Sierra Rutile

ASX ANNOUNCEMENT

24 MARCH 2023

Sierra Rutile Annual Statement of Resources and Reserves

Sierra Rutile Holdings Limited (ASX: SRX) (**Sierra Rutile or the Company)** announces completion of its annual Mineral Resource and Ore Reserve estimates as at 31 December 2022. Sierra Rutile reports its Mineral Resource and Ore Reserve estimates in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition (the **JORC Code 2012**) and the Listing Rules of the Australian Securities Exchange (**ASX**).

Comment from Sierra Rutile Managing Director and CEO, Theuns de Bruyn:

"Thanks to optimisation work on our future mine plan updated for current market pricing, we are in the favourable position of having effectively replaced our entire 2022 production and ended the year with more rutile in reserves than when we started. We are also aiming to have additional resources to be added to our reserves by mid-year 2023 from drilling at Ndendemoia and Pejebu, which is not included in this annual Resource and Reserve Statement as the drilling is still in progress."

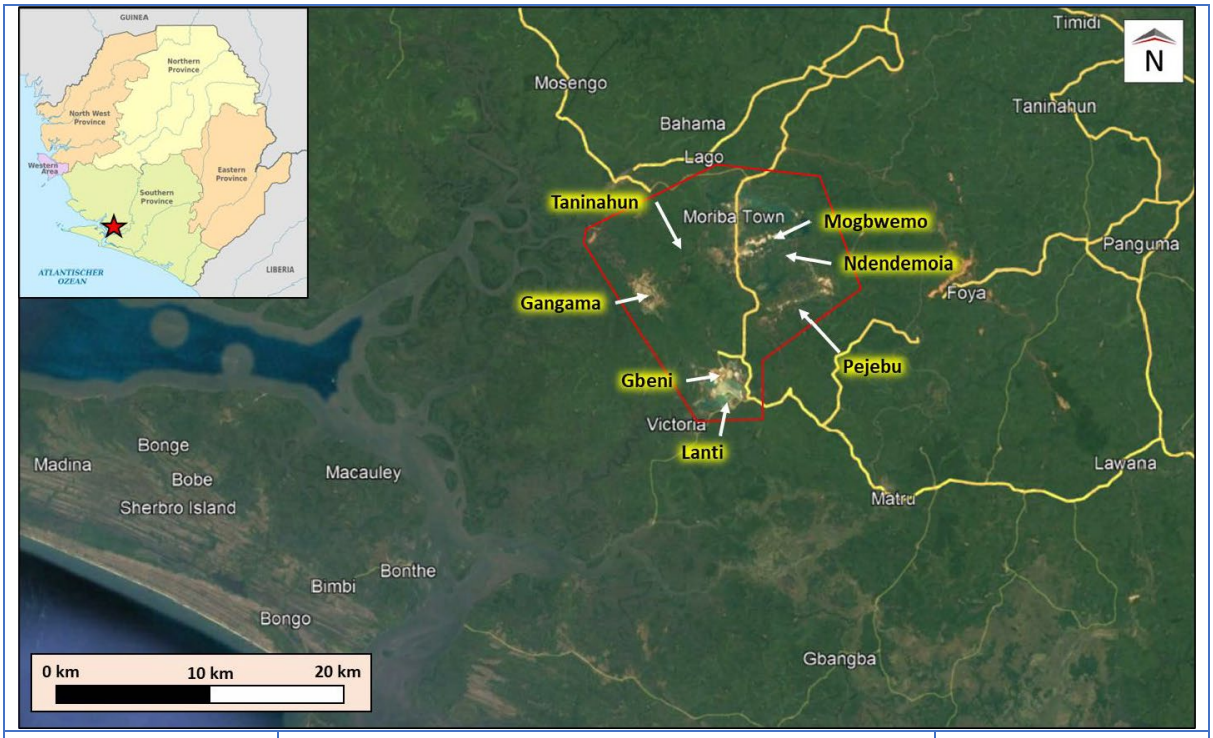
"With the optimisation work undertaken, and the additional resource drilling, we now have a clear pathway to having enough reserves to enable ongoing production from Area 1 throughout the expected Sembehun construction and ramp up phases. A further Life of Mine of four years and eight months is now envisaged for our Area 1 operations. This will enable Sierra Rutile to have a consistent production profile in the coming years ahead, and is the outcome we have been working towards, giving us confidence in our ability to help fund Sembehun."

Key Highlights:

- 2022 production replaced by updated pit optimisation and pit designs for Area 1 reflecting current economical parameters.
- Updated Ore Reserve estimate for Area 1 containing 40.7 Mt of ore @ 1.34% rutile.
- Sembehun Project Ore Reserve estimate containing 173.7 Mt of ore @ 1.46% rutile.
- Updated Mineral Resource estimation for Area 1 containing:
  - 47.1 Mt Measured Mineral Resource @ 0.92% rutile
  - 147 Mt Indicated Mineral Resource @ 1.03% rutile
  - 37.9Mt Inferred Mineral Resource @ 0.76% rutile
- Resource drilling underway at Ndendemoia and Pejebu is expected to further extend mine life in mid 2023, and not included in this Resource and Reserve Statement.
- Sierra Rutile is confident that Area 1 production can extend through Sembehun construction and ramp up.

Project Description

Sierra Rutile's operations and assets are located in the Bonthe and Moyamba Districts within the Southern Province of Sierra Leone and produce high quality rutile and ilmenite from the world's largest natural rutile deposit. Sierra Rutile's operating subsidiary, Sierra Rutile Limited (**SRL)** currently holds seven mining licenses and has submitted an application for a Mining Licence extension which in total cover 558.91 km², with a total of 19 separate rutile deposits within the seven lease areas. Three deposits have been mined out, several are in the process of mining or being set up to mine, and others are yet to be exploited. The figure below presents a locality plan of the main Area 1 mining operations belonging to SRL.



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Location of the Sierra Rutile Area 1 Mining Operations within Sierra Leone

Location of the Sierra Rutile Area 1 Mining Operations within Sierra Leone

Within SRL's seven mining areas, Area 1 is currently in production, while Area 5 has undergone a Prefeasibility Study to enable start-up in 2023. The project areas in question include the following deposits:

Area 1: ML011/72
Gangama
Gbeni
Lanti
Teninahun
Pejebu
Ndendemoia
Mogbwemo

Area 5 (Sembehun): ML015/72
Benduma
Dodo
Gbap
Kamatipa
Kibi
Komende

SRL's core product is natural rutile, with ilmenite and zircon as by-products. Rutile is a high-grade titanium ore composed primarily of titanium dioxide (TiO_2) and ilmenite is a titanium-iron oxide mineral ($FeTiO_3$), while zircon is composed primarily of zirconium silicate ($ZrSiO_4$). Both rutile and ilmenite are feedstock in the production of titanium dioxide, a white pigment used in the production of paints, paper, plastics and pharmaceuticals. Other important markets for natural rutile include welding, where it is used in both electrodes and flux cored wire applications, as well as titanium sponge production. The natural rutile produced by SRL has a titanium dioxide content of over 95% with low levels of impurities. It is considered a premium product within the rutile market due to a number of favourable physical and chemical characteristics over other supplies of natural rutile. Zircon is used in the decorative ceramics industry and as a refractory material.

SRL historically produced up to 30% of the world's annual supply of natural rutile. Mining commenced in 1967, when Sherbro Minerals Limited (SML) started mining operations at the Mogbwemo Deposit. Over the last decade, SRL's Strategic Business Plan has evolved from a mine plan that was based almost entirely on bulk mining with a dredge, to selective "dry mining" with truck and shovel. Dry mining methods were introduced early in 2013 where the shift was a function of the deposits themselves (more isolated, smaller, lower grade deposits) as well as the economic conditions that have restricted access to capital.

SRL owns and operates a self-sufficient mine site, with infrastructure and ancillary services that include port facilities (including storage, loading facilities, push boats and barges), road networks, warehousing, an electrical power generation and distribution system, water reticulation, medical facilities and furnished accommodation for senior staff.

Mineral Tenure

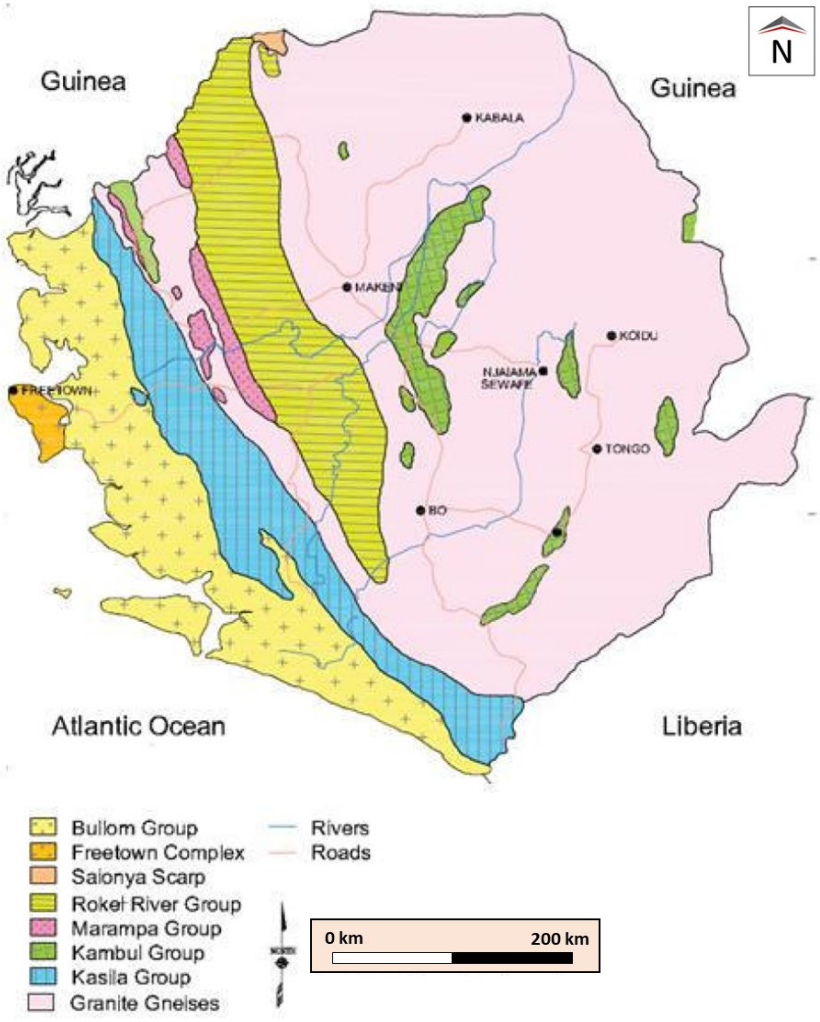
SRL holds the right to mine rutile, zircon, ilmenite, monazite, columbite, graphite, garnet and other titanium bearing minerals through their Mining Lease and Dredging Licence No. 2134 of 1984. This mineral lease was later ratified through the Sierra Rutile Agreement (Ratification) Act of 2002 and incorporates seven approved Mining Licences and one additional Mining Licence which is currently under application. Each license is valid for a period of 33 years from re-commencement of mining operations in 2006 and may be extended by a further (minimum) term of 15 years. In total the Mining Licence area held is currently 433.81 km² while the Mining Licence currently under application has an area of 125.1 km ² for a total combined area of 558.91 km².

No surface rights are held by SRL across any of the mining licence areas. Under the Sierra Rutile Agreement (Ratification) Act of 2002, provision is made for the payment of surface rent on all land used by the Company, with the rental distributed between the landowner, Paramount Chiefs and Native Administration.

Geology and Mineralisation

Regional Geology

Sierra Leone is split between two tectono-stratigraphic units. The eastern unit covers the majority of the country and forms part of the stable Precambrian West African Craton (Refer to the figure below). The western unit contains elements of an orogenic belt that was deformed during the Pan-African tectono-thermal event about 550 Ma ago resulting in the development of the Kasila Group Gneiss. A 20 to 40 km wide coastal strip to the west, known as the Bullom Group, comprises Pleistocene to Recent sediments (Button, MTG., 2011).



Adapted from: Button, MTG., 2011

General Geological Map of Sierra Leone

The Precambrian units in the east may be subdivided into infracrustal rocks (gneisses and granitoids), supracrustal rocks (forming synclinal greenstone belts), and basic/ultrabasic igneous intrusions. The infracrustal rocks were formed and reworked during two major orogenic cycles – an older Leonean episode (~2,960 Ma) and a younger Liberian episode (~2,750 Ma). Deformation was east-west during the Leonean event and north-south during the Liberian event. Most prominent is the Kasila Group of Archaean age, which is a linearly extensive belt of supracrustal rocks approximately 30 km wide that was reworked during the Pan-African Orogeny andconsists of mostly quartzo-feldspathic garnet gneisses and charnockites. (Button, MTG., 2011).

The coastal Bullom Group comprises alluvial, marine and estuarine sediments of Tertiary to Recent age and unconformably overlies the basement rocks. The deposition of the Bullom Group followed a late Tertiary-age marine regression, which exposed the basement to differential erosion and deposition of the alluvium, sands, clays, silts and lignites that typify this Group (Button, MTG., 2011).

Local Geology

The heavy mineral deposits of SRL are proximal alluvial placers in origin, with the primary source of mineralisation derived from the quartzo-feldspathic gneisses of the Precambrian Kasila Group. The heavy mineral suite is hosted within the Bullom Group, the onset of which marked the end of a late Tertiary marine regression. Sea levels at this time were approximately 100 metres below their current level, exposing the basement rocks of the Kasila Group to erosion. Mechanical and chemical degradation of topographically elevated areas of the Kasila gneisses led to the formation of kaolinite and other clay minerals, and the liberation of rutile and other heavy minerals. Sorting of light and heavy mineral components along with removal of clay by active drainage resulted in concentration of the rutile-rich heavy mineral suites and deposition into pre-incised channel systems (Button, MTG., 2011).

Project Geology

The Area 1 group of deposits is divided into eight areas – Bamba-Belabu, Gangama, Gbeni, Lanti, Mogbwemo, Ndendemoia, Pejebu and Taninahun. Surface geology consists of laterite derived from weathered bedrock exposed in the Gbangbama and Imperi Hills. The local bedrock is a Precambrian aged high-grade quartzo-feldspathic-garnet gneiss (charnockites) with accessory rutile, ilmenite, zircon, and monazite. Concentrations of heavy, resistant, accessory minerals in the laterites and associated clay soils surrounding the hills, constitute the ore bodies that are being mined by SRL within the alluvial deposits (DRA, 2015).

The Sembehun group of deposits is subdivided into six areas – Benduma, Dodo, Gbap, Kamatipa, Komende and Kibi. The deposits average 6.9 m in depth and vary between 0.9 m (topsoil) and 8.9 m in the case of bedrock. The deposit reaches depths of up to 28.1 m in the deeper areas to the south of Benduma, with a general thinning of the deposit toward the north. The thicknesses of individual lithologies vary between 0.1 m and 2.4 m, but are generally fairly thin, averaging between 0.9 m and 1.4 m. The oversize material (+1 mm) varies on average

between 10.1% (topsoil) and 45.9% (blocky laterites), whilst slimes (-63 µm) are generally high, averaging between 24% (blocky laterites) and 43.6% (sandy/silty/stiff clay).

Mineralisation

The typical mineral assemblage of SRL's ore deposits consists predominantly of rutile (TiO_2), followed by ilmenite ($FeTiO_3$) and zircon ($ZrSiO_4$). The typical mineral assemblage of the heavy mineral concentrate (HMC) produced during primary upgrading of ore at Area 1 consists predominantly of rutile, followed by ilmenite then zircon, with the remainder composed of various gangue minerals such as garnet, iron-oxides and alumina-silicates (corundum, kyanite, sillimanite, monazite). The ilmenite ($FeTiO_3$) contains approximately 63% TiO_2, whilst the more enriched rutile (TiO_2) contains 94 to 96% TiO2. The zircon ($ZrSiO_4$) is made up almost entirely of zirconium (ZrO_2). Leucoxene (an intermediate grade TiO2 mineral also commonly associated with heavy mineral deposits) is noticeably lacking in SRL's mineral assemblage.

Mineral Resources

The Mineral Resource estimates have been classified and reported in increasing confidence in accordance with the JORC Code into the Inferred, Indicated and Measured Mineral Resource categories based on a combination of:

- Data provenance and availability;
- Drillhole spacing and sampling density;
- Confidence in analytical data;
- Established geological continuity; and
- The level of confidence in the rutile and mineralogical grade continuity.

The SRL geological database contains information sourced from several chronologically different exploration campaigns. The availability of the original log sheets and background explanations for each campaign varies between non-existent to well-documented and the confidence level for each therefore has been adjusted accordingly.

Where drillhole spacing is within a 60 m X 60 m grid spacing, Measured Mineral Resources could be declared. Where drillhole spacing is within a 120 m X 120 m grid spacing, Indicated Mineral Resources are allowed to be declared and where drillhole spacing falls within a 240 m X 240 m drilling grid, the most confident allowed Mineral Resource Classification is that of Inferred Mineral Resources.

The geological assay database contains varying degrees of QAQC and has also been subject to various analytical techniques including MR400 and XRF. The MR400 assays are considered at best Indicated and Inferred, while the XRF data of post-2010 are considered to be in line with accepted industry practice and may be used in the Classification of Measured Mineral Resources. Pre-2010 XRF result are only considered to allow a maximum Mineral Resource Classification of Indicated Mineral Resources.

The combination of these factors has resulted in the Classification criteria for SRL. It should be noted that this process was previously applied to the Sembehun Project and satellite projects. No changes were made to the historical Classification of these projects.

The Mineral Resources for Sierra Rutile have been estimated to the project boundaries and each area has been treated as an individual prospect as per the guidelines for the Reasonable Prospect of Eventual Economic Extraction (RPEEE) and the Mineral Resources are reported at an appropriate cut-off grade considering extraction scenarios and processing recoveries. The Mineral Resource estimates take into account the fact that Area 1 is a currently producing mine and suitable constraints have been applied accordingly. Consideration in terms of geological uncertainty on a per Mineral Resource Category have been applied to the calculated tonnages in the form of geological losses where a geological loss of 2.5% has been applied to the Measured, 5.0% to the Indicated and 7.5% to the Inferred Mineral Resource categories respectively.

