ASX RELEASE

ASX: MRC

5 April 2023

AMENDED ANNOUNCEMENT - SIGNIFICANT ORE RESERVE INCREASE FOR TORMIN INLAND STRANDS

Mineral Commodities Ltd ("**MRC**" or "**the Company**") attaches an amended version of its announcement of 4 April 2023, titled "Significant Ore Reserve Increase for Tormin Inland Strands" which contains additional technical information required by ASX Listing Rule 5.9.1, as requested by ASX.

ENDS

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Authorised by the Interim Chief Executive Officer and Company Secretary, Mineral Commodities Ltd

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ASX RELEASE

ASX: MRC **5 April 2023**

SIGNIFICANT ORE RESERVE INCREASE FOR TORMIN INLAND STRANDS

Total Ore Reserve increase of 177%[1] for Tormin Inland Strands:

- **Updated Ore Reserve of 60.3 million tonnes at 3.7% VHM[2] (14.7% THM[3]) containing 2.21 million tonnes of heavy mineral**
    - **Increases projected Inland Strands mine life at current projected production rate of 2.4Mtpa to over 25 years, from 9 years based on previous ore reserve**
    - **Increase of 0.65 million tonnes of contained heavy mineral (41% increase)**
    - **83% conversion of available measured and indicated resource tonnes**
    - **31% conversion of available total resource tonnes**

Ore Reserve increase of 181%[1] within the current Expanded Mining Right (EMR) of the Tormin Inland Strands:

- **Updated Ore Reserve of 21.5 million tonnes at 5.4% VHM[2] (21.0% THM[3]) containing 1.17 million tonnes of heavy mineral within the EMR**
    - **Increases projected Inland Strands mine life within EMR at current projected production rate of 2.4Mtpa to 9 years, from 3 years based on previous EMR ore reserve**
    - **Increase of 0.42 million tonnes of contained heavy mineral (57% increase)**
    - **52.7% of all Ore Reserve contained heavy mineral lies within the EMR**

Mineral Commodities Ltd ("**MRC**" or "**the Company**") and its empowerment partner, Blue Bantry Investments 255 (Pty) Ltd, are pleased to announce that the Company's 50% owned subsidiary, Mineral Sands Resources (Pty) Ltd ("**MSR"**) has significantly upgraded its overall Inland Strands reserves by 177% (41% increase in contained heavy mineral) and its Inland Strands reserves within its current Expanded Mining Right ("**EMR**") by 181% (57% increase in contained heavy mineral). This reserve upgrade reflects the Company's focused commitment to its Strategic Plan[4] aiming to increase Tormin's asset value by expanding mineral reserves through organic growth and returning Tormin to historical profitability levels.

[1] As compared with the previously reported Ore Reserve. Refer ASX announcement entitled 'Maiden Ore Reserve For Inland Strand' dated 18 February 2022.
[2] VHM includes all currently sold minerals (zircon, rutile, ilmenite, magnetite, and garnet) that report as sink during heavy liquid separation at SG of 2.96 (bromoform) after desliming, within the 45 µm to 1mm size fraction as a percentage of the total material.
[3] THM includes all minerals that report as sink during heavy liquid separation at SG of 2.96 (bromoform) after desliming, within the 45 micron to 1mm size fraction as a percentage of the total material.
[4] Refer ASX announcement entitled 'MRC Unveils Five Year Strategic Plan 2022-2026' dated 29 April 2022.

Based on the current targeted production rate from the Inland Strands of 2.4Mtpa, the increase to the Inland Strands Ore Reserve contained within the EMR equates to a 9 year mine life for Inland Strands production. This production will provide stable medium term cash flows for the business prior to any consideration of additional mining right requirements additional to the EMR.

Inclusion of Inland Strands Ore Reserve outside of the current EMR will see a mine life of greater than 25 years, prior to any consideration of the recent high grade De Punt discovery.

The updated Inland Strands Ore Reserve, combined with the replenishable heavy mineral placer deposits of the Tormin and Northern beaches clearly demonstrate a long term, sustainable mining operation at Tormin.

Additionally, drilling options are available to target further increases in Geelwal Inland Strands reserves. These will be reviewed in conjunction with the De Punt resource [5], the completion of which is targeted for Q2 2023. An announcement will be made in respect of this work once complete.

The Tormin Inland Strands deposits comprise the Western and Eastern Strandlines which run directly behind the existing beach mining areas and adjacent to the current processing infrastructure at Tormin.

The Updated Ore Reserve estimate is based on the Maiden Ore Reserve[6] using updated modifying factors applied on measured and indicated Mineral Resources, new cashflow grade modelling, and updated pit optimisations using Whittle 4X. The Ore Reserve is classified as Proven and Probable in accordance with the JORC Code 2012 and the requirements of ASX Listing Rule 5.9. The orebody contains a high grade heavy mineral assemblage and will produce profitable mineral sands products. The Updated Ore Reserve is estimated at **60.3 Mt of ore with an average VHM grade of 3.7% resulting in 2.21 Mt of in-situ Heavy Minerals** in Proven and Probable categories (Table 1). It encompasses approximately 8km in total length across 153 hectares, adjacent to the existing plant.

[5] Refer ASX announcement entitled 'High Grade Drilling Results at De Punt' dated 15 March 2023.
[6] Refer ASX announcement entitled 'Maiden Ore Reserve For Inland Strand' dated 18 February 2022.

Table 1 - Updated Ore Reserve estimate for the Western Strandline

Reserve Category		Reserve Tonnes (Mt)	In situ VHM (Mt)	VHM (%)	Zircon (%)	Garnet (%)	Ilmenite (%)	Rutile (%)	Magnetite (%)	THM (%)
Within EMR	Proven	19.7	1.05	5.3	0.4	2.8	1.7	0.2	0.1	21.7
	Probable	-	-	-	-	-	-	-	-	-
Stockpiles - ROM	Proven	0.86	0.10	11.0	0.8	4.0	5.6	0.4	0.2	22.3
Stockpiles - LG	Proven	0.93	0.03	2.8	0.3	1.1	1.2	0.1	0.0	4.6
Outside EMR	Proven	-	-	-	-	-	-	-	-	-
	Probable	38.8	1.05	2.7	0.2	1.7	0.6	0.1	0.1	11.2
Proven		21.5	1.17	5.4	0.4	2.8	1.8	0.2	0.1	21.0
Probable		38.8	1.05	2.7	0.2	1.7	0.6	0.1	0.1	11.2
Total		**60.3**	**2.21**	**3.7**	**0.3**	**2.1**	**1.1**	**0.2**	**0.1**	**14.7**

- Ore Reserves are a sub-set of Mineral Resources.
- The economic cut-off is defined as positive cash flow grade per tonne.
- Tonnes and grades numbers may not compute due to rounding.

The Updated Ore Reserve is a sub-set of the Western Strandline Mineral Resource estimate of **193 million tonnes at 2.83% VHM (9.58% THM)**[7] as announced in December 2021. Specifically, it is based on the 74 million tonnes of measured, indicated and stockpiled resources (Table 2).

The Ore Reserve within the current EMR increases to **21.5 million tonnes at 5.4% VHM (21.0% THM) containing 1.17 million tonnes of heavy mineral** in comparison to the Maiden Ore Reserve for the current EMR of 7.9 Mt of ore with an average VHM grade of 9.4% resulting in 0.74 Mt of in-situ Heavy Minerals. This represents an increase of 13.6 million tonnes (181% increase) at 3.1% VHM for an additional 0.42 million tonnes of heavy mineral (57% increase) since the previous Ore Reserve announcement.

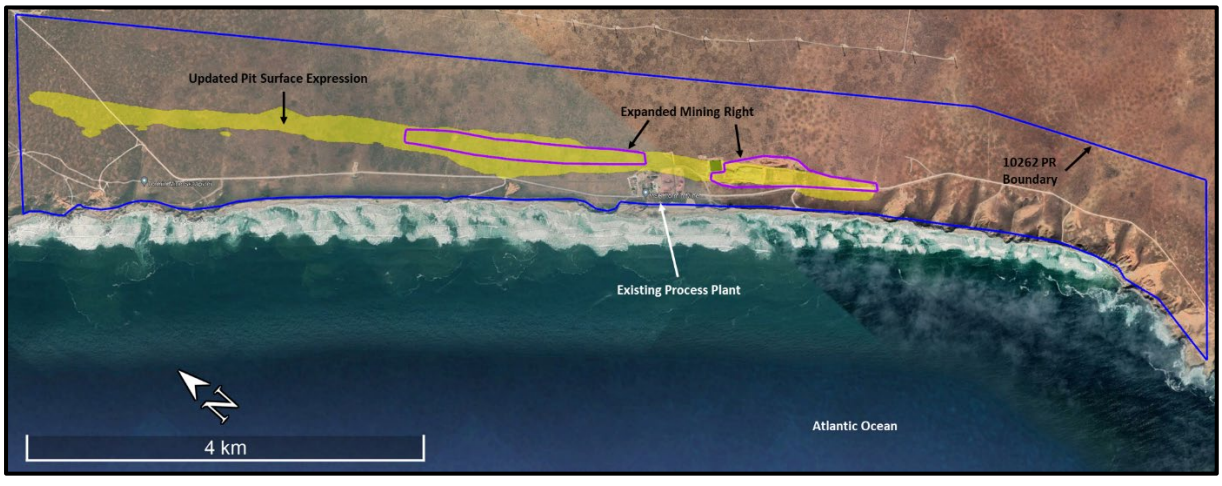

Figure 1 – Updated Western Strandline Ore Reserve Pit Location with Expanded Mining Rights and 10262 PR Boundary

[7] Refer ASX announcement entitled 'Significant Increase in Tormin Inland Strands' Mineral Resources' dated 7 December 2021.

