



QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 MARCH 2023

27 April 2023

ASX Code:

SFX

Directors:

Mr Bruce Griffin
Executive Chair

Mr Gordon Cowe
Non-Executive Director

Mrs Vanessa Kickett
Non-Executive Director

Mr Ian MacIver
Non-Executive Director

Mr John Richards
Non-Executive Director

Registered Office:

Level 2, 41-47 Colin Street
West Perth WA 6005

Share Registry:

Link Market Services
Level 12, QV1 Building
250 St Georges Terrace
Perth WA 6000

Capital Structure:

Ordinary Shares: 392.6M
Unlisted Options: 3.0M
Unlisted Rights: 4.6M

Market Capitalisation:

A\$188 million

Cash Reserves:

A\$25.0 million
(as at 31 March 2023)

Investor Relations:

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HIGHLIGHTS

Thunderbird Mineral Sands Project (Sheffield interest – 50%)

- Site construction 80% complete
- Process plant construction continued, with progressive installation of equipment and mechanical systems
- Project remains on schedule and within budget of \$484m with first product shipment from Thunderbird on track for Q1 2024

South Atlantic Project

- Binding agreement executed, providing Sheffield with an option to acquire an initial 20% interest in the South Atlantic Mineral Sands Project in Brazil

Corporate

- Successful completion of \$23m equity raising during the quarter
- Cash balance of \$25.0m as at 31 March 2023 (unaudited)



Figure 1: Thunderbird Process Plant site (April 2023)

KEY ACTIVITIES

Kimberley Mineral Sands Pty Ltd (KMS) (Sheffield interest – 50%)

Site construction activities at the Thunderbird Mineral Sands Project (Thunderbird) in the Kimberley region of Western Australia continued to advance throughout the quarter and were 80% complete as at the end of March 2023. The vast majority of equipment to complete the project has been received on site, including all fabricated steel. The peak of EPC construction personnel is expected during the forthcoming quarter.



Figure 2: Construction Progress at the Thunderbird Mineral Sands Project

Thunderbird Construction Activities

During the quarter significant progress was made on the process plant installation. Led by EPC contractor GRES, construction activities are progressing in line with planned schedules.

Process plant steel structures continued to be progressively installed in both the Wet Concentrator Plant (WCP) and Concentrate Upgrade Plant (CUP). Significant progress was made on equipment installation including pipework, transformers, screens, spirals and the thickener. The LNG bullets were delivered to site and installed and the steel framework for the power station engine building was installed. Offsite assembly of the Mining Unit Plant advanced throughout the quarter.

Despite Thunderbird recording approximately 500mm of rain associated with ex-Tropical Cyclone Ellie early in the quarter, there was no material impact on either capital cost or project schedule. The process plant, access road and accommodation village remained in good condition. There were minor impacts on earthwork areas that were under construction immediately prior to the rainfall events.



Figure 3: Thickener construction (foreground) with WCP construction in progress



Figure 4: Concentrate Upgrade Plant (foreground) construction in progress

Thunderbird Operations Activities

During the quarter preparations for the operations phase commenced. Good progress was made toward the recruitment of the key operations personnel including the appointment of an experienced mineral sands operations executive as Chief Operating Officer who commenced employment early in the quarter and the appointment of candidates for a number of other operational roles with some commencing during the quarter and others to follow early in the next quarter.

A detailed Operational Readiness Plan was developed during the quarter. Short term mine planning is underway to ensure alignment between waste and ore mining contractors and preparations are underway for mobilisation of the waste mining contractor to site during the forthcoming June quarter.



Figure 5: Power Generation building (LHS) and LNG storage area (RHS)

Project schedule and budget

As disclosed during the quarter, the KMS team has increased its focus on the pre-production activities and planned expenditures to maximise operational readiness once construction is complete. The expected on-budget completion of construction activities means that the overall funding envelope allows increased commitment of funds toward these activities.

KMS intends to bring forward recruitment of operations personnel and other activities to minimise start up risk. The additional cost of these activities, together with inflationary pressure experienced throughout the resources sector, and amendments to mine pre-strip and pre-production timing and cost estimates, adding \$27m to the previous estimate of pre-production costs.

KMS now estimates the total direct expenditures through to commencement of operations to be \$407m. After allowance for project financing costs, \$54m of remaining contingency and working capital provisions are available, with a total funding requirement of \$484m (refer ASX announcement “Final Investment Decision” of 10 October 2022).

Expenditure by KMS on the Thunderbird early works, construction and operational readiness since the inception of the joint venture in March 2021 has totalled over \$250m through to the end of March 2023. At the end of March 2023, the project is progressing on schedule and in line with budget, with KMS cash

reserves of \$96m and approximately \$140m of undrawn project financing available. A total of \$177m of project finance has been drawn as of the end of the quarter.

Project Timeline

First customer shipment remains on track for Q1 2024. A forecast timeline to first production is shown below.