The Indicated and Measured Mineral Resources for Sierra Rutile as at 31 December 2022 adopt a cut-off grade of 0.25% Rutile for Sembehun, while for the Area 1 projects, the applied cut-off grades are based on previous calculations and declarations and may be seen to vary between 0.25% Rutile and 0.5% Rutile. The current working areas in Area 1, including Gangama, Gbeni, Lanti and Taninahun use a cut-off of 0.3%.

The Inferred Mineral Resources for Sierra Rutile have a reasonably low relative level of confidence based on drillhole spacing and data quality and while it would be reasonable to expect that the majority of Inferred Mineral Resources would eventually upgrade to Indicated Mineral Resources with continued exploration, due to the uncertainty of Inferred Mineral Resources, it should not be assumed that such upgrading would automatically occur. Due to the inconsistent sampling of the ilmenite and zircon these commodities are considered as Inferred Mineral Resources only and have not been included in any estimate of Ore Reserves.

Mineral Resources for Sierra Rutile as at 31 December 2022

Area	Deposit	Mineral Resource Classification	Material	Rutile	Heavy Minerals	Ilmenite Grade	Zircon Grade	Rutile Grade	Cut-off
			Mt	Mt	%	%	%	%	% Rutile
Area 1	Gangama	Measured	14.81	0.19	3.55	0.74	0.12	1.30	0.30
		Indicated	16.54	0.20	3.17	0.70	0.11	1.23	0.30
		Inferred	10.98	0.11	2.60	0.59	0.09	1.04	0.30
	Lanti	Measured	17.11	0.15	2.14	0.29	0.05	0.88	0.30
		Indicated	32.91	0.35	3.65	0.35	0.06	1.05	0.30
		Inferred	18.11	0.10	3.55	0.18	0.03	0.55	0.30
	Gbeni	Measured	14.23	0.13	2.54	0.31	0.06	0.94	0.30
		Indicated	8.18	0.07	2.58	0.28	0.05	0.84	0.30
		Inferred	3.90	0.03	2.47	0.22	0.04	0.65	0.30
	Taninahun	Measured	0.98	0.01	3.49	1.05	0.09	1.12	0.30
		Indicated	4.35	0.03	3.43	0.92	0.06	0.63	0.30
		Inferred	0.12	0.00	3.64	0.87	0.06	0.64	0.30
	Mogbwemo	Measured							
		Indicated	0.70	0.01				1.00	0.25

Area	Deposit	Mineral Resource Classification	Material	Rutile	Heavy Minerals	Ilmenite Grade	Zircon Grade	Rutile Grade	Cut-off
			Mt	Mt	%	%	%	%	% Rutile
		Inferred							
	Mosavi	Measured							
		Indicated	47.40	0.34	8.20	0.40	0.20	0.70	0.30
		Inferred							
	Ndendemoia E	Measured							
		Indicated	14.33	0.16	7.00	0.50	0.20	1.10	0.50
		Inferred							
	Ndendemoia W	Measured							
		Indicated	4.00	0.03			0.10	0.60	0.25
		Inferred							
	Pejebu	Measured							
		Indicated	18.60	0.18	3.60	1.00	0.10	1.00	0.25
		Inferred	4.80	0.05	3.10	0.70	0.10	1.00	0.25
	Total	**Measured**	**47.13**	**0.49**	**2.73**	**0.46**	**0.07**	**1.03**	
		Indicated	**147.01**	**1.35**	**5.20**	**0.50**	**0.13**	**0.92**	
		Inferred	**37.90**	**0.29**	**3.11**	**0.37**	**0.06**	**0.76**	
Other	Gambia	Inferred	27.87	0.29				1.00	0.25
	Jagbahun	Inferred	2.10	0.02				1.00	0.25
	Nyandehun	Inferred	5.63	0.11				1.90	0.25
	Taninahun Boka	Inferred	3.35	0.06				1.70	0.25
	Total	**Inferred**	**38.95**	**0.47**				**1.19**	
Sembehun	Benduma	Measured	20.99	0.24	3.40	0.90	0.10	1.10	0.25
		Indicated	84.72	0.90	3.30	0.80	0.10	1.10	0.25
		Inferred	112.77	0.93	3.20	0.70	0.10	0.80	0.25
	Dodo	Measured	53.76	0.75	3.10	0.80	0.10	1.40	0.25
		Indicated	19.62	0.21	3.20	0.80	0.10	1.10	0.25
		Inferred	21.21	0.27	3.30	0+.90	0.10	1.30	0.25
	Gbap	Measured							
		Indicated	16.78	0.20	2.50	0.40	0.10	1.20	0.25
		Inferred	45.00	0.46	1.90	0.40	0.10	1.00	0.25
	Kamatipa	Measured	36.36	0.59	3.80	1.10	0.20	1.60	0.25
		Indicated	23.51	0.21	3.00	0.80	0.10	0.90	0.25
		Inferred	1.37	0.02	3.30	0.90	0.10	1.30	0.25
	Kibi	Measured	18.65	0.25	2.80	0.60	0.10	1.30	0.25
		Indicated	16.54	0.16	2.50	0.60	0.10	1.00	0.25
		Inferred	24.96	0.27	2.60	0.60	0.10	1.10	0.25
	Komende	Measured	4.01	0.04	5.10	1.40	0.10	1.00	0.25
		Indicated	5.65	0.03	4.70	1.00	0.10	0.50	0.25
		Inferred	1.89	0.01	4.50	1.10	0.10	0.50	0.25
	Total	**Measured**	**133.76**	**1.87**	**3.36**	**0.89**	**0.13**	**1.38**	
		Indicated	**166.82**	**1.71**	**3.13**	**0.75**	**0.10**	**1.05**	
		Inferred	**207.21**	**1.94**	**2.87**	**0.65**	**0.10**	**0.93**	
Total		**Measured**	**180.89**	**2.36**	**3.19**	**0.77**	**0.11**	**1.29**	
		Indicated	**313.83**	**3.07**	**4.10**	**0.63**	**0.11**	**0.99**	
		Inferred	**284.06**	**2.70**	**2.90**	**0.61**	**0.09**	**0.94**	
Grand Total		**Measured**	**180.89**	**2.36**	**3.19**	**0.77**	**0.11**	**1.29**	
		Indicated	**313.83**	**3.07**	**4.10**	**0.63**	**0.11**	**0.99**	
		Inferred	**284.06**	**2.70**	**2.90**	**0.61**	**0.09**	**0.94**	
		Total	**778.78**	**8.12**	**3.45**	**0.66**	**0.11**	**1.04**	

Notes:

1. A calculated cut-off grade of 0.3% Rutile was applied to the new 2022 Mineral Resource estimates for Gangama, Gbeni and Lanti, while previously calculated variable grade cut-offs of between 0.25% and 0.5% Rutile have been applied to the balance of the project areas.
2. Totals may not add up due to rounding.
3. Models have been depleted for mining.
4. Geological losses of 2.5%, 5.0% and 7.5% for Measured, Indicated and Inferred Mineral Resource Classification have been applied respectively to the calculated tonnages.

Ore Reserves

The 2022 and 2021 Mineral Resource estimation for Area 1 and Area 5 (Sembehun), respectively, contains Measured, Indicated and Inferred Mineral Resources.

The Ore Reserve estimates for Area 1 and Area 5 (Sembehun) have been classified and reported in accordance with the guidelines as set out in the JORC Code 2012 into Probable and Proved Ore Reserve categories.

Measured Mineral Resources have been converted to Proved Ore Reserves by applying the applicable modifying factors summarised in Appendix 1. There is sufficient confidence in the modifying factors that have been applied in the Mineral Resource to Ore Reserve conversion which enabled the conversion of Measured Mineral Resources to Proved Ore Reserves.

Indicated Mineral Resources have been converted to Probable Ore Reserve by applying the same modifying factors utilised in the conversion of Measured Mineral Resources to Proved Ore Reserves.

No conversion from Measured Mineral Resources into Probable Ore Reserves was conducted. The Sierra Rutile mineral deposits are well understood. Sufficient technical studies have been undertaken and operational experience supports the modifying factors which have been applied to the various deposits.

Inferred Mineral Resources are excluded for the Ore Reserve estimation. Only diluted Measured and Indicated Mineral Resources are considered for conversion to Ore Reserves.

The Ore Reserve estimation for the Area 1 operations is detailed in the table below.

Ore Reserve Category Estimation for the Sierra Rutile Area 1 Operations as at 31 December 2022

Ore Reserve Category	Diluted Ore Tonnes	Rutile Grade	Rutile Content	Ilmenite Grade	Ilmenite Content	Zircon Grade	Zircon Content
	kt	%	kt	%	kt	%	kt
Proved	16,801	1.33	223	0.67	113	0.11	18
Probable	23,938	1.36	325	0.80	191	0.14	34
Total	40,739	1.34	548	0.75	304	0.13	52

Notes:

1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of US$1,441/t over the life of mine.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.

Ore Reserve Estimation by Deposit for Area 1 Operations as at 31 December 2022

Ore Reserve Category	Diluted Ore Tonnes	Rutile Grade	Rutile Content	Ilmenite Grade	Ilmenite Content	Zircon Grade	Zircon Content
	kt	%	kt	%	kt	%	kt
Gangama West							
Proved	9,799	1.39	136	0.79	77	0.12	12
Probable	4,341	1.30	56	0.74	32	0.12	5
Total	14,140	1.36	192	0.78	110	0.12	17
Gangama North							
Proved	828	1.46	12	0.83	7	0.13	1
Probable	4,762	1.50	72	0.86	41	0.14	6
Total	5,590	1.50	84	0.85	48	0.13	8
Taninahun							
Proved	442	1.30	6	1.22	5	0.12	1
Probable	706	0.85	6	1.00	7	0.08	1
Total	1,148	1.02	12	1.09	13	0.09	1
Gbeni							
Proved	5,731	1.20	69	0.40	23	0.07	4
Probable	1,884	1.18	22	0.39	7	0.07	1
Total	7,615	1.20	91	0.40	30	0.07	5
Lanti							
Proved	-	-	-	-	-	-	-
Probable	3,097	1.64	51	0.55	17	0.10	3
Total	3,097	1.64	51	0.55	17	0.10	3
Pejebu							
Proved	-	-	-	-	-	-	-
Probable	5,629	1.29	73	1.14	64	0.15	8
Total	5,629	1.29	73	1.14	64	0.15	8
Ndendemoia							
Proved	-	-	-	-	-	-	-
Probable	3,520	1.29	45	0.64	23	0.25	9
Total	3,520	1.29	45	0.64	23	0.25	9
Total							
Proved	16,801	1.33	223	0.67	113	0.11	18
Probable	23,938	1.36	325	0.80	191	0.14	34
Grand Total	40,739	1.34	548	0.75	304	0.13	52

Notes:

1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of US$1,441/t over the life of mine.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.

The Competent Person (as defined below) is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other factors, other than those included as modifying factors to this Ore Reserve estimation, that will materially affect the Ore Reserve estimates. The Ore Reserve estimation for Area 1 excludes all stockpiles as at 31 December 2022.

The Competent Person (as defined below) is of the view that the information provided to them is sound and no undue material risks pertaining to mining, metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues pose a material risk to the Ore Reserve estimates.

The Ore Reserve estimation for the Sembehun Project is detailed in the table below.

Ore Reserve Category Estimation for the Sierra Rutile Sembehun Project as at 31 December 2022

Ore Reserve Category	Diluted Ore Tonnes	Rutile Grade	Rutile Content	Ilmenite Grade	Ilmenite Content	Zircon Grade	Zircon Content
	kt	%	kt	%	kt	%	kt
Proved	110,540	1.49	1,644	0.90	999	0.11	127
Probable	63,121	1.42	896	0.93	586	0.09	56
Total	173,661	1.46	2,540	0.91	1,585	0.11	183

Notes:

1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of US$1,338/t over the life of mine.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.

Ore Reserve Estimation by Deposit for Sembehun Project as at 31 December 2022

Ore Reserve Category	Diluted Ore Tonnes	Rutile Grade	Rutile Content	Ilmenite Grade	Ilmenite Content	Zircon Grade	Zircon Content
	kt	%	kt	%	kt	%	kt
Benduma							
Proved	12,858	1.31	168	0.89	114	0.08	10
Probable	39,686	1.49	591	1.00	397	0.08	32
Total	52,544	1.44	759	0.97	511	0.08	42
Dodo							
Proved	47,674	1.44	687	0.86	410	0.11	52
Probable	6,368	1.32	84	0.81	52	0.10	6
Total	54,042	1.43	771	0.85	462	0.11	58
Kamatipa							
Proved	33,816	1.66	561	1.07	362	0.15	51
Probable	8,626	1.32	114	0.88	76	0.13	11
Total	42,442	1.59	675	1.03	438	0.15	62
Kibi							
Proved	14,885	1.42	211	0.61	91	0.08	12
Probable	8,147	1.26	103	0.69	56	0.08	7
Total	23,032	1.36	314	0.64	147	0.08	19
Komende							
Proved	1,307	1.33	17	1.69	22	0.17	2
Probable	294	1.21	4	1.80	5	0.15	-
Total	1,601	1.31	21	1.69	27	0.12	2
Total							
Proved	110,540	1.49	1 644	0.90	999	0.12	127
Probable	63,121	1.42	896	0.93	586	0.09	56
Grand Total	173,661	1.46	2 540	0.91	1,585	0.11	183

Notes:

1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of US$1,338/t over the life of mine.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.

The information in this announcement relating to Ore Reserves and Mineral Resource estimates for the Sembehun Project is extracted from the announcement released by Iluka Resources Limited (**Iluka**) to the Australian Securities Exchange on the 24th of February 2022, titled: “Sembehun Ore Reserve and Mineral Resource Update, Sierra Leone” (**Sembehun Announcement**), available at www.asx.com.au. Sierra Rutile confirms that it is not aware of any new information or data that materially affects the information included in the Sembehun Announcement and that all material assumptions and technical parameters underpinning the estimates in the Sembehun Announcement continue to apply and have not materially changed.

Combined Ore Reserve Estimation for Sierra Rutile Area 1 and the Sembehun Project

Ore Reserve Category	Diluted Ore Tonnes	Rutile Grade	Rutile Content	Ilmenite Grade	Ilmenite Content	Zircon Grade	Zircon Content
	kt	%	kt	%	kt	%	kt
Proved	127,246	1.47	1 865	0.87	1 111	0.11	145
Probable	87,154	1.40	1 222	0.89	777	0.10	90
Total	214,400	1.44	3 088	0.88	1 889	0.11	235

Notes:

1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of USD1,441/t and USD1,338/t over the life of mine for Area 1 and the Sembehun Project, respectively.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.

Ends

This ASX Release was authorised for release to the ASX by the Board.

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About Sierra Rutile

Sierra Rutile is the world's largest natural rutile producer, with an established operating history of more than 50 years from its operations in Sierra Leone.

The Company is well positioned to extend its operations through the proposed development of the nearby Sembehun deposits. Sembehun represents one of the largest and highest grade natural rutile resources in the world, and its development would extend Sierra Rutile's mine life by at least 13 years.

Sierra Rutile is listed on the Australian Securities Exchange. Further details about Sierra Rutile are available at www.sierra-rutile.com

Mineral Resources and Ore Reserves

All of the Mineral Resource and Ore Reserves figures in this announcement represent estimates as at 31 December 2022. All tonnes and grade information has been rounded, hence small differences may be present in the totals. All of the Mineral Resource information is inclusive of Ore Reserves (i.e. Mineral Resources are not additional to Ore Reserves).

Competent Person Statement

The information in this announcement that relates to Mineral Resources of Sierra Rutile (other than Mineral Resources in respect of the Sembehun Project) is based on, and fairly represents, information and supporting documentation prepared by Mr Paul Obermeyer who is a Member of the South African Council for Natural Scientific Professions (SACNASP). Mr Obermeyer has 27 years of experience as a professional geologist, including 10 years in consulting. He holds a BSc (Hons) and an MSc in Geology focusing on sedimentology and syn-sedimentary tectonics.

The information in this announcement that relates to Ore Reserves of Sierra Rutile (other than Ore Reserves in respect of the Sembehun Project) is based on, and fairly represents, information and supporting documentation prepared by Mr George Olivier who is a Member of the Southern African Institute of Mining and Metallurgy (SAIMM). Mr Olivier has 23 years of experience as a professional engineer including 18 years in consulting. He holds a B.Eng. (Mining) and is a registered Professional Engineer at the Engineering Council of South Africa. In addition, Mr Olivier holds an MBA (GIBS).

The information in this announcement relating to Ore Reserves and Mineral Resource estimates for the Sembehun Project is extracted from the Sembehun announcement released on the Australian Securities Exchange on the 24th of February 2022, titled: “Sembehun Ore Reserve and Mineral Resource Update, Sierra Leone” (**Sembehun Announcement**), available at www.asx.com.au. Sierra Rutile confirms that it is not aware of any new information or data that materially affects the information included in the Sembehun Announcement and that all material assumptions and technical parameters underpinning the estimates in the Sembehun Announcement continue to apply and have not materially changed.

Neither of Mr Obermeyer and Mr Olivier are employed by Sierra Rutile, and both are full time employees of VBKOM (Pty) Ltd (**VBKOM**).

VBKOM was commissioned by Sierra Rutile to complete an independent Competent Person’s Report (the Report) on Sierra Rutile’s Area 1 operations and projects and Area 5 projects located in southwest Sierra Leone, West Africa. The Report was compiled in accordance with the reporting requirements as stipulated in the JORC Code 2012.

Mr Obermeyer and Mr Olivier each have sufficient experience that is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Obermeyer and Mr Olivier consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

Unless the context requires otherwise, the term **Competent Person** in this announcement means either or both of Mr Obermeyer and Mr Olivier, as applicable.

Forward looking statements

Certain statements in or in connection with this announcement contain or comprise forward looking statements. Such statements may include, but are not limited to, statements with regard to future production and grades, capital cost, capacity, sales projections and financial performance and may be (but are not necessarily) identified by the use of phrases such as “will”, “expect”, “anticipate”, “believe” and “envisage”. By their nature, forward looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and may be outside Sierra Rutile’s control. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in product prices and exchange rates and business and operational risk

management. Subject to any continuing obligations under applicable law or relevant securities exchange listing rules, Sierra Rutile undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.

Mineral Resources, Ore Reserves Estimates and Production Guidance

Sierra Rutile has an established governance process supporting the preparation and publication of Mineral Resources and Ore Reserves which includes a series of structures and processes independent of the operational reporting through business units and product groups and is designed to ensure reasonable and reliable estimates are produced in accordance with industry practice and our regulatory reporting requirements.