The Ore Reserve upgrade has been completed utilising funds raised by the Company's most recent Rights Issue, in accordance with the anticipated use of funds (Tormin Inland Strand reserve expansion and extension) set out in the corresponding offer document[8]. The Company has also reviewed its mining method to improve its Tormin reserve and mineable heavy mineral, with further optimisation work underway.

Interim Chief Executive Officer Adam Bick commented: "*This extremely significant Ore Reserve upgrade both within and outside the EMR will underpin the long term profitability of Tormin and significantly enhances the asset value of our Heavy Minerals division. The Inland Strands provides flexibility for Tormin to sustainably mine its two producing, replenishable placer beach deposits over the long term and also provides another long term profitability source in its own right. Further, given the size of the Ore Reserve we now have the strategic advantage of being able to consider further increasing the scale of Tormin in the near term beyond 3.9Mtpa[9]. This, in conjunction with the anticipated future De Punt resource announcement, should provide renewed excitement for MRC shareholders that the Heavy Minerals division is moving towards its stated goals of increased scale and restoring historical profitability and cash generation to Tormin.*"

Material Assumptions and outcome of the Pre-Feasibility Study

The Company has significant experience in the heavy mineral sands industry having operated the Tormin Mineral Sands Mine since 2014, mining and processing more than 16Mt of ore in its approximately 2.6Mtpa plant to produce non-magnetic (zircon and rutile), garnet and ilmenite concentrates for export.

Following the grant of the Section 102 Expanded Mining Right from the South African Department of Mineral Resources and Energy ("**DMRE**") in June 2020[10], the Company engaged Minsol Engineering to undertake a Pre-Feasibility Study ("**PFS**"). The staged development program in the PFS uses existing processing equipment where possible, complemented with the installation and commissioning of additional equipment to process the Inland Strand ore.

The implementation strategy will reduce pre-development capital, support the replenishment of the Tormin current beaches, as well as expansion of Inland Strand processing on receipt of additional mining rights, to increase revenues. The development stages are:

- Stage 1: 1.2Mtpa Inland Strand operation during 2022-2024 on the current EMR Ore Reserves.
- Stage 2: Expansion to 2.4Mtpa targeting late 2024 following receipt of additional mining rights.

Initially, the Ore Reserve within the granted EMR used in the PFS supported up to 6.5 years of Stage 1 operations, de-risking the timing of the grant of additional mining rights required for Stage 2.

[8] Refer ASX Announcement entitled 'Supplementary Offer Document' dated 7 December 2022.
[9] Refer ASX Announcement entitled 'Inlands Strands Ore Processing Commences at Tormin' dated 6 March 2023.
[10] Refer ASX Announcement entitled 'MRC Granted Approvals to Expand Mining and Processing at Tormin' dated 2 July 2020.

The PFS, used for the economics in the Maiden Ore Reserve Estimate, indicates that the project is technically low risk, delivering a low capital cost solution with attractive financial outcomes which easily surpasses MRC's internally generated minimum investment criteria (Table 5). Stage 1 was to be funded from a combination of cash flows generated from the Company's current business operations and funding facilities in place in South Africa.

Given the attractiveness of Stage 1, in 2022 installation of additional equipment as planned in the PFS, including upgrades to the front end crushing and scrubbing circuit, and dewatering circuit, was commenced. This additional equipment has now been commissioned and is performing to expectations[11].

Additionally, the Company intends to accelerate the Stage 2 expansion to 2.4Mtpa from the December quarter 2022.

The updated ore reserve in this announcement utilises the PFS of the original Inland Strands reserve, given no change has been made to the mining method. The Updated Ore Reserve of 21.5 million tonnes increases projected Inland Strands mine life within the EMR at a current projected production rate of 2.4Mtpa to 9 years, from 6.5 years based on previous EMR ore reserve PFS production schedule.

Criteria Used for Classification

Inland Strand Mineral Resources of the Western Strandline were released on 7 December 2021 in accordance with the JORC Code 2012 and independently peer-reviewed by Wardell Armstrong International (Table 2)[12].

Table 2 - Mineral Resources for the Western Strandline Deposit (2% THM cut-off grade)

Category	Tonnes (Mt)	THM (%)	In Situ THM (Mt)	Zircon (% HM)	Garnet (% HM)	Ilmenite (% HM)	Rutile (% HM)	Anatase (% HM)	Magnetite (% HM)	VHM (%)
Measured	32.7	19.21	6.2	1.82	12.49	7.91	1.09	0.21	0.52	4.62
Indicated	39.7	9.48	3.7	1.05	14.77	3.80	0.84	0.21	0.74	2.03
Inferred	119.2	6.93	8.2	2.60	10.68	18.04	1.44	0.29	0.43	2.32
Stockpile	1.6	12.84	0.2	4.21	18.85	25.78	1.95	0.39	0.78	6.67
Total	**193.2**	**9.58**	**18.5**	**2.16**	**11.89**	**13.46**	**1.26**	**0.25**	**0.51**	**2.69**

- Mineral assemblage reported as in situ percentage of THM content.
- Tonnes and grades numbers may not compute due to rounding.

[11] Refer ASX announcement entitled 'Inlands Strands Ore Processing Commences at Tormin' dated 27 March 2023.
[12] Refer ASX announcement entitled 'Significant Increase in Tormin Inland Strands' Mineral Resources' dated 7 December 2021.

Measured and Indicated Mineral Resources were used to form the basis of the Ore Reserve Estimate in accordance with the JORC Code 2012. Micromine, MinePlan, Deswik, Whittle 4X and COMET software were used for pit optimisation and mine planning. All the Mineral Resources intersected by the open pit mine design, are contained within the EMR and all Measured Resources were classed as Proved Ore Reserves. Measured Resources outside of the EMR and the Indicated portion of the Mineral Resources were classed as Probable Ore Reserve after considering mining, metallurgical, social, environmental, and financial aspects of the project.

There are no Inferred Resources included in the Ore Reserve statement.

Estimation methodology

The updated Mineral Resource for the Western Strandline released in December 2021[13] has been classified into Measured, Indicated, and Inferred categories. The Mineral Resource estimation involved the use of drillhole and geology/topography to construct three-dimensional wireframes to define mineralised domains using Micromine software. Domains were snapped to the nearest true intersection from sampling. Data was extrapolated between data points and approximately half of the drill spacing beyond. Ordinary kriging was used as the primary estimator for the THM and Valuable Heavy Minerals values. A block size of 50x12.5x1m reflects the geometry of the mineralised domains and drillhole spacing. Then a measured Bulk Density for each lithology layer was applied to the model. Areas with drilling spaced at 125x25m were generally classified as Measured Resources and 250x20m were generally classified as Indicated Resources. Drilling up to 500x100m has been generally classified as Inferred Resources.

The Micromine block model was sub-blocked to 4x4x1m to aid the selection of blocks within this perimeter for the Ore Reserve estimation. Whittle 4X, MinePlan and COMET software were used for pit optimisation and mine planning. A practical mining void shape with consideration of geotechnical parameters for floor and pit slopes, processing recoveries, and economics was developed for the selected pit shells using a revenue factor of 1, and a new block model generated with ore and waste flagged accordingly. This block model was divided into stages based on value for use in schedule optimisation. No minimum mining widths were used as the geometry of the deposit is tabular. Due to the cashflow grades of the deposit showing a cashflow positive mineralised halo around the high grade areas and bedrock being a definable boundary for mineralisation that is able to be mined to, mining recovery has been incorporated into schedule through block / bench aggregation.

[13] Refer ASX announcement entitled 'Significant Increase in Tormin Inland Strand's Mineral Resources', dated 7 December 2021.

Mining method and mining assumptions

The thickness and continuous nature of the mineralisation at the Western Strandline supports conventional open-pit mining with excavators and articulated dump trucks. The Company believes there are no mining factors that affect the assumption that the deposit has reasonable prospects for economic mining.

Pit shells were developed with Whittle 4X using pseudoflow and a variable cashflow cut-off grade estimated in the block model. The optimisation shells selected comprised open pits, initially targeting the higher value areas earlier in the mining plan. The initial Western Strandline pits have been optimised on the Measured and Indicated material in the south and north pits within the Expanded Mining Rights area (Figure 2). These initial pits have not changed from the previous mine plan due to currently being constrained by the Extended Mining Rights. Treatment of the material contained within these pits has been modified due

Firstly, topsoil is removed using a dozer. The topsoil stockpiles will not exceed two metres in height and will be seeded with a cover crop to stabilise them and to avoid airborne dust and material loss given mineralisation occurs near the surface. Excavators and trucks will be used for initial limited overburden stripping where required to open mining zones and in areas where voids for tailings storage need to be established in advance. Once suitable tailings areas are available, the exposed ore will primarily use a D9 dozer or equivalent to push material to a loading area for excavators and trucks to haul to the ROM and stockpiles.

Ore hauled from the mining pit is stockpiled for subsequent processing. A front end loader feeds stockpiled ore to the Primary Concentration Circuit ("**PCP**"). Oversize material is removed from the ore feed by a scrubber trommel circuit and then fed to a crusher before re-joining the circuit.

