



**PORT GREGORY SCOPING STUDY HIGHLIGHTS ROBUST GARNET PROJECT ECONOMICS**

Heavy Minerals Limited (ACN 647 831 833) (“**HVY**”, “**Heavy Minerals**” or the “**Company**”) is pleased to announce the results of the Port Gregory Scoping Study and Preliminary Economic Assessment (“**PGSS**” or “**Scoping Study**”)

**Study Highlights**

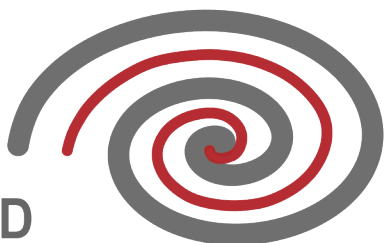
- ✂ **Substantial Net present Value (NPV)** relative to HVY market capitalisation
- ✂ **Low CAPEX project**
- ✂ **16-year mine life** with the potential to extend with further successful drilling (planned for 2022)
- ✂ **Short Payback period**
- ✂ **Significant Life of Mine (LOM) Revenue**
- ✂ **High Internal Rate of Return (IRR)**
- ✂ **Significant after-tax Free Cash Flow (FCF)**
- ✂ **Low OPEX and high margin project**
- ✂ **Averaging 141 kt of garnet and 6 kt of ilmenite product per annum**

Executive Director & CEO, Mr. Nic Matich said:

*The Company’s Port Gregory Scoping Study demonstrates the potential for the Port Gregory Project to be developed into a long life and economic mining operation. The results of the Scoping Study highlight the robust nature of the project and bodes well for the future, as the Company looks to potentially transition to the development stage.*

*With a second phase of drilling at the Port Gregory project currently being planned, the next few months should put the Company in a position to conduct a feasibility study and progress offtake discussions with interested parties.”*





***Scoping Study Parameters – Cautionary Statements***

The Scoping Study and Preliminary Economic Assessment (PGSS) referred to in this announcement has been undertaken to determine the potential viability of an open pit mine, garnet and ilmenite processing plant constructed onsite at the Port Gregory project in Western Australia and to reach a decision to proceed with more definitive studies. The Scoping Study has been prepared to an accuracy level of  $\pm 35\%$ . The results should not be considered a profit forecast or production forecast.

The Scoping Study is a preliminary technical and economic study of the potential viability of the Port Gregory project. In accordance with the ASX Listing Rules, the Company advises it is based on low-level technical and economic assessments that are not sufficient to support the estimation of Ore Reserves. Further evaluation work including infill drilling and appropriate studies are required before Heavy Minerals Limited (Heavy) will be able to estimate any Ore Reserves or to provide any assurance of an economic development case.

77% of the total production target is in the Indicated Mineral Resource category with 23% in the Inferred Mineral Resource category. 100% of the scheduled throughput over the first 11 years of production is in the Indicated Mineral Resource category, with 0% in the Inferred Mineral Resource category. The Company has concluded that it has reasonable grounds for disclosing a production target which includes a modest amount of Inferred material. However, there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work (including infill drilling) on the Port Gregory deposit will result in the determination of additional Indicated Mineral Resources or that the production target itself will be realised. Heavy, in consultation with IHC Mining, intends to conduct infill drilling to increase the confidence of the Inferred Mineral Resources to Indicated Mineral Resources and increase the confidence of Indicated Mineral Resources to Measured Mineral Resources.

The Scoping Study is based on the material assumptions outlined elsewhere in this announcement. These include assumptions about the availability of funding. While Heavy considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the Scoping Study, additional funding will likely be required. Investors should note that there is no certainty that Heavy will be able to raise funding when needed. It is also possible that such funding may only be available on terms that dilute or otherwise affect the value of Heavy's existing shares. Debt funding via offtake pre-funding and the eligibility for Northern Australian Infrastructure Funding will also be investigated.

The Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes that it has a reasonable basis to expect it will be able to fund the development of the Project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including sufficient progression of all JORC Modifying Factors, on which the production target and forecast financial information are based have been included in this ASX release.

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### Company Presentation

The Company intends to present at the NWR Aussie Explorers Virtual Conference to discuss its projects and the Port Gregory Scoping Study details. The conference details will be announced shortly.

### Scoping Study Key Highlights

**AUD\$253M**

After Tax NPV<sub>8</sub>

**4.2 years**

Payback period

**AUD\$1.59B**

LOM Revenue

**33%**

After Tax IRR

**AUD\$588M**

After Tax FCF

**AUD\$110M**

CAPEX to Production

- ✘ **Substantial NPV<sub>8</sub> (real) of AUD\$253M** relative to HVY market capitalisation of \$9.96M (at 18.5 cps)
- ✘ **16-year mine life** with the potential to extend with further successful drilling (planned for 2022)
- ✘ **Low CAPEX project** due to proximity to existing Infrastructure and Geraldton, an Industrial hub with a population of over 30,000 people.
- ✘ **Low OPEX and high margin project** due to simplistic and standard processing requirements to reach final product
- ✘ **Averaging 141 kt of garnet and 6 kt of ilmenite product per annum**

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## Scoping Study Overview

The Port Gregory Garnet Project consists of six tenements totalling 227.28 km<sup>2</sup> located approximately 50 km North of Geraldton. The Port Gregory Project is the initial focus of the Company and is prospective for industrial minerals, in particular garnet. The Project has a JORC Mineral Resource estimate of 135 Mt @ 4.0% (THM) or 4.9 Mt Contained garnet.

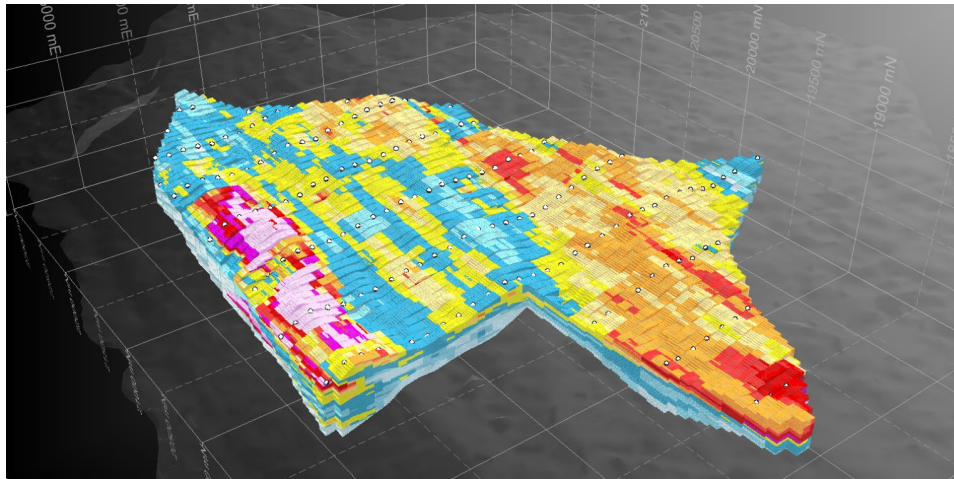


Figure 1: Port Gregory Block Model showing THM grade

The Port Gregory Mineral Resource estimate is reported at 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).

