig* • *All drilling contractors used NQ sized drill rods with open face sampling bits appropriate for mineral sands drilling* • *While initially collaring the hole, limited sample recovery can occur in the initial 0 m to 2 m sample interval owing to sample and air loss into the surrounding loose soils* • *The initial 0 m to 2 m sample interval is drilled very slowly in order to achieve optimum sample recovery* • *The entire sample passes through the on board rotary splitter and the sample collected in a pre-numbered calico bag. The bulk reject is not collected and is shovelled back down the hole upon completion* • *About 5 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*

Criteria	Explanation	Comment
		• *At the end of each hole the cyclone is inspected for material build up and cleanliness (for potential contamination)* • *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 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*
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 AC drill sample collected at the source was split down to 1.5 to 2.5 kg using a rig based rotary splitter* • *The sample size 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. These are blind to the laboratory staff and laboratory processing flowsheet*

Criteria	Explanation	Comment
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 and SLIMES grade which is expressed as a percentage and is sufficient for the purpose of determining approximate initial concentrations* • *Individual aircore sub-samples (approximately 1.5 - 2.5 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 100 g is taken using a micro riffle splitter and used for heavy liquid separation using funnels and a heavy liquid, Tetrabromomethane (TBE), with a density of between 2.92 and 2.96 gcm^{-3} to determine total heavy mineral (THM) content.* • *This is considered to be an industry standard technique* • *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.* • *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*

Criteria	Explanation	Comment
		• *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 +/- 5-10 m in the horizontal. A professional DGPS survey pickup of each collar position was completed upon completion of the drilling program* • *Adjusted SRTM (Shuttle Radar Topography Mapping) at 30 arc seconds was used for indicative topography and RL prior to photogrammetry drone mapping that is planned to take place once field cropping is completed. The SRTM surface was corrected to the DGPS collar pickups when deemed necessary and all collar positions were subsequently pinned to the completed topographic wireframe. At this stage of the exploration program this is considered to be of adequate indicative accuracy.* • *Following the completion of the drilling program, a professional survey pickup of all the drill hole collar coordinates will be undertaken* • *The datum used is GDA94 and coordinates are projected as UTM zone 50*
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 east-west by 500 m north-south* • *Drilling completed to date consists of 187 AC holes spread across 10 parallel East/West orientated lines spaced 500m apart in a North/South direction. Of these holes, a total of 164 were used in the Mineral Resource estimate preparation. Holes were omitted due to issues identified on site with sampling, holes collapsing and abandoned, and those holes strongly suspected sample contamination due to poor drilling technique. This was further pared down to 154 holes given there were 10 twinned holes drilled as part of the QA/QC*

Criteria	Explanation	Comment
		• *This spacing is designed for supporting the development of Mineral Resource Estimation* • *Each aircore drill sample is a single 1, 1.5 or 2 m sample of material 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* • *Compositing of samples (77 composite samples) was undertaken on THM concentrates for mineral assemblage determination. The mineral assemblage composite samples were determined by geological domains.*
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 and Mineral Resource estimate lies within the granted exploration licences.* • *The drill samples for this Mineral Resource estimate were taken from tenement E70/5160* • *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.*	• *Previous tenement holders in the area, GMA, conducted Air Core drilling over 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 and drill hole collar locations have been identified in Appendices 2 and 3 respectively of this report.* • *No relevant material data has been excluded from this report.*
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.*	• *All length weighted intervals are reported for each hole in (Appendix 2) for grades above 2.0% THM* • *For the Mineral Resource estimate reporting, the cut-off grade for reporting was THM > 2%.*

Criteria	Explanation	Comment
	• *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.*	
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 summarised as composited intervals and 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*	• *Samples have not yet been tested for in situ density.* • *Passive seismic surveys have been carried out over the deposit in alignment with planned drilling. Preliminary results correlate to the identification of bands of limestone and calcrete in the drilling carried out to date.* • *Detailed mineral assemblage work was undertaken on composite samples from across the resource area using whole rock XRF analysis and QXRD analysis by Bureau Veritas Minerals Pty Ltd, South Australia.*

Criteria	Explanation	Comment
	characteristics; potential deleterious or contaminating substances.	
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.*	• *Pit-optimization studies* • *Further work via infill drilling to target high grade and continuous mineralisation is recommended.* • *Refer to the main body of the release for further information regarding diagrams.*

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Explanation	Comment
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• *Exploration data provided by the company to IHC Mining in the form a Microsoft Excel Spreadsheet which was then imported into a Microsoft Access database.* • *Checks of data by visually inspecting on screen (to identify translation of samples), duplicate assays was visually examined to check the reproducibility of assays.* • *Database assay values have been subjected to random reconciliation with laboratory certified value is to ensure agreement.* • *Visual and statistical comparison was undertaken to check the validity of results.*
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• *Regular site trips before and during the resource drilling programme were undertaken by was undertaken by Mr Maurice (Nic) Matich to observe the drilling data collection, and sampling activities.*
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource.* • *The use of geology in guiding and controlling Mineral Resource estimation.*	• *The geological interpretation was undertaken by IHC Mining in collaboration with the company's Executive Director and then validated using all logging and sampling data and observations.* • *Current data spacing and quality is sufficient to indicate grade continuity.* • *Interpretation of modelling domains was restricted to the main mineralised envelopes utilising THM, SLIMES, oversize, mineralogy and geological logging. The interpretation of domains was also aided by the utilisation lithological colour logging which assisted with distinguishing domain boundaries.*

Criteria	Explanation	Comment
	• *The factors affecting continuity both of grade and geology.*	• *Optical mineral scanning was undertaken on THM sink fractions by Diamantina Laboratories. This was a rapid scan and estimate process with rounding to the nearest 5% and 1% for trace mineral species. This scanned mineralogy was used to guide the domain interpretation and the design of the mineral assemblage composites.* • *There is a high degree of confidence in the geological interpretation and of the enclosed mineralised envelopes.* • *Grade trends have been used with cross-sectional data and variography analysis to define search ellipsoid orientation and size in populating the resource model.* • *Four geological domains and a basement zone were identified and are used as constraints in the Mineral Resource Estimation.* • *There are two primary geological domains for the deposit, an upper near surface high THM grade domain (Zone 1) and a lower low THM grade domain (Zone 2).* • *There are also two smaller discontinuous geological domains located at the western and eastern extents of the deposit. Zone 3 is a very high THM grade domain located at depth along the western edge of the deposit exhibiting elevated garnet grades. Zone 4 is a low THM grade unit near surface which exhibits elevated rutile grades.*
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource*	• *The Mineral Resource field for the Project is approximately 5 km in length (at the longest point) and approximately 3 km wide (at the widest point). Depth of the Mineral Resource typically ranges from 10 m to 60 m depth dictated by the morphology of the project region and limestone basement.*
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• *The mineral resource estimate was conducted using Datamine Studio RM mining software. Inverse distance weighting techniques were used to interpolate assay grades from drill hole samples into the block model and nearest neighbour techniques were used to interpolate index values and nonnumeric sample identification into the block model. The mostly regular dimensions of the drill grid and the anisotropy of the drilling and sampling grid allowed for the use of inverse distance methodologies as no de-clustering of samples was required. Appropriate and industry standard search ellipses were used to search for data for the interpolation and suitable limitations on the number of samples and the impact of those samples was maintained. An inverse distance weighting power of 3 ('ID3') was used so as not to over smooth the grade interpolations. Ordinary Kriging was also used as check against the inverse distance weighting using THM grade*