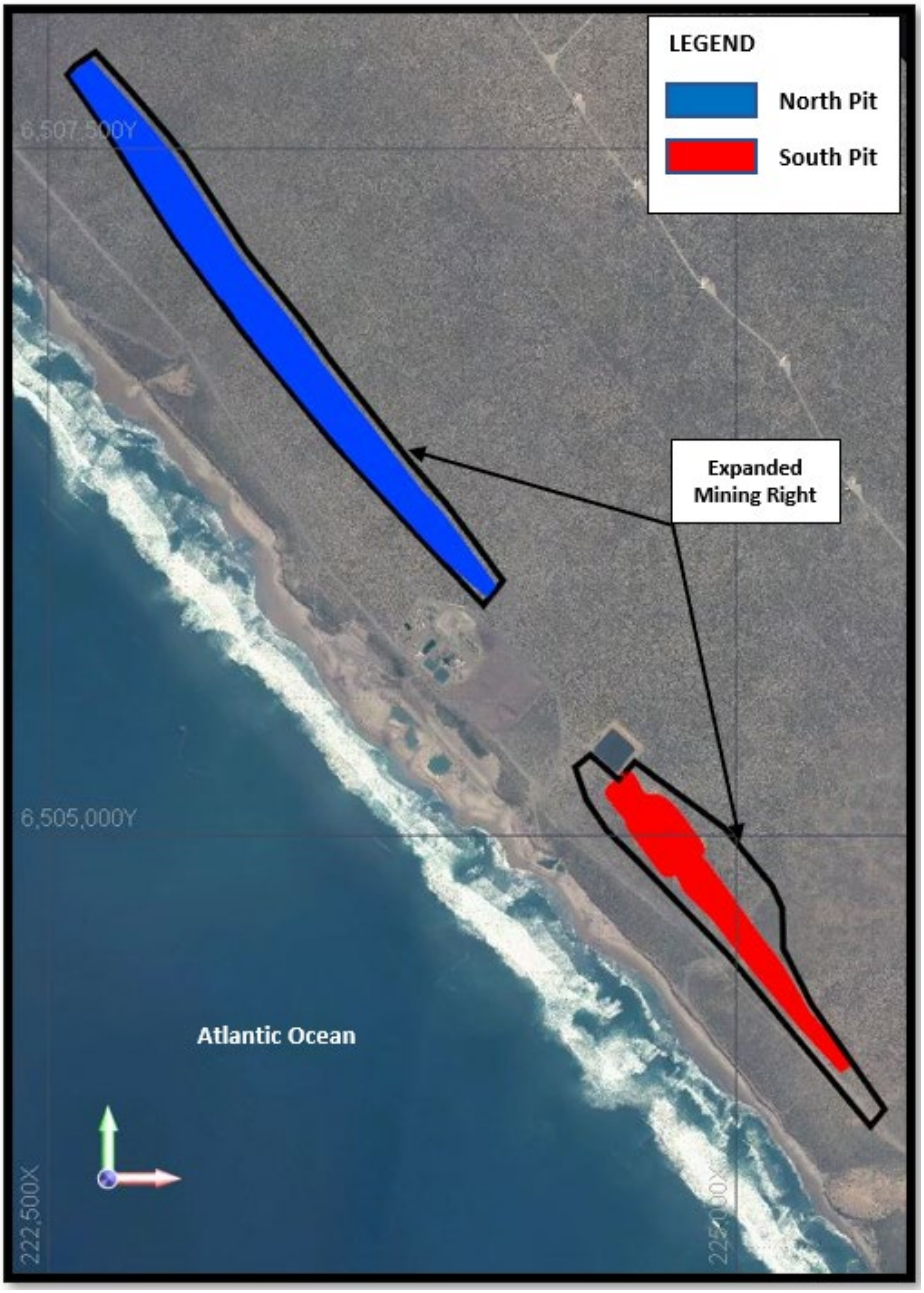

Figure 2 – Scheduled pit outlines at the Western Strandline within the Mining Right

The mining schedule is based on Measured and Indicated Mineral Resources with detailed mine designs and mining fleet requirements determined by qualified engineers and mining contractors. The results from geotechnical and hydrogeological studies carried out at the Tormin Inland Strands (including drilling, logging, in-pit slope stability analysis, in situ permeability testing and laboratory test works, also 2D resistivity survey and water boreholes monitoring) have been included in the Western Strandline mine design.

The rehabilitation management plan and standard operating procedures have been prepared and will be implemented as required. Backfilled tailings will be profiled to mimic original topography prior to the replacement of topsoil for rehabilitation and reseeding.

Processing method and processing assumptions

The processing plant has been designed by experienced mineral sands engineers, Minsol Engineering, based on metallurgical factors derived from laboratory testwork programs by Nagrom, Haver & Boecker, and Delchem as well as onsite production scale processing trials, with design recoveries to the Heavy Mineral Concentrate ("**HMC**") provided in Table 3.

Table 3 – Design mineral recoveries for the Western Strandline

Heavy Minerals	Units	ROM Feed (inc. Slimes)	HMC	Mineral Recovery to HMC
Zircon	%	0.50	2.53	92
Rutile	%	0.25	1.13	82
Ilmenite	%	2.83	14.35	92
Garnet	%	4.27	21.18	90
Magnetite	%	0.16	0.81	92

Overall recoveries based on the PFS metallurgical factors and previous plant performance of the existing Garnet Stripping Plant - Secondary Concentrator Plant ("**GSP-SCP**") for heavy mineral used in the estimation of the Ore Reserve are provided in Table 4.

Table 4 – Designed overall mineral recoveries for the Western Strandline

Heavy Minerals	Units	Overall Recovery
Zircon	%	77
Rutile	%	50
Ilmenite	%	78
Garnet	%	80
Magnetite	%	57

The PFS was presented at the appropriate level of design required to support the recovery, throughput, and production estimates. The processing flowsheet is representative of the deposit in terms of material type, grades, and spatial distribution (Figure 3).

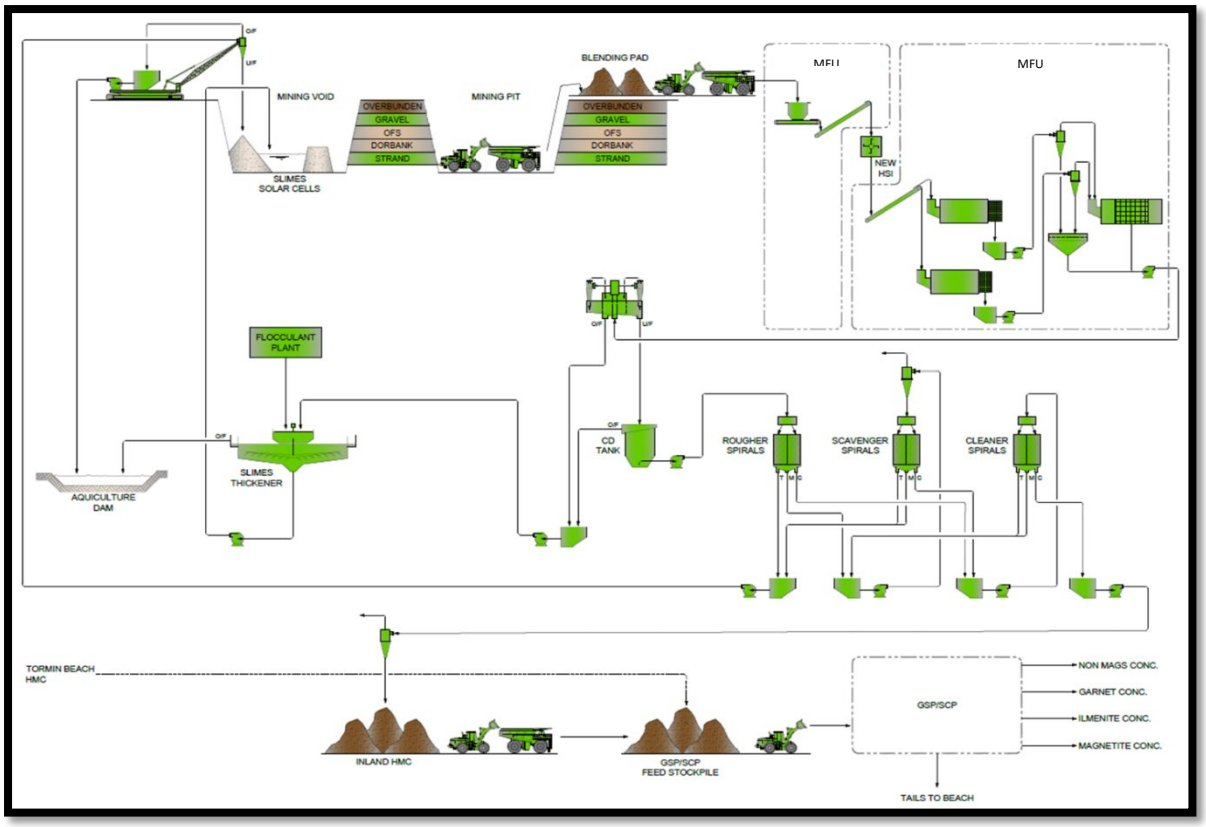

Figure 3 – Schematic of Inland Strand mining and mineral processing

Liberated ore from the PCP is deslimed and processed via conventional, primary, gravity concentration plants to recover valuable heavy minerals as a HMC. The Company's existing PCP are used as the primary concentrators. Strandline HMC is stockpiled at the primary concentrator and then fed to the Company's existing GSP-SCP to produce ilmenite, garnet and non-magnetics concentrates for sale. Slimes are pumped to a slime thickener situated at the Aquaculture Dam for water recovery before co-disposal into the mining void with coarse gravity tailings.

Current operational costs have been used as the basis for operating cost estimates used in the estimation of the cashflow grade for the Western Inland Strand deposit.

Basis of the cut-off grade

The Mineral Resource is reported to a 2% THM cut-off grade in accordance with JORC Code 2012. This updated Ore Reserve is based on a value model that assigns mining and processing recoveries, costs, and revenue to the geological model. This value model follows the entire mining process from soil stripping to final rehabilitation. An economic optimisation is applied to determine the cashflow grade of each block to every destination. Material is then characterised as being either cashflow positive or cashflow negative. Material is designated as ore where the cashflow grade ($/t) is positive.