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:

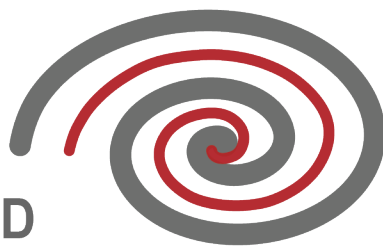
- ✘ an Indicated Mineral Resource of 88 Mt @ 3.8% THM, 10% SLIMES and 9% OS containing 3.3 Mt of THM with an assemblage of 89% garnet, 4% ilmenite, 2% rutile and 0.6% zircon; and
- ✘ an Inferred Mineral Resource of 47 Mt @ 4.5% THM, 10% SLIMES and 11% OS containing 2.1 Mt of THM with an assemblage of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

Table 1: Port Gregory – Mineral Resource Estimate

Summary of Mineral Resource estimate <sup>(1)</sup>							THM Assemblage <sup>(2)</sup>					
Classification	In Situ		In Situ				Garnet (%)	Ilmenite (%)	Zircon (%)	Rutile (%)	Anatase (%)	Other (%)
	Material (Mt)	THM (Mt)	Garnet (Mt)	THM (%)	SL (%)	OS (%)						
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
<b>Grand Total</b>	<b>135</b>	<b>5.4</b>	<b>4.9</b>	<b>4.0</b>	<b>10</b>	<b>10</b>	<b>90</b>	<b>4</b>	<b>0.6</b>	<b>1</b>	<b>0.3</b>	<b>4</b>

### 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.



The Scoping Study highlights that the project has a low capital requirement for production with substantial operating margins which has the potential to elevate Heavy to the ranks of producer in the coming years. The cash flow and economic analysis has been prepared on a 100% of project. Cost estimations are considered to be at a scoping study level of accuracy of  $\pm 35\%$

There are two major mining areas which will be selectively mined with mining initially beginning on the eastern flank of the project where material will be mined for approximately 12 years. The western flank will be mined for the remaining 4 years of the life of mine which is currently estimated at 16 years. Given the resource is open to the north and south there is the potential for the mine life to be extended with successful drilling.

The proposed operation will process mineralisation from surface or with limited overburden removal via conventional dozer trap mining (MUP) from shallow pits at a rate of 488 TPH to produce a slurry that is pumped to a Wet Concentration Plant (WCP). A Heavy Mineral Concentrate (HMC) is produced via processing the sand fraction through a series of gravity spirals and up-current classifiers (UCC). The HMC is transferred to the dry Mineral Separation Plant (MSP) where the HMC is further upgraded by removing material via magnetic separation. The magnetic concentrate which is dominated by ilmenite will form a valuable by-product, estimated to sell for AUD\$640 per tonne. The garnet material will then be screened, bagged, and shipped to Geraldton Port for export to the market.

The Project has excellent surrounding infrastructure including bitumen roads and a short haulage path to Geraldton for offsite storage at a warehouse in Narngulu. Once a shippable amount of product (20kt) has accumulated, material will be trucked to port for loading onto ships for export. Furthermore, given the location, it is expected that a high-quality residential workforce located in either Geraldton or Kalbarri will enhance the opportunities for regional development. Should the project source a considerable proportion of the workforce from Kalbarri the potential for NAIF (Northern Australia Infrastructure Fund) funding will be investigated as a source of debt financing.

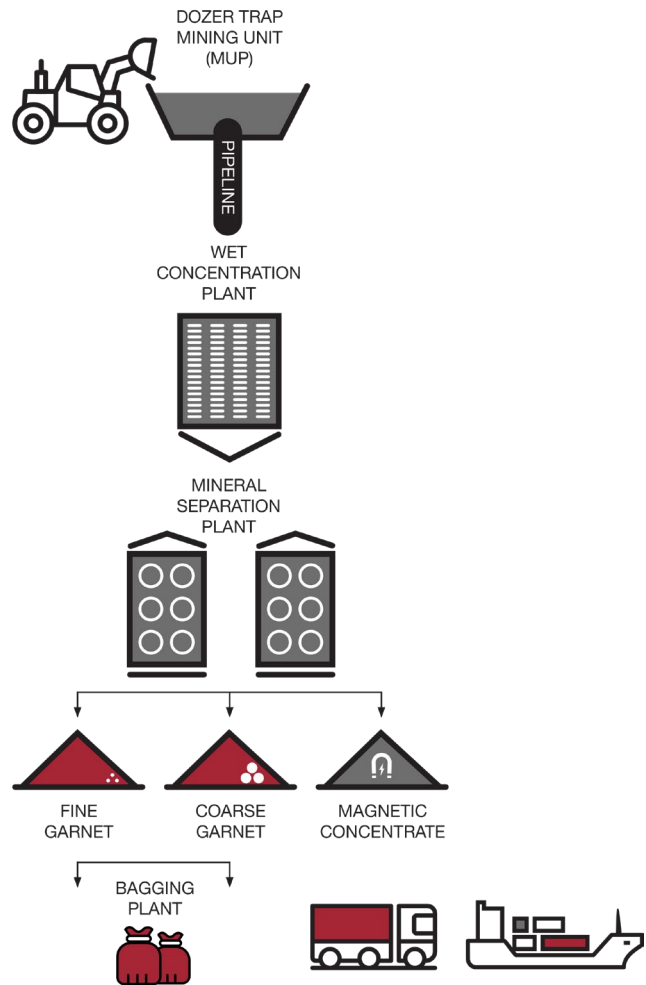
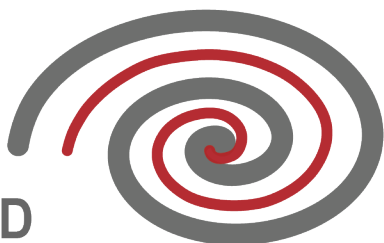


Figure 2: Stylised production flow diagram



## Key Study Outcomes and Assumptions

The Scoping Study demonstrated the technically simple and robust nature of the project and the significant potential economic value that would result from a future development at Port Gregory. There remains significant upside to add to the Mineral Resource Estimate at Port Gregory as highlighted by the Mineral Resource Estimate which shows that it is open to both the North and South within HVY tenure. Should this occur the effect on the NPV of the project will rerate upwards accordingly.

A total of 8 production and processing scenarios were originally evaluated during the Scoping Study, with Scenario 1 originally the production base case. This Scenario was left out due to overproduction and bottlenecking of the processing flowsheet. The results of the Scenario modelling for Scenarios 2 to 7 are presented in Table 4. Scenario 6 was selected as the production and financial case for the Scoping Study as it does not exceed WCP / MSP capacity and allows for the reasonable placement of product in the market.