Criteria	Explanation	Comment
	• *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	*as a comparison which proved successful demonstrating comparable results. Hard domain boundaries were used and these were defined by the geological wireframes that were interpreted.* • *No assumptions were made during the resource estimation as to the recovery of by-products.* • *SLIMES and oversize contents are estimated at the same time as estimating the THM grade.* • *The average parent cell size used for the interpolation was half the standard drill hole width and half the standard drill hole section line spacing.* • *No assumptions were made regarding the modelling of selective mining units however it is assumed that a form of dry mining will be undertaken, and the cell size and the sub cell splitting will allow for an appropriate dry mining preliminary reserve to be prepared. Any other mining methodology will be more than adequately catered for with the parent cell size that was selected for the modelling exercise.* • *No assumptions were made about correlation between variables.* • *The Mineral Resource estimates were controlled to an extent by the geological / mineralisation and basement surfaces.* • *Grade cutting or capping was not used during the interpolation because of the regular nature of sample spacing and the fact that samples were not clustered nor wide spaced to an extent where elevated samples could have a deleterious impact on the resource estimation.* • *Sample distributions were reviewed and no extreme outliers were identified either high or low that necessitated any grade cutting or capping.* • *The sample length of 1.0, 1.5 m and 2 m does result in a degree of grade smoothing also negating the requirement for grade cutting or capping.* • *Validation of grade interpolations were done visually In Datamine Studio RM software by loading model and drill hole files and annotating and colouring and using filtering to check for the appropriateness of interpolations.* • *Statistical distributions were prepared for model zones from drill hole and model files to compare the effectiveness of the interpolation. Along strike distributions of section line averages (swath plots) for drill holes and models were also prepared for comparison purposes.*

Criteria	Explanation	Comment
Moisture	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• *Cut-off grades for THM were used to prepare the reported resource estimates. These cut-off grades were defined by the Competent Person by considering the continuity of mineralisation at that cut-off-grade as well as the inflection points on the grade tonnage curves of the Port Gregory deposit. This was used to report the block model on material >2% THM for the Mineral Resource* • *Consideration was taken into account for a modest stripping ratio to ensure that deeply buried material with a very low likelihood of eventual economic extraction was not selected for reporting in the Mineral Resource estimate.* • *The selected cut-off grades are also in line with other deposits of similar size.*
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• *No specific mining method is assumed other than potentially the use of dry mining methods.*
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• *Metallurgical assumptions were used based on mineral assemblage composites which at this stage only allow for preliminary commentary with no final products being defined from the reported mineral species.*

Criteria	Explanation	Comment
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• *No assumptions have been made regarding possible waste and process residue however disposal of by products such as SLIMES, sand and oversize are normally part of capture and disposal back into the mining void for eventual rehabilitation. This also applies to mineral products recovered and waste products recovered from metallurgical processing of heavy mineral.*
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• *A bulk density algorithm was prepared using first principles techniques coupled with industry experience that is exclusive to IHC Mining. We believe the bulk density formula to be conservative and fit for purpose at this level of confidence for the Mineral Resource estimates and based on our experience and we would also recommend that bulk density test work be undertaken going forward.* • *A bulk density (BD) was applied to the model using a standard linear formula originally described by Baxter (1977). This approach was refined in a practical application by this author using the following first principles calculations to develop a regression formula. This regression formula was then used to calculate the conversion of tonnes from each cell volume and from there the calculation of material, THM and SLIMES tonnes.* • *The bulk density formula is described as:* • *Bulk Density = (0.009 * HM) + 1.698*
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal*	• *The resource classification for the Port Gregory deposit was based on the following criteria: drill hole spacing, geological and grade continuity, variography of primary assay grades and the distribution of bulk samples.* • *The classification of the Indicated and Inferred Mineral Resources was supported by all the supporting criteria as noted above.*

Criteria	Explanation	Comment
	values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• As a Competent Person, Greg Jones considers that the result appropriately reflects a reasonable view of the deposit categorisation.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• *No audits or reviews of the mineral resource estimate have been undertaken at this point in time.*
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• *Variography was undertaken to determine drill hole support of the selected JORC Classification* • *Ordinary Kriging was used as a check against the inverse distance weighting technique for the interpolation of THM grade demonstrating a strong correlation providing further confidence in the resource estimate* • *Validation of the model vs drill hole grades by observation and comparison on screen* • *Swathe plots, trend plots in both X and Y used to validate model vs drill hole grades* • *Contact analysis used to validate the model's geological domains* • *The statement refers to global estimates for the entire known extent of the Port Gregory deposit.* • *No production data is available for comparison with the Port Gregory deposit.*