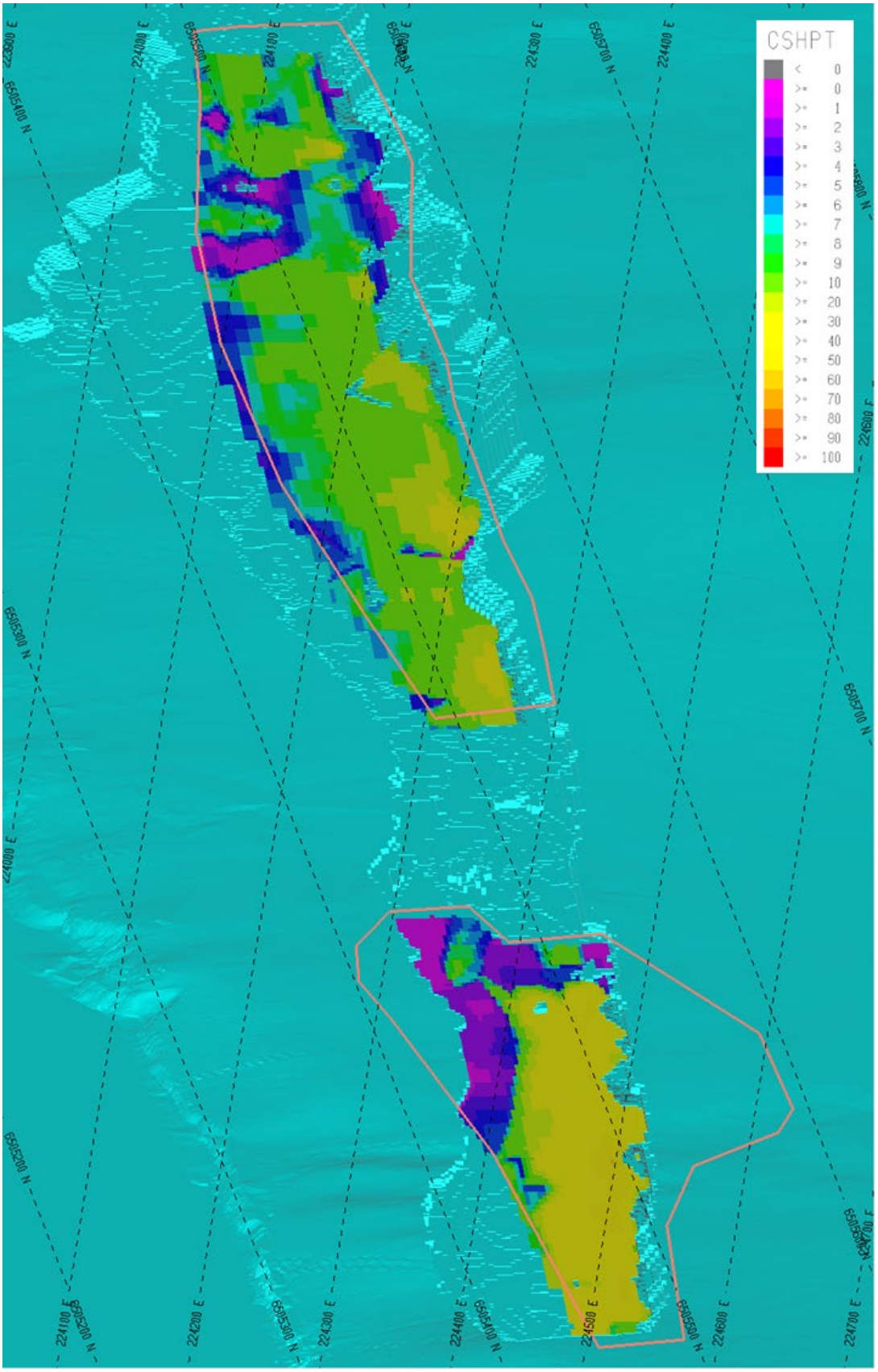

Figure 4 – Oblique view of Cashflow Grade ($/t) for the Western Strandline within the final pit (rf=1) and filtered to the Extended Mining Right (orange boundary) at 36mRL

Material modifying factors

The Expanded Mining Right (162 &163 EMR) was granted on 30 June 2020 and all regulatory approvals have been awarded. An environmental impact assessment ("**EIA**") has been completed by SRK Consulting as an independent environmental consultant and environmental approvals have been granted. The current Ore Reserves sit within the Company-owned 1,741 hectares farm Geelwal Karoo 262 which covers the entire Prospecting Right 10262. The Company intends to apply for an additional Mining Right (MR) over the balance of Prospecting Right 10262, outside of the Expanded Mining Right area.

Mineral sands mining and processing operations at Tormin have been ongoing since 2014 and the local community is generally familiar with heavy mineral sands operations and product transport. There are also other resource extraction operations within the district and the Company has been operating successfully in the region for more than 9 years to date. MSR's strong investment in the social and economic upliftment of Historically Disadvantaged South Africans ("**HDSA**") and the ongoing support of its Black Economic Empowerment ("**BEE**") partners in the Tormin Mineral Sands Operation will continue to grow under the proposed mine expansion.

All of the infrastructure requirements already exists at the Tormin site. MSR is investigating connecting to the Eskom national electricity grid to provide power and replace the current gensets as a cost-effective power supply option for the expansion plant via supply of up to10MVA from the adjacent wind energy facility. In this event, a 22kV underground powerline of approximately 4km will be installed from the Sere wind farm substation to a new MSR substation.

Marketing arrangements are commercially sensitive, but price assumptions are based on fixed price and volume contracted sales agreements and commercial negotiations. Long term sale price assumptions used in the estimation of cashflow grades and subsequent ore reserve:

- Garnet concentrate – US$154 per tonne.
- Ilmenite concentrate – US$150 per tonne.
- Magnetite concentrate – US$125 per tonne.
- Non-magnetic concentrate – US$1,051 per tonne.

Generally, the bulk mineral concentrates (ilmenite and garnet concentrates) are trucked to the port of Saldanha for export, while the non-magnetic and magnetite (bagged) concentrates are trucked to the port of Cape Town, where they are containerised and exported. Transport costs comprise a significant portion of operational costs. Transport costs used in the estimation of cashflow grades and subsequent ore reserve:

- Garnet concentrate – US$21.75 per tonne.
- Ilmenite concentrate – US$21.75 per tonne.
- Magnetite concentrate – US$50 per tonne.
- Non-magnetic concentrate – US$50 per tonne.

The PFS was completed by Minsol Engineering and generated into a financial model. The capex is presented with an order of accuracy of ±20%, developed on the Association for the Advancement of Cost Engineering ("**AACE**") guidelines for cost estimation. The PFS has met AACE requirements for a PFS, with several activities completed to Feasibility standard including, but not limited to, process selection, flowsheet development, engineering specifications, and equipment pricing. Furthermore, the database used to supplement the development of the cost estimate includes both current pricing from similar projects in South Africa and historical cost data from several projects completed at Tormin, including expansion projects in 2014-16 that draw many similarities with the current project.

The operation of 1.2Mtpa has been considered as a base case ("**Stage 1**") and the Company is currently in the process of realising this case. Further, the Company is planning an increase of operation to 2.4Mtpa by late 2024 ("**Stage 2**") with additional capital cost of approximately US$1.8M. The project implementation duration for the expanded case to 2.4Mtpa (Stage 2) is estimated to be 26-28 weeks. The implementation schedule is based on design development, vendor quoted manufacturing periods, local contractor installation timeframes, and commissioning requirements. The key financial metrics from the PFS are outlined in Table 5.

Table 5 – PFS Capital cost and Processing cost assumption for the Western Strandline

Real 2021 Prices (US$)	Stage 1 FY2022 – 2024	Stage 2 FY2025 – 2032	LOM
Operation	1.2Mtpa	2.4Mtpa	
Production	320ktpa HMC	630ktpa HMC	
Pre-tax project NPV_7			US$ 63.1M
Post-tax project NPV_7			US$ 42.8M
Capital cost	US$ 3.0M	US$ 1.8M	US$ 4.8M
Revenue	US$ 73.5M	US$ 321.4M	US$ 394.9M
EBITDA	US$ 11.4M	US$ 96.1M	US$ 107.5M

- Numbers have been rounded.

This PFS methodology was used for the current reserve estimates. The Company intends to accelerate development of Stage 2 to the December quarter 2022.

Refer to the JORC TABLE 1 below for further explanatory notes.

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About Mineral Commodities Ltd

Mineral Commodities Ltd is a global mining and development company with a primary focus on the production of high-grade Mineral Sands and Natural Flake Graphite from operations in South Africa and Norway.

The Company is a leading producer of zircon, rutile, garnet, magnetite, and ilmenite concentrates through its Tormin Mineral Sands Operation, located on the Western Cape of South Africa.

The Company owns and operates the Skaland Graphite Operation in Norway, the world's highest-grade operating flake graphite mine and is the only producer in Europe. The planned development of the Munglinup Graphite Project, located in Western Australia, builds on the Skaland acquisition and is a further step toward an integrated, downstream value-adding strategy which aims to capitalise on the fast-growing demand for sustainably manufactured lithium-ion batteries.

In April 2022, the Company released its Five-Year Strategic Plan 2022-2026[14] to delineate and implement its aspiration to become a leading vertically integrated diversified producer of graphitic anode materials and value added mineral products with a commitment to operate with a focus on the Environment, Sustainability and Governance.

[14] Refer ASX Announcement entitled 'MRC Unveils Five Year Strategic Plan 2022-2026' dated 29 April 2022.

Cautionary Statement

This announcement contains forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that various factors may cause actual results or expectations to differ materially from the results expressed or implied in the forward-looking statements.

These forward-looking statements are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are beyond MRC's control. This may cause actual results and developments to differ materially from those expressed or implied. These risks include but are not limited to, economic conditions, stock market fluctuations, commodity demand and price movements, access to infrastructure, timing of approvals, regulatory risks, operational risks, reliance on key personnel, Ore Reserve and Mineral Resource estimates, native title, foreign currency fluctuations, exploration risks, mining development, construction, and commissioning risk.

Forward-looking statements in this announcement apply only at the date of issue and are subject to any continuing obligations under applicable law or regulations, MRC does not undertake to publicly update or revise any of the forward-looking statements in this announcement or to advise of any change in events, conditions, or circumstances on which any such statement is based. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this announcement.