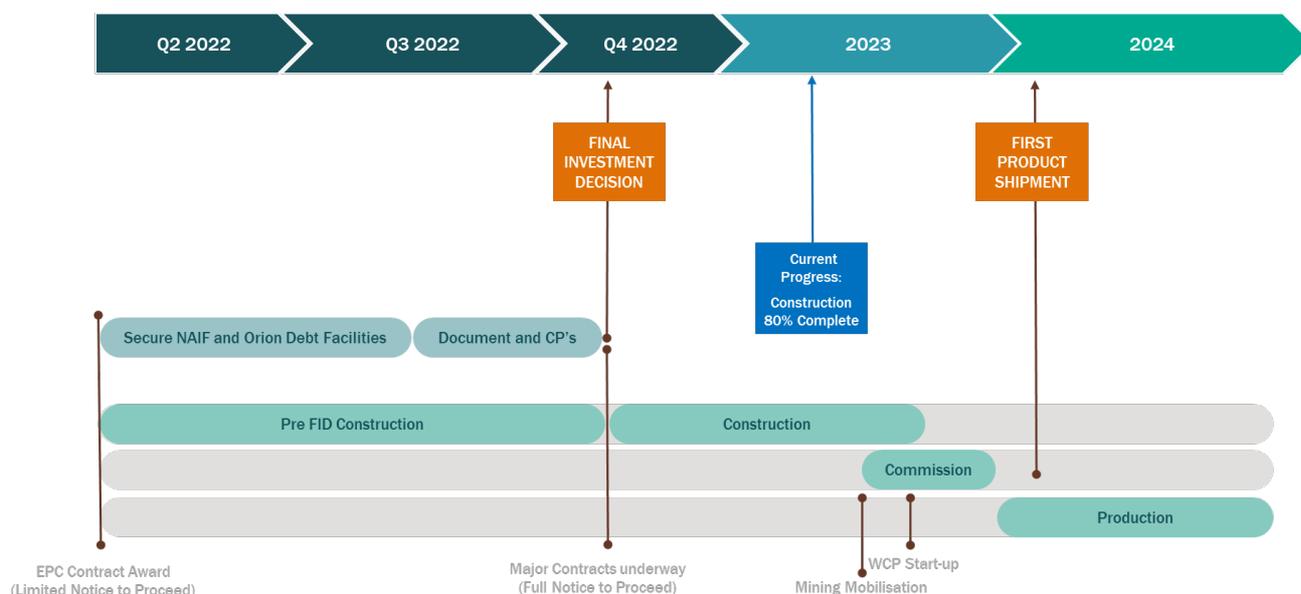


Figure 6: Timeline to First Production from Thunderbird

Product Logistics and Offtake Agreements

KMS has in place a number of non-magnetic (zircon) concentrate take or pay offtake agreements, accounting for in excess of 80% of forecast production volume for the initial five year production period for Thunderbird.

During the quarter, KMS management held in person meetings and site visits with key offtake partners in China in readiness for first shipment of product in early 2024.

Markets¹

Premium zircon from major producers moved from c.US\$1,350 per tonne in mid-2019 through to a peak of c.US\$2,200 per tonne in Q3 2022 and then softening to c.US\$2,100 per tonne in Q4 2022. Prices remained around this level in Q1 2023. In Q1 2023 the demand softness in China first observed in Q3 2022 reversed as a result of the pro-growth policies implemented by the Chinese government. The market in Europe started 2023 stronger with the energy supply constraints in Q4 2022 easing in Q1 2023. Global zircon supply remains balanced, and inventory levels remain low, and some new supply coming on line in 2023. Major producer prices are expected to be flat around US\$2100 per tonne in Q1 2023 and remain above US\$2,000 per tonne through 2023, well above long term price forecasts.

The medium to long term supply outlook for zircon continues to be for an emerging supply deficit with supply from the three leading producers representing c. 55% of current supply from primarily from mature operations with flat or declining forecast production. Notably Rio Tinto recently downgraded the Zulti South reserve from Proven to Probable and the project remains on hold.

¹ Zircon market update sourced from TZMI/ZIA and company analysis. Titanium feedstock market update sourced from TZMI and company analysis

The titanium feedstock market was balanced in early 2023 with growth in China, especially for ilmenite and ilmenite containing concentrates to supply domestic slag production and ultimately new chloride pigment production, offset by weaker demand in the rest of the world. There is a small increase in global supply forecast for 2023 resulting in small surplus. Global sulfate ilmenite prices were essentially flat in the second half of 2022 and have weakened marginally in Q1 2023 but remain very high relative to long term forecasts at around US\$340 per tonne in FOB. Sulfate ilmenite prices are expected to soften further in 2023. Longer-term, high-grade pigment feedstock demand for production of chloride grade pigment is forecast to grow, and chloride slag (produced from sulfate ilmenite) is the most likely source of new supply.