Appendix 2: Summary of drill hole results

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0001	229247	6885219	40.9	64.2	-90	360	0	12	12	7.0	1.6	5.8
PGAC0001	229247	6885219	28.1	64.2	-90	360	15	22.5	7.5	2.9	1.1	0.5
PGAC0001	229247	6885219	22.1	64.2	-90	360	24	25.5	1.5	2.9	1.8	0.3
PGAC0001	229247	6885219	-2.6	64.2	-90	360	46.5	52.5	6	3.5	2.1	0.8
PGAC0002	229322	6885296	57.1	40.5	-90	360	0	9	9	2.5	2.4	3.4
PGAC0002	229322	6885296	39.1	40.5	-90	360	15	30	15	4.0	1.9	1.0
PGAC0002	229322	6885296	27.9	40.5	-90	360	31.5	36	4.5	2.9	2.5	1.3
PGAC0003A	229391	6885366	59.4	51	-90	360	0	4.5	4.5	3.7	4.1	15.2
PGAC0003A	229391	6885366	44.4	51	-90	360	16.5	18	1.5	2.0	9.0	11.1
PGAC0003A	229391	6885366	29.4	51	-90	360	30	34.5	4.5	2.7	4.4	7.7
PGAC0003A	229391	6885366	21.9	51	-90	360	39	40.5	1.5	3.2	5.3	16.6
PGAC0004	229463	6885434	58.5	63	-90	360	0	1.5	1.5	5.7	6.4	41.3
PGAC0004	229463	6885434	55.5	63	-90	360	3	4.5	1.5	2.0	2.3	6.0
PGAC0004	229463	6885434	51.0	63	-90	360	6	10.5	4.5	3.9	5.0	10.2
PGAC0004	229463	6885434	45.0	63	-90	360	13.5	15	1.5	2.1	3.9	8.5
PGAC0005	229534	6885506	50.1	66	-90	360	0	1.5	1.5	2.8	7.3	28.5
PGAC0005	229534	6885506	42.6	66	-90	360	6	10.5	4.5	2.4	11.6	20.5
PGAC0005	229534	6885506	38.1	66	-90	360	12	13.5	1.5	2.3	8.5	17.5
PGAC0005	229534	6885506	26.1	66	-90	360	24	25.5	1.5	2.0	7.8	13.7
PGAC0005	229534	6885506	22.4	66	-90	360	27	30	3	2.9	7.4	2.7
PGAC0006	229602	6885578	46.2	43.5	-90	360	3	4.5	1.5	2.0	5.5	21.3
PGAC0006	229602	6885578	42.4	43.5	-90	360	6	9	3	2.6	5.5	0.9
PGAC0007	229674	6885649	39.3	39	-90	360	9	10.5	1.5	2.1	5.8	28.2
PGAC0008	229744	6885721	53.7	39	-90	360	0	1.5	1.5	2.7	8.2	11.7
PGAC0008	229744	6885721	45.4	39	-90	360	7.5	10.5	3	2.6	9.4	19.5
PGAC0008	229744	6885721	40.2	39	-90	360	13.5	15	1.5	2.1	11.8	24.6
PGAC0009	229814	6885791	57.0	38	-90	360	0	1.5	1.5	2.1	8.8	36.2
PGAC0009	229814	6885791	51.7	38	-90	360	4.5	7.5	3	3.5	7.5	9.4
PGAC0010A	230446	6886427	69.5	14.5	-90	360	0	13.5	13.5	3.9	9.5	7.4
PGAC0011	230379	6886360	69.8	42	-90	360	0	7.5	7.5	3.4	5.3	7.6
PGAC0011	230379	6886360	63.1	42	-90	360	9	12	3	2.2	6.7	5.8
PGAC0011	230379	6886360	58.6	42	-90	360	13.5	16.5	3	2.2	9.9	17.5
PGAC0012	231084	6887066	83.7	30.6	-90	360	0	7.5	7.5	3.0	7.0	17.3
PGAC0012	231084	6887066	76.2	30.6	-90	360	10.5	12	1.5	2.2	11.0	0.9
PGAC0012	231084	6887066	70.2	30.6	-90	360	16.5	18	1.5	2.1	10.0	16.4
PGAC0020B	229881	6885858	55.4	40	-90	360	4	12	8	4.3	19.2	5.4
PGAC0022	228906	6885581	35.3	30	-90	360	0	14	14	6.1	3.0	2.7
PGAC0023	228969	6885646	47.7	32	-90	360	0	8	8	5.0	3.6	9.2
PGAC0023	228969	6885646	35.7	32	-90	360	14	18	4	3.0	5.5	1.0
PGAC0023	228969	6885646	30.7	32	-90	360	20	22	2	4.8	7.1	0.4
PGAC0024C	229253	6885940	51.2	45	-90	360	0	1	1	2.2	7.4	3.7
PGAC0025	229033	6885720	53.7	48	-90	360	0	8	8	20.6	4.6	3.0
PGAC0025	229033	6885720	34.7	48	-90	360	22	24	2	2.6	6.9	2.8

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0025	229033	6885720	27.7	48	-90	360	28	32	4	2.3	7.2	0.7
PGAC0025	229033	6885720	10.7	48	-90	360	46	48	2	15.9	21.5	13.8
PGAC0026	229101	6885804	48.8	58	-90	360	0	8	8	16.7	17.2	15.0
PGAC0031	229394	6886075	54.2	40	-90	360	2	4	2	2.4	19.9	16.3
PGAC0031	229394	6886075	44.2	40	-90	360	10	16	6	4.2	12.8	13.2
PGAC0032A	229463	6886145	57.5	50	-90	360	0	6	6	6.4	16.4	10.5
PGAC0032A	229463	6886145	46.5	50	-90	360	12	16	4	4.3	13.9	16.3
PGAC0032A	229463	6886145	41.5	50	-90	360	18	20	2	2.2	9.6	7.5
PGAC0032A	229463	6886145	29.5	50	-90	360	30	32	2	2.2	5.9	3.2
PGAC0051	229953	6885933	61.9	85.5	-90	360	4.5	7.5	3	2.8	9.2	20.8
PGAC0052	230030	6886002	73.2	34.5	-90	360	1.5	3	1.5	2.2	7.5	4.6
PGAC0052	230030	6886002	62.7	34.5	-90	360	4.5	21	16.5	3.4	9.9	6.4
PGAC0053	230097	6886071	58.5	21	-90	360	9.5	17	7.5	2.7	10.4	2.5
PGAC0053	230097	6886071	52.0	21	-90	360	18.5	21	2.5	2.1	12.7	4.5
PGAC0055	230238	6886214	65.3	10.5	-90	360	0	1.5	1.5	2.5	11.2	10.9
PGAC0056	230309	6886286	64.5	45	-90	360	0	3	3	2.2	5.6	0.8
PGAC0057	230238	6886920	74.6	17.5	-90	360	0	9	9	5.0	11.2	13.5
PGAC0058	230166	6886849	67.4	45	-90	360	0	9	9	3.7	9.4	9.6
PGAC0058	230166	6886849	59.1	45	-90	360	10.5	15	4.5	5.6	15.4	9.7
PGAC0059	230095	6886779	61.5	30	-90	360	0	13.5	13.5	3.7	9.3	3.0
PGAC0061	229956	6886635	62.5	21	-90	360	7.5	13.5	6	3.2	11.3	10.3
PGAC0062	229885	6886568	66.6	21	-90	360	7.5	8.5	1	2.7	10.2	23.2
PGAC0062	229885	6886568	62.6	21	-90	360	10.5	13.5	3	2.9	10.0	21.4
PGAC0062	229885	6886568	58.1	21	-90	360	15	18	3	2.4	12.3	17.9
PGAC0063	229814	6886497	72.3	17.3	-90	360	5.5	6.5	1	3.1	13.3	17.4
PGAC0064	229743	6886429	66.4	23.5	-90	360	7	10	3	3.7	7.0	0.5
PGAC0065	229673	6886356	63.5	60	-90	360	0	9.5	9.5	2.6	14.7	15.8
PGAC0065	229673	6886356	47.3	60	-90	360	20.5	21.5	1	2.0	13.2	1.1
PGAC0066	229598	6886281	54.9	48	-90	360	10.5	12	1.5	2.9	14.0	14.2
PGAC0067	228639	6885983	41.7	48	-90	360	0	1.5	1.5	3.0	8.5	2.8
PGAC0067	228639	6885983	19.2	48	-90	360	12	34.5	22.5	11.3	5.6	5.8
PGAC0068A	228828	6886215	61.3	29	-90	360	1	10	9	9.5	10.4	21.4
PGAC0068A	228828	6886215	52.8	29	-90	360	12	16	4	3.7	15.2	7.3
PGAC0068A	228828	6886215	44.3	29	-90	360	22	23	1	4.5	13.4	1.8
PGAC0069	228891	6886282	63.4	42	-90	360	0	2	2	3.1	17.2	0.9
PGAC0069	228891	6886282	59.9	42	-90	360	4	5	1	2.0	14.5	15.8
PGAC0071	229038	6886426	64.6	42	-90	360	0	3	3	2.9	15.3	17.8
PGAC0071	229038	6886426	60.1	42	-90	360	4.5	7.5	3	2.2	16.8	14.3
PGAC0072	229110	6886495	62.2	35	-90	360	8	9	1	3.1	11.8	22.5
PGAC0072	229110	6886495	60.2	35	-90	360	10	11	1	2.3	8.0	10.1
PGAC0073	229181	6886579	64.7	42	-90	360	9	10	1	2.5	20.7	3.0
PGAC0074	229250	6886638	75.8	24.8	-90	360	0	1	1	2.5	6.2	2.1
PGAC0074	229250	6886638	71.3	24.8	-90	360	4	6	2	2.2	14.7	10.8
PGAC0075	229321	6886710	78.7	75	-90	360	0	5	5	4.2	10.2	11.1
PGAC0075	229321	6886710	74.2	75	-90	360	6	8	2	2.9	21.7	4.3