Competent Persons Statement

The information in this Announcement related to Sampling Techniques and Data, and Exploration Results is based on information compiled and has been approved for release by Ms Thuli Hlela. Ms Hlela is a Registered Professional Natural Scientist ("Pr.Sci.Nat") with the South African Council for Natural Scientific Professions ("SACNASP") and a member of Geological Society of South Africa ("GSSA"), a Recognised Professional Organisation ("RPO"). She is Mineral Resources Manager of Mineral Sands Resources ("MSR") and a full-time employee of the Company. She has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity she is undertaking to qualify as a Competent Person in accordance with the JORC Code (2012). Ms Hlela consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this Announcement related to Mineral Resources is based on information compiled and approved for release by Mr. Chris De-Vitry, who is a member of the Australian Institute of Mining and Metallurgy ("AusIMM") and the Australian Institute of Geoscientists ("AIG"). Mr. De-Vitry is a Principal Consultant at Manna Hill GeoConsulting Pty Ltd. He has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity, he is undertaking to qualify as a Competent Person in accordance with the JORC Code (2012).

The information from Mr. De-Vitry was prepared under the JORC Code (2012). Mr. De-Vitry consents to the inclusion in this ASX release in the form and context in which it appears.

The information in this Announcement related to Ore Reserves is based on information compiled and has been approved for release by Mr. Daniel Hastings, who is a member of the Australian Institute of Mining and Metallurgy ("AusIMM"). Mr. Hastings is a Principal Consultant at Quantified Strategies Pty Ltd and has over 25 years of mining experience in a variety of mineral deposits and styles. Mr. Hastings has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person in accordance with the JORC Code (2012). The information from Mr. Hastings was prepared under the JORC Code (2012). Mr. Hastings consents to inclusion in the report of the matters based on this information in the form and context in which it appears.

Appendix 1
JORC TABLE 1
Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
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 1m samples from which 3kg was pulverised to produce a 30g 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.*	The current resource database consists of 507 aircore holes and 2 sonic holes, representing 13,251m of vertical drilling, and their analytical data. Sample taken from surface to bedrock. Mineralogical studies and grade testwork undertaken according to mine control standards within Tormin mine site laboratory. Sampled exclusively by vertical holes. One-metre air core drill samples from a cyclone were collected in 20-25kg plastic bags. Each bag was riffle split into two pre-numbered calico bags of ~5kg each and the remainder of the samples collected in a large plastic bag. 5kg samples were submitted directly to the Tormin mine laboratory to be analysed for oversize, slimes, and heavy minerals. The laboratory sample was dried, de-slimed (removal of -45 micron fraction) and screen (+2mm oversize). 200g of sample split to use for heavy liquid separation using Bromoform with density range between 2.92 and 2.96g/ml to define THM content.
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Banka, 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).*	Air core drilling was used. Air core drilling is considered a standard industry drilling method for HMS mineralisation. 78mm and 85mm drill bits and rods were used. Two sonic holes by wide barrel (137mm) drilled. All holes were drilled vertically.
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*	Metric samples from aircore drill were taken and riffled down to a representative sample for heavy liquid separation and XRD. No sample loss or cavitation were experienced. Dry samples may lose some of their slimes fraction due to blowing out of sampling equipment, however HM are not affected. Sample recovery was excellent.

Criteria	JORC Code Explanation	Commentary
	occurred due to preferential loss/gain of fine/coarse material.	The aircore and sonic drilling 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.*	Each hole was logged by a geologist on pre-printed log sheets, transcribed to excel and transferred to a cloud hosted geological database Geological and lithological observations per depth were recorded together with field sections and hand drawn down-the-hole logs. Special attention was given to heavy minerals intersected as a guide to potential marine strandlines and marine diamond deposits. Percentage HMS was recorded from visual observations as well as the magnetic content of each metre by handheld pen magnet. Marine gravels and contact with basement bedrock recorded as maximum depth of mineralisation. Each 1m sample was washed and sieved to obtain a representative sample stored in numbered chip trays.
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.*	Sampling over 1m down the hole intervals as determined by 1m marks on the rig mast. Drill samples were riffle split into approximately 3kg samples to be assayed. All samples were dry. Technicians undertaking the splitting were supervised by mine site geologists to ensure sampling quality. The sample sizes were considered suitable, based on industry practices of mineral sand exploration. Field duplicate samples were riffled for the Tormin mine laboratory and external QA/QC checks for every 25th sample Lab duplicate samples were split for the Tormin mine laboratory and for external QA/QC checks.
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,*	All sample analyses were undertaken by the Tormin mine laboratory. The mine owns and operates a state of the art heavy liquid separation (HLS) lab using bromoform with density range between 2.92 and 2.96g/ml with Panalytical XRD machines (the Rietveld method after HLS in an automated mode setup). All grades reported are from XRD results on heavy liquid sink. Industrial laboratory XRF machines (Panalytical Epsilon 3 ED) are used by Tormin mine as a grade verification check on the XRD zircon content.

Criteria	JORC Code Explanation	Commentary
	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 Tormin mine laboratory completes its own internal QA/QC using Certified Reference Material ("CRM") at the rate of approximately 1 in 50 and sending every 25th sample to the external labs for independent check analysis. 271 field duplicates plus 80 blank samples, and 56 CRMs were included into the sample stream and submitted to the lab. The CRMs, blank and duplicate sample results are within accepted limits. External sampling checks for XRD have been done by XRD Analytical and Consulting (398 samples) and UIS Analytical Services (20 samples) and for XRF in Mintek and UIS Analytical Services (10 samples each), accredited laboratories in Pretoria and Johannesburg. Also,10 samples have been assayed in Mintek and UIS Analytical Services by ICP-MS for trace elements and REEs. The adopted QA/QC protocols are appropriate for the Mineral Resource and public reporting and QA/QC system returning acceptable results. QEMSCAN testwork on 18 composite samples by SGS, ALS and SJT MetMin was used for verification of the mineral assemblage and the component mineralogy as well as grain size distribution and HMS particle size. Additionally, optical microscopy grain counting was used to confirm heavy mineral assemblage on 4 composite samples. No geophysical tools or handheld instruments were utilised in the sample analysis.
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 sampling was undertaken by mine site personnel overseen by a qualified and experienced mine geologist and independent consultants. All sample preparation was carried out by qualified staff, supervised by chemists and the laboratory manager. The lab results and logging have been reviewed by external consultants to MSR as well as internally by MRC's exploration manager. 10 twinned holes were drilled in different fence lines to assess stationarity. 48 holes (1,192m) from historical drilling were verified and included into the resource model. The drillhole logs have been converted to electronically stored formats and stored in a database provided by Maxgeo (DataShed). This database is hosted on an offsite server supplied by Maxgeo and managed by their trained database staff. No adjustments to assay data results were made

Criteria	JORC Code Explanation	Commentary
		outside the standard XRD and XRF calibration software being used.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (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.*	Hole collars were surveyed by DGPS accurate to within +/- 100 millimeters by mine surveyors. Down hole surveys for shallow vertical air core holes are not required. WGS 84 datum and UTM/ zone 34S coordinate system is used.
Data spacing and distribution	*Data spacing for reporting of exploration results.* *Whether the data spacing and distribution are 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.*	Systematic grade spacing used in the drilling program was 250m x 20m containing 30 fence lines. Each drillhole is spaced 20m apart along each drill line perpendicular to the strandline inferred strike. The above-mentioned drill fence line is 250m apart along the strandline strike. infill fence lines with 500m x 25m and 250m x 25m grade were drilled between the primary lines. 16 holes from historical drilling were verified and included in the resource model. 10 twinned holes were drilled in different fence lines.
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.*	Vertical drilling to intersect sub-horizontal strata. Orientation of the drillholes will not result in sampling bias.
Sample security	*The measures taken to ensure sample security.*	Sampling was carried out using pre-printed calico bags to prevent mislabeling. All sample bag numbers were logged against the drillhole by the site geologist. Three samples per metre drilled were produced. The reject was stored securely in a bag farm for reference, one for external QA/QC use and one was sent directly to the mine lab at the end of each day's drilling into a secure area. The Tormin mine laboratory inspected the submitted samples and did not report any missing, nor any error of the samples against the sample lists. Where external laboratories were used, their chain of custody controls for shipping and sample submission were used.

Criteria	JORC Code Explanation	Commentary
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	The lab results and logging have been reviewed by external consultants to MSR and internally as part of normal validation processes by MRC.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	*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 area has a granted prospecting right (WC 30/5/1/1/2/10262 PR) in the name of Mineral Sands Resources (Pty) Ltd, a subsidiary of ASX listed Mineral Commodities Ltd (ASX: MRC). This Prospecting Right (Inland Strand) incorporates an area approximately 12km in length covering 1,741 hectares of coastal area adjacent to the existing beach mining operations on the Company-owned farm Geelwal Karoo 262. 162 and 163 Expanded Mining Right (WC 30/5/1/2/2/10108 MR) encompassing the Northern Beaches and Inland Strandline expansion project was approved by the Department of Mineral Resources - South Africa on 30 June 2020. MSR has been operating successfully in the region for more than 8 years to date.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The general area has been investigated and mined for heavy mineral deposits as far back as the 1930s (Haughton, 1931). Subsequent geological surveys and exploration programs investigated the distribution, mineralogy, and economic potential of the heavy mineral sands along the coastline of Geelwal Karoo (Toerien & Groeneveld 1957, Abele 1989, Swart 1990, Barnes 1998) and Trans Hex 1989-1991). De Beers drilled 9 fence lines across the property and bulk sampled the area in the 1960s. During 1999, Trans Hex conducted additional onshore drilling of strandlines and identified the inland raised beach deposits containing heavy minerals. Trans Hex subsequently bulk sampled the material by digging several trenches in 1999-2000. Geelwal Karoo Diamante conducted small diameter forum drilling to a depth of 40m between 2000 and 2002, with a total of 42 drillholes. Extensive work, including mining of the inshore strandlines along the coast, was undertaken by Namakwa Diamond Company in 2003-2005. This work also identified the presence of the Inland Strand.