A summary of the initial physical and financial evaluation of the project is shown in Table 2 and Table 3.

Table 2: Port Gregory Scoping Study Project Summary – Physicals and costs

<b>Port Gregory Garnet Project Summary</b>		
<b>Mining Physicals</b>		
Total Mining Inventory	Mt	57
Average Grade	%	5.1
Mining Rate	Mtpa	3.5
Mine Life	years	16
HMC Produced (Annual)	ktpa	158
<b>Production</b>		
Ilmenite Product	ktpa	6
Bulk Garnet – 20/40	ktpa	14
Bulk Garnet – 30/60	ktpa	56
Bulk Garnet 80 – WJ80	ktpa	69
Bulk Garnet 12 – WJ120	ktpa	1
Total Production	ktpa	146
<b>Capital Expenditure</b>		
Development Capital	AUD\$m	109.5
<b>Cash Costs</b>		
	AUD\$m	(638)
	\$/t Ore	(11.1)
	\$/t HMC	(249)
Royalties (State and Vendor)	\$/t HMC	(46.6)

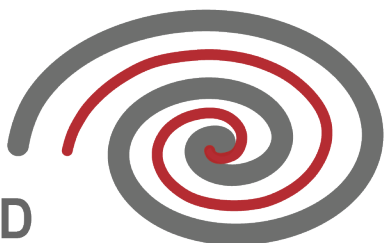


Table 3: Port Gregory Scoping Study Project Summary - Financials and Key Assumptions

Port Gregory Garnet Project Summary		
Financials and Key Assumptions		
Bulk Garnet – 20/40 (Price)	\$/t	752
Bulk Garnet – 30/60 (Price)	\$/t	714
Bulk Garnet 80 – WJ80 (Price)	\$/t	714
Bulk Garnet 12 – WJ120 (Price)	\$/t	785
Ilmenite Product (Price)	\$/t	640
Garnet Revenue	AUD\$m	1,643
Ilmenite Revenue	AUD\$m	65
Total Revenue	AUD\$m	1,708

Garnet pricing assumptions were sourced from a variety of open-source data and publications including Garnet distributors marketing pricing and Garnet producers market releases. Industry expert interviews were also conducted. Low to midpoint pricing was utilised to ensure robustness in the model.

Ilmenite concentrate pricing was sourced from current ferroalloy.net pricing data for ilmenite product ex-WA.

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## Production Projections and Options Investigated

The production profile of the Port Gregory Garnet Mine (Figure 3) demonstrates annual production of 71 kt of Blasting grade garnet, 70 kt of Water Jet grade garnet and 6 kt of Ilmenite product. 77% of production throughout the life of mine is sourced from Indicated Mineral Resources with the remainder from Inferred Mineral Resources. Nameplate capacity is conservatively modelled to be reached within 3 months of commissioning. It should be noted that the 80 mesh garnet could be placed into the blasting market as well as the waterjet market.

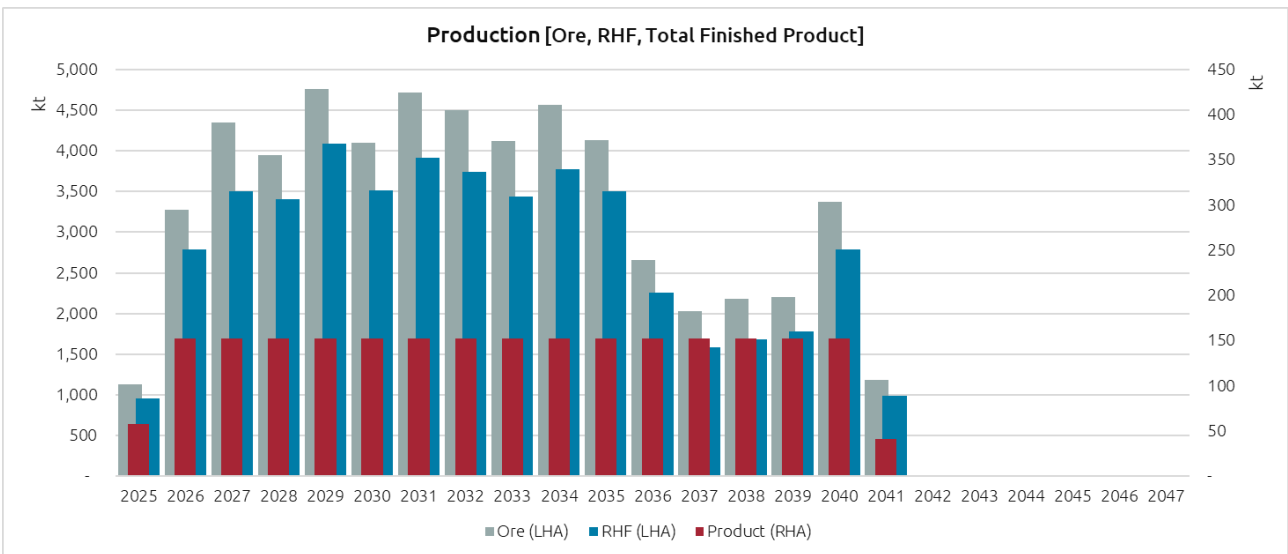


Figure 3: Production profile over the life of the project

The mining sequence and the material movement classified by Mineral Resource confidence is presented in Figure 4.

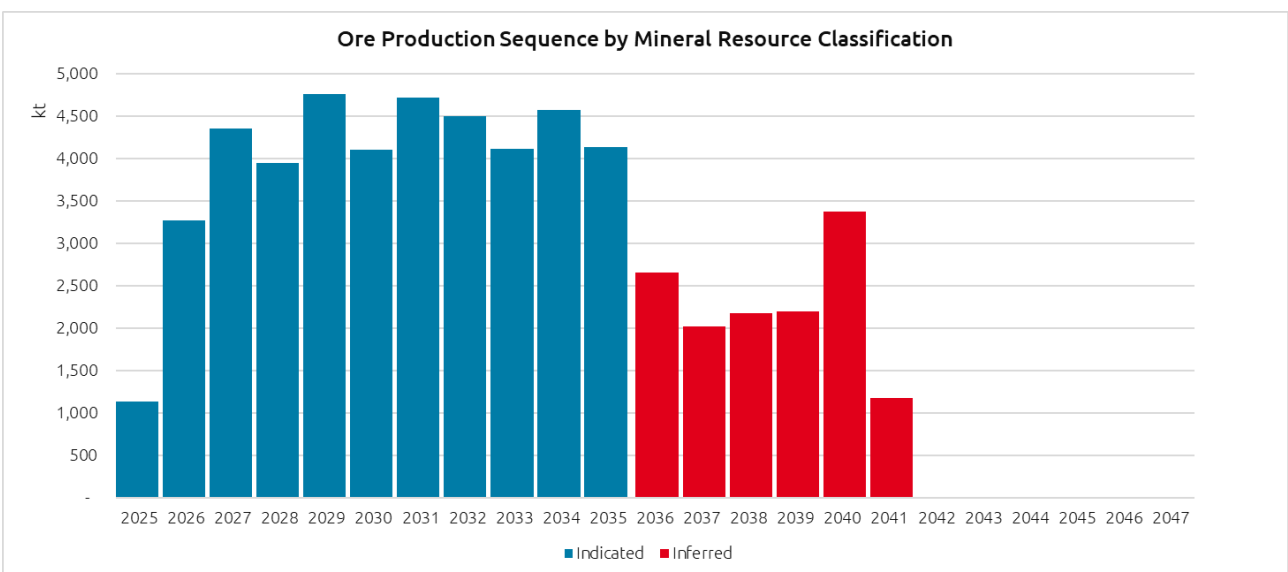
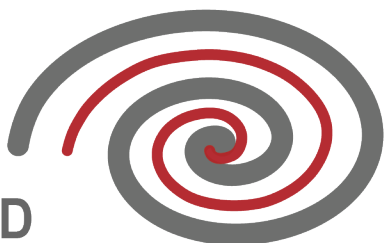