The trend towards China importing and processing concentrates to supply zircon and titanium feedstocks continued throughout 2022 and into 2023.



Figure 7: Installation of spirals underway

Community Engagement

The KMS team continued community engagement and consultation processes throughout the quarter. These included several community based forums across the Kimberley region, providing information on site activities and forthcoming business opportunities.

Further community engagement activities are scheduled throughout 2023.

South Atlantic Project

During the quarter, Sheffield executed a binding investment agreement (RGM Option Agreement) with Mineração Santa Elina Indústria e Comércio S/A. and Kromus Xi Fundo De Investimento Em Participações, current owners of Rio Grande Mineração S/A (RGM), providing Sheffield with an option to

acquire a 20% interest in RGM, the 100% owner of the South Atlantic Project in Brazil, via an initial option contribution of US\$2.5m, with further staged payments totalling US\$12.5m based upon the achievement of key milestones (refer ASX announcement dated 28 February 2023 for further details).

An initial part contribution of US\$1.0m was remitted to RGM during the quarter.

The South Atlantic Project is located within the Rio Grande do Sul Coastal Plain, a region located in the southernmost state of Brazil, Rio Grande do Sul, along the coast of the Atlantic Ocean.

The tenements are held by RGM. Four main deposits have been identified within the project area: Retiro, Estreito, Capao do Meio and Bujuru with Exploration Targets developed for the Retiro and Bujuru deposits.



Figure 8: South Atlantic Project location



Figure 9: South Atlantic Project – prospects, including Retiro and Bujuru Exploration Targets

Retiro

The Exploration Targets for the area of interest have been developed from all available geological, drill hole and assay information. Requisite checks and balances have been applied to supporting information and all care has been taken to prepare Exploration Target ranges that reflect both conventional mining methodologies and economic cut-off grade considerations.