Criteria	JORC Code Explanation	Commentary
Geology	*Deposit type, geological setting and style of mineralisation.*	The western coastal plain of South Africa contains a significant resource of detrital heavy minerals by world standards. The heavy mineral sand deposits occur in a current active beach environment (eg Tormin mine) as well as in older palaeo-beach raised strandlines found inland (inland strandlines) eg Tronox Namakwa Sands. Apart from the mid-Jurassic, Cretaceous and Tertiary (Paleogene) sediments along the coast, numerous small fossiliferous, marine, and terrestrial deposits of Neogene age outcrop along the coastal zone. The onshore mineral sands are marine palaeo-terraces "Inland Strands", aeolian sands and fluvial sediments. These targets were formed during Miocene, Pliocene, and Quaternary/Pleistocene coastal transgression (sea move inland) and regression cycles. The lithological units of the Western Strandline can be described as below: Aeolian Sand – non mineralised Red Aeolian Sand – mineralised Silcrete Duricrust/ Dorbank Orange Feldspathic Sand – non mineralised Orange Feldspathic Sand – mineralised Dorbank – mineralised Strandline – mineralised Base pebble beds – mineralised Schist basement For purposes of estimation, the lithology has been grouped into the following: Red Aeolian Sand Silcrete Duricrust / Dorbank Orange Feldspathic Sand Main Strandline Mineralisation Secondary Perched Strandline Mineralisation Gravel Basement Schist The orebody hosts mineralisation in all geological units/layers except for the schist basement.

Criteria	JORC Code Explanation	Commentary
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 Competent Person should clearly explain why this is the case.*	The minimum hole length is 5m, maximum 60m and average depth of drilling is 24metres. East collar ranges – 220,261mE to 227,375mE. North collar ranges – 6,500,851mN to 6,510,977mN. Height collar ranges- 34.25m to 95.84m. Azimuth ranges/dip ranges – vertical drilling.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Not relevant. No grade cutting of HM values were undertaken. No metal equivalents were used for reporting of Mineral Resources.
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*	Not relevant. The strandline mineralisation is sub-horizontal in nature and the air core drilling intercepts are vertical. Thickness of intercept reported is therefore true thickness of the mineralisation.

Criteria	JORC Code Explanation	Commentary
	down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
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.*	Maps, sections and plan views are provided in the main body of the report and previous market releases.
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.*	Statistics of drillhole grades used during the Mineral Resource Estimate are contained in the main body of the report. This report provides the total information available to date and is considered to represent a balanced report.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Historical drill data is not reported as it is classified as historical foreign estimates that are non-JORC compliant. Aeromagnetic geophysical data has been used for drilling target delineations. Only 48 holes (1,192m) from historical drilling were verified and included into the resource model. This is an increase from the previous model, as new drilling has confirmed logging and assays from more of the historical dataset.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Further drilling is planned to increase Measured/Indicated resources over the Western Strandline.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding sections also apply to this section)

Criteria	JORC Code Explanation	Commentary
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.*	The data was plotted, and plots were as expected with no mis-plots or extraneous data found. Maximum and minimum values and average values were all within the norm. Duplicate values were confirmed as such. The coordinates were confirmed as being WGS84 UTM zone 34S. Data is stored in an offsite database hosted by Maxgeo.
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.*	The previous Competent Person was a full-time employee of Mineral Commodities Ltd. However, the new Competent Person as off 2022 has not had sufficient time to visit site. A site visit is planned for 2023.
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 estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology.*	The deposit is a classic inland strandline mineral sands deposit with no doubt as to its genesis. The grain size characteristics are interpreted to support an offshore depositional setting, closer to the shoreline position. Samples were collected for resource estimation purposes. The geology/topography of the deposit has been used to constrain the resource envelope. The data was partitioned into areas (subsets) based on geology/topography. The base of the deposit is defined by the underlying bedrock, the landward side by barren land and sand dunes.
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 total deposit, inside MSR controlled Prospecting Rights, has a strike length of approximately 12,125m and an average width (including low grade halo) of 380m. High grade strandline core of the deposit averages approximately 200m width, along the entire strike length. It is developed from surface to a maximum depth of 49m and the average resource thickness is approximately 21m (including low grade halo). The deposit occurs from the surface down.
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*	Micromine software was used to domain and estimate each of the valuable heavy minerals and THM. Domains were snapped to the nearest true intersection from sampling. Samples were generally 1.0m in length however there were some 4m long field composites. The entire data set was composited down to 1m. Outlier values were cut based on local analysis for each lithology. Only THM percentage was required to be top cut for the low grade Dorbank and RAS lithologies (cut to 30% and 15% respectively), and the only constituent mineral requiring a top cut was Garnet within the RAS (cut to 10%).

Criteria	JORC Code Explanation	Commentary
	estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. *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.*	Data was extrapolated between data points and approximately half of the drill spacing beyond. Data points are nominally 125m x 25m to 250m x 25m. There are generally between 2-15 drill holes per line (average 7 holes). Ordinary Kriging was used as the primary estimator. Each variable was estimated separately, using variograms created for each lithology. An anisotropic search was used, with the variable ratios of direction of greatest continuity: Across the continuity: depth (STRAND 1:0.4:0.04, LGSANDS 4:0.4:0.08). A maximum search distance of 500m was used for the STRAND unit, and 750m for LGSAND units. Octant searching was used, with a maximum points per sector of between 5 and 12. Minimum points to estimate a block were 5. These neighborhood parameters were all confirmed using Quantitative Kriging Neighborhood Analysis. This is a resource estimate and mining parameters are not used beyond normal global parameters of grades, dimensions, and accessibility. An in-depth validation process was used to test the robustness of the modelled data, including visual checks, check estimates (NN), swath plots and detailed statistical comparisons. The results of the validation of the block model show acceptable correlation of the input data to the estimated grades. Maiden Mineral Resources have been previously estimated for the Western Strandline in August 2020.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The resource tonnages are estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	Final reported resources were based on a 2% THM cut-off grade for blocks as this is the current minimum grade where there is a reasonable expectation for eventual extraction. 2% cut off grade was based on grade-tonnage curves with respect to THM and VHM assemblage. Also considered was current and anticipated plant performance, and other similarly sized deposits in the region. A VHM cut-off for resources would be more accurate than a THM cut-off. This is because the proportion of VHM within the THM varies. MSR plan to transition from a THM cut-off to a VHM cut-off for external reporting of resources.

Criteria	JORC Code Explanation	Commentary
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.*	The resource is considered as dry mining feed and mineralisation can be any depth or width. Dry mining techniques are preferred in situations involving high grades. Mining is through conventional open pit methods. The thickness and continuous nature of the mineralisation, supports a non-selective bulk mining method. The Company believes there are no mining factors which affect the assumption that the deposit has reasonable prospects for economic mining.
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.*	The metallurgical recovery is similar to other mineral sand operations. Metallurgical parameters have been taken from the metallurgical tests, and metallurgical testwork results support the recovery. The VHM mineral assemblage, low slimes and oversize are fit for an economic extraction. Historical and current mining and processing operations confirm that the metallurgical parameters used and testwork underpinning the metallurgical assumptions are appropriate. The most recent studies are: 2020 Tormin Expansion projects-implementation strategy by MinSol Engineering, and 2021 Pre-feasibility study report for Inland Strandline expansion by MinSol Engineering. To date, the Company considers there are no metallurgical factors which are likely to significantly affect the assumption that the deposit has reasonable prospects of eventual economic extraction.
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 greenfield project, may not always be well advanced, the status of early*	There are no environmental factors likely to affect the assumption that the deposit has reasonable prospects for economic extraction. The local vegetation environment generally consists of strandveld plant communities. Topsoil stripped from the mining operations will be stockpiled for later use during rehabilitation. Slimes content is moderate (<10%) and tailings generated in the processing plant will be pumped back into the open pits as part of the rehabilitation strategy. Any excess water will be recovered and recycled to the process. There are no significant pollutants introduced with the tailings and the material is inert, however further studies for tailing and slime waste classification are ongoing.

Criteria	JORC Code Explanation	Commentary
	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.	
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.*	The bulk density is based on a calculation of the specific gravity of the silica and heavy mineral content fractions of each sample. It is therefore not fixed and fluctuates between 1.68 and 2.1 as per the formula: SG=1.68+(0.0095 x THM). The use of a bulk density algorithm is a standard industry practice for the estimation of mineral sands resource. There is uncertainty that the SG formula is sufficiently accurate to support Measured resources. MSR plan to generate a dataset of actual density measurements for comparison against the calculated density.
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 values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The Mineral Resources have been classified as Measured, Indicated, and Inferred Categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code (2012)"). A range of criteria has been considered in determining this classification including, Geological continuity and Drillhole spacing: Areas with aircore drilling spaced at 125x25m have been generally classified Measured; Areas with aircore drilling spaced at 250x20m have been generally classified Indicated; and Areas outside this has been classified as Inferred. Broadly spaced scoping drilling in the south, coupled with other widely spaced historic data, gives some confidence in the continuity of mineralisation up to 100m from the main high grade strandline core, providing the search criteria are met.