The Audit and Risk Committee has in its remit the governance of Mineral Resources and Ore Reserves. This includes an annual review of Mineral Resources and Ore Reserves at a group level, as well as review of findings and progress from the Group Resources and Reserves internal audit program with a regular meeting schedule.

Mineral Resources and Ore Reserves are estimated by suitably qualified independent personnel using industry standard techniques and supported by internal guidelines for the estimation and reporting of Mineral Resources and Ore Reserves. Sierra Rutile's internal guidelines are regularly reviewed and updated to align with industry practice and reporting regulations.

Non-IFRS financial information

This announcement includes certain information and data, such as Operating Costs, Net Operating Cash Costs and Unit Operating Cash Costs, that are not recognised under Australian Accounting Standards and are classified as 'non-IFRS financial information' under ASIC Regulatory Guide 230 (Disclosing non-IFRS financial information). Sierra Rutile uses these non-IFRS financial information metrics to assess business performance and provide additional insights into the underlying performance of its operations.

The non-IFRS financial information metrics in this announcement do not have standardised meaning under the Australian Accounting Standards and, as a result, may not be comparable to the corresponding metrics reported by other entities. Non-IFRS financial information should be considered in addition to, and not as a substitute for, financial information prepared in accordance with Australian Accounting Standards. Readers are cautioned not to place undue reliance on non-IFRS financial information cited in this announcement.

APPENDIX 1: TECHNICAL STUDIES AND MODIFYING FACTORS

Technical Studies

Sierra Rutile is an established natural rutile producer with an operating history of more than 50 years. Sierra Rutile currently has several operating pits within the Area 1 mining lease. The Definitive Feasibility Study ("DFS") for the Sembehun Project (Area 5) is underway at the time of this Report.

Mineral Resource Models

The Mineral Resource estimates were prepared using the updated Mineral Resource models prepared by the Competent Person for the Gbeni, Lanti and Gangama deposits as at 30 November 2022. For the Pejebu, Ndendemoia and Taninahun deposits, the latest Mineral Resource models prepared by Sierra Rutile were utilised. The 2021 Mineral Resource model for Area 5, generated by Iluka, and used for the 2022 Prefeasibility Study ("PFS") conducted by consulting engineers, Hatch Limited (**Hatch**), was utilised for the Ore Reserve estimation of the Sembehun Project (Area 5). The outcomes of the PFS and material assumptions underpinning the PFS are summarised in section 3.12 of the Demerger Booklet contained in ASX release by Sierra Rutile entitled "Information Memorandum and Demerger Booklet" dated 25 July 2022, available at https://sierrarutile.com/ and www.asx.com.au.

Study Level

Sierra Rutile has an operating mine with mining activities currently taking place within Area 1. Additional future mining activities are planned for the Sembehun Project (Area 5). All technical studies related to Area 5 were conducted by Iluka in conjunction with Hatch, who completed the Area 5 pre-feasibility study Life of Mine ("LoM") plan in 2021. The results of these technical studies for Area 5 are presented in a report titled: "Sembehun II Preliminary Feasibility Study Report".

Modifying Factors

Mining Factors

The mining conversion factors applied to the in-situ Mineral Resources in the LoM plan are detailed in the table below.

Mining Modifying Factors Summary

Description	Unit	Value
Geological Losses	-	Accounted for with the utilisation of the optimised geological beds.
Mining Losses	%	3
Dilution	-	Accounted for during reblocking to Smallest Mining Unit ("SMU").
Minimum Mining Area	m²	2500

Processing and Metallurgical Factors

The existing Mineral Separation Plant ("MSP") is operational and has been used consistently on the Area 1 deposits. Wet Concentrator Plant ("WCP") recoveries of 96%, 92% and 97% for Rutile, Ilmenite and Zircon, respectively, have been applied. The recoveries of 92 %, 85 % and 65 % for Rutile, Ilmenite and Zircon, respectively are supported by historical as well as current processing data obtained from the MSP. No other metallurgical factors have been defined that may impact the Ore Reserve estimation.

Infrastructure Factors

Infrastructure required for the planned production is either in place or accounted for in the mine plans and financial models. Sufficient capital provision has been made for all planned infrastructure that is required for the planned future production.

Economic and Marketing Factors

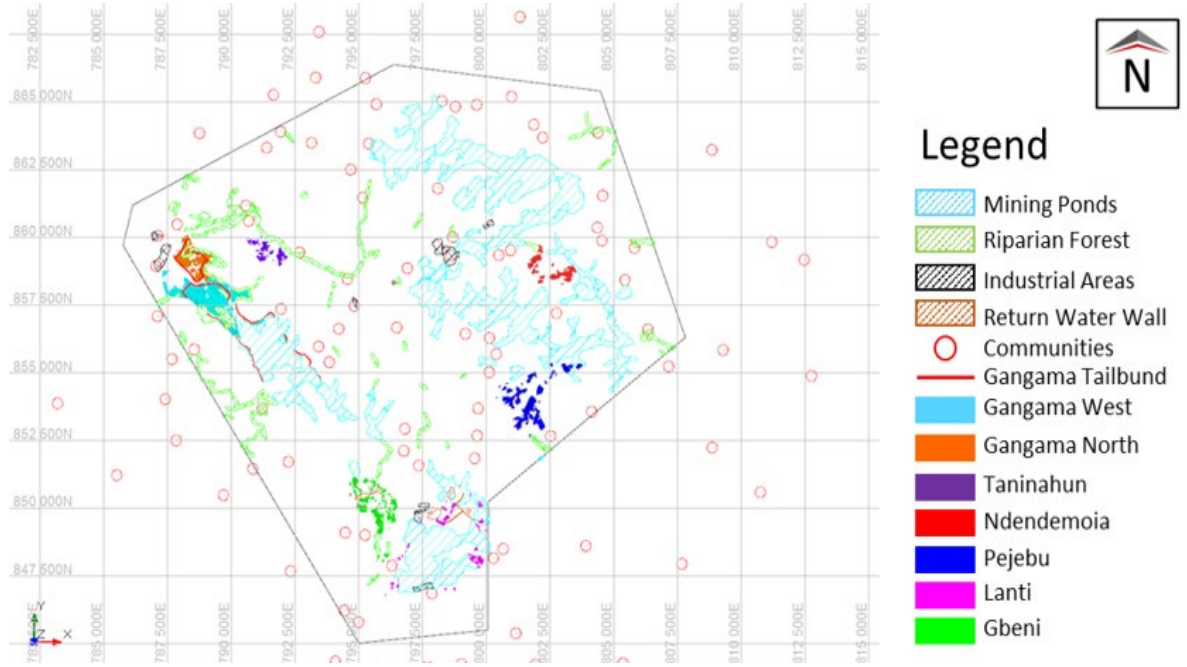
The product pricing for Rutile, Ilmenite and Zircon was derived from average product price forecasts from 2022 to 2025 and the long-term product price forecasts as per the TZ Minerals International Pty Ltd ("TZMI") prices. SRL has take-off agreements for the products that are produced.

Legal, Environmental, Social and Governmental Factors

SRL provided the Competent Person with several exclusion zones where mining may not take place due to proximity to communities, proximity to major water courses and natural forests and buffers against mining lease perimeters. The exclusion zones have been deemed as non-mineable areas and were excluded from the Ore Reserve estimation. The following is a list of exclusion zones that have been applied:

- A 30 m stand-off distance around the mining lease of Area 1;
- A 200 m radius around all existing communities in Area 1;
- A 30 m stand-off distance from all existing dredge ponds, major rivers and streams;
- A 30 m stand-off distance from all gallery and riparian forests in Area 1; and
- A 30 m stand-off distance from any industrial areas.

The Area 1 mining areas, showing the exclusion zones applied to the Ore Reserve estimation are illustrated visually in the figure overleaf.



VBKOM | Plan View of SRL Mining Areas Showing Exclusion Zones

Cut-off Grade

A cut-off grade of 0.30% rutile was applied as part of the Mineral Resource declaration for the Area 1 deposits. The Sembehun Project Mineral Resource cut-off grade remained at 0.25 % rutile as detailed in the Sembehun Announcement.

The economic pit limit analysis (also referred to as a “Margin Rank” or “Pit Optimisation”) optimisation process determines whether material will be economic to mine as a composite block or column. The financial pit limit algorithm therefore calculates the economic cut-off grade on a case-by-case (block-by-block) basis. The cut-off grade for the Ore Reserve estimation is therefore variable throughout the mining areas and deposits as it is dependent on a number of factors including rutile grade, Mineral Resource Classification, waste tonnes within the mining column, heavy minerals concentration and ilmenite and zircon value contribution to a specific mining block.

Geotechnical Parameters

No geotechnical information or studies are currently available for the Sierra Rutile operations. The depth of the pits seldomly exceeds 12 m and pits are excavated at an overall slope angle of 70^{o}. Operational experience has proved that by maintaining an overall slope angle of 70^{o}, there is no safety risk or risk to the mining operations considering the possibility of slope failures. In areas where Bullom sands are stripped, lower slope angles of approximately 45^{o} to 55^{o} degrees are maintained.

The nature of the in-situ semi-consolidated material allows for steep overall slope angles after the topsoil has been removed.

Mining Method

The mining method utilised by Sierra Rutile is conventional truck and shovel mining. Owing to the nature of the deposits, and the softness of the material, all excavation is conducted by hydraulic excavator, on a free dig basis (without the need for drilling and blasting). Excavated material is loaded onto dump trucks for transportation to the stockpiles, from where the materials are fed to the dry mining units via excavators.

Inferred Mineral Resources

A portion of Inferred Mineral Resources (approximately 13% after the application of mining losses) are included in the Area 1 LoM plan, as it is required to mine through some Inferred Mineral Resources to access the Measured and Indicated Mineral Resource areas. These Inferred Mineral Resources have, however, been excluded in the Ore Reserve estimation.

Pit Optimisation

An economic pit limit analysis is also referred to as a “Pit optimisation” or, in the case of heavy mineral sands, a “Margin rank”. Financial parameters are applied to the blockmodel and an algorithm determines which parts of the blockmodel can be economically mined by generating a positive cashflow (revenue minus costs). It also optimises the depth of the pit so that the revenue is maximised by limiting the floor elevation to an optimum column value and excluding any material that would not contribute to the positive cashflow.

The margin rank process allows for an economic assessment of the deposit using vertical columns. A “column” in this context refers to multiple blocks that are on top of each other in the blockmodel and stretches downward from the topographical survey file or DTM. An algorithm searches through the potential mining blocks and calculates the financial value of each block and then determines which blocks should be mined to achieve the maximum economic value for each column and determines the optimal mining floor elevation.

The margin rank process uses the blockmodel and a computer algorithm to determine the optimal pit depth and mining areas to achieve maximum profits. From this "flagged” blockmodel it is possible to create a three-dimensional (“3D”) generated surface file that represents the outlines of these economically viable blocks, also known as a “pit shell”. This

pit shell is a raw representation of the mine, without considerations for mine design criteria such as bench angles.

This optimal pit shell 3D representation is then used in the next step of the mining technical study to create a pit design where mine design criteria are applied.

Mine Design Criteria

During the mine design process, a 3D mine design file is created with Deswik™ mine design software, where all the associated mine design criteria are taken into account for the outlines generated by the margin rank. The mine design criteria that were applied to the Sierra Rutile Area 1 operations are detailed in the table below.

Sierra Rutile Mine Design Criteria for Area 1

Criterion	Unit	Value
Topsoil thickness	m	0.3
Smallest Mining Unit ("SMU")	Size (x) x Size (y) x Size (z)	10 x 10 x 1.5
Bench Height	m	3
Overall Pit Slope Angle	Degrees	70
Ramp Width	m	15
Ramp Gradient	Degrees/Gradient	5.71/1:10
Pit Floor Maximum Gradient	Degrees/Gradient	5.71/1:10
Standoff Distance from Exclusion Zones	m	30
Standoff Distance from Communities	m	200

The mine design criteria applied in the Area 5 Sembehun PFS are detailed in the table below.

Sierra Rutile Mine Design Criteria for Area 5

Criterion	Unit	Value
Topsoil Bench Height	m	0.1
Topsoil Bench Angle	Degrees	N/A
Overburden Bench Height	m	≤ 5
Softs Bench Angle	Degrees	60
Ore Bench Height	m	≤ 17
Ore Bench Angle	Degrees	60
Ramp Gradient	Degrees	5.71

The pit designs for Area 1 aim to maximise ore extraction and limit waste mining, while maintaining mining practicality, and considering the required exclusion zones, design criteria and margin rank outputs. A minimum mining area of 2,500 m² was applied to the optimised areas. Optimised areas less than 2,500 m² which are in isolated positions relative to the major optimised areas, have been excluded.

The optimised mining pits of Area 5 span an area of more than 11 km in length and 5 km width. The optimised pits consider:

- Mineral Resource Classification;
- Continuity of the ore deposits;
- Rutile grade and content;
- Mining volumes;
- Areas above sea level;
- Distance from the central plant infrastructure; and
- Tailings storage areas.

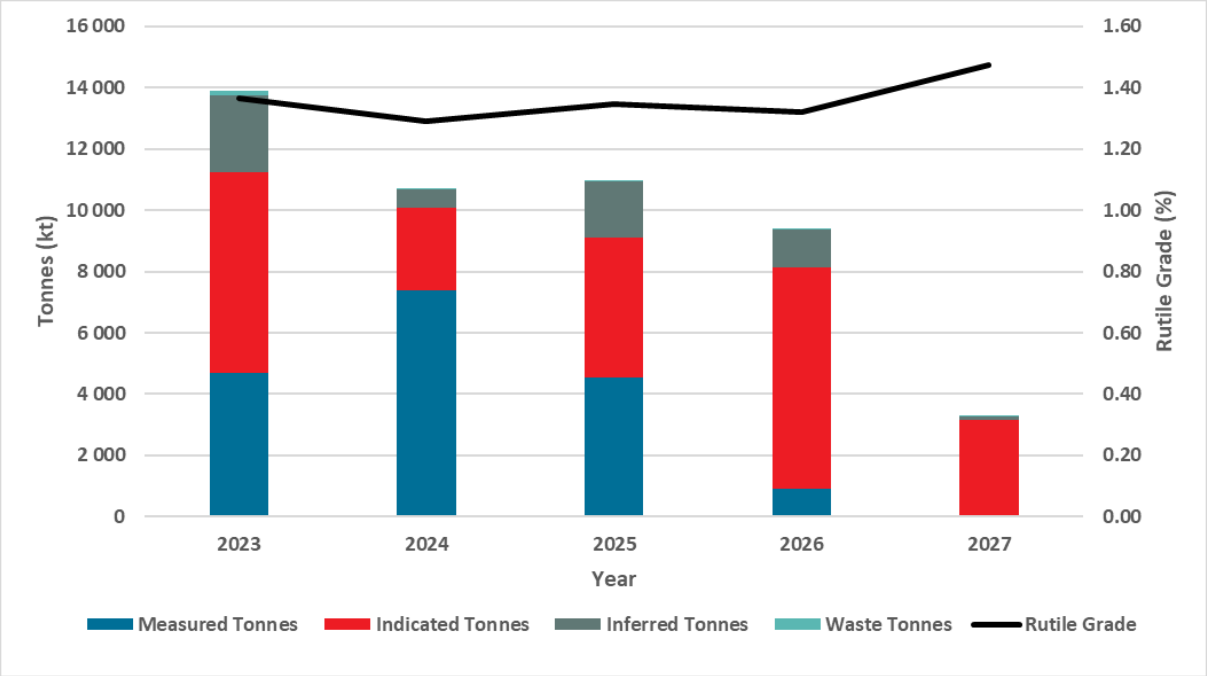
Life of Mine Schedule

The Life of Mine mining schedule commences in January 2023. The schedule was generated with a monthly resolution and was used to inform the financial model utilised in the economic analysis. The scheduling was generated using GEOVIA®Minesched Software, which is the preferred software package for SRL, as it is currently in use at SRL for planning and scheduling purposes.

The mining strategy for the Area 1 operations is to maximise Ore Reserves by depleting the current active mining areas and then to progress to the two life of mine extensions for Area 1, Pejebu and Ndendemoia. This will enable SRL to maintain a consistent plant feed from the Area 1 operations while developing the Sembehun Project.

A LoM of four years and eight months is envisaged for the SRL Area 1 operations. A portion of Inferred Mineral Resources have been included in the LoM plan, as it is required to mine through the Inferred material to access the planned Measured and Indicated Mineral Resources for mining.

The figure below indicates the tonnes that will be mined in the LoM production schedule. The tonnes are depicted on the primary, left-hand, Y-axis in kt. The diluted grade is depicted on the secondary Y-axis, on the right-hand side of the graph. The tonnes are further sub-divided into their relevant Mineral Resource categories.



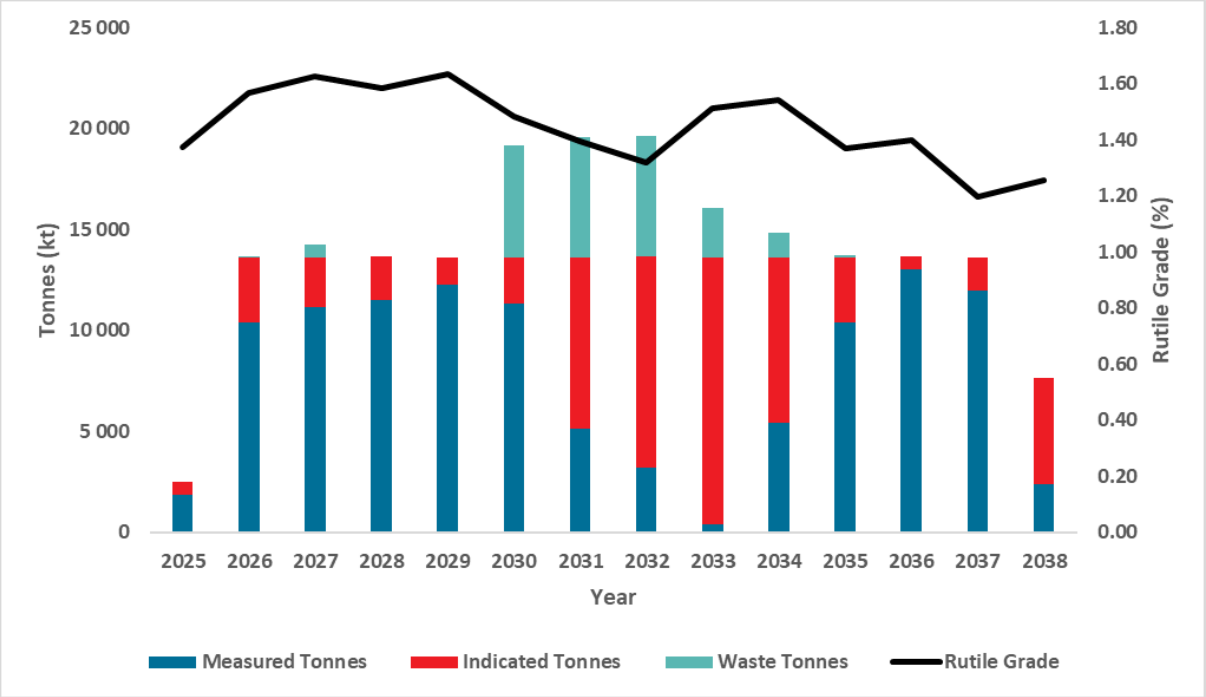
Diluted LoM Production Schedule for Area 1

The LoM production schedule contains a total of 40.7 Mt of diluted ore that is classified as either Measured or Indicated material. A total of 6.5 Mt of Inferred material (approximately 13%) is also included in the schedule, however this material has been excluded from the Ore Reserve estimation in line with Reporting requirements.