Figure 4: Production profile over the life of the project





Several alternative production and processing scenarios were investigated as part of the PGSS with a summary of the outcomes represented in Table 4.

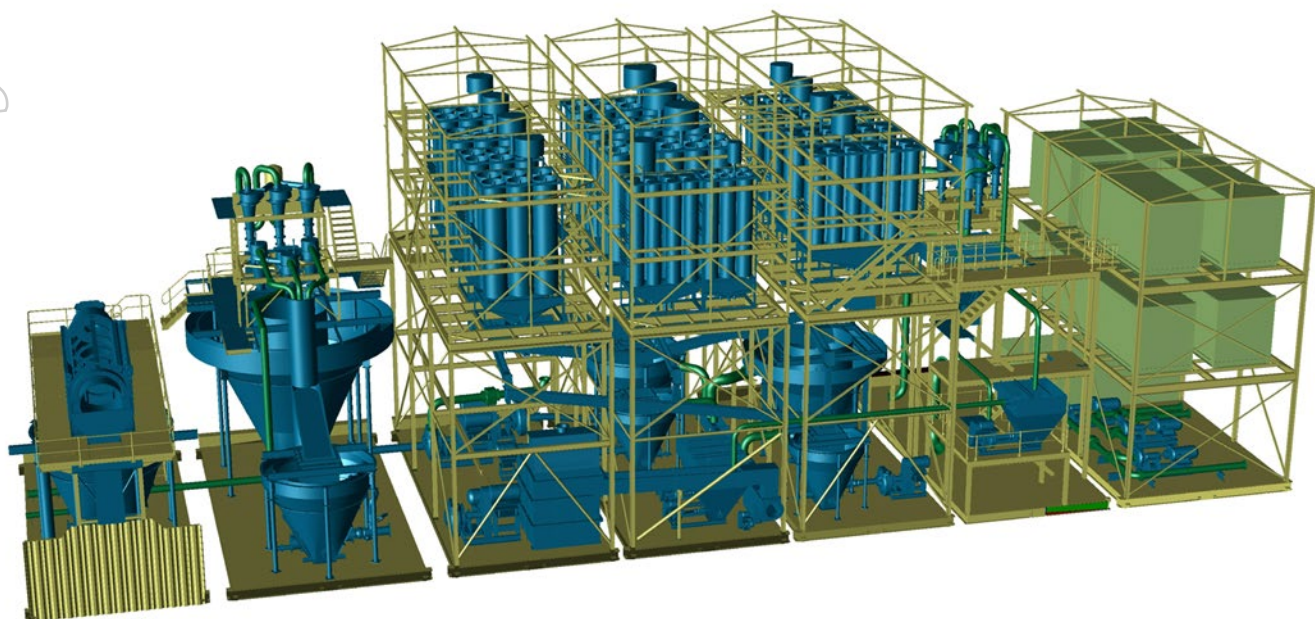
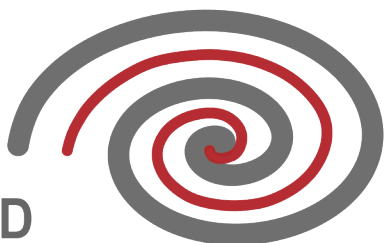
- ✘ Scenario 2: MUP de-rated and then unconstrained; limited to WCP HMC production rate;
- ✘ Scenario 3: MUP mining smoothed production rate to ~150 ktpa of product, small increase in CAPEX;
- ✘ Scenario 4: MUP mining smoothed production rate to ~240 ktpa of product, increase in CAPEX;
- ✘ Scenario 5: Scenario 2 plus screening and bagging plant for sized product, transport to Geraldton;
- ✘ Scenario 6: Scenario 3 plus screening and bagging plant for sized product, transport to Geraldton; and
- ✘ Scenario 7: Scenario 4 plus screening and bagging plant for sized product, transport to Geraldton.

Table 4: Options investigated as part of the Scoping Study (highlighted is the selected case for presentation)

Option	Capex (AUD\$M)	NPV (AUD\$M)	IRR (%)	Mine life (years)	TPA (kt HMC)
Scenario 2	89	161	27	17	145
Scenario 3	96	176	29	16	158
Scenario 4	140	269	40	9	257
Scenario 5	104	233	31	17	145
<b>Scenario 6</b>	<b>110</b>	<b>253</b>	<b>33</b>	<b>16</b>	<b>158</b>
Scenario 7	155	370	46	9	257

The primary constraint on the project concerned the quantity of final product (garnet) that could be placed in the market given the supply / demand forecasts from work conducted by [TZ Minerals International Pty Ltd] (TZMI). The garnet market is a demand driven industrial mineral market and as such Heavy has taken a conservative approach with sizing the plant to ensure that excess product is not produced. Significant upside potential does exist should garnet demand increase or offtakes exceed the proposed output of the plant. The plant is designed in such a way that additional throughput could be achieved via modularised additions (as seen in Scenario 4 and Scenario 7).

Even with a modest increase in CAPEX there is a real increase in NPV<sub>8</sub>. Extending the deposit footprint and the underlying Mineral Resource estimate, and thereby increasing the mining inventory will also add to the NPV<sub>8</sub> for all Scenarios investigated.



*Figure 5: Mineral sands modular plant concept (IHC Mining)*

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## Financial Metrics Analysis

The sensitivity of the project NPV and IRR to changes in key variable for the Port Gregory Project are outlined in Figure 6 and Figure 7 below. The greatest sensitivity to the project economics is the realised garnet price, which is expected given the mono-product nature of the project. Significant upside exists with positive movements in the garnet price with a +10% variance in realised price resulting in an NPV<sub>8</sub> of AUD\$308M (an uplift of AUD\$55M).