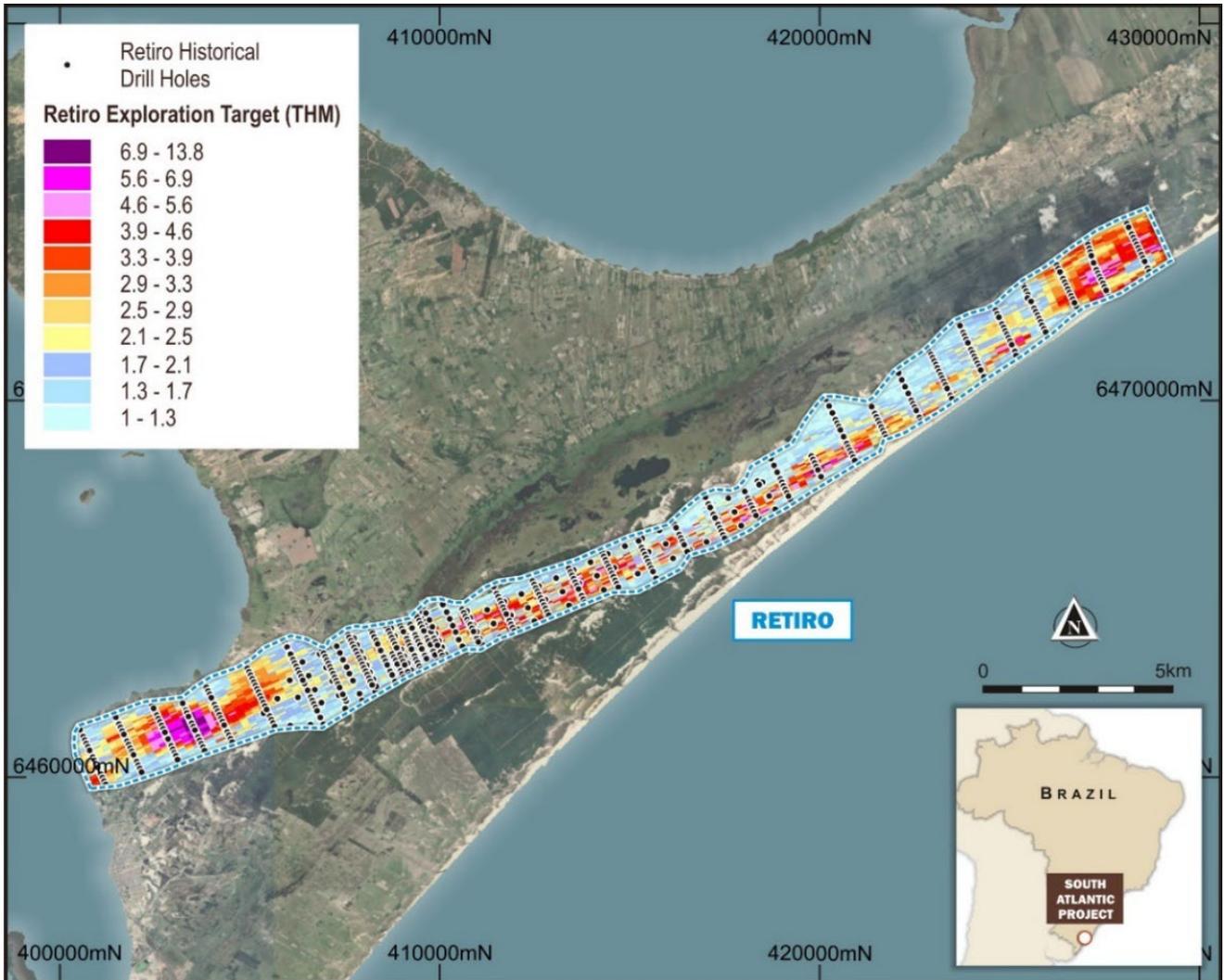


Figure 10: Retiro Exploration Target

The Exploration Target is reported at a cut-off grade range of 1% HM to 2% HM. These are considered by the Competent Person to reflect reasonable reporting ranges based on the dimensions and grade distribution of the identified mineralisation (including HM and mineral assemblage) and taking into account potential future mining methodologies.

The potential quantity and grade of the Exploration Target is conceptual in nature and is therefore an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target, being conceptual in nature, takes no account of geological complexity, possible mining method or metallurgical recovery factors. The Exploration Target was estimated in order to provide an assessment of the potential scale of exploration for the South Atlantic Project.

The Retiro Exploration Target is estimated between 250 and 380 Mt of material at an average grade of 3.9% to 3.0% HM for a total contained estimate of HM tonnes of between 10 and 12 Mt. These estimates of Exploration Target ranges have been made at HM cut-off grades of between 2% and 1% HM.

Table 1: Exploration Target Summary - Retiro deposit (February 2023)

SUMMARY OF EXPLORATION TARGET⁽¹⁾ (HM assemblage)

Deposit	Classification	Cut off (THM%)	Material (Mt)	In Situ HM (Mt)	THM (%)	HM Assemblage					Non Valuable HM (%)
						Ilmenite (%)	Altered Ilmenite (%)	Zircon (%)	HITI / Rutile (%)	Leucoxene (%)	
Retiro	Exploration Target	2.0	250	10	3.9	49	5	5	3	0	38
	Exploration Target	1.0	380	12	3.0	49	5	5	3	0	38

Notes:

- (1) Exploration Target reported at a lower cut-off grade of 1% HM and an upper cut-off-grade of 2% HM.
- (2) Mineral assemblage is reported as a percentage of in situ HM content.
- (3) The Exploration Target is reported at a cut-off grade range of 1% HM to 2% HM. The potential quantity and grade of the Exploration Target is conceptual in nature and is therefore an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target, being conceptual in nature, takes no account of geological complexity, possible mining method or metallurgical recovery factors. The Exploration Target was estimated in order to provide an assessment of the potential scale of exploration for the South Atlantic Project.

Bujuru

The Bujuru area of interest has been estimated to have an Exploration Target of between 250 and 340 Mt of material at an average grade of 4.0% to 3.3% HM for a total contained estimate of HM tonnes of between 10 and 11 Mt. These estimates of Exploration Target ranges have been made at HM cut-off grades of between 2% and 1% HM.