The planned mined grade for the Measured and Indicated material is at an average Rutile grade of 1.34% which yields 548 kt of Rutile metal content while the Inferred material has a grade of 1.37% rutile. The average mined rutile grade over the LoM is 1.34%, delivering a total of 644 kt of rutile.

The LoM Schedule for the Sembehun Project was obtained from the 2022 PFS conducted by Hatch and Iluka. The information contained in the PFS schedule, has not been modified by the Competent Person, as the DFS for the Sembehun Project remains in progress at the time of this announcement.

A LoM of thirteen years and five months is envisaged for the Sembehun Project. The figure below illustrates the tonnes that will be mined in the LoM production schedule. The tonnes are depicted on the primary, left-hand, Y-axis in kt. The diluted grade is depicted on the secondary Y-axis, on the right-hand side of the graph. The tonnes are further sub-divided into their relevant Mineral Resource categories.

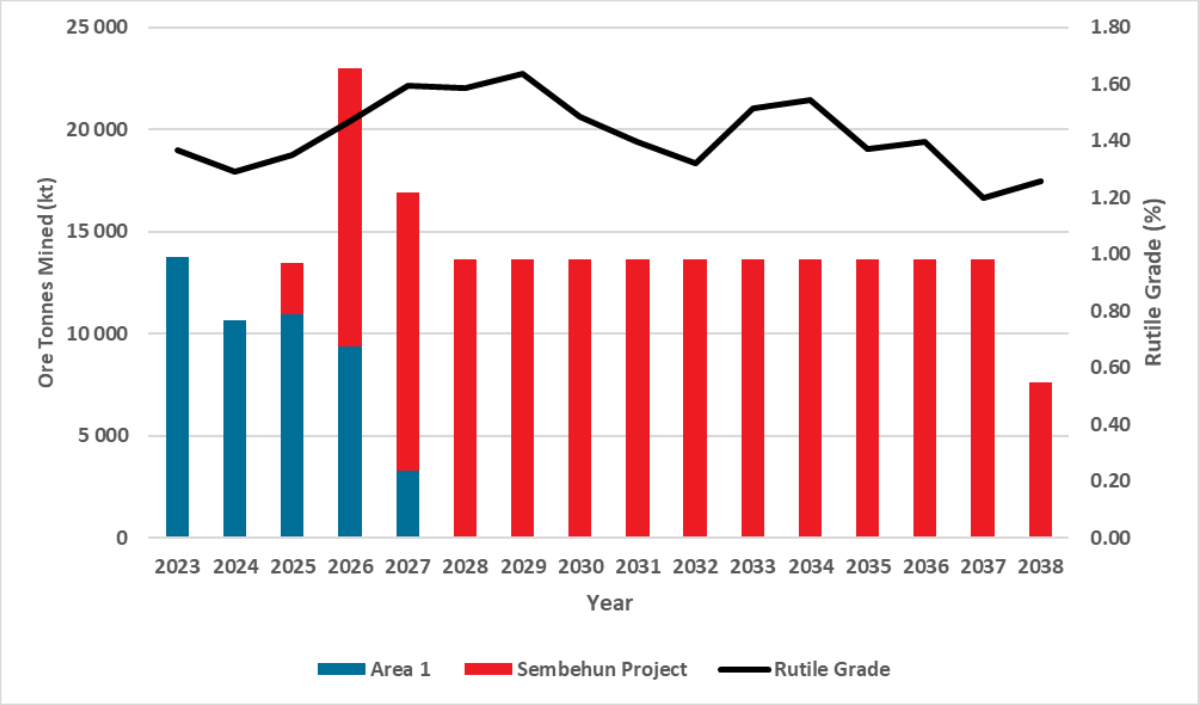


LoM Production Schedule for the Sembehun Project

The LoM production schedule contains a total of 173.6 Mt of diluted ore that is classified as either Measured or Indicated material.

The planned mined grade for the Measured and Indicated material is at an average rutile grade of 1.45% which yields 2,540 kt of rutile product.

The combined ore tonnes mined from Area 1 and the Sembehun Project is illustrated in the figure overleaf. The Sembehun Project is brought into production in 2025 when the Area 1 Ore Reserves are depleted. A total of 222 Mt of ore will be mined at an average rutile grade of 1.42% delivering approximately 3.2 Mt of rutile content.



Combined Ore Tonnes Mined and Rutile Grade over the LoM of Area 1 and the Sembehun Project

Grade Control

Grade control at Sierra Rutile operations is conducted on the mine by the Geology Department. Grade control is conducted during mining of the pit face by panning the targeted mining horizon material.

Geological interpretation of the scheduled mine blocks is conducted on a monthly or quarterly basis to identify operation and production issues, and communicating them to all associated personnel such as interburden, sulphur content, slime, grade variation, VHM ratios, HM grain size prior to mining. The grade control geologist liaises with surveyors for in-pit mark-up (this helps to delineate mining limit). Any deviations in mining limit are taken into account by the Geo-Technician in-charge. A quarterly trench/pit mapping and sampling program is undertaken by the Grade Control Geologist and Geo-Technicians to further investigate critical issues observed in the reserve model such as grade variation, occurrence of blocky laterite and Bullom Sand Zone (Interburden) to minimize ore dilution and maximize ore recovery.

Sampling of the mine face involves panning of the ore at various intervals and observing the HMC grade distribution in the resultant pan tails. Any visible deviations from the plan are communicated to the mine planning and operations teams.

Mapping of the mine face is conducted as mining progresses for better classification of the ore characteristics, observation of changes within interburden zone and bed surface elevation for ensuring that the waste material is mined, stacked and measured for reconciliation purposes.

Identification of the ore-waste and ore-bedrock zones is conducted ensuring that mining is within a ±0. 5m limit. The Grade control Geo-Technician gives directions to the dozer operators as changes occur especially, during bed floor sweeping and change in the bed surface elevation to prevent excessive dilution. During bed floor sweeping, in a bid to maximize ore recovery, the Geo-Technician can allow up to 30% blade fill of bed material. This is communicated to the spiral plant to stockpile this material separately. The depth to bedrock during dozer push must be clearly marked out using pegs with indication of depths on it at various locations in the blocks using green flags. The Grade Control team provides a monthly ore mined reconciliation report in collaboration with survey, mine planning and metallurgy indicating the economic impact on production loss or gain.

In addition, grade control is conducted ahead of the mining faces by a combination of methods. Often areas were historically drilled on a close-spaced grid and thus grade confirmation is considered necessary. Grade confirmation is conducted along historical drill grid lines by means of a combination of trenching or pitting. Trenching and pitting are conducted using a TLB. The resultant trenches and pits are logged and sampled by the geology and grade control.

Metallurgy

All mining operations at Sierra Rutile are currently conducted by dry mining methods. The RoM feed is stockpiled at the land based WCP's (Wet Concentrator Plant) where a front-end loader or excavator tips the RoM feed into a 150t hopper or direct tipping with a dump truck is done, and the material is then passed onto an apron feeder, which discharges onto a vibrating grizzly feeder.

The grizzly feeder separates the undersize material which discharges into a primary scrubber. Material leaving the primary scrubber is discharged onto a double deck screen. The oversize material from both decks is combined and conveyed to a waste dump via conveyor, from where it is trucked and utilised in rehabilitation. The undersize material is pumped to the de-sliming and effluent disposal section, where it is fed to cluster cyclones.

The overflow from the primary and secondary cyclones flow to the final effluent sump together with sand tailings from the spiral modules. The overflow gravitates to the water dam. The underflow from the de-sliming cyclones collects in the spirals feed sump where it is diluted before being pumped to the spirals module. Sand tailings and slimes tailings are co-disposed, while the heavy minerals concentrate ("HMC") is dewatered and stockpiled for transportation via truck to the MSP (Mineral Separation Plant) for further processing.

Further metallurgical processing is conducted at the MSP which is situated at the western end of the former Mogbwemo dredge pond. The main processes at the dry plant are drying, sizing and electrostatic separation. The electrostatic separation process deflects non-conductors (zircon and silica) and separates them from conductors (rutile, hematite and ilmenite) in the product stream.

The conductors (rutile, hematite and ilmenite) undergo electromagnetic separation where the non-magnetic rutile separates from the magnetic hematite and ilmenite. The final rutile product contains approximately 95 % titanium dioxide (TiO_2), the ilmenite contains approximately 60% TiO_2 and zircon concentrate (ZIC) at least 20% ZrO_2. The products are stored in separate stockpiles per varying grades for transport to Nitti Port.

Infrastructure

The SRL Area 1 operations are well established with all the required infrastructure in place. The Area 1 operations are self-sufficient considering that mine site construction, maintenance and ancillary services are conducted by the Owner. Established infrastructure includes:

- The mine site and offices;
- MSP Plant;
- Dry-mining units and wet concentrator plants;
- Haul roads to the active mining areas, plant site and Nitti Port;
- Electrical power generation facilities and distribution systems,
- Water reticulation systems;
- Tailings storage facilities;
- Employee accommodation and a mine clinic; and
- Recreational facilities.

The proposed infrastructure for the Sembehun Project will consist of:

- Access and service roads;
- A wet concentrator plant;
- A bridge to cross the Gbangbaia River;
- Mining site buildings;
- Employee accommodation camp;
- Power plant facility;
- Tailings storage facilities; and
- Process water dams.

Product Shipping

Sierra Rutile uses the Nitti Port to ship product produced from the MSP. The facilities are located approximately 4 km South of Gbangbatoke. Concentrate received from the MSP is stored in the silos and domes. The products are then loaded onto barges from the various silos and domes through a common dispatch conveyor. The conveyor system is installed below the

silos and product is discharged directly onto the conveyor. Product stored in the domes or on stockpiles requires the use of a frontend loader to move the product to a tipping bin with feeder conveyors that feed the dispatch conveyor. The barges transport the bulk product from the Nitti Port to transfer buoys located in the Sherbo River estuary. The product is then loaded from the barges to Ocean-Going-Vessels for transport to various international customers.

Electrical Supply

The SRL Mine has its own existing power supply system, which is completely independent of other electrical systems.

The power supply of the SRL Area 1 operations consists of:-

- The Powerhouse 2 ("PH2");
- associated switchboard; and
- 46 kV, 13.2 kV and 4.16 kV systems.

The PH2 is the only electrical power source for the SRL Operations. The plant consists of four Caterpillar/Mak 16CM32 marine fuel oil fuelled medium speed generator sets, each nominally rated 6.8 MW and generating 4.16 kV at 60 Hz. This equates to a total installed capacity of 27.2 MW.

Potable Water Supply

SRL has an existing water treatment plant with an output capacity of about 950 l per minute, treating water supplied from the Mogbwemo Domestic Reservoir. Water is treated with chlorine, soda ash and aluminium sulphate (used as coagulant) before filtration to produce potable water up to World Health Organisation ("WHO") drinking water quality standard.

Environmental and Social Studies

The ESHIA and ESHMP were done and are reported by SRK in the Draft ESHIA and 6ESHMP Report, Number 515234/D-ESHIA/ESHMP (March 2018). EPA inspectors conducts audits at the SRL operations on a quarterly basis, and a compliance certificate is issued annually. SRL management are confident that the environmental aspects are managed responsibly and don't pose a significant risk to the operations in future. The following sections are sourced from the ESHIA report.

As part of the ESHIA process, a Mine Closure Plan was prepared by SRK during 2017 to demonstrate how closure of the Area 1 operations will be completed in a manner that meets the applicable legislative requirements, SRL environmental management standards and good International Industry Practice. The Mine Closure Plan was developed to be site specific and to address the particular risks associated with Area 1. The overall closure objective is to implement remedial measures in a manner that the land capability of the rehabilitated areas is capable of sustaining a variety of post closure land uses, where the residual post closure risks are acceptable to SRL and SRL's stakeholders.

The Mineral Resources at SRL's Area 1 are nearing depletion. As a result, SRL is investigating options related to the possible extension of the Life of Mine or final closure of the operations. SRL appointed Digby Wells to conduct a Socio-Economic Assessment (SEA) in 2021. The SEA was tailored towards planning for socio-economic transitioning to closure and identifying potential impacts to the communities within Area 1.

Market Studies

Sierra Rutile currently produces three primary products for sale: two grades of rutile (called Standard Grade Rutile ("SGR") and Industrial Grade Rutile ("IGR") and Chloride Ilmenite. In addition to the three primary products, Sierra Rutile also produces approximately 5 kt of Zircon annually, in the form of Zircon In Concentrate ("ZIC"). Zircon content in the ZIC is variable but typically around 20-25%.

Sierra Rutile has a long and established market presence, including relationships with all of the primary chloride-based Titanium pigment manufacturers as well as the world's largest producers of high-specification aircraft-quality Titanium metal. Sierra Rutile products remain in high demand, and for the purposes of this study, it has been assumed that all production can be sold during the year that is produced.

Industry consultant TZMI predicts that rutile will be in short supply for the foreseeable future since existing Ore Reserves are nearing the end of their mine life and there are very few first-tier Mineral Resources coming into development.

The near-term outlook for high grade Chloride feedstock from existing supply sources indicates the market will range from being balanced to having a slight surplus from 2023 to 2024. Shortages emerge unless new supply is brought onstream by 2025.

The near-term outlook for rutile remains positive despite bulk rutile demand potentially softening as pigment producers reduce their head grade in an attempt to save costs and consume proportionally more lower cost feedstocks like chloride slag or chloride ilmenite within plant specific technical or capacity constraints. An important consideration when evaluating the Sembehun Project is that Sierra Rutile is the only mineral sands operation with predominantly rutile driven economics. Most, if not all, other mineral sands companies view rutile as a co-product, albeit in the case of Base Resources, a high credit co-product.

Taxation

Tax assumptions for SRL are based on the relevant Sierra Leone legislation in force at this time, including application of the Third Amendment Agreement tax concessions to Area 1 volumes. Taxes payable are applicable to:

- Minimum Income Tax
- Royalty and Export Inspections
- Duty on MFO

Economic Analysis

The purpose of the economic analysis is to set out the economic valuation for the current Area 1 operations and the evaluation of the Sembehun Project for the updated Ore Reserve estimation for Sierra Rutile. The evaluation does not represent the full potential valuation of the Sembehun Project, as it does not consider the extended price decks from TZMI, or optimized support costs.

The table below details the key financial indicators for Sierra Rutile.

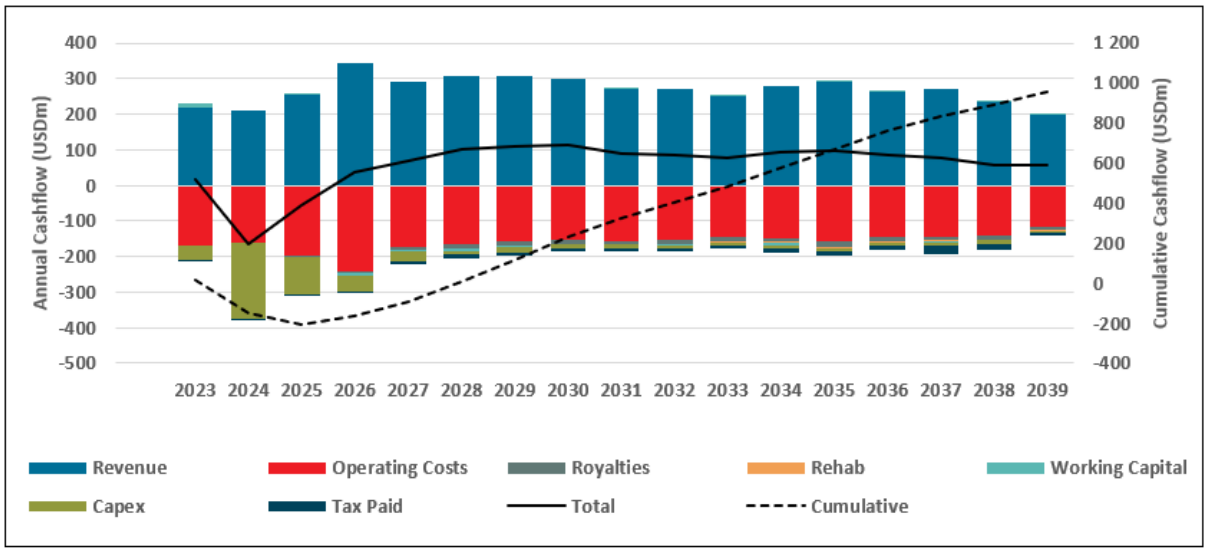
Summary of Financial Indicators for Area 1 and the Sembehun Project (Area 5)

Measure	Unit	SRL Area 1 and Sembehun LoM
Operating years	**Years**	**2023 - 2039**
Life of mining operation	**Years**	**17.0**
Production – SGR	kt	2,470
Production – IGR	kt	337
Production - Total Rutile	**kt**	**2,806**
Production – Chloride Ilmenite	kt	1,211
Production – Ilmenite Within Concentrate	kt	329
Production – Total Ilmenite	**kt**	**1,540**
Production - Zircon	**kt**	**209**
Rutile Revenue	USDm	3,860
By-product Revenue	USDm	704
Total Revenue	**USDm**	**4,564**
Cash Cost	**USDm**	**2,594**
Cash Cost (net of by-product credits) /t Rutile	**USD/t R**	**674**
EBITDA	**USDm**	**1,748**
EBITDA / Revenue	**%**	**38%**
EBIT	**USDm**	**1,326**
Free Cash Flow	**USDm**	**944**
Area 1 Capex (Reset Plan + SIB)	**USDm**	**39**
Sembehun Studies Capex	USDm	14
Sembehun Execution Capex	USDm	345
Sembehun SIB Capex	USDm	132
Total Sembehun Capex	**USDm**	**491**
Total Capex	**USDm**	**530**
NPV_8 (post-tax, real)	**USDm**	**386**

Notes:

1. Valuation date of 1 January 2023. All figures and financial results are calculated from 2023 onwards.
2. All figures are presented in US$ real 2023 terms.