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0075	229321	6886710	67.2	75	-90	360	12	16	4	2.5	9.9	17.3
PGAC0076	229391	6886779	80.7	32	-90	360	0	1	1	3.6	3.0	1.5
PGAC0076	229391	6886779	75.7	32	-90	360	4	7	3	2.8	10.9	11.8
PGAC0076	229391	6886779	70.2	32	-90	360	10	12	2	2.5	6.5	1.9
PGAC0076	229391	6886779	66.2	32	-90	360	13	17	4	3.0	11.4	4.8
PGAC0078	229530	6886921	78.1	15	-90	360	5	9	4	2.9	16.8	14.6
PGAC0078	229530	6886921	74.1	15	-90	360	10	12	2	2.3	10.3	1.5
PGAC0079	229602	6886990	83.8	22	-90	360	0	1	1	2.1	25.6	7.4
PGAC0079	229602	6886990	76.8	22	-90	360	4	11	7	4.8	10.3	9.3
PGAC0079	229602	6886990	69.8	22	-90	360	14	15	1	2.1	4.2	4.9
PGAC0079	229602	6886990	67.8	22	-90	360	16	17	1	2.1	19.1	0.6
PGAC0079	229602	6886990	64.8	22	-90	360	19	20	1	2.3	18.8	12.4
PGAC0080	229675	6887065	71.6	27	-90	360	8	13	5	4.7	10.7	15.1
PGAC0080	229675	6887065	62.6	27	-90	360	18	21	3	2.2	21.2	3.5
PGAC0081	229743	6887136	80.6	20	-90	360	0	1.5	1.5	3.6	8.8	4.6
PGAC0081	229743	6887136	71.6	20	-90	360	4.5	15	10.5	3.8	6.9	5.2
PGAC0082	229816	6887203	76.0	20	-90	360	0	12	12	5.6	5.8	5.1
PGAC0083	229889	6887279	83.0	42	-90	360	0	8	8	5.3	6.6	5.8
PGAC0083	229889	6887279	77.0	42	-90	360	9	11	2	2.8	2.3	0.9
PGAC0083	229889	6887279	74.5	42	-90	360	12	13	1	2.2	5.5	27.0
PGAC0083	229889	6887279	69.0	42	-90	360	14	22	8	5.8	7.0	11.7
PGAC0083	229889	6887279	53.0	42	-90	360	33	35	2	2.5	8.4	11.9
PGAC0083	229889	6887279	50.5	42	-90	360	36	37	1	2.4	23.9	5.3
PGAC0084	229956	6887344	83.0	43.5	-90	360	0	6	6	4.7	9.3	4.6
PGAC0084	229956	6887344	72.5	43.5	-90	360	8	19	11	3.2	8.7	7.2
PGAC0085	229526	6886215	60.3	42	-90	360	0	1.5	1.5	2.2	8.2	11.1
PGAC0085	229526	6886215	47.5	42	-90	360	12	15	3	5.6	5.5	2.1
PGAC0086	228257	6886354	44.5	45	-90	360	9	11	2	2.3	13.7	4.8
PGAC0087	228328	6886427	61.2	16.5	-90	360	0	13	13	7.8	14.6	8.0
PGAC0087	228328	6886427	52.2	16.5	-90	360	15	16	1	3.2	14.8	9.6
PGAC0088	228399	6886491	65.5	39	-90	360	0	12	12	13.2	10.0	5.3
PGAC0088	228399	6886491	51.0	39	-90	360	20	21	1	2.2	14.0	0.7
PGAC0089	228471	6886568	64.0	23	-90	360	0	14	14	12.9	10.4	7.0
PGAC0089	228471	6886568	55.5	23	-90	360	15	16	1	12.3	12.8	15.1
PGAC0089	228471	6886568	53.5	23	-90	360	17	18	1	3.4	7.5	1.5
PGAC0090A	228540	6886636	67.9	45	-90	360	0	2	2	7.5	7.4	1.5
PGAC0090A	228540	6886636	42.4	45	-90	360	26	27	1	2.7	9.1	1.1
PGAC0091	228614	6886708	69.1	39	-90	360	0	2	2	2.4	9.1	4.0
PGAC0091	228614	6886708	64.6	39	-90	360	5	6	1	2.3	19.3	13.4
PGAC0092	228683	6886779	72.4	35	-90	360	0	1	1	3.4	3.4	5.0
PGAC0092	228683	6886779	70.4	35	-90	360	2	3	1	2.4	2.3	0.5
PGAC0092	228683	6886779	66.4	35	-90	360	5	8	3	4.4	10.7	6.5
PGAC0093	228750	6886849	79.1	14	-90	360	1	2	1	3.2	20.6	0.4
PGAC0093	228750	6886849	72.1	14	-90	360	3	14	11	5.0	13.8	3.4
PGAC0094	228817	6886909	82.3	33.7	-90	360	0	1	1	2.2	9.4	28.5