Criteria	JORC Code Explanation	Commentary
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The Mineral Resource has been reviewed internally as part of normal validation processes by MRC. Wardell Armstrong International ("WAI") conducted a review of the Mineral Resource Estimate and no material issues were identified. Mr Ché Osmond (CGeol) and Richard Ellis (CGeol) (WAI) undertook an audit of the Mineral Resource estimate as an independent technical review. The current Competent Person was not involved in the preparation of the resource estimate. A desktop review was completed before accepting responsibility as the Competent Person. The current estimate and resource classification is considered defendable. There is some uncertainty that a Measured resource classification is appropriate however, this needs to be investigated with more work, i.e., 1. Detailed examination of twin holes to verify the reliability of drilling. 2. Comparing calculated density to actual density measurements. 3. Sending sample splits for verification of the quantitative XRD at an alternative laboratory. This could involve an approach such as – Gravity Separation of the THM followed by magnetic separation. The magnetic and non-magnetic THM fractions then would undergo various density separations followed by XRF analysis of the fractions to determine the mineral assemblage and mineral quality. The quantitative XRF could also be compared against QEMSCAN. 4. Complete a simple 2D kriging estimation variance study to verify that the current drill hole spacings used for resource classification are appropriate.
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*	Slope of regression from kriging was considered in classification. No significant production has occurred from the deposit. Since September 2020 when mining commenced in the Western Strandline, a total of 1.9Mt has been mined from the South pit, with all material being stockpiled. 100kt was used for testwork purposes in the March quarter of 2021. This material was depleted from the updated mineral resource and reported as a stockpile.

Criteria	JORC Code Explanation	Commentary
	technical and economic evaluation. Documentation should include assumptions made and the procedures used.	

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in the preceding sections also apply to this section)

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	*Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	This Ore Reserve is based on the Measured and Indicated portion of the updated Mineral Resource at Tormin Western Strandline released on 7 December 2021. The Mineral Resource model is a 3D block model reported at 2%THM cut-off grade. Mineral Resources are reported inclusive of Ore Reserves.
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.*	A site visit was undertaken in the first week of February 2023. All aspects of the operation were reviewed over a period of 5 days including mining operations at both Tormin and Northern Beaches, previously mined pits in the southern section of the Western Inland Strand and clearing / grubbing works being undertaken at the northern area of the Extended Mining Rights. The waste dumps and ROM stockpiles were examined along with product stockpiles and a review of the new processing route for Inland Strand material completed. A review of the on-site laboratory was undertaken including the entire process workflow from receipt of samples to release of final approved results. Sample points along the current operations workflow were also visited. The field office at De Punt exploration area was visited and sampling procedures reviewed with the contract geologist and exploration technicians. The recent drilling sites at De Punt were also examined. Discussions with the consulting geotechnical group were held on site in person and the proposed pit slope parameter set discussed along with review of the performance of the current pit slopes. Review of tenue, permitting and permitting processes and environmental requires were discussed on site with the Environment Manager and General Manager.
Study status	*The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	This study is assessed as being at a Pre-Feasibility Study level to support the Ore Reserve. The Pre-Feasibility Study evaluated geology and resource, mining, metallurgy, process plant and tailings, infrastructure and logistics, environment, human resources, marketing, implementation plan and schedule, capital and operating costs, financial assessment and other activities/issues that could impact the proposed operation as contained in the PFS report. Processing costs and input costs (in particular diesel and transport costs) were reviewed post PFS and adjusted to current long term projections post COVID 19 impacts. Modifying factors accurate to the study level have been applied. The resulting mine plan is technically achievable

Criteria	JORC Code Explanation	Commentary
		and economically viable.
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	A value model was developed that assigns mining and processing recoveries, costs, and revenue to the geological model. This value model follows the entire mining process from topsoil stripping to final rehabilitation. A cashflow grade model was written in python as a cash flow script to generate at a block level all of the required attributes to calculate the cash flow grades for the proposed processing permutation for subsequent use in pit optimisation and strategic mine schedule optimisation. Blocks where the cash flow grade per tonne is positive are designated as potential ore and negative blocks are designated potential waste.
Mining factors or assumptions	*The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* *The mining dilution factors used.* *The mining recovery factors used.* *Any minimum mining widths used.* *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* *The infrastructure requirements of the selected mining methods.*	Mining dilution was not specifically input as the updated cashflow grades show that the mineralisation is extensive above the bedrock. With a LOM strip ratio of 0.19:1, this bulk mining operation does not require a great deal of selectivity in mining. Additionally, the block sizes used in the Mineral Resource estimation are large enough that dilution is included as part of the estimation process. All the selected pit shells did not have detailed pit designs created due to the shallow nature of the pits and the extent of cashflow positive material. Pits within the EMR have detail designs. These pits account for 9 years' worth of mining at current rates. Pits will be detailed for construction as required. Inferred Mineral Resources were considered as waste. The deposits will be mined in multiple stages in a conventional open pit operation and will utilise conventional load-haul mining methods. Each panel will be mined using 70 tonne class excavators and 45 tonne articulated trucks. A minimum mining width for pits of 30m is based on the use of CAT 745 class trucks. Geotechnical assessment and recommendations provided by Middindi Consulting and MLB Consulting. Pit slopes assumed as 45 and 75 degrees depends on material types. Hydrogeological studies have been carried out by the Australian Environmental & Mining Co (AEMCO) and Geohydrological impact assessment completed by Geohydrological and Spatial Solutions International (GEOSS). Ore to be excavated from open pits with an average depth of 15m and maximum depth of 30m. Ore is hauled directly to the processing plant by the Articulated trucks. Haul road widths designed to 15m (as approved in the Environmental Management Plan) for dual lane traffic and 11.5m for single lane, based on the use of CAT 745 Articulated trucks, with ramp gradients to be limited to 1:10 (10%). The high-grade nature of the deposit results in pit

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>optimisation shell sizes increasing incrementally with revenue factor.

Access to the area is straightforward and roads are available within Tormin mining area.

The topography is smooth (about 3 degrees), and it is anticipated that no significant issues associated with mining are likely.

Infrastructure requirements for the selected mining method are minimal. Current workshops and operating spaces have been defined. ROM stockpiles (fingers) will be constructed to manage the feed blend.
The LOM average strip ratio is approximately 0.19:1 (Waste: Ore).

Based on the block model, the total mined mine waste volumes are expected to be approximately 11.3 million tonnes over life of mine.</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.
Whether the metallurgical process is well-tested technology or novel in nature.
The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.
Any assumptions or allowances made for deleterious elements.
The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.
For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</td><td>The metallurgical process proposed comprises conventional gravity separation of heavy minerals using spirals. The metallurgical recovery is similar to other mineral sand operations.

Metallurgical parameters have been taken from the metallurgical tests by Nagrom, Haver & Boecker and Delchem, and metallurgical testworks results support the recovery. The VHM mineral assemblage, low slimes and oversize are fit for an economic extraction.

Key design criteria used for the current Ore reserve are below:

<table><tr><th>Description</th><th>Overall Recovery (%)</th></tr><tr><td>Zircon</td><td>77</td></tr><tr><td>Rutile</td><td>50</td></tr><tr><td>Ilmenite</td><td>78</td></tr><tr><td>Garnet</td><td>80</td></tr><tr><td>Magnetite</td><td>57</td></tr></table>
The Ore Reserve estimation has been based on the recoveries and processes outlined from metallurgical testwork.

100kt of ore was processed in the MSR's Tormin processing plant in the March quarter of 2021 prior to plant upgrades and installation of new equipment. This test material and its subsequent plant performance was used to inform the recovery parameters used for the optimisation.

Additionally, production has now commenced on the Inland Strand material and current process plant performance to date is in line with metallurgical inputs used in modelling. Refer ASX announcement entitled 'Commissioning</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
		complete for Inland Strands Ore' dated 27 March 2023.
Environmental	*The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	Significant environmental assessment work has been undertaken. The deposit lies entirely within prospecting right (WC 30/5/1/1/2/10262 PR) and 36% of the Ore Reserve is within the 162 & 163 Expanded Mining Right. Environmental impact assessment has been completed by SRK Consulting as an independent environmental consultant and environmental approvals have been granted for the 162 & 163 EMR. Ecology, fauna, and flora studies were undertaken as part of the baseline assessment report to grant Integrated Environmental Authorisation (IEA) by the Ministry of Environment, Forestry and Fisheries. MSR implements dust suppression measures to reduce dust emissions from haul roads. A watercart continuously applies seawater to all internal haul roads (freshwater applied to external haul roads) as required, including the DR2225 public gravel road to Koekenaap. MSR will continue to implement dust suppression measures on haul roads. MSR has engaged GroundTruth to undertake a Biodiversity Management Plan (BMP). Environmental studies to support additional mining rights on prospecting right (WC 30/5/1/1/2/10262 PR) outside the 162 & 163 Expanded Mining Right are in progress.
Infrastructure	*The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	Access to Tormin Mine is from Koekenaap via Robeiland and De Punt, or from Koekenaap via Kommandokraal and Schaapvlei. The gravel road extending the length of Farm Geelwal Karoo 262 is maintained by MSR and provides access to the processing plant. The Company owns Geelwal Karoo Farm 262. Diesel powered generator sets (gensets) are currently used at Tormin Mine to provide power to the Mine. Power is generated by 3 x 1250kVA gensets plus 1 standby unit with an installed power capacity of 3.75MVA. The gensets are containerised and located adjacent to the SCP and GSP. MSR has made an application to Eskom to provide power from the national grid to replace the current gensets and, more importantly, provide a cost-effective power supply option for the expansion plant and MSP. The future 10MVA power requirement is to utilise the adjacent wind energy facility. In this event, a 22kV underground powerline of approximately 4km will be installed from the Sere wind farm substation to a new MSR substation. CVG Consulting Engineers has been engaged for detail engineering work for this project. Obsideo Consulting designed the tailing and water management plan to suit the Inland Strand processing plant requirements.