The figure below illustrates a summary of cash flow for the Area 1 and Sembehun Project.



Sembehun Project Annual and Cumulative Cashflow Summary

A positive payback is achieved in 2030, which equates to a 6.6-year payback period from the commencement of the Sembehun project execution.

APPENDIX 2: JORC CODE (2012) – 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 (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (e.g. "reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay"). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	Due to the nature of the deposits and their relative age, exploration techniques or sampling practices other than drilling are not generally required. However, limited pitting data collection has been conducted in various exploration campaigns. The historical Sierra Rutile digital database contains drill and assay records for the main resource development undertaken on the ML011/72 (Area 1) and ML015/72 (Area 5) mining leases prior to 1995. Post-2002 drill programmes have been centred around ML011/72.
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., 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.).	The SRL mining leases have been explored using several different drilling techniques, namely window sampling Stitz drilling, aluminum derrick tripod drilling, hand auger, hollow stem auger, mechanical bangka drilling, aircore and reverse circulation methodologies.

Criteria	JORC Code explanation	Commentary
		a) Stitz Window Sampling Drilling The Stitz drill data was used for reconnaissance exploration carried out on satellite orebodies in the early 1970's. It had a maximum depth of 6 metres, with sample intervals taken at 1.0 metres through side slots (windows) in the rod. The technique had some shortcomings, namely: • Potential over-estimate of grades due to contamination when drilling through enriched upper sediments prior to encountering more barren clays and silts. • Underestimating the true thickness of the deposit, as well as failing to encounter heavy mineral enrichment often observed within the lower sand and gravel sequences resulting from the inability of the rig to penetrate hard ground (e.g. laterite) as well as the 6 metre depth limitation. (Button, MTG., 2016). b) Aluminum Derrick Tripod Drilling Aluminum Derrick Tripod drilling consists of a 76.2mm diameter double tube percussion drill mounted on an aluminum tripod with a 4 hp gasoline engine and cathead combination. The cathead raises and lowers the drill tools and drives the percussive hammer. The split barrel sampler is placed in the drive shoe of the borehole casing, and the casing driven to the new sample level. The sampler is withdrawn and replaced with a new sampler before resuming the next drive (Button, MTG., 2016). c) Hand-Auger Drilling Hand-augering is not currently used at SRL operations. The augers are rotated into the ground until they are filled, then lifted out of the borehole to be emptied. Specialised augers can be used for different formations (soil types). Above the water table, the borehole generally stays open without the need for support. Below the water table a temporary casing may be used to prevent borehole collapsing. Drilling continues inside the temporary casing using a bailer until the desired depth is reached. The permanent well casing is then installed and the temporary casing is removed. Augers can be used up to a depth of about 15-25 meters, depending on the geology (Practica, 2010). d) B53 / B54 Hollow Stem Auger Drilling Auger drilling is a method of drilling holes by cutting or gouging with the chiselled tip of a rotating drill bit. The drill stem is shaped like a helical screw and is driven rotationally into the ground. The rotational penetration of the drill bit produces drill cuttings that are lifted to the surface by the helical edges or flights of the rotating drill stem. Auger drilling can produce boreholes quickly and efficiently, although the rate of penetration depends on the type of formation being drilled. Water is commonly used to hydrate dry holes to improve penetration and help lift cuttings. Auger drilling can reach depths of around 20 m, depending on the material being drilled and size of the rig and

Criteria	JORC Code explanation	Commentary
		stem. The rods are typically 1.5 m or 3 m long and require care when handling due to their weight and sharp flight edges (West Aus. Department of Mines and Petroleum, 2012). The mobile auger rigs are mounted on a 5-tonne truck and uses a hollow stem auger with a 51mm split barrel sampler. The sampler is driven into the undisturbed ground ahead of the auger by a 63.5kg hammer. The sampler is withdrawn and replaced by a plug bit, with the augers rotated down to the end of the sample length to case the borehole. The plug is removed and the sampler inserted into the augers to restart the sampling cycle. The augers are used to prevent the drill holes from caving in and contamination of samples from the rutile-rich surface layers. Samples are collected at 1.5m intervals (Button, MTG., 2016). e) Mechanical Bangka Rig Drilling Mechanical Bangka Rig: Bangka drilling has been used for drilling into virgin, water-logged and tailings material. Sampling is undertaken over 0.5 metre intervals using a 63.5 mm core barrel. The Bangka drill rig consists of a motorized winch with a wire rope passing through a pulley attached to a standing tripod. The free end of the wire rope is attached to a sampler which is a two-piece sampler made up of a long, cylindrical hammer connected to a sand pump bailer (Button, MTG., 2016). f) Air-core Drilling Air-core drilling was historically used at SRL and is not currently being employed. Air-core drilling employs hardened steel or tungsten blades to bore a hole into unconsolidated ground. The drill bit generally has three blades. Drill rods are hollow and are fitted with an inner tube within the outer barrel, similar to the rods used for reverse circulation drilling (described below). Drill cuttings are recovered by injection of compressed air into the annulus between the inner tube and the inside wall of the drill rod and are lifted to the surface by upward air flow through the inner tube. Samples are then passed through a sample hose into a cyclone where they are collected in buckets or bags. Cuttings are removed inside the drill rods. Air-core drill rigs usually require a sizable support vehicle, normally a truck, to carry diesel, water and other supplies needed for rig maintenance (West Aus. Department of Mines and Petroleum, 2012). Several aircore rigs have been used as the primary sampling tool post 2002 and have the ability to sample to a depth of 100 metres. The technique uses hollow rods containing an inner tube which sits inside the hollow outer rod barrel. The drilled samples are removed by injection of compressed air into the hole via the annular area between the inner tube and the drill rod. The cuttings are then blown back to surface up the inner tube where they pass through the sample separating system fitted with a rotary splitter and are collected in sample bags. Samples are collected at 1.5 metre intervals (Button, MTG., 2016).

Criteria	JORC Code explanation	Commentary
		g) RC Drilling RC drilling is similar to air-core drilling in that the drill cuttings are returned to the surface via an inner tube inside the drill rods. However, RC rigs commonly have a much greater capacity and are designed to handle much larger downhole equipment, with rods that are typically 6 m long and weigh about 200 kg. Penetration is achieved by a pneumatic reciprocating piston known as a downhole hammer (DHH), which drives a drill bit (typically 115 to 150 mm in diameter) with round protruding tungsten-carbide buttons that can cut hard rock. RC drill rods rotate at speeds of 30 to 50 rpm. Before commencing deeper drilling, a collar (PVC or metal piping) is installed at the surface to prevent unconsolidated material collapsing into the hole. Collars may extend to 30 m depth, depending on the stability of the surface formations. Circulation is achieved by pumping air down the drill rods between the outer and inner tubes, with the air returning up the inner tube and lifting cuttings to the surface. At the surface, the cuttings are directed through a hose into a cyclone for collection and bagging.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	All drilling sample recoveries are logged as a percentage recovery. Sampling by auger methods generally does not introduce sample bias, as all of the sample is delivered to the laboratory. Auger samples are only split for QAQC duplicates and in this case tend to be whole core samples that split without loss. To improve the recovery samples at depth in deeper holes (or in wet ground conditions), the entire drill string is retrieved from the hole. Aircore drilling is prone to undersize losses: Dry aircore samples may lose slimes during blowing out of sampling equipment, but heavy minerals and oversize are not affected. Wet, clay-rich material may contaminate the sampler equipment if not cleaned properly.
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.	<u>Geophysical Logging</u> Whilst adhoc geophysical surveys have been conducted in regional exploration programmes, mainly in the form of airborne magnetic and radiometric surveys (e.g., Turners Peninsular), no geophysical data was available for use in the Mineral Resource estimates for Sierra Rutile. <u>Geological Logging</u> Geological Logging: All sample intervals are qualitatively logged directly into the live and relational digital acQuire™ database via a digital field Toughbook™ in accordance with the standard operating procedures. The following main geological criteria are recorded: • Width of interval • Depth to base of interval

Criteria	JORC Code explanation	Commentary
		• Percentage sample recovery • Colour • Main lithotype • Visual heavy mineral content • Lithological qualifiers • Slimes and oversize qualifiers • Sample number
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 representativity of sampling. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.	The SRL drilling has been sampled using several vertical drilling techniques, namely Hollow Stem Auger, Aircore, Mechanical Banka and Lightweight Tripod Derrick drilling. Sampling of drillholes was conducted at 0.5 - 1.5 metre intervals (depending on the standards in place at the time and the drilling methods employed) and all samples submitted for assay. <u>Sampling Methodology</u> The sampling protocol for all drilling operations is prescribed by various standard operating procedures specific to the type of drilling method adopted. Generally, approximately 2.0 Kgs of sample is collected for each interval and is placed in pre-labelled plastic sample bags. Unique sample identifiers (location, line, Hole No, interval, etc) are recorded on waterproof paper tags and placed in the sample bag for submission to the SRL laboratory. A duplicate tag is also inserted for validation purposes. A sample submission form that itemises the samples recovered per borehole is completed, photocopied and submitted to both the data-capture clerk and laboratory for further processing. <u>Sample Compositing</u> The compositing of samples was introduced for some of the post-2002 drill campaigns and allows sufficient sample volume to be made available for Full Mineral Analysis (FMA) as required by the analytical flowsheet. The heavy mineral (HM) grades reported by the laboratory are imported and plotted onto geological cross sections of the deposit under consideration. These along with other variables such as lithology, slimes and oversize content, iron staining, etc are considered when compositing of the samples. Care is taken to ensure that only lithological units of similar geological and grade character are composited together. <u>Sub-Sampling Techniques</u> All samples taken in the field are whole core samples, with the exception of the QAQC field duplicate samples where a sample in split and bagged as two samples.

Criteria	JORC Code explanation	Commentary
		Sample Preparation Samples are prepared for analysis in accordance with a standard operating procedure. After booking in, the drill samples are oven dried, weighed and soaked in Tetra-Sodium Pyrophosphate (TSPP) solution. The samples are then dried, attritioned and wet screened to remove the slimes (-63µm) and oversize (+1.0mm) material. All screened fractions are weighed for proportionation before the slimes and oversize are discarded. The +63µm, -1.0mm fraction is riffle split to produce one sample for further analysis and one sample for storage. A full analytical flow sheet for both historical and current lab process is included.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e.lack of bias) and precision have been established.	Analytical Methods Most drillhole samples have been analysed at the SRL laboratory using a combination of MRS 400, X-Ray Fluorescence (XRF) - pressed pellet method) and microscope “point counting” analysis. Mineral assemblage data was obtained by compositing the sand fraction of samples from similar geological horizons, screening across a series of size ranges, recovering the heavy minerals by dense liquid media and then conducting a magnetic separation (Permroll Magnet). Laboratory procedure has varied between historical and current campaigns. The historical assay database typically contains the following parameters: • Rutile Analysis: Ti XRF analysis on the non-magnetic -16 to +250 Tyler mesh interval fraction normalised to rutile and expressed as a Wt% of the -16 to +250 mesh fraction (sand fraction). • Rutile Content: Ti XRF analysis on the non-magnetic -16 to +250 Tyler mesh interval fraction normalised to rutile, multiplied by the sand fraction ratio, expressed as Wt% of the whole sample (i.e., recoverable rutile within the whole rock). • Magnetic Heavy Minerals: Weight in grams of the magnetic fraction discarded from the magnetic separation stage. • +3/8, -3/8 +3/16, -3/16 +16, -16 +42, -42 +250: Tyler mesh fractions expressed as Wt% of the whole rock sample interval. Note that the -250 mesh slimes fraction is not present. • Heavy Minerals %: Wt% of heavy minerals as determined by the bromoform heavy mineral separation, expressed as Wt% of heavy minerals (s.g.>2.8) within the -16 to +250 mesh sand fraction. • HM +70: % of the heavy minerals in the sand fraction greater than 70 Tyler mesh. • HM -70: % of the heavy minerals in the sand fraction less than 70 Tyler mesh. • +16, -16 +250, -250: Wt% of the oversize (+16), sand (-16 +250) and slimes fractions (-250) of the whole sample. • Fe2O3: % iron oxide in sand fraction.

Criteria	JORC Code explanation	Commentary
		• ZrO2: % zirconium dioxide in sand fraction. • Sulphur: % in sand fraction. Point count: Point counting determines the percentages of magnetic and non-magnetic minerals through microscopically examining the seven size fractions (-16 +28, -28 +42, -42 +60, -60 +100, -100 +150, -150 +200, -200 +250) of the sand component (i.e., screened, HM and magnetic separation) from each drillhole composite. The historical point count database includes the following information: • HM%: Wt% of the -16 to +250 mesh sand fraction heavy minerals (s.g.>2.8), expressed as Wt% of the sand fraction. • %Mag: amount of magnetic material within the -16 to +250 mesh heavy mineral sand fraction, expressed as Wt% of the sand fraction (-16 +250 Tyler mesh). • %NMag: amount of non-magnetic material within the -16 to +250 mesh heavy mineral sand fraction, expressed as Wt% of the sand fraction. • Leuc_ilm_M; Iron_Ox_M; Monaz_M; Garnet_M; Pyr_Marc_M; Other_M: Weight % of Leucoxene/ilmenite, iron oxides, monazite, garnet, pyrite/marcasite, and other minerals within the -16 to +250 mesh magnetic heavy mineral sand fraction, expressed as Wt% of the sand fraction. • Rutile_NM; ICR_CCR_NM; Zircon_NM; Kyan_NM; Corud_NM; Pyr_Marc_NM; Other_NM; weight percent of the rutile, iron coated/clay coated rutile, zircon, kyanite, corundum, pyrite/marcasite, and other minerals within the -16 to +250 mesh non-magnetic heavy mineral sand fraction, expressed as Wt% of the sand fraction. Current (post-2002) Methods The sample preparation is identical to that of the historical data, excepting the initial screening stage. Point Count: The more recent point count procedure is identical to the historical procedure, with the exception that the final sand fraction feed for the procedure is defined by the -1mm to +63µm fraction interval. Current analytical procedure at SRL requires the point count analysis of individual sample intervals (in contrast with the historical dataset which reported composited drill holes). Points count data are back calculated to XRF values and reported as such. Quality Assurance and Quality Control Procedures The QAQC procedure ensures that the values used in the Mineral Resource estimations and evaluations are reliable and reproducible and provides a means of demonstrating the integrity of

Criteria	JORC Code explanation	Commentary
		the database during audits and identifies the requirements for implementing quality assurance / quality control measures to exploration information for optimal database integrity. The QAQC monitoring practice includes the blind insertion of control materials into the batches of exploration samples prior to lab analysis. It also requires the validation of mineral ratios and the documentation of QAQC results. <u>Control Materials</u> a) Coarse Field Duplicates Blind duplicates are used to quantify analytical precision and to detect sample preparation errors. At least 1 standard in 20 samples (5%) of the total sample program should contain identical coarse duplicates. Duplicates are specific to each independent drill rig campaign (i.e., no duplicates inserted across drilling campaigns). Each 20th drillhole sample should be clearly recorded on the Drill log sheet as a duplicate and a sequential Sample Number allocated to the duplicate, such that the sample is not identifiable by the laboratory. This sample should be split into two representative duplicates for submission to the laboratory. All submissions to the laboratory should be in batched with each batch containing at least one duplicate. All duplicates submitted to the laboratory should be captured and monitored by the responsible Section Geologist in control sheets. These control sheets must record the original and duplicate Sample Numbers, their respective analytical results and any actions taken. Anomalous results should be highlighted, reported and addressed immediately. The pass criteria for the sample program, as a whole, is 90% of coarse duplicates within ±5% difference. This is to be monitored by means of duplicate control (XY-Scattergram) charts and any anomalies outside of these limits should be treated as follows: • Both original and duplicate must be submitted for re-analysis; • Should the repeat analysis remain anomalous, the entire batch of 20 samples is repeated. SRL tests the coarse duplicates for the following qualities: • Dry weight • Percent sand • Percent oversize • Percent slime • Percent heavy mineral content

		b) Analytical Replicates If warranted, the responsible geologist may request that the laboratory return selected samples for re-numbering and re-submission. These should be randomly selected from all samples and should never include high grades. This evaluates the assay repeatability (precision) of the laboratory. Check assay control charts should be used to monitor the integrity of the analytical repeats. 90% of the repeats should be within 5% difference before accepting the laboratory results into the database. c) Analytical Standard Reference Materials Standard reference material is submitted at random throughout the sample stream at an approximate rate of 5%. However, it should be noted that a single internally generated reference material (SRL_STD01). This reference material is used to assess the performance of the laboratory of the heavy mineral content percentage, as well as the percentage slime. d) Analytical Blanks Blank reference material (also standardised) is submitted at random throughout the sample stream at an approximate rate of 5%. However, it should be noted that the two blank reference materials are also internally generated by the SRL laboratory (SRL_BLK01 and SRL_BLK02). This reference material is used to assess the performance of the laboratory of the heavy mineral content percentage, as well as the percentage slime in terms of sample cross-contamination. The blanks are plotted between their respective “performance gates” around their respective certified values. The Competent Person would recommend that the graphs be plotted relative to a minimum detection limit for both percentage heavy mineral and percentage slime content. In addition, the Competent Person would recommend that nearly pure silica sand be obtained/imported for use as blank material instead of internally generated material being used for these purposes. e) Mineral Ratios The ratios of various minerals from the laboratory analyses may be used for identifying anomalies or poor XRF assays results. It should be noted however that spatial variations do occur within lithological units, which may also create anomalies and care is taken to recognise these. The mineral ratios are calculated for each analysis and checked for inconsistencies. Any values falling outside of certain limits are highlighted as exceptions for further checking. These are extracted and compared to the original log for data capture errors / anomalies. If an error is confirmed, the incorrect value (and any other associated / compromised value/s) is deleted from the database, rather than attempting to interpret a more reasonable value. The mineral ratio’s validated include:

Criteria	JORC Code explanation	Commentary
		• The mineral proportion of rutile > ilmenite > zircon is seldom violated; • The valuable heavy minerals (VHM containing rutile + ilmenite+ zircon) is always less than the total heavy minerals (THM: containing all heavy minerals including gangue); • ZrO2 is usually never greater than TiO2; • All sizing fractions should always add up to 100% • MAGS% plus NONMAGS% should always add up to 100%; • THM is always greater than individual analyses e.g. RR%, ILM%, ZIR%, etc The database is also checked and corrected for other obvious analyses errors e.g., low panned ilmenite – high THM (and vice versa), point count vs. XRF analyses, etc.
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.	Verification of significant intersections by either independent or alternative company personnel is viewed as being not applicable for the SRL mineral sands as there are no strandlines present with mineralisation blending across several lithologies. Twinhole drilling across historical drill sites is routinely conducted during new infill drilling campaigns. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols exists and readily available and is updated when required.
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.	All planned borehole coordinates are determined by the Geology Department in the WGS84 datum and submitted to the Survey department for field survey. The field survey of each borehole is conducted using the Leica Viva GS10 GPS equipment, with calibration to mining area-specific control points. Before the setting out or survey of any borehole commences, a survey check using several control points is undertaken to confirm that the survey base setup is correct. The quality of all surveyed position and height data is validated during the download into the Leica Geo Office software. Only points that do not differ from the control point by more than 0.05m in position and height are accepted into the survey database. During early 2013, an airborne Light Detection and Ranging (LIDAR) survey was conducted over the seven SRL mining leases to quantitatively improve the existing topography Digital Terrain Model (DTM). The survey covered 132,341 ha and produced data resolution at 15 cm (horizontal and vertical RMSE at 1.0 sigma). Ground control points and base stations were surveyed for each of the individual lease areas, with the existing SRL survey beacons in UTM28 North – ITRF 2008 used as references. The existing point LD10 was adopted as a datum and the entire survey shifted to this datum.