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0094	228817	6886909	76.8	33.7	-90	360	2	10	8	3.7	12.8	3.4
PGAC0094	228817	6886909	70.3	33.7	-90	360	12	13	1	2.2	41.1	2.1
PGAC0095	228893	6886995	84.5	10.5	-90	360	3	5	2	2.7	3.1	0.1
PGAC0095	228893	6886995	82.0	10.5	-90	360	6	7	1	2.4	3.1	2.6
PGAC0096	228959	6887062	80.7	11.5	-90	360	3	11.5	8.5	3.3	8.3	9.1
PGAC0097	229036	6887131	86.6	45	-90	360	0	1	1	2.3	12.6	17.0
PGAC0097	229036	6887131	79.6	45	-90	360	3	12	9	3.0	8.9	10.9
PGAC0098	229112	6887195	90.0	20	-90	360	0	1.5	1.5	3.7	7.7	7.8
PGAC0098	229112	6887195	82.7	20	-90	360	7	9	2	2.2	14.9	9.1
PGAC0098	229112	6887195	78.7	20	-90	360	10	14	4	2.5	14.4	7.0
PGAC0099	229176	6887275	90.2	12	-90	360	0	4	4	3.4	10.7	7.4
PGAC0100	229247	6887346	92.6	45	-90	360	0	4	4	3.5	14.0	4.8
PGAC0100	229247	6887346	86.1	45	-90	360	8	9	1	2.1	5.7	0.1
PGAC0101	229319	6887418	92.7	26.5	-90	360	0	8	8	3.0	13.9	13.2
PGAC0101	229319	6887418	81.7	26.5	-90	360	14	16	2	3.1	4.3	0.2
PGAC0101	229319	6887418	78.2	26.5	-90	360	18	19	1	2.6	9.1	0.7
PGAC0102	229392	6887484	92.9	16.5	-90	360	0	2	2	2.9	12.1	9.5
PGAC0102	229392	6887484	88.9	16.5	-90	360	4	6	2	2.5	19.4	5.8
PGAC0103	229460	6887556	79.2	28.9	-90	360	11	13	2	2.3	13.2	10.9
PGAC0105	229606	6887697	90.5	12	-90	360	0	2	2	2.1	14.2	8.9
PGAC0105	229606	6887697	80.0	12	-90	360	11	12	1	2.1	5.4	18.1
PGAC0106	229423	6887873	92.9	46	-90	360	1	5	4	2.3	9.7	17.9
PGAC0106	229423	6887873	81.4	46	-90	360	13	16	3	3.1	9.4	2.7
PGAC0106	229423	6887873	59.4	46	-90	360	36	37	1	2.4	6.7	1.6
PGAC0106	229423	6887873	56.4	46	-90	360	38	41	3	2.9	12.2	9.4
PGAC0106	229423	6887873	50.4	46	-90	360	45	46	1	4.1	8.3	4.0
PGAC0107	229113	6887903	91.8	45	-90	360	1	12	11	7.2	11.2	8.9
PGAC0107	229113	6887903	76.3	45	-90	360	21	23	2	3.4	16.8	7.8
PGAC0107	229113	6887903	73.3	45	-90	360	24	26	2	2.2	21.9	18.1
PGAC0108	229039	6887838	100.5	39	-90	360	0	7	7	3.6	6.6	8.1
PGAC0108	229039	6887838	94.5	39	-90	360	8	11	3	4.0	10.9	7.8
PGAC0108	229039	6887838	91.0	39	-90	360	12	14	2	2.5	5.9	0.9
PGAC0108	229039	6887838	85.5	39	-90	360	18	19	1	2.1	8.5	1.3
PGAC0109	228966	6887780	102.3	24	-90	360	0	1	1	4.1	7.4	22.9
PGAC0109	228966	6887780	94.8	24	-90	360	2	14	12	6.8	7.4	2.0
PGAC0109	228966	6887780	86.8	24	-90	360	15	17	2	2.3	6.2	0.1
PGAC0109	228966	6887780	83.3	24	-90	360	19	20	1	2.2	8.1	0.1
PGAC0109	228966	6887780	79.3	24	-90	360	23	24	1	3.0	11.7	24.8
PGAC0110	228894	6887698	94.2	19	-90	360	0	15	15	4.8	6.2	1.0
PGAC0111	228827	6887628	97.0	15	-90	360	0	1	1	2.4	10.6	16.8
PGAC0111	228827	6887628	90.5	15	-90	360	3	11	8	4.7	5.0	1.2
PGAC0111	228827	6887628	83.5	15	-90	360	13	15	2	4.3	7.1	14.6
PGAC0112	228751	6887557	87.5	12	-90	360	1	10	9	3.9	10.7	10.2
PGAC0112	228751	6887557	81.5	12	-90	360	11	12	1	2.1	8.8	31.0
PGAC0113A	228679	6887485	85.5	16	-90	360	0	7.5	7.5	3.9	11.7	11.0