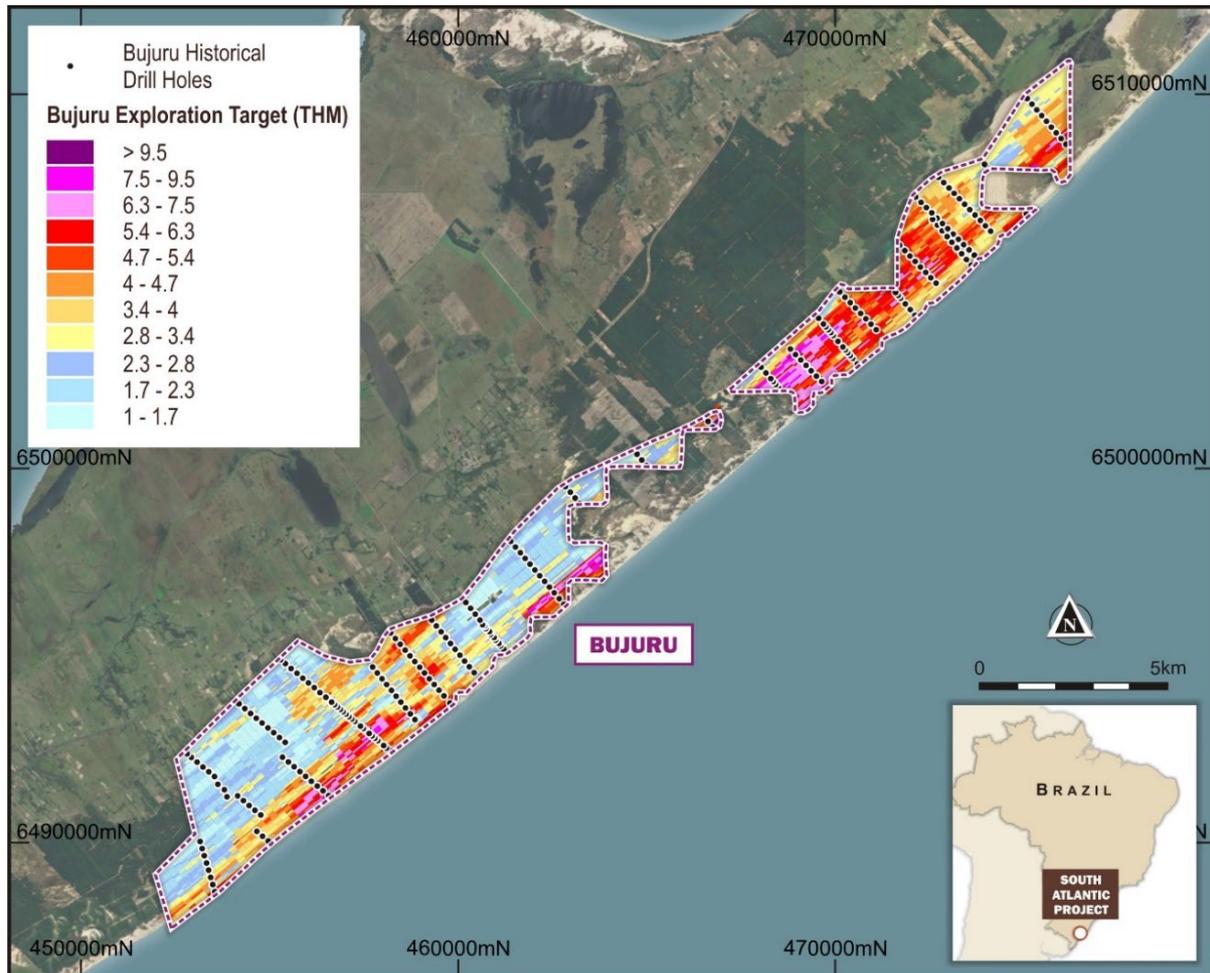


Figure 11: Bujuru Exploration Target

Table 2: Exploration Target Summary - Bujuru deposit (February 2023)

SUMMARY OF EXPLORATION TARGET⁽¹⁾ (HM assemblage)

Deposit	Classification	Cut off (THM%)	Material (Mt)	In Situ HM (Mt)	THM (%)	HM Assemblage					Non Valuable HM (%)
						Ilmenite (%)	Altered Ilmenite (%)	Zircon (%)	HiTi / Rutile (%)	Leuco-xene (%)	
Bujuru	Exploration Target	2.0	250	10	4.0	53	6	6	3	0	32
	Exploration Target	1.0	340	11	3.3	53	6	6	3	0	32

Notes:

- (1) Exploration Target reported at a lower cut-off grade of 1% HM and an upper cut-off-grade of 2% HM.
- (2) Mineral assemblage is reported as a percentage of in situ HM content.
- (3) The Exploration Target is reported at a cut-off grade range of 1% HM to 2% HM. The potential quantity and grade of the Exploration Target is conceptual in nature and is therefore an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target, being conceptual in nature, takes no account of geological complexity, possible mining method or metallurgical recovery factors. The Exploration Target was estimated in order to provide an assessment of the potential scale of exploration for the South Atlantic Project.

RGM Work Program & Option Agreement Principles

Following execution of the binding option agreement, a management committee comprising Sheffield and other shareholder representatives has been established to govern the day to day activities of the initial 18 month program. Prior to exercise of the option, the parties intend to negotiate and execute a shareholders agreement and framework agreement in accordance with pre-agreed principles.

The proposed work program activities include, but are not limited to, regulatory approvals, drilling, resource definition and definitive feasibility studies. Sheffield may decide to continue to the next stage or retain its 20% interest. If Sheffield does not elect to proceed to the next stage, the other shareholders may purchase Sheffield's 20% interest in RGM for the total amount of funding provided (anticipated to be US\$15m).

Should Sheffield elect to proceed to the next stage following execution of the shareholders agreement and framework agreement, subject to various conditions being satisfied, including project financing being obtained and all funds required for project construction being secured, Sheffield may exercise a further option to increase its interest in RGM up to 80%.

Sheffield will provide further updates to the market in respect of material developments in connection with the RGM Option Agreement, including progressing of the RGM Work Program and execution of the shareholders agreement and framework agreement.

RGM Activities during the Quarter

During the quarter RGM completed a mining trial at Bujuru which confirmed a viable non-dredge mining method suitable for deployment in Bujuru and the thin, wet areas of Retiro. Bulk metallurgical samples extracted during the mining trial are currently in transit to Australia for flowsheet development work.