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		MSR utilises water from two sources, namely seawater for processing activities from the seawater intake located on the coast and fresh water for domestic purposes, the latter transported by truck to site from Lutzville. The current daily seawater intake rate is approximately 7.2 ml/d. Seawater is pumped from the seawater intake station located on the beach via a booster pump station to the aquaculture dam. Make-up water is pumped from the aquaculture dam to the process water dam which is located at the GSP/SCP. Process water from the SCP and GSP is discharged into the secondary process water dam for settling. The water is then recirculated back to the main process water storage dam for further use in processing. Excess water from beach ore processing is returned to the sea whilst excess water from inland ore is recovered via the thickener and dewatering screen and recirculated. The average tailings production is approximately 80% of ROM. Total anticipated tailings from inland mining, including slimes, will be approximately 0.7Mtpa for stage 1. Tailings will have a (seawater) moisture content of ~ 55% with the aim of extracting 100 % of free flowing (decant) water after settlement. Tailings will be pumped as a slurry from the processing plant and backfilled in the mine void. Tailings, including filtered slimes, from the processing plant will be pumped separately to the mining void for co-disposal. The tailings and filtered slimes will be allowed to settle in the containment cells. Clean water will be decanted from the containment cells and recycled to the processing plant for reuse in processing. Davies Lynn & Partners has been engaged for technical inputs and design of waste storage facilities for tailings management. 3D- Dig software used for tailing deposition planning and simulate Co- disposal into backfill and its long-term impact Backfilled tailings will be covered with returned (dry) overburden. Rehabilitation management plan and standard operation procedure has been prepared by Enviroworks. Rehabilitation will be undertaken as soon as the mining path allows. Backfilled tailings and returned overburden will be profiled to mimic original topography as closely as possible before topsoil is replaced for rehabilitation and reseeding, where required.
Costs	*The derivation of, or assumptions made, regarding projected capital costs in the study.* *The methodology used to estimate operating costs.* *Allowances made for the content of deleterious elements.* *The source of exchange rates*	MinSol Engineering and Obsideo Consulting prepared a preliminary capital cost estimate for the Western Strandline Project based on Association for the Advancement of Cost Engineering cost estimation guidelines. The Project included engineering, design, procurement, and construction of a 1.2Mtpa (base case, stage1) wet processing facility, using conventional crushing, scrubbing and gravity separation technology. Much of the processing plan and infrastructure required for the processing

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	used in the study. *Derivation of transportation charges.* *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* *The allowances made for royalties payable, both Government and private.*	operation was already owned by MRC, with only minor modifications or upgrades required. Front end scrubbing and crushing along with a new thickener and filters have been installed on site and commissioned. Refer ASX announcement entitled 'Commissioning complete for Inland Strands Ore' dated 27 March 2023. The expansion stage has been considered for a 2.4Mtpa mining operation (stage2). The operating cost estimate for the operation includes all costs associated with processing, infrastructure, and site-based general and administration costs. The operating cost inputs have been derived from site actuals and budget forecasts. The mining operating cost estimates have been prepared by MRC, with inputs from the mining contractor. Royalties have been calculated at 5% of sales revenue payable to the government of South Africa. All amounts have been modelled in US dollars with foreign estimated inflows/outflows converted to US dollars at an average exchange rate of USD/ZAR 17.0 and USD/AUD 1.5 used reflects long term exchange forecasts.
Revenue factors	*The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	Revenue from the Project is derived from the sale of heavy mineral concentrates. The price assumptions are based on contracted sales agreements. Transport and treatment charges as well as other administration charges incurred on site are all based upon actual costs being incurred mining at Tormin site. Revenue estimates are based on independent market pricing and life-of-mine concentrate production. Forecast prices for heavy mineral products (2023-2028) were incorporated into the model. Revenue estimates are base case only and do not include any process expansion options or downstream additions to the process flow route.
Market assessment	*The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* *A customer and competitor analysis along with the identification of likely market windows for the product.* *Price and volume forecasts and the basis for these forecasts.* *For industrial minerals the customer specification, testing and acceptance requirements*	The conditions of the global economy are key drivers for the mineral sand industry and its products. There is a clear correlation between economic welfare and consumption of titanium, garnet, and zircon feedstock. Demand for mineral sands products has historically been closely linked to growth in global GDP, which has grown at close to 3% per annum. Global demand for titanium feedstock is dominated by the TiO2 pigment end use. By 2025, TZMI estimates that global demand for titanium feedstock will reach 8.7 million tonnes titanium dioxide (TiO2), which corresponds to a compound annual growth rate of 2.6%.

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	prior to a supply contract.	Ilmenite and Zircon pricing has seen a significant uplift over the last few years. Zircon and Ilmenite prices continue to rise in 2023. China remains the largest importer of zircon concentrate, accounting for 99% of global demand. The price range of industrial garnet is based on the application, quality, quantity purchased, source and type. There are no terminal markets for garnet and no reliable published prices for products. Products are sold through negotiations between buyer and seller. US$154 per tonne has been considered as the long term base price for garnet concentrate. MRC supplies circa 25% of the world's demand for garnet sands and is one of the top ten independent zircon and titanium feedstock suppliers. MRC has offtake agreements in place for garnet and existing customers for ilmenite and zircon products from its Tormin mineral sands mine. Product samples produced from the Project PFS test work indicate the product quality will meet customer requirements and have been assessed as such by potential customers. Price assumptions are cross referenced against TZMI assumptions over the coming years.
Economic	*The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Macro-economic assumptions used in the economic analysis of the Western Inland Strand Ore Reserve including foreign exchange and discount rates have been internally generated by MRC and benchmarked against external sources where applicable. Sensitivity analysis was undertaken on key economic assumptions such as costs and price to ensure the reserves are robust. Changes in product prices and costs have the potential to increase or decrease the total Ore Reserve. Cashflows from the optimized Ore Reserve on current assumptions produce a financially viable project.
Social	*The status of agreements with key stakeholders and matters leading to social licence to operate.*	MSR has been operating at Tormin since 2014. The local community is generally familiar with the characteristics of mining, processing and product transport at Tormin, and there are other resource extraction operations within the district. Stakeholder consultation conducted to date has identified that majority of the community is supportive of the Project. MSR is one of the most important workplace in the area, and it is an important part of the local economy of the district. Expansion of the processing plant will result in securing long term employment that contributes to the local and regional economies. Important social programs will be continued and extended as a result of the extended mine life. MSR's strong investment in the social and economic upliftment of

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		Historically Disadvantaged South Africans ("HDSA") and the ongoing support of its Black Economic Empowerment ("BEE") partners in the Tormin Mineral Sands Operation will continue to grow under the proposed mine expansion. The implementation of the 2019-2023 Social and Labour Plan (Generation 3) is nearing its end where an amount of ZA38.8 million was committed to programs such as local enterprise development, education and infrastructure projects and initiatives. MSR is currently in the process of generating the Generation 4 SLP with new commitments for the 2024 – 2029 period.
Other	*To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* *Any identified material naturally occurring risks.* *The status of material legal agreements and marketing arrangements.* *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre- Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	MSR has been operating successfully in the region for more than 9 years to date. Prospecting right (PR) 10262 was granted in January 2020 and there is a Mining Right (162&163EMR) in place, granted on 30 June 2020 which covers a significant part of the Ore Reserve. All mineral permits associated with the Ore Reserves Estimate are in good standing. The company is planning to lodge an MR application over the 10262 Prospecting Right outside of the current Extended Mining Right (EMR).There is a reasonable expectation that the new MR will be issued well within the timeframe required for mining of reserve areas outside of the current EMR. Other than the satisfactory completing of a new, updated Mineral Resource, there are no other known unresolved matters that are dependent on a third party that may materially impact the future exploitation of the reserve.
Classification	*The basis for the classification of the Ore Reserves into varying confidence categories.* *Whether the result appropriately reflects the Competent Person's view of the deposit.* *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	The Mineral Resource classifies all mineralisation at Western Strandline as Measured, Indicated, and Inferred and 100% of this updated Ore Reserve has been derived from Measured and Indicated Mineral Resources. The Ore Reserve includes Proven and Probable classifications. Measured Mineral Resources within the EMR have been converted to Proven Ore Reserves. Measured Mineral Resources outside of the EMR have been converted to Probable Ore Reserves to reflect the current mining permitting status of being under application. All Indicated Mineral Resources have been converted to Probable Ore Reserves. Proven material accounts for 36% of the Ore Reserve,

Criteria	JORC Code Explanation	Commentary
		Probable material accounts for 64% of the Ore Reserve. The classification reflects the Competent Person's view of the deposit and impact of current modifying factors. Pit optimisations and the proposed mining schedule are cognisant of the Mineral Resource classification.
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	The Ore Reserve methodology and estimates has been reviewed internally to Quantified Strategies Pty Ltd by Principal Consultants as part of normal validation processes required by MRC. Capital and operating costs has been reviewed and approved by MRC.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which 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.* *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	This is an update of the current Ore Reserve Estimate under the guidelines of the JORC Code (2012). The Ore Reserve has been peer reviewed internally and the Competent Person is confident that it is an accurate estimate of the Ore Reserve. Mining and processing methods selected are typical for mineral sands and have been demonstrated in various other mineral sand operations. They are considered a low risk of impacting the Ore Reserves. To date, approximately 1.8Mt of ore has been mined from the Southern pit and stockpiled on the ROM (high grade) and in a Low Grade Stockpile. The ROM stockpiled ore indicates an excellent reconciliation with the Mineral Resource and Ore Reserve and is currently being processed. Ore performance is thus far in line with current modelling. There was previously a degree of uncertainty regarding geotechnical characterisation and the proposed pit slope parameter set. The geotechnical pit slope assumptions used in mining of the southern pits as per the proposed pit slope set have shown excellent stability and will be used going forward, notwithstanding any adjustments that may need to be made in the field due to variation in material characterisation. The PFS upon which the previous maiden Ore Reserve was based provides a higher degree of confidence in the modifying factors than usual. Over eight years' profitable mining at Tormin gives confidence that the operation costs and product price expectations are realistic Modifying factors used in this updated Ore reserve have been modified from the PFS using actuals and reconciled data to be more accurate. All costs used in the optimisation and Ore Reserve process are supported by an extended operational history and actual results from MSR operation.