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0113A	228679	6887485	77.2	16	-90	360	10.5	13.5	3	2.5	11.0	12.8
PGAC0114B	228547	6887338	83.1	27	-90	360	0	4	4	3.5	11.4	13.6
PGAC0115	228613	6887420	32.1	51	-90	360	50	51	1	2.2	6.4	0.7
PGAC0116	228470	6887273	79.9	39	-90	360	4	9	5	5.1	9.0	14.5
PGAC0116	228470	6887273	74.9	39	-90	360	10	13	3	2.8	11.0	13.3
PGAC0116	228470	6887273	68.9	39	-90	360	17	18	1	2.5	14.5	3.9
PGAC0116	228470	6887273	65.9	39	-90	360	20	21	1	2.4	6.9	0.4
PGAC0117	228400	6887206	80.1	38	-90	360	0	1	1	2.8	7.1	3.9
PGAC0118	228330	6887132	72.5	38	-90	360	0	4	4	2.8	7.1	13.5
PGAC0119	228259	6887061	69.7	42	-90	360	0	1	1	2.1	7.5	0.8
PGAC0121	228186	6886989	64.6	39	-90	360	1	8	7	3.6	8.6	8.1
PGAC0121	228186	6886989	56.6	39	-90	360	12	13	1	2.5	26.7	5.9
PGAC0121	228186	6886989	51.6	39	-90	360	17	18	1	2.7	10.9	3.0
PGAC0122	228117	6886924	63.6	60	-90	360	4	12	8	4.6	11.9	7.8
PGAC0123	228047	6886849	62.7	55	-90	360	10	16	6	4.8	8.5	9.7
PGAC0123	228047	6886849	56.7	55	-90	360	18	20	2	3.0	10.1	21.6
PGAC0123	228047	6886849	54.2	55	-90	360	21	22	1	2.5	14.3	23.6
PGAC0124	227976	6886781	70.4	51	-90	360	3	5	2	2.3	2.5	0.9
PGAC0124	227976	6886781	59.9	51	-90	360	12	17	5	5.0	9.5	9.0
PGAC0124	227976	6886781	55.4	51	-90	360	18	20	2	2.2	12.4	8.6
PGAC0125	227910	6886718	65.6	51	-90	360	0	1	1	2.1	6.5	6.6
PGAC0125	227910	6886718	63.1	51	-90	360	2	4	2	2.1	3.5	5.4
PGAC0125	227910	6886718	55.6	51	-90	360	10	11	1	2.4	14.0	19.8
PGAC0129	227763	6887272	61.9	51	-90	360	6	9	3	2.8	12.9	1.9
PGAC0134	227904	6887413	64.7	33	-90	360	0	3	3	2.9	9.3	11.5
PGAC0135	227975	6887485	63.2	14	-90	360	5	7	2	3.4	15.8	7.0
PGAC0135	227975	6887485	60.7	14	-90	360	8	9	1	2.1	15.9	15.9
PGAC0137	228116	6887630	71.4	23	-90	360	0	4	4	2.7	9.1	4.4
PGAC0138	228187	6887699	73.4	25	-90	360	3	8	5	3.9	13.0	17.9
PGAC0139	228254	6887768	75.5	30	-90	360	7	8	1	4.3	20.0	12.4
PGAC0139	228254	6887768	66.5	30	-90	360	15	18	3	3.4	9.7	3.8
PGAC0140	228328	6887840	72.9	43	-90	360	9	10	1	2.4	21.0	8.9
PGAC0142	228720	6887871	91.2	19	-90	360	0	8	8	3.5	9.3	14.6
PGAC0142	228720	6887871	84.2	19	-90	360	10	12	2	2.3	11.0	1.3
PGAC0142	228720	6887871	81.7	19	-90	360	13	14	1	2.3	17.0	25.0
PGAC0142	228720	6887871	79.2	19	-90	360	15	17	2	2.3	19.8	14.7
PGAC0142	228720	6887871	76.7	19	-90	360	18	19	1	2.1	28.8	8.8
PGAC0144	228682	6886081	47.8	60	-90	360	2	3	1	3.1	6.7	7.0
PGAC0144	228682	6886081	45.8	60	-90	360	4	5	1	2.8	6.7	32.7
PGAC0145	228759	6886151	61.4	60	-90	360	0	1	1	3.2	12.7	13.0
PGAC0145	228759	6886151	54.9	60	-90	360	5	9	4	5.6	12.1	10.3
PGAC0146	230021	6887404	81.5	47	-90	360	0	11	11	4.3	9.2	4.4
PGAC0146	230021	6887404	69.0	47	-90	360	17	19	2	2.7	13.3	14.2
PGAC0146	230021	6887404	66.5	47	-90	360	20	21	1	2.1	10.7	1.6
PGAC0147	230095	6887483	91.4	11	-90	360	1	2	1	2.4	18.9	8.5

Heavy Minerals LIMITED

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0147	230095	6887483	86.4	11	-90	360	3	10	7	3.3	9.3	4.3
PGAC0148	230307	6886987	78.8	45	-90	360	0	13	13	3.5	9.4	7.6
PGAC0148	230307	6886987	58.8	45	-90	360	26	27	1	2.5	17.2	12.4
PGAC0149	230377	6887062	90.9	39	-90	360	0	2	2	2.8	10.1	13.1
PGAC0149	230377	6887062	81.9	39	-90	360	4	16	12	5.6	5.6	1.7
PGAC0149	230377	6887062	72.9	39	-90	360	18	20	2	2.5	11.4	12.3
PGAC0149	230377	6887062	59.4	39	-90	360	32	33	1	2.2	11.5	1.8
PGAC0150	230520	6886499	77.3	13	-90	360	0	8	8	3.3	10.1	6.1
PGAC0150	230520	6886499	71.8	13	-90	360	9	10	1	2.2	10.0	0.8
PGAC0151	230452	6887127	89.9	39	-90	360	1	16	15	5.5	3.6	2.9
PGAC0151	230452	6887127	75.4	39	-90	360	17	29	12	3.1	13.8	12.3
PGAC0152	230594	6886567	78.8	15.5	-90	360	0	15.5	15.5	4.0	8.7	3.6
PGAC0153	230663	6886647	86.6	48	-90	360	0	13	13	4.3	6.2	5.8
PGAC0153	230663	6886647	72.1	48	-90	360	14	28	14	5.5	9.1	3.7
PGAC0153	230663	6886647	63.1	48	-90	360	29	31	2	2.8	11.2	5.2
PGAC0153	230663	6886647	60.6	48	-90	360	32	33	1	2.2	13.2	7.7
PGAC0153	230663	6886647	50.6	48	-90	360	41	44	3	3.3	17.1	2.0
PGAC0154	230733	6886722	78.4	45	-90	360	1	28	27	5.7	8.3	3.1
PGAC0154	230733	6886722	56.4	45	-90	360	33	40	7	2.6	10.7	3.0
PGAC0154	230733	6886722	51.4	45	-90	360	41	42	1	2.6	11.9	16.2
PGAC0154	230733	6886722	48.4	45	-90	360	44	45	1	2.2	33.1	5.9
PGAC0155	230523	6887205	93.1	42	-90	360	0	14	14	3.9	9.6	10.0
PGAC0155	230523	6887205	80.1	42	-90	360	15	25	10	6.5	13.9	11.8
PGAC0155	230523	6887205	73.1	42	-90	360	26	28	2	2.2	17.8	4.0
PGAC0155	230523	6887205	61.6	42	-90	360	38	39	1	2.1	21.8	10.0
PGAC0155	230523	6887205	59.1	42	-90	360	40	42	2	2.7	15.4	10.8
PGAC0156	230592	6887275	97.0	39	-90	360	0	10	10	3.5	6.6	6.5
PGAC0156	230592	6887275	83.5	39	-90	360	11	26	15	2.9	15.2	6.3
PGAC0156	230592	6887275	74.5	39	-90	360	27	28	1	2.0	13.0	0.4
PGAC0156	230592	6887275	68.5	39	-90	360	29	38	9	3.5	16.7	4.7
PGAC0157	230805	6886784	87.5	42	-90	360	0	10	10	2.8	12.2	5.8
PGAC0157	230805	6886784	72.0	42	-90	360	17	24	7	2.4	14.3	18.2
PGAC0157	230805	6886784	61.5	42	-90	360	28	34	6	3.3	16.5	1.7
PGAC0157	230805	6886784	56.5	42	-90	360	35	37	2	2.2	17.7	0.6
PGAC0158	230870	6886859	90.6	20	-90	360	0	9	9	4.7	6.2	6.8
PGAC0158	230870	6886859	78.1	20	-90	360	14	20	6	2.2	14.7	13.9
PGAC0159	230947	6886926	95.7	39	-90	360	0	1	1	4.0	11.2	16.0
PGAC0159	230947	6886926	89.7	39	-90	360	2	11	9	3.0	6.0	5.0
PGAC0159	230947	6886926	83.7	39	-90	360	12	13	1	2.7	9.4	14.9
PGAC0159	230947	6886926	81.7	39	-90	360	14	15	1	2.5	10.1	10.8
PGAC0159	230947	6886926	74.7	39	-90	360	20	23	3	2.4	14.1	6.2
PGAC0159	230947	6886926	70.7	39	-90	360	25	26	1	2.2	13.8	0.2
PGAC0159	230947	6886926	67.2	39	-90	360	27	31	4	5.8	12.4	1.2
PGAC0160	231010	6887002	87.7	42	-90	360	0	10	10	2.8	11.6	16.0
PGAC0160	231010	6887002	80.7	42	-90	360	11	13	2	2.2	13.3	3.3