IBAMA, the national environmental regulator, appointed the team to review the Retiro Installation Licence (LI) application submitted in 2022 and approval of the LI is currently expected later in 2023. Once the LI is granted RGM can apply for a Mining Decree for Retiro.

Planning has commenced for a drilling program designed to convert the exploration targets at Retiro and Bujuru into resources. RGM currently expect the drilling program to be undertaken in late 2023.

CORPORATE ACTIVITIES

As at 31 March 2023, Sheffield held cash reserves of approximately \$25.0m (unaudited).

During the quarter, the Company successfully completed an equity raising. The equity raising comprised a placement of 36m fully paid ordinary shares to raise \$18m and a one (1) for fourteen (14) pro rata non-renounceable entitlement offer of shares, resulting in a total equity raising of \$23m.

The Company is fully funded to execute its proposed work program through to the end of 2025 with no further equity forecast to be required for Stage 1 of Thunderbird and current cash of \$25m sufficient to fund corporate costs (~\$2m per annum), the South Atlantic Option (\$2m remaining) and possible acquisition of 20% of the South Atlantic Project (\$17m).

Please note the year-to-date position of the Quarterly Cashflow Report should be read in conjunction with this report. During the quarter, a total sum of \$183,092 was paid to related parties and their associates for Director fees and superannuation benefits.

This announcement is authorised by the Board of Sheffield Resources Limited.



Mr Bruce Griffin

Executive Chair

27 April 2023

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited is focused on assembling a portfolio of global mineral sands development and production assets to generate cash returns and growth.

Our core asset is our 50% investment in Kimberley Mineral Sands Pty Ltd (KMS), the owner of the world class Thunderbird Mineral Sands Project under development in north-west Western Australia.

Additionally, Sheffield executed a binding agreement in February 2023, providing the Company with an option to acquire up to an initial 20% interest in the South Atlantic Mineral Sands Project in Brazil.

KIMBERLEY MINERAL SANDS

Kimberley Mineral Sands Pty Ltd, (KMS) is a 50:50 Joint Venture between Sheffield and Yansteel. The joint venture owns and is developing the Thunderbird Mineral Sands Project and adjacent tenements on the Dampier Peninsula.

KMS is governed by a four person Board of Directors with Sheffield and Yansteel each nominating two directors. Key Joint Venture decisions require unanimous approval of both shareholders. KMS operates as a standalone entity with its own management and employees.

THUNDERBIRD MINERAL SANDS PROJECT

The Thunderbird Mineral Sands Project (“Thunderbird”) is one of the largest and highest grade mineral sands discoveries in the last 30 years. The 2022 KMS Bankable Feasibility Study shows Thunderbird is a technically low risk Project, that generates strong cash margins from globally significant levels of production over a decades long mine-life.

With operations forecast to commence in late 2023, Thunderbird is expected to generate a high-quality suite of mineral sands concentrate products suited to market requirements. These products include a zircon concentrate and a magnetic concentrate that contains a high quality ilmenite suitable smelting into chloride slag or for manufacturing titanium dioxide pigment.

Thunderbird is located in one of the world’s most attractive mining investment jurisdictions and is well placed to deliver long term, secure supply of high quality products to a range of potential customers.

ABOUT YANSTEEL

Yansteel is a wholly-owned subsidiary of Tangshan Yanshan Iron & Steel Co., Ltd, a privately owned steel manufacturer headquartered in Hebei, China producing approximately 10mt per annum of steel products and has annual revenues of ~A\$6bn.

Construction of a 500ktpa integrated titanium dioxide processing facility including a titanium slag smelter has commenced by the company. This complex will consume the magnetic concentrate from Stage 1 of the Thunderbird Mineral Sands Project under a take or pay offtake agreement.

SOUTH ATLANTIC PROJECT

The South Atlantic Project is located in south east Brazil. Four main deposits have been identified within the project area: Retiro, Estreito, Capao do Meio and Bujuru with Exploration Targets developed for the Retiro and Bujuru deposits. The combined Exploration Target for Retiro and Bujuru is estimated between 500 and 720 Mt of material at an average grade of 4.0% to 3.2% HM.

The tenements are held by RGM. Sheffield entered into an option agreement with RGM in February 2023 with Sheffield to provide US\$2.5m to fund project related activities over an 18 month period and earn an option to acquire up to 20% of RGM with the payment of a further US\$12.5m (US\$15.0m in total) to acquire a 20% interest. Should Sheffield elect to exercise the option, subject to various conditions being satisfied, including project financing being obtained and all funds required for project construction being secured, Sheffield may exercise a further options to increase its interest in RGM up to 80%.

FORWARD LOOKING AND CAUTIONARY STATEMENTS

The contents of this report reflect various technical and economic conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly over relatively short periods of time. Consequently, actual results may vary from those contained in this report.