Criteria	JORC Code explanation	Commentary
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.	SRL uses a regularised grid to gather deposit information from drilling. Pre-1995 drilling was generally undertaken at a 240 m (800 ft) to 488 m (1,600 ft) spacing. Subsequent infill drilling over some of the deposits was on a 122 m (400 ft) spacing, often with an additional drill hole in the centre of each 122 m grid block. Post-2002 drilling has mostly honoured this drill configuration, with the exception of the 2007 / 2008 Gangama West drilling campaign, which was undertaken on an anisotropic 30 m X 60 m drill grid. Extensions to the Lanti deposit were drilled to a 35 m X 35 m drill spacing during 2006 to 2008. The post-2011 drilling campaigns were phased, starting at a 240 m X 240 m drill spacing and progressively improved to a 120 m X 120 m drill spacing dependant on mineralisation potential. Select areas of these deposits are drilled to a 60 m X 60 m drill spacing, particularly within identified palaeochannels containing higher levels of geological variability. From 2012, grade control drilling in select areas at a 20 to 25 m X 20 to 25 m drill spacing has been conducted in the Lanti, Gbeni and Gangama deposits for dry mining optimisation and grade control purposes.
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.	All drillholes at SRL are drilled vertically. This is due to the types of drilling employed. This orientation is considered most appropriate as the targeted sediments are oriented near-horizontal. This means that the drilling intersection lengths are a true representation of the actual intersected lithologies and resultant mineralisation.
Sample security	The measures taken to ensure sample security.	Once logging in the field is complete, the individual sample bags are places into a sack with the corresponding drillhole ID and the location. Once the samples are logged and the logging sheet has been completed, a sample submission form is filled in. The sample submission form bear a list of samples recovered per hole that require assay at the laboratory. At the end of each day, the geologist in charge prepares a daily report sheet, which bears the responsible geologist's name, the foreman, date, drillhole ID and the total depth of drilling. The responsible geologist submits both the sample submission form and the daily report sheet to the data entry clerk who keeps a record of all the drilling on a database. The sample submission form is photcopied and the original is submitted to the laboratory technicians along with the samples. The geological samples reporting from the field need to be booked in and given a Lab ID, drillhole number, first sample geological ID, last geological sample ID, number of samples and relevant commentary.

Criteria	JORC Code explanation	Commentary
		It is the responsibility of the laboratory foreman to ensure the laboratory assistants are aware of the samples that have to be processed that day and to ensure that they are preparing them whilst following this procedure and the SOP's of the laboratory. Whilst in the laboratory, the samples are under the care of the laboratory assistants, and so it is the responsibility of the chief chemist to ensure that this procedure and the laboratory SOP's are adhered to.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	To the knowledge of the Competent Person, there have been no documented external reviews of sampling techniques other than those carried out by the Competent Person during a site visit in September 2022. However, all sampling conducted on site is internally reviewed and audited by on-site geologists. The Competent Person conducted a review and audit of the on-site SRL laboratory on the 15th of September as part of a Competent Person site visit. In addition, the Competent Person observed the in-field drilling and sampling in practice and was satisfied with the standards observed. Compositing of samples for heavy mineral point counting was observed and revied as well by the Competent Person, who was satisfied that the documented protocols were correctly observed.

Section 2 Reporting of Exploration Results

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>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.</td><td>Sierra Rutile Limited holds the right to mine rutile, zircon, ilmenite, monazite, columbite, graphite, garnet and other titanium bearing minerals through Mining Lease and Dredging Licence No. 2134 of 1984. This mineral lease was later ratified through the Sierra Rutile Agreement (Ratification) Act of 2002 and incorporates the seven mining licences included in the table below together with the Sembehun Extension. Each licence is valid for a period of 33 years from re-commencement of mining operations in 2006 and may be extended by a further (minimum) term of 15 years.
Summary of SRL Mining Licences
<table>
<tr><th>Previous Licence Name</th><th>Licence Number</th><th>Area (km²)</th><th>Date Issued</th><th>Expiry Date</th></tr>
<tr><td>ML011/72 – Area1</td><td>ML2134</td><td>290.60</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>ML012/72 – Gambia</td><td>ML2134</td><td>17.50</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>ML013/72 – Jagbahun</td><td>ML2134</td><td>20.65</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>ML014/72 – Nyandehun</td><td>ML2134</td><td>5.64</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>ML015/72 _Sembehun</td><td>ML2134</td><td>73.63</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>ML015/72 _Sembehun Ext</td><td>ML2134 Ext</td><td>125.10</td><td>(Under Application)</td><td>(Under Application)</td></tr>
<tr><td>ML016/72 – Taninahun Boka</td><td>ML2134</td><td>12.47</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>ML017/72 – Mosavi</td><td>ML2134</td><td>13.32</td><td>01-Jul-84</td><td>23-Jan-39</td></tr>
<tr><td>Total</td><td></td><td>558.91</td><td></td><td></td></tr>
</table>
No surface rights are held by SRL across any of the mining licence areas. Under the Sierra Rutile Agreement (Ratification) Act of 2002, provision is made for the payment of Surface Rent on all land used by the Company, with the rental distributed between the landowner, Paramount Chiefs and Native Administration.</td></tr>
<tr><td>Exploration done by other parties</td><td>Acknowledgment and appraisal of exploration by other parties.</td><td>In the compilation of the information in this announcement, the following reports were used and are acknowledged to include information pertaining to historical exploration at SRL:
Mining Development Associates (MDA) 2002,"Resource Estimates of the Lanti, Gangama, Gbeni, and Sembehun Heavy Mineral Sands Deposits, Sierra Leone. MDA 2002, unpubl.
Mining Development Associates (MDA) 2003, "Sierra Rutile Limited, Resources, Reserves, Mine Plans, Site Observations. MDA 2003, unpubl.
ACA Howe, 2005, "Sierra Rutile, Sierra Leone; Scoping Study on the Mogbewmo Wet Plant Tailings and other Satellite Deposits". ACA Howe, unpubl.
Boli, C., 1982,"Regional Reconnaissance Exploration". Internal SRL Rep. Unpubl.</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Ransome, I., 2010, “Resource and Reserve Estimates, Sierra Rutile Limited”. Internal SRL Rep. Unpubl.
Author unknown. 1996. Mineral Sands Mining in Sierra Leone. Internal SRL Rep. Unpubl.
Mackenzie, DH Dr. 1961. Geology and Mineral Resources of Gbangbama Area. Geological Survey of Sierra Leone, Bulletin No. 3.</td></tr>
<tr><td>Geology</td><td>Deposit type, geological setting, and style of mineralisation.</td><td>The heavy mineral deposits of SRL are proximal alluvial placers in origin, with the primary source of mineralisation derived from the quartzo-feldspathic gneisses of the Precambrian Kasila Group. The heavy mineral suite is hosted within the Bullom Group, which marks the end of a late Tertiary marine regression where sea levels were approximately 100 metres below their current level resulting in erosion of the basement rocks of the Kasila Group to form the significant deposits of rutile and other heavy minerals, together with clay minerals with deposition within pre-incised channel systems.

The basement complex is unconformably overlain by Tertiary to Recent sediments, collectively termed the Bullom Group. To the coastal side of the Gbangbama Hills, which form a northwest striking ridge line in the centre of the current SRL mining lease, the sediments comprise a thin unconsolidated stratigraphic sequence of estuarine and shallow marine silts and sands. Sub-aerial sedimentation on the hinterland to the north-northeast of the Gbangbama Hills is represented by a thin veneer of sand and elluvial/alluvial sediments.

Several cyclic sequences are preserved within the alluvial stratigraphy, comprising poorly sorted clastic gravels, overlain by sands and clayey silts. Hard, lateritic inclusions are common throughout the sequence, but are generally associated with the upper portions. Rutile is typically enriched preferentially within the basal scour gravel sequences, and within silty sand at the top of the preserved units, where secondary processes such as deflation may have been responsible for heavy mineral enrichment.</td></tr>
<tr><td>Drillhole Information</td><td>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:
easting and northing of the drillhole collar
elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar
dip and azimuth of the hole
downhole length and interception depth</td><td>SRL mining has drilled the various deposits to varying degrees over a long period of time dating back to the 1970’s. The number of drillholes and their associated total drilled meters (until end of July 2022) are presented below:

<table>
<tr><th>Area</th><th>Deposit</th><th>Number of Holes</th><th>Meters drilled</th><th>Prospect Code</th></tr>
<tr><td rowspan="2">Area 1</td><td>Gangama</td><td>4 692</td><td>15 221</td><td>GNE,GNN,GNW</td></tr>
<tr><td>Lanti</td><td>2 738</td><td>12 127</td><td>LAN, LAG, LAS</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>• 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.</td><td>
<table>
<tr><td></td><td>Gbeni</td><td>3 955</td><td>46 847</td><td>GBD, GBN,GBS, BND,BNE</td></tr>
<tr><td></td><td>Taninahun</td><td>625</td><td>2 117</td><td>TAN</td></tr>
<tr><td></td><td>Mogwemo</td><td>590</td><td>346</td><td>MOG</td></tr>
<tr><td></td><td>Mosavi</td><td>565</td><td>2 234</td><td>MOS, KOP</td></tr>
<tr><td></td><td>Ndendemoia E</td><td>140</td><td>240</td><td>NDE</td></tr>
<tr><td></td><td>Ndendemoia W</td><td>100</td><td>507</td><td>NDW</td></tr>
<tr><td></td><td>Pejabu</td><td>881</td><td>3 038</td><td>PJE</td></tr>
<tr><td></td><td>Total</td><td>14 286</td><td>82 677</td><td></td></tr>
<tr><td rowspan="7">Sembehun</td><td>Benduma</td><td>1 322</td><td>6 307</td><td>BEN</td></tr>
<tr><td>Dodo</td><td>1 282</td><td>5 772</td><td>DOD</td></tr>
<tr><td>Gbap</td><td>89</td><td>305</td><td>GBP</td></tr>
<tr><td>Kamatipa</td><td>1 450</td><td>4 352</td><td>KAM</td></tr>
<tr><td>Kibi</td><td>638</td><td>2 506</td><td>KIB</td></tr>
<tr><td>Komende</td><td>274</td><td>1 118</td><td>KOM</td></tr>
<tr><td>Total</td><td>5 055</td><td>20 360</td><td></td></tr>
<tr><td rowspan="2">Additional</td><td>Jagbahun</td><td>252</td><td>591</td><td>JGB</td></tr>
<tr><td>Sembehun</td><td>127</td><td>678</td><td>SEM</td></tr>
<tr><td>Total</td><td></td><td>19 720</td><td>104 306</td><td></td></tr>
</table>
</td></tr>
<tr><td>Data aggregation methods</td><td>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.
Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.
The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>A twinned drillhole analysis conducted during the 2015 and 2016 exploration program proved acceptable correlation between the new auger drilling and the historically drilled auger, core drilling or aircore drilling results. Only auger drilling information has been utilised for subsequent Mineral Resource estimations due to the change in data acquisition methodology and the current extent of the auger drillhole database. A review on the sampling and sample length data and selected 1 m drillhole composites as the optimum sample length utilised for Mineral Resource estimation is deemed acceptable to the Competent Person.</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>These relationships are particularly important in the reporting of Exploration Results
If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</td><td>Mineralisation geometry of the SRL Rutile and heavy mineral deposits is sub-horizontal and associated with the deposition of mineral sands within pre-incised valleys with tapered thin terrestrial sediments in some places. Mineralisation thickness is approximately 5 m and may attain up to 25 m in thickness in specific areas. All drilling is orthogonal or normal to the sub-horizontal deposits and the downhole widths are deemed to be representative of the true mineralisation widths.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g., '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 drillhole collar locations and appropriate sectional views.	The appropriate diagrams are presented in Item 6.7 of this announcement.
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 avoiding misleading reporting of Exploration Results.	The Mineral Resource estimations for 2022 were produced by the Competent Person for the Lanti, Gbeni and Gangama deposits and depletions (provided by SRL) conducted on the resulting Mineral Resource models. The other areas were historically estimated by SRL and Iluka geologists and were reviewed by the Competent Person. The resultant Mineral Resource report contains summary information for all historical and current drilling campaigns within the SRL Licence Areas and provides a representative range of grades intersected in the relevant drillhole datasets within the respective project areas. Agreement between the drillholes and the resultant Mineral Resource blockmodels has been established and reviewed by the Competent Person during the course of Mineral Resource estimation and existing blockmodel reviews.
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.	The Competent Person is not aware of the collection of any other substantive exploration data, other than the historical drilling and the subsequent infill drilling programs and the 2013 Lidar Survey with later mining production drone surveys which have been conducted on the SRL mining properties to date.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	The Competent Person would recommend that as additional historically drilled areas are upgraded by infill drilling, additional twin holes are drilled to support the continually proving up the integrity of the data in these older areas. In situ densities utilising the pipe method, or water displacement method within the mining areas or in pitted Resource areas, should be considered to confirm density values utilised in the Mineral Resource estimates on a per lithology basis.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in Section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data have 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.	All drillholes, both historical and recent are captured into a central acQuire™ database and copies are backed up to a server in South Africa. Queries are run to extract data for any specific area for estimation. The drillhole database consists of drillhole collar, assay and lithological information, whereas downhole surveys are all accepted to be vertical due to the short lengths of the holes drilled. The Competent Person conducted an analysis for overlapping intervals, missing data, as well as data repeats on geological logs. The capture of the geological logs as well as the assay logs aree cross-checked and verified relative to the filed observations, as well as relative to the parallel hardcopy notes made in the field during the actual drillhole sampling process. Negative values occurring within the assay dataset were set to trace values after discussion with the database manager. It was noted the negative values occurring in the database originated from the historical drillholes where the negative values indicate where an assay was not conducted or where a trace value was recorded. For the Mineral Resource estimation exercises conducted, drillholes from each of the separate modelled areas were extracted from the central database and the relevant drillhole files were compiled for each of these areas in a .csv format for importing into Datamine Studio RM™ by the SRL database manager. The drillhole dataset received from the SRL database manager was in the form of a desurveyed Datamine™ drillhole file after sign-off of the respective datasets was obtained. The Competent Person conducted numerous checks on the provided drillhole files to ensure that no abnormal values were carried through to the Mineral Resource estimation exercise.
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.	Mr Paul Obermeyer, the Competent Person for the Mineral Resources estimates, conducted a site visit to SRL from 14 to 18 August 2022 and again from 17 to 22 February 2023. While on site, he visited the various operational mining areas. He conducted a field visit to the infill exploration drilling operations in the Gangama-North area on 15 August 2022 and conducted a visit to the mine laboratory on 16 August 2022. In general, the Competent Person considers that management of the exploration drilling program and the associated sampling meets industry standards, with data also being captured directly in the field onto a tough book laptop. On 17 August 2022, a site visit was conducted by the Competent Person to the Area 5 / Sembehun Project.

Criteria	JORC Code explanation	Commentary
		A review of the logging processes and procedures, geological and assay database maintenance, as well as Mineral Resource estimation processes was conducted on 18 of August 2022. Processes and procedures associated with the data management and Mineral Resource estimation were found by the Competent Person to be of industry standard.
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.	Geological models for each of the Gangama, Gbeni and Lanti deposits were created and provided by the SRL Geology Department for review and subsequent Mineral Resource estimation. Modelled wireframes which included the original topography, modelled basement (base of alluvial sands) and internal modelled lithological boundary wireframes including a) Blocky Laterite, b) Clay boundaries, c) Low-grade areas and interpreted d) Bullom sands were utilised in the resultant Mineral Resource estimates for the Gangama, Gbeni and Lanti project areas. Other historically modelled areas for Area 1 and Sembehun were not remodelled for the purposes of this announcement as no additional information has become available since the Sembehun Announcement. These models were reviewed and will be updated as new information becomes available. The internal wireframes were used to hard code the lithology into the estimation blockmodel and were also used to separate the assay analysis for each zone for the estimation process. The provided lithological boundaries were used as domains for the Mineral Resource estimation for each of the project areas mentioned above.
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 heavy mineral sand deposits at SRL's Area 1 and Sembehun cover a large area and are defines into three areas namely Area1, Gbangbama and Sembehun. Area 1 consists of Gangama, Gbeni, Lanti, Taniahun, Mogbwemo, Mosavi, Pejebu, Ndendemoian East and West. The total dimensions for Area 1 are 19 km by 18 km. Sembehun consists of Benduma, Dodo, Gbap, Kamatipa, Kibi and Komende and are included in an area of 7.7 km by 8.6 km.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer-assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	<u>Capping and cutting</u> The estimation process followed for all the re-estimated areas (Gangama, Gbeni and Lanti) included the statistical analysis of the drillholes to determine if capping of the assay data was needed. The Competent Person deemed it unnecessary to conduct capping of the data as it was apparent that any encountered high values would not affect the integrity of the Mineral Resource estimation due to the limited number of high values. <u>Compositing</u> Analysis of the compositing of the drillholes based on the sampling techniques and length of samples were also reviewed. An analysis of the length of sampling conducted over the various periods of drilling shows very little deviation to the normal preferred 1.5m samples length.