HOLE_ID	EASTING (GDA94)	NORTHING (GDA94)	RL (m)	EOH (m)	DIP	AZI	FROM (m)	TO (m)	LENGTH (m)	THM (%)	SLIMES (%)	OS (%)
PGAC0160	231010	6887002	70.7	42	-90	360	18	26	8	4.2	14.8	4.9
PGAC0160	231010	6887002	59.2	42	-90	360	33	34	1	2.2	13.7	14.4
PGAC0161	230524	6885787	59.0	10	-90	360	0	7	7	3.5	13.3	9.4
PGAC0163	230661	6885929	66.0	18	-90	360	0	10	10	4.8	10.7	9.9
PGAC0163	230661	6885929	54.5	18	-90	360	15	18	3	5.5	10.8	3.3
PGAC0164	231153	6886423	88.0	15	-90	360	0	9	9	3.0	12.1	17.1
PGAC0164	231153	6886423	80.5	15	-90	360	10	14	4	2.2	9.7	0.8
PGAC0165	231442	6885287	76.1	20	-90	360	0	12	12	9.3	8.6	4.3
PGAC0165	231442	6885287	63.6	20	-90	360	17	20	3	2.4	17.6	14.1
PGAC0166	231367	6885224	72.3	13.5	-90	360	0	13.5	13.5	6.0	7.7	4.3
PGAC0167	231298	6885152	71.7	20.4	-90	360	0	19	19	5.7	11.0	11.7
PGAC0168	231290	6885853	80.3	14.9	-90	360	0	14.9	14.9	4.2	8.4	4.1
PGAC0169	231226	6885783	75.8	42	-90	360	0	15	15	7.7	7.5	6.3
PGAC0169	231226	6885783	59.8	42	-90	360	21	26	5	2.5	13.4	15.4
PGAC0169	231226	6885783	53.8	42	-90	360	29	30	1	2.2	10.5	0.7
PGAC0169	231226	6885783	48.3	42	-90	360	32	38	6	3.4	15.6	12.4
PGAC0170	231162	6885718	73.5	39	-90	360	0	15	15	4.1	10.1	4.1
PGAC0170	231162	6885718	52.0	39	-90	360	26	32	6	3.2	10.3	6.8
PGAC0171	231087	6885647	72.4	25	-90	360	0	7	7	4.2	10.3	9.1
PGAC0171	231087	6885647	60.9	25	-90	360	12	18	6	3.2	8.6	3.6
PGAC0171	231087	6885647	51.4	25	-90	360	24	25	1	2.3	23.9	11.0
PGAC0172	231021	6885577	66.0	12	-90	360	0	12	12	4.4	8.1	7.4
PGAC0173	230949	6885507	66.1	39	-90	360	0	6	6	3.5	11.4	16.3
PGAC0173	230949	6885507	59.1	39	-90	360	9	11	2	2.1	5.8	23.8
PGAC0173	230949	6885507	37.6	39	-90	360	31	32	1	3.2	9.9	1.0
PGAC0174	230891	6885447	66.5	15	-90	360	0	10	10	5.9	8.6	15.1
PGAC0174	230891	6885447	59.0	15	-90	360	12	13	1	3.7	12.2	17.2
PGAC0175	230875	6886146	84.7	17	-90	360	0	17	17	4.1	8.1	2.4
PGAC0176	230805	6886069	80.8	17	-90	360	0	17	17	3.6	7.9	5.2
PGAC0177	230737	6886003	73.9	14	-90	360	0	10	10	4.1	6.3	11.4
PGAC0177	230737	6886003	65.4	14	-90	360	13	14	1	2.6	8.2	23.6
PGAC0178	230595	6885860	63.9	18	-90	360	0	3	3	4.6	5.8	8.7
PGAC0178	230595	6885860	52.4	18	-90	360	9	17	8	2.9	10.8	8.9
PGAC0181	231085	6886354	89.9	28	-90	360	1	7	6	3.1	8.8	5.9
PGAC0181	231085	6886354	79.9	28	-90	360	8	20	12	3.6	9.1	8.6
PGAC0181	231085	6886354	69.4	28	-90	360	22	27	5	3.2	14.1	3.5
PGAC0182	231017	6886281	83.0	24	-90	360	0	10	10	3.8	9.6	10.7
PGAC0182	231017	6886281	74.5	24	-90	360	12	15	3	2.6	8.8	18.2
PGAC0182	231017	6886281	67.0	24	-90	360	18	24	6	5.8	9.3	3.1
PGAC0183	230943	6886213	82.7	24	-90	360	0	19	19	4.2	7.6	5.5
PGAC0184	231149	6887132	83.7	42	-90	360	1	2	1	2.8	9.1	2.3
PGAC0184	231149	6887132	75.7	42	-90	360	5	14	9	2.3	12.8	8.3
PGAC0184	231149	6887132	54.7	42	-90	360	29	32	3	3.2	10.6	4.0
PGAC0186	231282	6887293	83.5	39	-90	360	5	7	2	3.2	14.2	0.6
PGAC0187	231423	6887433	89.3	11	-90	360	4	8	4	2.4	10.2	8.6