Some statements in this report regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as “planned”, “expected”, “projected”, “estimated”, “may”, “scheduled”, “intends”, “anticipates”, “believes”, “potential”, “predict”, “foresee”, “proposed”, “aim”, “target”, “opportunity”, “could”, “nominal”, “conceptual” and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results and may cause the Company’s actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

COMPETENT PERSONS AND COMPLIANCE STATEMENTS

The information in this announcement that relates to the Retiro and Bujuru Exploration Targets is based on information compiled under the guidance of Mr Greg Jones, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Jones is an employee of IHC Mining and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Jones consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

APPENDIX 1: JORC (2012) Table 1 Report

The table below summaries the assessment and reporting criteria used for the Retiro and Bujuru Exploration Targets and reflects the guidelines in Table 1 of The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012).

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that 	<ul style="list-style-type: none"> Holes were sampled over a range of intervals, but were dominated by consistent 1 to 1.5 metre intervals (95% of the samples were in this range) No sample splitting was undertaken out on site due to saturated samples. Samples were collected wholly from the drilling and sub samples were taken using a poly pipe spear sampler

Criteria	JORC Code explanation	Commentary
	<i>has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	
Drilling techniques	<ul style="list-style-type: none"> • Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> • All holes were drilled vertically • Holes were drilled various programs with a mixture of RAB, percussion and reverse circulation (RC) methods • Core diameter was nominally 3 inches for the percussion and semi-percussion methods. • The RC drilling was nominally 3-inch diameter
Drill sample recovery	<ul style="list-style-type: none"> • Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> • The approximate volume of the samples was observed but not recorded and would indicate that all samples experienced close to or completely 100% recovery • Likely that the historic drilling method has been influenced by down hole contamination give the manual technique of percussion drilling and the saturated ground conditions in the area
Logging	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • All samples were visually checked and logged on site by rig geologist or technician and logged for lithotype, colour and estimated THM • A small subsample was taken for each drill interval and manually panned for estimation of HM content
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Samples for the historical drilling were recovered from the down hole casing using a sand pump • There is no record of the method for sub-sampling of the historical drilling • Samples for the 2014 RC drilling were collected as a whole, then sub-sampled using a PVC spear which was cleaned between each sample • All laboratories: separation of concentrates was by heavy liquid (either bromoform or tetrabromoethane (TBE) at density 2.95 g/cc) • There are no assay flowsheets or detailed descriptions of assay methods, aside from general descriptions of coarse screening at a top mesh size of 557 µm and 300 µm for the historical and 2014 drilling respectively • The 2014 drilling used a bottom mesh screen of 53 µm and a heavy liquid separation medium of LST (2.87 g/cc)
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of 	<ul style="list-style-type: none"> • Internal RTZ laboratories were used for the historical drilling. It is not known whether assay methods were of industry standards • The 2014 drilling utilised the Robbins Technology Group laboratory which uses standard industry assay methods • Mineral assemblage composite data (mineralogy) was prepared using a method of magnetic fractionation and XRF analysis to then convert to mineral species based on a cross reference to QEMSCAN assays

Criteria	JORC Code explanation	Commentary
	<i>bias) and precision have been established.</i>	
Verification of sampling and assaying	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No record of QA/QC sampling, twin holes or standards being utilised for the historic drilling The 2014 utilised industry standard rates of QA/QC sampling No adjustments were made to assays for the purpose of developing the Exploration Targets for the Retiro and Bujuru deposits
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Survey of historical holes unknown The 2014 holes were located by GPS and surveyed post drilling The grid system used for all historical drilling was: <ul style="list-style-type: none"> SAD69(96) / UTM zone 22S All holes were vertical and therefore no down hole surveys were required
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> The drill grid used for Bujuru was a mixture of ~1000 north-east / south-west and either 100 or 200 m in the north-west / south-east direction The drill grid used for Retiro was a mixture of ~1000/800/250/150 north-east / south-west and 100 or 200 m in the north-west / south-east direction No sample compositing was used
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All drill holes were drilled vertically Drill line were drilled north-east / south-west and north-west / south-east within 10 degrees of the deposit anisotropy No bias to drill grid sampling has been introduced
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> There is no recorded information on the chain of custody for samples from drill rig to laboratory.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Audits and reviews of the sampling data and techniques have been carried out by: <ul style="list-style-type: none"> RPA (2013) IHC Mining (2021) Some items were identified with the historical drilling to be rectified in future drill programs. The 2014 drilling program did twin some of the older historical holes and subsequent database reviews did identify some bias between the two drilling sets below 6 m depth. For this reason, only the top 6m were utilised in the preparation of the Exploration Targets.