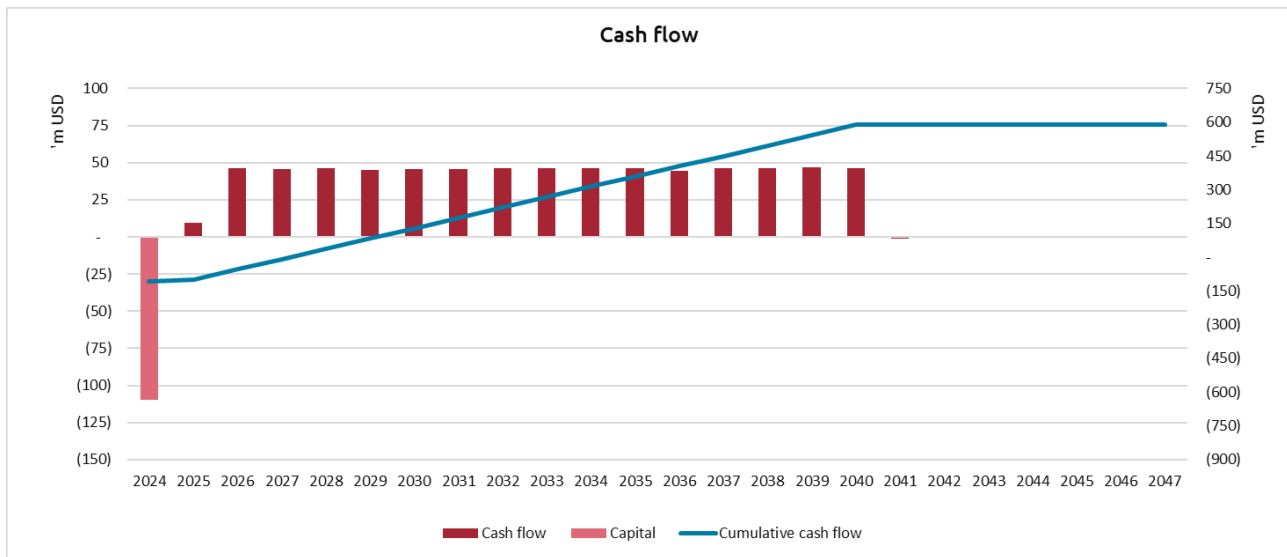


Figure 6: Cash flow over the life of the project

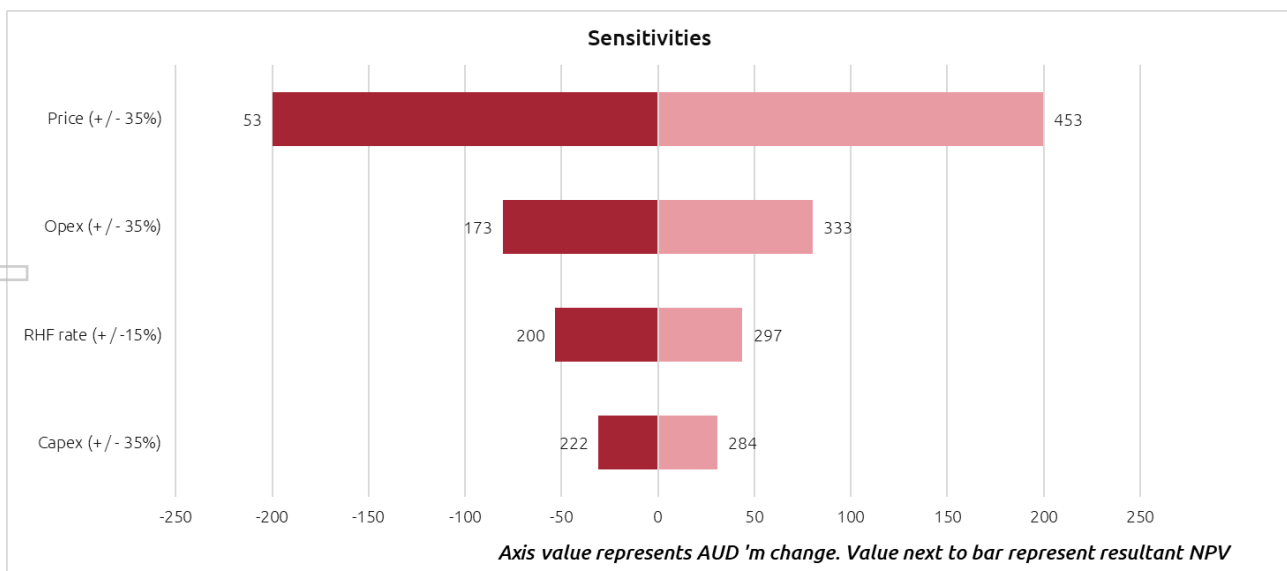


Figure 7: Project NPV sensitivities in relation to changes in key assumptions



### Capital Cost Estimate

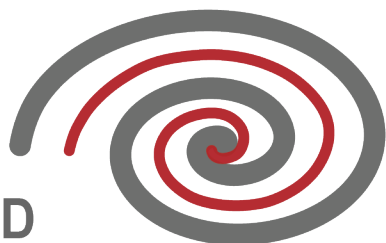
The Scoping Study costs are provided in Australian Dollars (AUD) and target a Class 5 estimate as defined by the American Association of Cost Engineering (AACE) with engineering development to between 1 - 2% and a cost accuracy of ( $\pm$  30 - 35%). As the basis for its cost estimate IHC Mining used previous work conducted on similar projects in the region and a proprietary in-house pricing database. The overall contingency is AUD\$14.3M which is 15% of the base estimate. The rates for labour were based on the Hays Australia Salary Guide 2022-2023.

Table 5: Port Gregory Capital Cost Estimate

Port Gregory Garnet Project Summary	
Capital Costs	AUD\$M
Operational Establishment	22.5
Mining Unit Plant	9.6
Wet Concentrator Plant	45.3
Magnetic Separation Plant	15.7
Bagging Plant	14.8
Load Out and Storage	1.6
<b>Total Project Costs</b>	<b>109.5</b>

Table 6: Port Gregory Cost Breakdown of Direct Cost, Indirect Cost and Contingency

Port Gregory Garnet Project Summary	
Capital Costs	AUD\$M
Direct Cost	76.7
Indirect Cost	18.5
<b>Total Project Cost (Excluding Contingency)</b>	<b>95.2</b>
Contingency	14.3
<b>Total Project Cost</b>	<b>109.5</b>



## Operating Cost Estimate

The Scoping Study costs are provided in Australian Dollars (AUD) and target a Class 5 ( $\pm 35\%$ ) estimate as defined by the American Association of Cost Engineering (AACE). The operating cost estimate was prepared by IHC Mining based upon an owner operator model. The OPEX is based on a 488 tph operation, assuming a WCP availability of 85% and MSP availability of 92%.