Appendix 3: Summary of mineralogy results

MACNUM	RUTILE	ANATASE	ILMENITE	QUARTZ	ZIRCON	CALCITE	GARNET	TOTAL
PG001	2.00	0.50	4.00	3.00	0.50	3.00	87.00	100.00
PG002	1.99	0.50	4.98	1.99	1.99	1.00	87.56	100.00
PG003	2.00	0.05	4.00	2.00	1.00	1.00	89.96	100.00
PG004	4.06	0.51	7.11	3.05	2.03	1.02	82.23	100.00
PG005	2.01	0.05	5.02	2.01	0.50	2.01	88.40	100.00
PG006	2.02	0.51	4.04	2.02	1.01	0.51	89.90	100.00
PG007	1.98	0.50	3.96	1.98	0.50	0.99	90.10	100.00
PG008	3.05	0.51	6.09	2.03	1.02	2.03	85.28	100.00
PG009	1.01	0.50	3.02	2.01	0.50	0.50	92.46	100.00
PG010	2.02	0.51	4.04	2.02	1.01	0.51	89.90	100.00
PG011	2.02	0.51	4.04	2.02	0.51	1.01	89.90	100.00
PG012	2.02	0.51	4.04	2.02	0.51	1.01	89.90	100.00
PG013	1.98	0.50	3.96	1.98	0.50	2.97	88.12	100.00
PG014	2.00	0.50	4.00	4.00	0.50	1.00	88.00	100.00
PG015	0.99	0.50	3.96	1.98	0.50	1.98	90.10	100.00
PG016	1.01	0.51	3.03	2.02	0.51	2.02	90.91	100.00
PG017	1.99	0.50	3.98	2.99	1.00	1.00	88.56	100.00
PG018	2.00	0.50	4.00	2.00	0.50	4.00	87.00	100.00
PG019	3.02	0.50	6.03	3.02	1.01	2.01	84.42	100.00
PG020	2.00	0.50	4.00	2.00	0.50	6.00	85.00	100.00
PG021	2.00	0.50	4.00	4.00	0.50	4.00	85.00	100.00
PG022	1.01	0.51	4.04	2.02	0.51	2.02	89.90	100.00
PG023	2.99	0.50	7.96	2.99	1.00	3.98	80.60	100.00
PG024	1.00	0.50	4.00	2.00	0.50	2.00	90.00	100.00
PG025	2.01	0.50	4.02	3.02	2.01	3.02	85.43	100.00
PG026	2.00	0.50	4.00	2.00	0.50	1.00	90.00	100.00
PG027	2.03	0.51	4.06	2.03	0.51	0.51	90.36	100.00
PG028	1.99	0.50	3.98	2.99	0.50	0.50	89.55	100.00
PG029	2.00	0.50	6.00	2.00	0.50	1.00	88.00	100.00
PG030	1.99	0.50	3.98	1.99	1.00	1.00	89.55	100.00
PG031	2.99	0.50	4.98	2.99	1.99	1.00	85.57	100.00
PG032	5.03	1.01	7.04	3.02	2.01	0.50	81.41	100.00
PG033	1.00	0.05	4.02	1.00	0.50	1.00	92.42	100.00
PG034	2.02	0.51	3.03	3.03	0.51	1.01	89.90	100.00
PG035	1.01	0.51	4.04	2.02	0.51	3.03	88.89	100.00
PG036	3.05	0.51	5.08	2.03	1.02	2.03	86.29	100.00
PG037	2.01	0.05	4.02	2.01	0.50	4.02	87.39	100.00
PG038	2.99	0.50	5.97	3.98	1.99	1.99	82.59	100.00
PG039	1.01	0.05	4.06	1.01	0.51	1.01	92.34	100.00
PG040	4.06	0.51	6.09	3.05	2.03	3.05	81.22	100.00
PG041	1.00	0.50	4.00	2.00	0.50	3.00	89.00	100.00
PG042	1.00	0.50	3.00	2.00	0.50	2.00	91.00	100.00
PG043	1.00	0.05	2.00	2.00	0.50	0.50	93.95	100.00
PG044	0.50	0.05	5.05	1.01	0.50	2.02	90.86	100.00

MACNUM	RUTILE	ANATASE	ILMENITE	QUARTZ	ZIRCON	CALCITE	GARNET	TOTAL
PG045	2.00	0.50	4.00	3.00	0.50	1.00	89.00	100.00
PG046	0.05	0.05	1.99	0.50	0.50	0.50	96.42	100.00
PG047	0.99	0.05	3.98	1.99	0.50	1.99	90.50	100.00
PG048	2.02	0.51	3.03	2.02	0.51	1.01	90.91	100.00
PG049	2.00	0.50	4.00	2.00	0.50	2.00	89.00	100.00
PG050	2.01	0.50	4.02	3.02	2.01	3.02	85.43	100.00
PG051	0.50	0.05	3.00	2.00	0.50	2.00	91.95	100.00
PG052	2.02	0.51	4.04	3.03	0.51	1.01	88.89	100.00
PG053	1.00	0.50	3.00	2.00	0.50	3.00	90.00	100.00
PG054	2.00	0.50	3.00	3.00	0.50	2.00	89.00	100.00
PG055	1.00	0.05	2.01	2.01	0.50	1.00	93.42	100.00
PG056	0.99	0.05	3.98	1.99	0.50	1.99	90.50	100.00
PG057	2.01	0.05	4.02	3.01	0.50	1.00	89.40	100.00
PG058	1.00	0.05	4.02	1.00	0.50	2.01	91.41	100.00
PG059	2.99	0.50	4.98	3.98	1.00	2.99	83.58	100.00
PG060	1.00	0.50	3.00	2.00	0.50	4.00	89.00	100.00
PG061	2.99	0.50	3.98	2.99	1.99	1.99	85.57	100.00
PG062	1.01	0.05	3.04	2.03	0.51	1.01	92.34	100.00
PG063	2.03	0.51	4.06	3.05	1.02	1.02	88.32	100.00
PG064	1.00	0.05	3.01	2.01	0.50	2.01	91.41	100.00
PG065	2.00	0.50	5.00	3.00	0.50	3.00	86.00	100.00
PG066	0.99	0.05	2.98	1.99	0.50	1.99	91.50	100.00
PG067	2.01	0.50	4.02	3.02	1.01	1.01	88.44	100.00
PG068	0.99	0.50	3.96	1.98	0.50	1.98	90.10	100.00
PG069	3.02	0.50	4.02	3.02	1.01	1.01	87.44	100.00
PG070	2.00	0.50	4.00	2.00	0.50	2.00	89.00	100.00
PG071	1.99	0.50	4.98	1.99	1.00	1.99	87.56	100.00
PG072	1.99	0.50	7.96	1.99	1.99	1.00	84.58	100.00
PG073	1.99	0.50	4.98	1.99	1.00	1.00	88.56	100.00
PG074	1.98	0.05	3.96	1.98	0.99	1.98	89.06	100.00
PG075	2.01	0.50	4.02	3.02	1.01	2.01	87.44	100.00
PG076	1.00	0.05	4.02	1.00	0.50	2.01	91.41	100.00
PG077	2.00	0.50	4.00	2.00	0.50	3.00	88.00	100.00