Section 1: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> The Exploration Targets are wholly located within exploration tenure owned 100% by Rio Grande Mineracao S.A

Criteria	JORC Code explanation	Commentary
	<i>of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Drilling has been carried out in the past by: <ul style="list-style-type: none"> RTZ and Paranapanema SA, 471 holes for Retiro and 286 holes for Bujuru (prior to 2014) Sibelco 182 holes (2014)
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The Rio Grande do Sul Coastal Plain is also known for its extensive sand dunes, which have formed by the action of wind and sea currents and influenced by changing sea levels due to glaciation events. The more recent sedimentation has included the transport, concentration and preservation of HM placers along the barrier beach shorelines of the project area There are four main types of sedimentary units that have been identified within the project area (After TZMI 2013): <ul style="list-style-type: none"> Beige, well-sorted eolian sands that are primarily found on beach sands and dune fields and are typically low grade (1%, rarely 2-3%). Fine-grained, beige sea sands that can contain up to 10% THM and are often of a fine texture. Additionally, lenses of fine clayey sands, layers of peat intercalations, and discontinuous layers rich in shells can all be found in these sands (10 - 15 cm thick). Sands that range from beige to greenish-beige and contain a lot of clayey to plastic clay sands. Low levels of THM are also seen in this unit. Clayey sand that can range in colour from greyish beige to black and contains up to 3.5% THM in some locations. These sediments often occur in discontinuous deposits and include clay lens intercalations.
Drillhole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> easting and northing of the drillhole collar elevation or RL (elevation above sea level in metres) of the drillhole 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. 	<ul style="list-style-type: none"> A summary of the drill holes used in the development of the Exploration Targets is presented in Appendix 2 and 3. All composites are reported without any cut-off grade and are a composite of vertical and unbroken domain used to control the grade interpolation used to populate the block model.
Data aggregation methods	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Exploration results are not being reported at this time No metal equivalent values were used Minor aggregation of short length samples was used as samples were 95% sampled at 1 - 1.5 m intervals

Criteria	JORC Code explanation	Commentary
	<p>such aggregations should be shown in detail.</p> <ul style="list-style-type: none"> The assumptions used for any reporting of metal equivalent values should be clearly stated 	
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> The deposit is flat lying and intersected by vertical holes The domain used to estimate the Exploration Target ranges was between 5 and 10 m thick on average for the Retiro target and between 2 to 7 m thick on average for the Bujuru target The Retiro Exploration Target is approximately 30 km long and between 800 and 1800 metres wide on average. The Bujuru Exploration Target is approximately 27 km long and between 1400 and 2000 metres wide on average.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Plans of the Exploration Targets are presented in the main body of the report
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> The majority of exploration results are being reported here as they support the development of the Exploration Targets for Retiro and Bujuru
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> No other exploration results are being reported at this time
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). 	<ul style="list-style-type: none"> Future work will consist of infilling the 2014 drilling and replacing the historic drilling for which the level of confidence is low at depths greater than 6 metres.

Schedule 1: Interests in Mining Tenements as at the end of the quarter as required under ASX Listing Rule 5.3.3

Kimberley Mineral Sands Joint Venture (Sheffield interest – 50%)¹

Project	Tenement	Holder	Interest	Location	Status
Mineral Sands	E04/2081	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2083	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2084	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2171	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2349	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2390	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2456	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2478	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2494	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2509	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2540	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2554	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2571	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	E04/2597	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/82	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/83	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/84	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/85	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/86	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/92	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	L04/93	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted
Mineral Sands	M04/459	Thunderbird Operations Pty Ltd	100%	Canning Basin	Granted

Notes:

¹Thunderbird Operations Pty Ltd is a wholly owned subsidiary of Kimberley Mineral Sands Pty Ltd (refer to ASX announcement 12 March 2021). Kimberley Mineral Sands Pty Ltd is a 50:50 incorporated joint venture between Sheffield Resources Ltd and YGH Australia Investment Ltd (Yansteel).

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Sheffield Resources Limited

ABN

29 125 811 083

Quarter ended ("current quarter")

31 March 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(325)	(1,035)
(e) administration and corporate costs	(291)	(1,026)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	70	309
1.5 Interest and other costs of finance paid	-	(1)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(546)	(1,753)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) exploration & evaluation	-	-
(e) investments	-	-
(f) other non-current assets (joint venture)	-	(33,771)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Loans to third party entities	(1,534)	(1,534)
2.4	Dividends received (see note 3)	-	-
2.5	Other	-	-
2.6	Net cash from / (used in) investing activities	(1,534)	(35,305)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	22,685	22,685
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(871)	(871)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of finance lease	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	21,814	21,814

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	5,245	40,223
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(570)	(1,753)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,534)	(35,305)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	21,814	21,814

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	24,979	24,979

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	24,979	5,245
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	24,979	5,245

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1 – Salary & Directors fees	183
6.2	Aggregate amount of payments to related parties and their associates included in item 2	Nil

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at quarter end		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(546)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(546)
8.4 Cash and cash equivalents at quarter end (item 4.6)	24,979
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	24,979
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	46
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer:	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 27 April 2023

Authorised by: By the Board of Sheffield Resources Limited

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.