Table 7: Port Gregory Operating Cost Estimate

Port Gregory Garnet Project Summary	
Unit Costs	AUD\$M
Mining Costs	3.5
Overburden costs	0.8
Consumables	1.6
Power	8.4
Transportation	8.1
Labour	9.8
Maintenance	3.0
Operating Spares	0.8
Owner's costs	1.5
Rehabilitation	0.6
<b>Annual Operating Cost</b>	<b>38.1</b>

## Reasonable Basis for Funding Assumptions

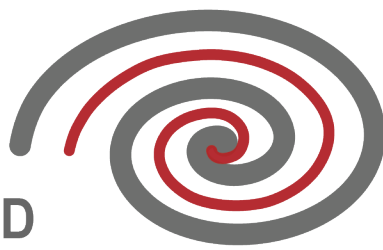
The Port Gregory Garnet Project is technically simple and relatively low risk with strong economics that provide a strong platform for Heavy to source traditional financing through debt and equity markets.

To achieve the range of outcomes indicated in the PGSS, pre-production funding of AUD\$110M may be required. Typical project development financing could involve a combination of debt and equity. Heavy is of the view that there is a reasonable basis to believe that the requisite funding for the development of the Port Gregory Garnet Project will be available when required however, investors should note that equity funding will be dilutive and may affect the value of Heavy Mineral's securities.

The grounds on which this reasonable basis has been established include:

**The Company has had preliminary discussions with its brokers and believes that, subject to the Company continuing to develop the project in line with the assumptions in this announcement, including feasibility study results not materially worse than that of the scoping study, there is a viable pathway to fund the project through the development stages and to pre-production via equity funding.**

- ✧ The Port Gregory Garnet Project is low risk, technically simple, has payback period of 4.2 years with a mine life of 16 years



- ✂ There exists potential to extend the life of mine beyond 16 years with successful extensional drilling
- ✂ Strong post-tax cash flows of AUD\$588M
- ✂ Forecast upside in Garnet demand and pricing by industry data aggregation specialists TZMI

## Industrial Garnet Market

The industrial Garnet market has two primary drivers of demand, those being abrasive blasting and water jet cutting material. Whilst water jet cutting material has been the dominant driver of the growth in demand in recent times the improvement in alternate cutting techniques and the lack of “true” 30/60 alluvial almandine garnet has seen the demand for blasting grade material increase. Heavy’s potential product suite is expected to be able to fill gaps in the 30/60 mesh blasting market and the 80 mesh water jet market. Initial discussions with potential “offtakers” have begun with more formal discussions likely to occur next year after further material testing and feasibility studies have been completed.

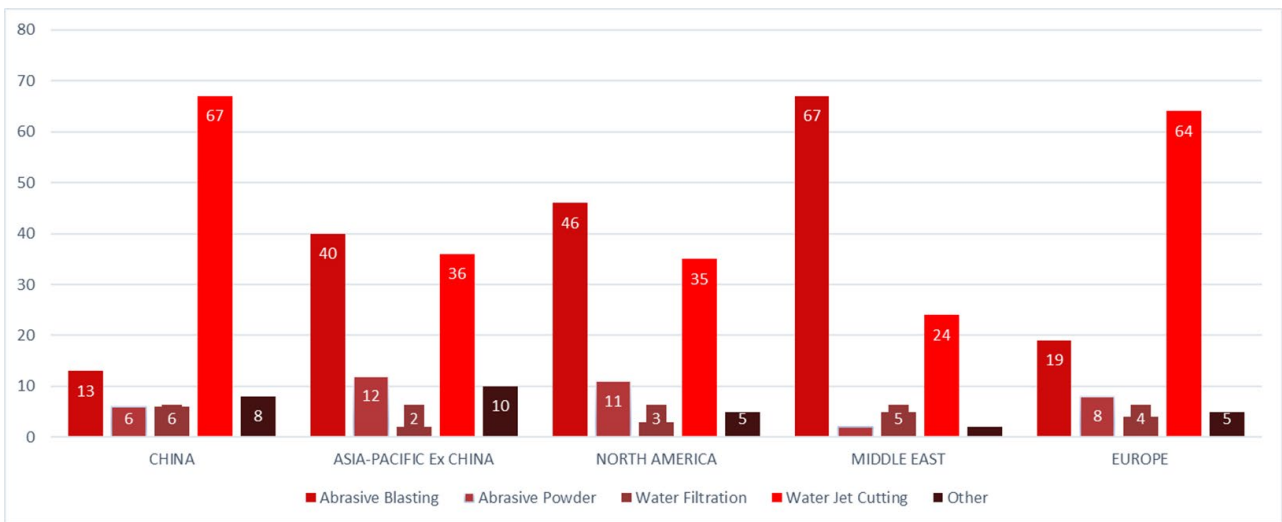


Figure 8: Annual garnet end use by region (kt) - TZMI

Market research conducted by TZMI in 2021 highlighted a widening supply demand deficit. Industry players in the Port Gregory region have found that product has been accepted into the market with long term offtakes readily sourced.

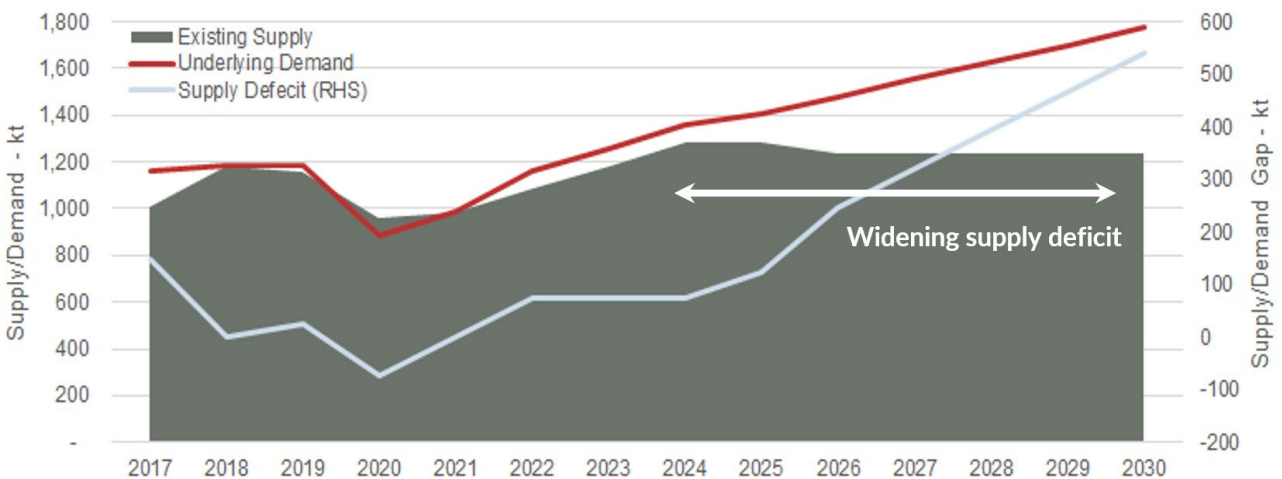


Figure 9: Garnet supply / demand forecast - TZMI





**Metallurgy**

Metallurgy results for the Port Gregory Garnet Project released on the 15<sup>th</sup> August 2022 highlight that the potential products produced could be marketed as 30/60 mesh and 80 mesh blasting grade products and 80 mesh and 120 mesh water jet cutting products. The ilmenite stream has the potential to also add revenue to the project as a valuable by-product.