Criteria	JORC Code explanation	Commentary
	The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation). In the case of blockmodel 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 drillhole data, and use of reconciliation data if available.	Therefore, the Competent Person deemed that compositing all samples to 1.5m using Datamine Studio RM™ was appropriate. <u>Geostatistics</u> Variography was considered for the alluvial lithology, however no decent definitive variograms were achieved, therefore they were only utilised as a guideline for selecting the search radii in the for each of the three Mineral Resource estimates. <u>Mineral Resource Estimation</u> Estimation was conducted on a per lithology basis where samples were segregated on a per lithology basis. All estimations were conducted utilising inverse distance squared (ID^2). The estimation was limited to an indicative variogram range of 240 m and was limited to the number of samples per drillhole at to be utilsed at to 2 samples per drillhole. While estimating or interpolating values into a block, a minimum of 3 drillholes were required and an associated maximum of 8 drillholes. This ensured that no block was only supported by a single drillhole. The blockmodels were created using a block size of 30 m X 30 m X 1.5 m. <u>Estimation Validation</u> The blockmodels were checked visually for correlation between geology and grade data for the respective block models and their informing drillhole datasets. In addition, swath analysis plots were generated and reviewed on a per model basis. The swath analysis is seen to present good correlation between the composited drillhole data and the estimated blockmodel rutile value. It is the Competent Person's view that the Mineral Resource models for SRL are robust and representatively reflect the grade in the drillholes relative to the Mineral Resource blockmodel block sizes utilised.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnages at SRL are estimated as dry tonnages, however, the in-situ moisture content of the Sierra Rutile ore deposits has been estimated at (Jones & Wagener, 2022): <u>Gangama</u> • In-situ moisture - 5% • Oversize moisture - 10% • HMC moisture from Wet Concentrator Plant - 30% • HMC moisture in stockpile - 10% <u>Lanti/Gbeni</u> • In-situ moisture - 14% • Oversize moisture - 13% • HMC moisture from Wet Concentrator Plant - 40% • HMC moisture in stockpile - 9%

Criteria	JORC Code explanation	Commentary
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Competent Person has elected to keep the cut-off value previously applied to the historical declaration for Sembehun at 0.25% Rutile. The current Resource Estimation for Area 1 utilises a cut-off grade of 0.30% Rutile which is based on a costing and recovery matrix which considers an all-in mining cost of USD 5 per ton; a plant recovery of 95% and a long-term rutile price of USD 1,700 per ton. The resulting cut-off grade calculated is 0.31% Rutile
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 current Resource Estimation for Area 1 utilises a cut-off grade of 0.30% Rutile which is based on a costing and recovery matrix which considers an all-in mining cost of USD 5 per ton.
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 drillhole sample analytical and modelling process is aligned with defining the economic metallurgical recoverable rutile within the SRL heavy mineral deposits. Sembehun Point Count Data: For datasets of pre-2002 sums of the magnetic mineral point count data typically lie within or better than 0.01% whole rock weight of the stated value for the magnetic heavy mineral whole rock content (accepted as 'true' analytical errors in statistical counting). The non-magnetic 'other mineral' point count data do not correlate with the given break-down of the non- magnetic other mineral assemblages as given in the files, i.e., sums of the non-magnetic quartz, epidote, sillimanite, intergrowth and miscellaneous fields etc, do not equate to the reported non-magnetic 'other minerals' field. Therefore, for the Sembehun dataset, the non-magnetic 'other minerals' field has been recalculated using the sum of the corresponding non-magnetic quartz, monazite, epidote, sillimanite, intergrowth, and miscellaneous fields. This aggregated value is typically larger than the reported non-magnetic 'other' minerals field and yield a better agreement with the total non-magnetic fraction values as expressed in the %N_Mag field in the blockmodels. The 2013 to 2016 grade control analyses were adjusted in the Sembehun Mineral Resource estimate to correct for the bias associated with the XRF pressed pellet method. Pressed pellets are prepared rapidly at low cost but are prone to XRF errors such as particle size, matrix and

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>mineralogical effects. An investigation into the XRF pressed pellet method at SRL revealed that the TiO_2 pressed pellet analyses were low-biased low (Figure 7 28). A positive linear correlation (r^2 = 93%) exists between Wet Chemistry and pressed pellet XRF TiO_2, supporting a linear algorithm correction. Two linear algorithms were used to adjust the TiO_2 data; -
Algorithm for >1.0% TiO2: WC TiO2 = (0.9368) PP TiO2 + 0.9482
Algorithm for <1.0% TiO2: WC TiO2 = (0.8149) PP TiO2 + 0.2168</td></tr>
<tr><td>Environmental factors or assumptions</td><td>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</td><td>No specific assumptions are made in the Mineral Resource estimate for environmental factors. SRL is a well-established mining operation with standard environmental operating practices. Modelled drillhole information is used to determine sand and slimes tailings deposition practices by mine planning, but this has no impact on the Mineral Resource for SRL.</td></tr>
<tr><td>Bulk density</td><td>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 of 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.</td><td>The densities for the different lithologies have been determined by obtaining samples from a measured volume using a sand replacement method. The samples are weighed dry, and density is calculated utilising a mass and volume calculation. Three-foot wide test shafts were excavated in each deposit on a set grid to determine the density of each lithology. While documentation of the dry densities does exist, the location of the test pits and raw data supporting the dry values were destroyed during the civil unrest in the 1990’s. The table below summarises the dry densities per lithological code.
Bulk Densities per Lithological Unit
<table>
<tr><th>Lithology</th><th>Lith Code</th><th>Density t/m^3</th></tr>
<tr><td>Topsoil</td><td>TS</td><td>1.57</td></tr>
<tr><td>Sandy/Stiff Clay</td><td>SSC</td><td>1.60</td></tr>
<tr><td>Sandy / Clayey Sand</td><td>SCS</td><td>1.63</td></tr>
<tr><td>Clay/ Sandy Clay</td><td>CSC</td><td>1.65</td></tr>
<tr><td>Lateritic Gravel</td><td>LG</td><td>1.73</td></tr>
<tr><td>Blocky Laterite</td><td>BL</td><td>1.67</td></tr>
<tr><td>Bedrock</td><td>BED</td><td>1.52</td></tr>
</table></td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		Bulk densities are currently conducted on the drilling and these densities are recorded within the current database.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e., 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 Competent Person has reviewed the historical Mineral Resources, as well as the new Mineral Resources estimates and ensured that the Mineral Resource Classification of the SRL Mineral Resources are aligned with the Reporting requirements and definitions of the different Mineral Resource categories as defined within the JORC (2012) Code. The 31 December 2022 SRL Mineral Resource estimate has been classified and reported on a per project area basis into Measured, Indicated and Inferred Mineral Resource categories based on a combination of: • Data provenance and availability. • Drillhole spacing and sampling density. • Confidence in analytical data. • Established geological continuity; and • the level of confidence in the rutile and mineralogical grade continuity. The SRL geological database contains data sourced from several significant chronologically segregated exploration campaigns. The availability of the original log sheets and background explanations for each campaign varies between non-existent to well-documented and the confidence level for each set of data therefore has been adjusted accordingly. Drilling was conducted pre-1995, was only used to estimate Indicated and Inferred Mineral Resources. Drilling post-dating 2002, Measured and Indicated Mineral Resource Categories were allowed based upon the standards of practice in operation at the time. Drilling programs conducted post-2010 have applied industry accepted standards in terms of data collection, QAQC and date storage, thus allowing sufficient data confidence to declare Measured Mineral Resources in areas where the data spacing allows. Where drillhole spacing is within a 60 m X 60 m grid spacing, Measured Mineral Resources could be declared. Where drillhole spacing is within a 120 m X 120 m grid spacing, Indicated Mineral Resources are allowed to be declared and where drillhole spacing falls within a 240 m X 240 m drilling grid, the most confident allowed Mineral Resource Classification is that of Inferred Mineral Resources. The geological assay database contains varying degrees of QAQC and has also been subject to various analytical techniques including MR400 and XRF. The MR400 assays are considered at best Indicated and Inferred, while the XRF data of post-2010 are considered to be in line with accepted industry practice and may be used in the Classification of Measured Mineral Resources. Pre-2010 XRF result are only considered to allow a maximum Mineral Resource Classification of Indicated Mineral Resources.

Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Competent Person has reviewed the processes pertaining to data collection, sample preparation and analysis, geological modelling and Mineral Resource estimation for all the previously modelled project areas occurring within Sembehun and Area 1. The Competent Person updated the Mineral Resource estimates for the Gangama, Gbeni and Lanti project areas. These areas have not undergone independent reviews or audits at this juncture. However, the Competent Person for Mineral Resources has overseen and internally reviewed the data collection, sample preparation and analysis, geological modelling and Mineral Resource estimation processes applied to these areas.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The blockmodels were checked visually for correlation between geology and grade data for the respective block models and their informing drillhole datasets. In addition, swath analysis plots were generated and reviewed on a per model basis. The swath analysis is seen to present good correlation between the composited drillhole data and the estimated blockmodel rutile value. It is the Competent Person's view that the Mineral Resource models for SRL are robust and representatively reflect the grade in the drillholes relative to the Mineral Resource blockmodel block sizes utilised. It is the Competent Person's view that the new blockmodels for Gangama, Gbeni and Lanti are robust in terms of the estimation technique applied. This is clearly observable from the blockmodel validations conducted. The remaining previously estimated models have been reviewed and in the Competent Person's view are acceptable for the purposes of Mineral Resource estimation. However, the Competent Person would recommend that as new drillhole and geological data are acquired within the Area 1 project areas, as well as at Sembehun, these areas should be re-evaluated to assist with increasing the confidence of their Mineral Resources estimates.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in Section 1, and where relevant in sections 2 and 3, 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.	The updated Mineral Resource models prepared by VBKOM for Gbeni, Lanti and Gangama as at 30 November 2022 was utilised. For Pejebu, Ndendemoia and Taninahun the latest Mineral Resource models received from the Client were utilised. The 2021 Mineral Resource model for Area 5, used for the 2022 Prefeasibility Study ("PFS"), was utilised as the basis for the Ore Reserve estimation of Area 5.3 All Mineral Resources have been 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 to the operations was conducted by the Competent Person for Ore Reserve estimation on the 16th to the 22nd of February 2023.The operations were found to be well managed. No material risks which have not been reported in the Report were found.
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.	The Sierra Rutile Mine is an operating mine with active mining operations in Area 1 (**Sierra Rutile Mine**). A PFS for the Sembehun Project was conducted by Iluka and Hatch in 2022. The DFS for this Project is in progress at the time of this announcement.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	A Cut-off grade of 0.30% was applied as part of the Mineral Resource declaration for the Area 1 deposits. The Sembehun Project Mineral Resource cut-off grade remained at 0.25 % Rutile. The economic pit limit analysis optimisation process determines if material will be economic to mine or if it should be treated as waste or excluded from the pit. The financial pit limit algorithm therefore automatically calculates the economic cut-off grade on a case-by-case (block-by-block) basis. The cut-off grade for the Ore Reserve estimation is therefore variable throughout the mining areas and deposits as it is dependent on a number of factors including Rutile grade, Mineral Resource Classification, waste tonnes within the mining column, heavy minerals concentration and Ilmenite and Zircon value contribution to a specific mining block.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mining factors or assumptions</td><td>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</td><td>
The mining conversion factors applied to the in-situ Mineral Resources in the LoM plan are detailed in the table below.
Mining Modifying Factors Summary
<table>
<tr><th>Description</th><th>Unit</th><th>Value</th></tr>
<tr><td>Geological Losses</td><td>-</td><td>Accounted for with the utilisation of the optimised geological beds.</td></tr>
<tr><td>Mining Losses</td><td>%</td><td>3</td></tr>
<tr><td>Dilution</td><td>-</td><td>Accounted for during reblocking to Smallest Mining Unit (“SMU”).</td></tr>
<tr><td>Minimum Mining Area</td><td>m²</td><td>2500</td></tr>
</table>
The existing Mineral Separation Plant (“MSP”) is operational and has been used consistently on the Area 1 deposits. The recoveries of 92 %, 85 % and 65 % for Rutile, Ilmenite and Zircon, respectively is supported by historical as well as current processing data obtained from the MSP. No other metallurgical factors are known that may impact the Ore Reserve estimation.
Infrastructure required for the planned production is either in place or accounted for in the mine plans and financial models. Sufficient capital provision has been made for all planned infrastructure that is required for the planned future production.
The product pricing for Rutile, Ilmenite and Zircon was derived from average product price forecasts from 2022 to 2025 and the long-term product price forecasts as per the TZ Minerals International Pty Ltd (“TZMI”) prices. SRL has take-off agreements in place for the products that is produced. SRL provided the Competent Person with several exclusion zones where mining may not take place. The exclusion zones have been deemed as non-mineable areas and were excluded from the Ore Reserve estimation. The following is a list of exclusion zones that have been applied:

A 30 m stand-off distance around the mining lease of Area 1;
A 200 m radius around all existing communities in Area 1;
A 30 m stand-off distance from all existing dredge ponds, major rivers and streams;
A 30 m stand-off distance from all gallery and riparian forests in Area 1; and
A 30 m stand-off distance from any industrial areas.

After having conducted a pit optimisation, mine designs and schedules were completed for the Sierra Rutile Mine.
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The conventional truck and shovel mining method utilised in Area 1 of the SRL Mine is well suited to the nature of the mineral deposits. Trade-off studies were completed for the Sembehun ProjectPFS which indicated that conventional truck and shovel mining would be best suited to the mineral deposits, considering the economics.
	The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc.), grade control and pre-production drilling.	No geotechnical information or studies is currently available for the Sierra Rutile operations. The depth of the pits seldomly exceeds 12 m and pits are excavated at an overall slope angle of 70^{o}. Where Bullom Sands occur, the overall slope angle is reduced to 45^{o}. to 55^{o}.in that region. Operational experience has proved that by maintaining an overall slope angles of 70^{o}, there is no safety risk or risk to the mining operations considering the possibility of slope failures. The nature of the in-situ material allows for steep overall slope angles after the topsoil has been removed. The DFS for the Sembehun Project is currently in progress and as part of this study, the geotechnical design criteria will be confirmed. It is recommended that geotechnical studies should be conducted to confirm the current assumptions for pit slope design criteria and to provide guidance on future pit slope design criteria.
	The major assumptions made, and Mineral Resource model used for pit and stope optimisation (if appropriate).	The 2022 Mineral Resource estimation for Area 1 conducted by the Competent Person and the 2021 Mineral Resource estimation for the Sembehun Project, as at 31 December 2022 has been utilised for the pit optimisation, mine design, mining schedules and conversion to Ore Reserves. For Area 1, real term average prices over the LoM of USD1,441/t, USD 313/t and USD1,071/t was utilised for rutile, ilmenite and zircon respectively, in the economic analysis. For the Sembehun Project, real term average prices over the LoM of USD1,338/t, USD 310/t and USD1,060/t was utilised for rutile, ilmenite and zircon respectively, in the economic analysis.
	The mining dilution factors used.	Mining dilution was accounted for during the up-blocking process from the sub-celled Mineral Resource models to a SMU of 10 m x 10 m x 1.5 m.
	The mining recovery factors used.	A mining recovery of 97% (Mining losses of 3%) was applied to the Ore Reserve estimation. The mining recovery was derived from operational experience with typical mining losses experienced in the Area 1 mining operations.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>Any minimum mining widths used.</td><td>A smallest mining unit of 10 m x 10 m x 1.5 m was selected for practical mining purposes for the SRL Mine. Loading typically takes place in flitches of approximately 3 m. This is a conservative approach and there is potential to improve mining selectivity during short term planning and mining operations.
All optimised areas of less than 2,500m^2 were removed for mining practicality.</td></tr>
<tr><td></td><td>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</td><td>A portion of Inferred Mineral Resources (approximately 13% after the application of Mining losses) are included in the Area 1 LoM plan, as it is required to mine through some Inferred portions to access Measured and Indicated Mineral Resources. These Inferred Mineral Resources have, however, been excluded in the Ore Reserve estimation.
Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.</td></tr>
<tr><td></td><td>Ore Reserve Estimation</td><td>The Ore Reserve estimation for the Sierra Rutile Area 1 operations is detailed in the table below:
Ore Reserve Estimation for the Sierra Rutile Area 1 Operations as at 31 December 2022
<table>
<tr><th rowspan="2">Ore Reserve Category</th><th>Diluted Ore Tonnes</th><th>Rutile Grade</th><th>Rutile Content</th><th>Ilmenite Grade</th><th>Ilmenite Content</th><th>Zircon Grade</th><th>Zircon Content</th></tr>
<tr><th>kt</th><th>%</th><th>kt</th><th>%</th><th>kt</th><th>%</th><th>kt</th></tr>
<tr><td>Proved</td><td>16 801</td><td>1.33</td><td>223</td><td>0.67</td><td>113</td><td>0.11</td><td>18</td></tr>
<tr><td>Probable</td><td>23 938</td><td>1.36</td><td>325</td><td>0.80</td><td>191</td><td>0.14</td><td>34</td></tr>
<tr><td>Total</td><td>40 739</td><td>1.34</td><td>548</td><td>0.75</td><td>304</td><td>0.13</td><td>52</td></tr>
</table>
Notes:
1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of USD1,441/t over the life of mine.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.
The Competent Person is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other factors, other than those included as modifying factors to this Ore Reserve estimation, that will materially affect the Ore Reserve estimates.</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
The Ore Reserve estimation for Area 1 excludes all stockpiles as at 31 December 2022.
The Competent Person is of the view that the information provided to them is sound and no undue material risks pertaining to mining, metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues pose a material risk to the Ore Reserve estimates.
The Ore Reserve estimation for the Sierra Rutile Sembehun Project is detailed in the table below:
Ore Reserve Estimation for the Sierra Rutile Sembehun Project as at 31 December 2022
<table>
<tr><th rowspan="2">Ore Reserve Category</th><th>Diluted Ore Tonnes</th><th>Rutile Grade</th><th>Rutile Content</th><th>Ilmenite Grade</th><th>Ilmenite Content</th><th>Zircon Grade</th><th>Zircon Content</th></tr>
<tr><th>kt</th><th>%</th><th>kt</th><th>%</th><th>kt</th><th>%</th><th>kt</th></tr>
<tr><td>Proved</td><td>110 540</td><td>1.49</td><td>1 644</td><td>0.90</td><td>999</td><td>0.11</td><td>127</td></tr>
<tr><td>Probable</td><td>63 121</td><td>1.42</td><td>896</td><td>0.93</td><td>586</td><td>0.09</td><td>56</td></tr>
<tr><td>Total</td><td>173 661</td><td>1.46</td><td>2 540</td><td>0.91</td><td>1 585</td><td>0.11</td><td>183</td></tr>
</table>
Notes:
1. The Ore Reserve estimation considers diluted Measured and Indicated Mineral Resources only.
2. No Inferred Mineral Resources have been included in the Ore Reserve estimation.
3. The Ore Reserve estimation was completed using an average real rutile price of USD1,338/t over the life of mine.
4. The Ore Reserve estimation is stated at a variable rutile cut-off grade as determined by the economic pit limit analysis results.
5. The Ore Reserve estimation is 100% attributable to Sierra Rutile.
6. Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation and while present, currently have a low value contribution in the optimisation process for the Ore Reserve estimation.
7. Numbers in columns may not add up due to rounding.
The information in this announcement relating to Ore Reserves and Mineral Resource estimates for the Sembehun Project is extracted from the Sembehun Announcement. Sierra Rutile confirms that it is not aware of any new information or data that materially affects the information included in the Sembehun Announcement and that all material assumptions and technical parameters underpinning the estimates in the Sembehun Announcement continue to apply and have not materially changed.
</td></tr>
<tr><td></td><td>The infrastructure requirements of the selected mining methods.</td><td>The Sierra Rutile Area 1 operations are well established with all the required infrastructure in place. The Area 1 operations are self-sufficient considering that mine site construction, maintenance and ancillary services are conducted by the Owner.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	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?	The existing Mineral Separation Plant is operational and has been used consistently on the Area 1 deposits. The recoveries of 92%, 85% and 65% for rutile, ilmenite and zircon, respectively are supported by historical as well as current processing data obtained from the MSP. Wet Concentrator Plant recoveries of 96%, 92% and 97% for Rutile, Ilmenite and Zircon, respectively, have been applied. No other metallurgical factors have been defined that may impact the Ore Reserve estimation. Products from the MSP are produced in accordance with the take-off agreements that SRL has in place with its customers.
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.	In 2015, the Environmental Protection Agency of Sierra Leone (EPA-SL) issued a notification to SRL (reference number EPA-SUHA.96/214/a/HNRM), instructing them to conduct an Environmental, Social and Health Impact Assessment (ESHIA) and develop an Environmental, Social and Health Management Plan (ESHMP) for their current and proposed dry and wet mining activities, including the proposed expansion areas within Area 1. SRK Consulting (Pty) Ltd was appointed by SRL in 2016 to conduct a scoping site visit and to develop a scoping report that met the Sierra Leonean legal requirements. The scoping report was submitted to, and accepted by, the EPA-SL on 16 October 2017. Subsequent to this initial appointment, Iluka acquired the SRL operation and requested SRK to prepare an ESHIA and an ESHMP in accordance with the EPA-SL's requirements (EPA-SUHA.96/214/a/HNRM, 2015) as well as Iluka's corporate policies, which are aligned with Good International Industry Practice. Annual inspections are conducted based on the 2018 ESHIA for Area 1 and approved. The majority of specialist studies for the Sembehun Project have been completed and an application for the approval of an ESHIA will be submitted at the end of 2023 .