The following key products were produced during the study:

- ✂ High grade garnet concentrate product containing 98.3% garnet
- ✂ Potential primary ilmenite product containing 53.8% TiO<sub>2</sub> which was readily upgraded from magnetic concentrate
- ✂ A coarse and fine garnet stream can be produced which has the potential to generate a blasting grade product and a water jet cutting grade product being:
  - ✂ Coarse garnet product D50 and D80 of 418 µm and 490 µm containing 99% garnet
  - ✂ Fine garnet product D50 and D80 of 220 µm and 277 µm containing 98% garnet

IHC Mining were quoted as saying:

“Metallurgical scoping test work completed confirms the Port Gregory material processes readily using typical physical separation methodologies and standard equipment.

The produced combined garnet product is high grade and is determined to contain 98.3% garnet.

The magnetic concentrate was readily upgraded to a potential ilmenite product containing 53.8% TiO<sub>2</sub> and low levels of contaminants.”

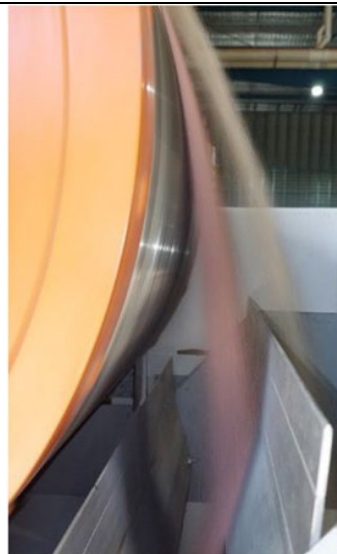


Figure 10: Fine garnet RED roll

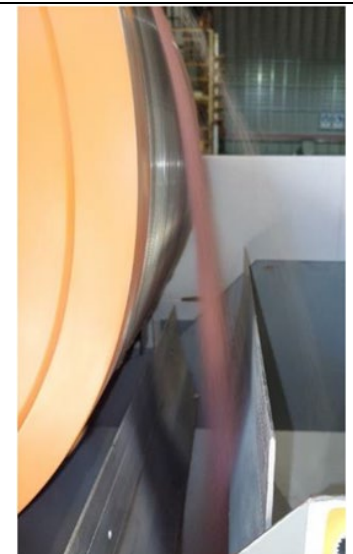


Figure 11: Coarse garnet RED roll





## Final Product Images

Images of the products produced from the Port Gregory raw material are presented in Figure 12 and Figure 13.

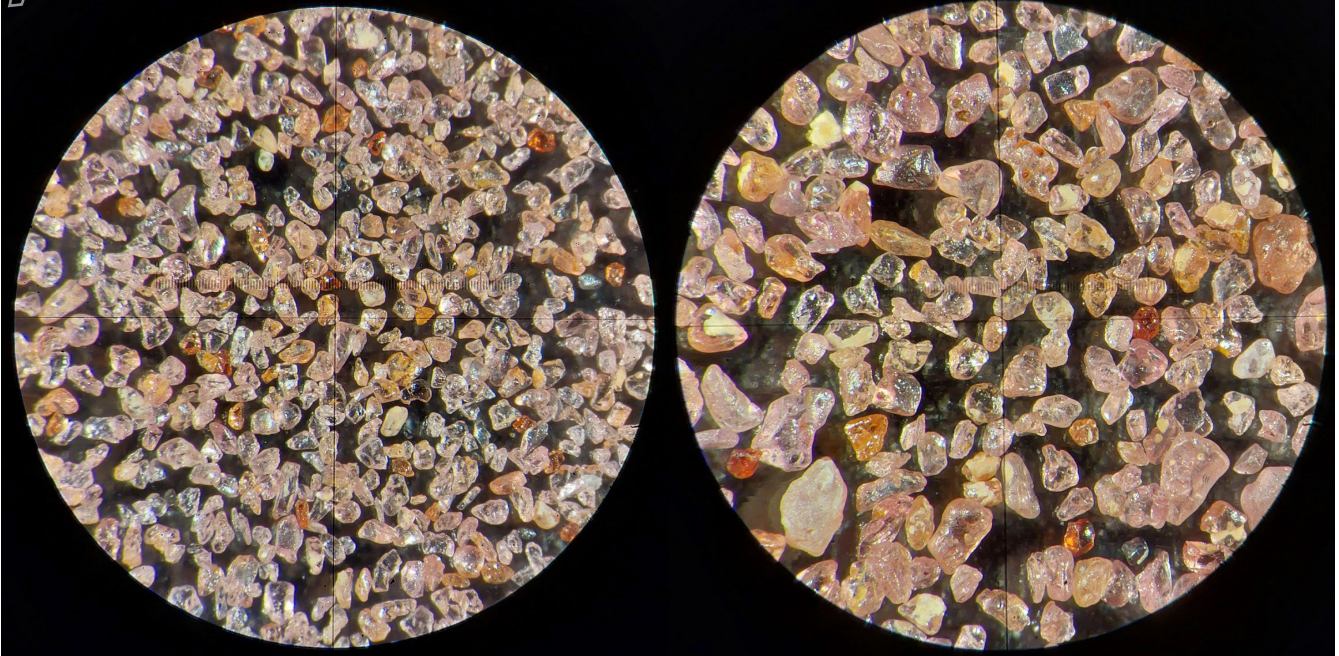


Figure 12: Fine garnet product (8.5mm field of view)

Figure 13: Coarse garnet product (8.5mm field of view)

## 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.

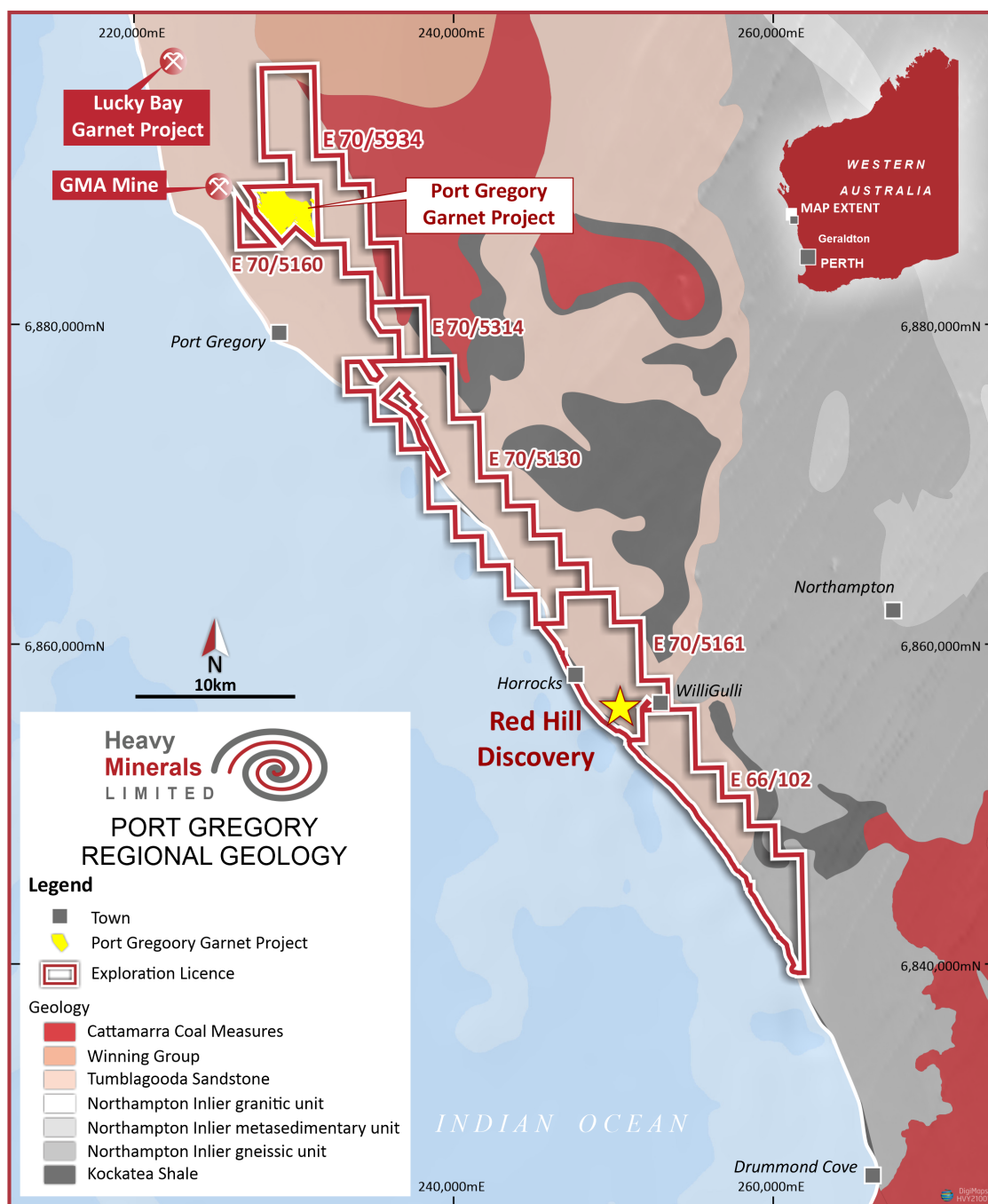


Figure 14: Port Gregory Regional Geology

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### Conclusions and Recommendations

The pit optimisation and preliminary mine planning exercise carried out on the Port Gregory Garnet Project demonstrates that there are economically exploitable pits to potentially support a mining operation of approximately 10-17 years duration.

The Modifying Factors used for the pit optimisation have been developed from a combination of first principles analysis, a historical database of costs, experience and the test work carried out by the IHC Mining laboratory in Brisbane. Revenues have been supplied by HVY and vetted for application by the IHC team. The pit shells were developed and vetted by the IHC Mining team in Australia with input from the HVY team. The final recommendation of the pit shells was made by the IHC Mining team with sign-off by the HVY technical team.

The global mining inventory developed for the Scoping Study and PEA totalled 57 Mt at an average THM grade of 5.1% for a total contained THM of 2.92 Mt.

The following recommendations flow from this work package and are in no particular order of importance, but should be taken for consideration:

- The next phase of work should establish a firm basis for mineral pricing based on off-take agreements so as to firm up the revenue drivers for the project;
- Consideration of other mining methodologies should be considered such as scrapers and truck and excavator;
- Detailed work needs to be undertaken on the nature of the SLIMES and the direct impact this has on flocculent / coagulant usage as well as handling with respect to water recovery, solar drying requirements, and potential for co-disposal; and
- The most likely next step is a Pre-Feasibility Study (PFS) and one of the key deliverables from that level of study will be a Probable Ore Reserve. In order to undertake that work, there is a considerable amount of background study work that needs to be completed, including but not restricted to:
  - o Hydrogeology study, development of piezometers, bores, baseline data, etc
  - o Transport study;
  - o Power study;
  - o Port development study; and
  - o Investigation of alternative mining methodologies.



## Upcoming News

- ✂ 3<sup>rd</sup> / 4<sup>th</sup> Quarter 2022: Red Hill drilling and 2<sup>nd</sup> phase Port Gregory drilling
- ✂ 3<sup>rd</sup> / 4<sup>th</sup> Quarter 2022: Inhambane wide spaced Auger drill program (still being planned)

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

## Ends

**For further information, please contact:**

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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 project has progressed to the Scoping Study stage which has shown the project to have an NPV<sub>8</sub> (real) of AUD\$253M and a 16-year mine life. 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](http://www.heavyminerals.com)

### Competent Persons Statement(s)

The Mineral Resource Estimate underpinning the production target and forecast financial information in this announcement has been 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 Mineral Resource Estimate in this announcement was first announced by HVY on 2 May 2022. The information in this announcement that relates to metallurgical test results was first announced by HVY on 15 August 2022.





HVY confirms it is not aware of any new information or data that materially affects the information included in the previous announcements and that all material assumptions and technical parameters underpinning the estimates in the previous announcement continue to apply and have not materially changed.

#### **Forward Looking Statement(s)**

Statements relating to the estimated or expected future production, operating results, cash flows and costs and financial condition of Heavy's planned work at the Company's project and the expected results of such work are forward-looking statements. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by words such as the following: expects, plans, anticipates, forecasts, believes, intends, estimates, projects, assumes, potential and similar expressions. Forward-looking statements also include reference to events or conditions that will, would, may, could or should occur. Information concerning exploration results, metallurgical results and Mineral Resource Estimates may also be deemed to be forward-looking statements, as it constitutes a prediction of what might be found to be present when and if a project is developed.

These forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable at the time they are made, are inherently subject to a variety of risks and uncertainties which could cause actual events or results to differ materially from those reflected in the forward-looking statements, including, without limitation: uncertainties related to raising sufficient financing to fund the planned work in a timely manner and on acceptable terms; changes in planned work resulting from logistical, technical or other factors; the possibility that results of work will not fulfil projections/expectations and realise the perceived potential of the Company's projects; uncertainties involved in the interpretation of drilling results and other tests and the estimation of heavy mineral sand resources; risk of accidents, equipment breakdowns and labour disputes or other unanticipated difficulties or interruptions; the possibility of environmental issues at the Company's projects; the possibility of cost overruns or unanticipated expenses in work programs; the need to obtain permits and comply with environmental laws and regulations and other government requirements; fluctuations in the price of heavy mineral sands and other risks and uncertainties.