Criteria	JORC Code explanation	Commentary
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.	Established infrastructure at Area 1 includes: • The mine site and offices; • Minerals Separation Plant; • Dry-mining units and wet concentrator plants; • Haul roads to the active mining areas, plant site and Nitti Port; • Electrical power generation facilities and distribution systems, • Water reticulation systems; • Tailings storage facilities; • Employee accommodation and a mine clinic; and • Recreational facilities. The proposed infrastructure for the Sembehun Project will consist of: • Access and service roads; • A wet concentrator plant; • A bridge to cross the Gbangbaia River; • Mining site buildings; • Employee accommodation camp; • Power plant facility; • Tailings storage facilities; and • Process water dams Provision for capital for the establishment of infrastructure for the Sembehun Project has been made in the Sembehun PFS. Sierra Rutile uses the Nitti Port to ship product produced from the MSP. The facilities are located approximately 4 km South of Gbangbatoke and include: • Office buildings; • Generator building; • Storage building; • Product storage silos; • Product storage domes; • Loading facilities; • Marine fuel and oil storage tanks; and • Barges and push boats.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	Cost utilised in the economic analysis for the Area 1 operations are based on current actual costs which have been escalated to 2023 real terms.

Criteria	JORC Code explanation	Commentary
	The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The source of exchange rates 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.	For the Sembehun Project, all costs as determined by Hatch in the Sembehun PFS were utilised and escalated to 2023 real terms.
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.	Driven by low inventories and high marginal cost of production, Rutile prices are expected to remain relatively strong in the near term. More specifically the SRX forecast, which is derived from TZMI's (a reputable industry consultant) baseline outlook, predicts that real 2023 bulk Rutile prices will move from USD1,505 per tonne in 2023 to USD1,306 per tonne in the medium term. SRX Ilmenite and Zircon in concentrate prices are derived from the base TZMI price forecasts dated December 2022. SRX Ilmenite FOB prices is based on 100% of TZMI Ilmenite price forecast, whilst ZIC prices is derived based on the Zircon content of the concentrate, which ranges from 20 to 25% Zircon. CP Ilmenite and ZIC only contributes approximately 16% to the LoM NPV of revenue, with SRX Rutile accounting for the balance.
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 prior to a supply contract.	Sierra Rutile currently produces three primary products for sale: two grades of Rutile (called Standard Grade Rutile ("SGR") and Industrial Grade Rutile ("IGR") and Chloride Ilmenite. In addition to the three primary products above, Sierra Rutile also produces around 5 kt of Zircon annually, in the form of Zircon In Concentrate ("ZIC"). Zircon content in the ZIC is variable but typically around 20-25%. While only a minor contributor to Sierra Rutile's overall production volume, Zircon's high value means it provides an attractive revenue stream to Sierra Rutile. Sierra Rutile's products are highly sought after in several end-use markets and applications. Associated sales arrangements are custom-tailored, varying by end-use application and ranging from spot to annual duration, as detailed in the table below. In 2021, 77% Sierra Rutile's revenue was from sales to customers from Europe, 19% from customers in Asia and the remaining 4% was from customers in North America and South America.

SRL Product Sales Summary

Product	End-Use Application	Offtake Arrangement
Rutile	TiO2 pigment	Pigment customers buy on FOB or CIF Incoterms, with ocean freight charged on a cost plus basis.
Rutile	Ti Metal (sponge)	In the current tight supply environment, select top tier titanium sponge producers purchase under annual agreements. In recent years offtake agreements were of multi-year duration.
Rutile	Welding and Industrial Applications	Sierra Rutile's IGR is regarded as a premium product for high quality welding applications. Rather than buying in bulk on a FOB basis, welding customers purchase packaged product in small parcels on a delivered to factory gate or container terminal basis. Although volumes are regular, contracts see price and quantity agreed quarterly to adjust for fluctuations in supply and demand. A global hub and spoke distribution network will continue to be used in order to maximize the margin of IGR consumed by industrial applications like welding consumables. Such a network involves economically optimised bulk shipments of IGR from Sierra Leone to an international warehouse, where it is packaged before being sold in truck/container sized parcels to customers under quarterly contracts.
Ilmenite	TiO2 pigment or Ti slag	Sierra Rutile ilmenite is highly desired and readily sold on a spot or annual basis. It is a secondary ilmenite suitable for direct chlorination or transformation into titanium slag. As part of the demerger in 2022, there is a multi-year arrangement in place with Iluka covering a portion of SRL's ilmenite production.
Concentrates Zircon In Concentrate (ZIC) Ilmenite Concentrate (IC)	Asian processors who extract remaining Zircon, Rutile and other valuable Heavy Minerals credits	Concentrate streams that are no longer economic for Sierra Rutile to process, or that exceed the current MSP processing capabilities, are sold to specialised processors on a spot basis. To manage shipping costs, quantities are accumulated and sold/shipped once or twice a year.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Industry consultant TZMI has predicted that Rutile will be in short supply for the foreseeable future since existing Ore Reserves are nearing the end of their mine life and there are very few first-tier Mineral Resources coming into development. Thus, the Sembehun Project is deemed critical to meeting the world’s Rutile needs.
The near-term outlook for rutile remains positive despite bulk Rutile demand potentially softening as pigment producers reduce their head grade in an attempt to save costs and consume proportionally more lower cost feedstocks like chloride slag or chloride ilmenite within plant specific technical or capacity constraints.
An important consideration when evaluating the Sembehun Project is that Sierra Rutile is the only mineral sands operation with predominantly Rutile driven economics. Most, if not all, other mineral sands companies view Rutile as a co-product, albeit in the case of Base Resources, a high credit co-product. At Rio Tinto’s Richards Bay Minerals operation Chloride slag is the economic driver and multiple products - high purity Pig Iron, Zircon and Rutile all provide valuable credits. At Tronox, the co-product dynamic is less of a factor since rutile (and slag) is consumed captively, reportedly filling 85% of their pigment feedstock requirements.</td></tr>
<tr><td>Economic</td><td>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.</td><td>The table below details the key financial indicators for Area 1, and the Sembehun Project:
Summary of Financial Indicators for Area 1 and the Sembehun Project
<table>
<tr><th>Measure</th><th>Unit</th><th>"With Sembehun" LoM</th></tr>
<tr><td>Operating years</td><td>Years</td><td>2023 - 2039</td></tr>
<tr><td>Life of mining operation</td><td>Years</td><td>17.0</td></tr>
<tr><td>Production – SGR</td><td>kt</td><td>2,470</td></tr>
<tr><td>Production – IGR</td><td>kt</td><td>337</td></tr>
<tr><td>Production - Total Rutile</td><td>kt</td><td>2,806</td></tr>
<tr><td>Production – Chloride Ilmenite</td><td>kt</td><td>1,211</td></tr>
<tr><td>Production – Ilmenite Within Concentrate</td><td>kt</td><td>329</td></tr>
<tr><td>Production – Total Ilmenite</td><td>kt</td><td>1,540</td></tr>
<tr><td>Production - Zircon</td><td>kt</td><td>209</td></tr>
<tr><td>Rutile Revenue</td><td>USDm</td><td>3,860</td></tr>
<tr><td>By-product Revenue</td><td>USDm</td><td>704</td></tr>
<tr><td>Total Revenue</td><td>USDm</td><td>4,564</td></tr>
<tr><td>Cash Cost</td><td>USDm</td><td>2,594</td></tr>
<tr><td>Cash Cost (net of by-product credits) /t Rutile</td><td>USD/t R</td><td>674</td></tr>
<tr><td>EBITDA</td><td>USDm</td><td>1,748</td></tr>
<tr><td>EBITDA / Revenue</td><td>%</td><td>38%</td></tr>
<tr><td>EBIT</td><td>USDm</td><td>1,326</td></tr>
<tr><td>Free Cash Flow</td><td>USDm</td><td>944</td></tr>
<tr><td>Area 1 Capex (Reset Plan + SIB)</td><td>USDm</td><td>39</td></tr>
</table></td></tr>
</table>

Criteria	JORC Code explanation	Commentary

Sembehun Studies Capex	USDm	14
Sembehun Execution Capex	USDm	345
Sembehun SIB Capex	USDm	132
Total Sembehun Capex	**USDm**	**491**
Total Capex	**USDm**	**530**
NPV_8 (post-tax, real)	**USDm**	**386**

Notes:

1. Valuation date of 1 January 2023. All figures and financial results are calculated from 2023 onwards.
2. All figures are presented in US$ real 2023 terms.

The key financial information for the economic analysis is summarized below:-

- The financial model was developed internally by Sierra Rutile. It is an annual project-based model, and excludes corporate considerations related to intercompany loans and funding arrangements;
- Execution CAPEX for Sembehun is USD345 million (adjusted to real 2023) based on the 2022 Hatch PFS. This is comprised of USD291 million for Phase 1 and USD54 million for Phase 2. Total contingency of USD77 million across both phases represents a contingency rate of 28% applied to total direct and indirect costs.
- Total capital expenditure required over the life-of-mine to continue both Area 1 and Sembehun operations is USD530 million. In addition to the Sembehun execution capital, total capital expenditure includes amounts for the Area 1 Reset Plan, Sembehun studies and Stay in Business (SIB) capital.
- The Sembehun project has a Unit Cash Production Cost (net of by-product credits) of USD581/t rutile (at steady state average). This represents a considerable improvement of more than USD400/t rutile when compared to existing operations. Description of improvements are listed below, with Sembehun comparisons made to the existing DM2 operations due to the similarity in mining method:
    - Mining: Direct mining costs are expected to reduce from USD5.67/t ore mined to USD3.08/t ore mined (Sembehun Phase 2 average). This is primarily driven by lower fuel cost assumptions, increased ore mining rate, larger ore haul trucks, shorter haulage distances, and a longer-term contract. The reduced mining cost accounts for a unit cost reduction of approximately USD200/t rutile at steady state.
    - Concentrating: WCP costs are expected to reduce from USD4.36/t (Area 1 average) to USD2.18/t ore treated (Sembehun Phase 2 average). This is primarily due to increases in ore treatment rates. Additionally, total WCP cost savings for SRL will occur due to removing the significant WCP operating costs incurred at DM1/4, and the consolidation from three WCPs to a single WCP. The reduced

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>WCP cost accounts for a unit cost reduction of approximately USD155/t rutile at steady state.
○ Support costs which amount to approximately USD45 million per year also contributes to a unit cost reduction of approximately USD100/t rutile since the rutile production improves from ~130 kt rutile produced per year with Area 1, to ~ 175ktpa rutile per year given steady state operations with Sembehun. With Sembehun these fixed support costs are absorbed by higher steady state production.</td></tr>
<tr><td>Social</td><td>The status of agreements with key stakeholders and matters leading to social licence to operate.</td><td>Internal plans are available for conducting social interactions with all key stakeholders. The most recent Socio-Economic Assessment for the Sierra Rutile Mine Lease Area 1 was conducted in January 2022 and similar studies for the Sembehun Project are in progress.</td></tr>
<tr><td>Other</td><td>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.</td><td>Sierra Rutile Limited holds the right to mine rutile, zircon, ilmenite, monazite, columbite, graphite, garnet and other titanium bearing minerals through Mining Lease and Dredging Licence No. 2134 of 1984.
This mineral lease was later ratified through the Sierra Rutile Agreement (Ratification) Act of 2002 and incorporates the seven mining licences included in the table below . Each licence is valid for a period of 33 years from re-commencement of mining operations in 2006, and may be extended by a further (minimum) term of 15 years.
Summary of SRL Mining Licenses
<table>
<tr><th>License Name</th><th>License Number</th><th>Area (km^2)</th><th>Date Issued</th><th>Expiry Date</th></tr>
<tr><td>ML011/72: Area 1</td><td>2134</td><td>290.60</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>ML012/72: Gambia</td><td>2134</td><td>17.50</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>ML013/72: Jagbahun</td><td>2134</td><td>20.65</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>ML014/72: Nyandehun</td><td>2134</td><td>5.64</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>ML015/72: Sembehun</td><td>2134</td><td>73.63</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>ML015/72 Ext: Sembehun Ext</td><td>2134 Ext</td><td>125.10</td><td>17 Sep 1991</td><td>23 Jan 2039</td></tr>
<tr><td>ML016/72: Taninahun Boka</td><td>2134</td><td>12.47</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>ML017/72: Mosavi</td><td>2134</td><td>13.32</td><td>1 Jul 1984</td><td>23 Jan 2039</td></tr>
<tr><td>Total</td><td></td><td>558.91</td><td></td><td></td></tr>
</table>
In 2012, SRL was granted Exploration Licences over 189.24 km^2 of the Semabu area, 108.86 km^2 of the Jagbwema area and 104.63 km^2 of the Gbangbaia area, all located close to current mining licence area ML011/72 .
No surface rights are held by SRL across any of the mining licence areas. Under the Sierra Rutile Agreement (Ratification) Act of 2002, provision is made for the payment of Surface Rent</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		on all land used by the Company, with the rental distributed between the landowner, Paramount Chiefs and Native Administration.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	The Ore Reserves for Area 1 and the Sembehun Project have been classified to Proved and Probable Ore Reserve categories. Measured Mineral Resources have been converted to Proved Ore Reserves by having applied the applicable modifying factors. There is sufficient confidence in the modifying factors that have been applied in the Mineral Resource to Ore Reserve conversion which enabled the conversion of Measured Mineral Resources to Proved Ore Reserves. Indicated Mineral Resources have been converted to Probable Ore Reserve by having applied the same modifying factors utilised in the conversion of Measured Mineral Resources to Proved Ore Reserves.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The methodology of block ranking utilised in the optimisation process is appropriate for the style of mineralisation and mining method.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	No conversion from Measured Mineral Resources into Probable Ore Reserves was conducted. The Sierra Rutile mineral deposits are well understood. Sufficient technical studies have been undertaken and operational experience supports the modifying factors which have been applied to the various deposits.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	This announcement includes a maiden Ore Reserve estimation for Sierra Rutile following the demerger from Iluka in 2022. No external audits or reviews have been conducted on the 2022 Ore Reserve estimation presented for Area 1. The Competent Person conducted a review of the Ore Reserve estimation for the Sembehun Project as at 31 December 2021. The Ore Reserve estimation was found to be reproducible utilising the input parameters as detailed in the 2022 Sembehun PFS.
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	A detailed mine design and schedule on a monthly basis has been completed for the Area 1 operations and a PFS has been completed for the Sembehun Project. The modifying factors applied in the Mineral Resource to Ore Reserve conversion have been derived from technical studies and operational experience. The Ore Reserve conversion factors applied correlate well with operational values at similar operations. Diluted Measured Mineral Resources have been converted to Proved Ore Reserves and Indicated Mineral Resources have been converted to Probable Ore Reserves.

Criteria	JORC Code explanation	Commentary
	could affect the relative accuracy and confidence of the estimate.	There is sufficient confidence in the modifying factors applied in the Mineral Resource to Ore Reserve conversion to convert diluted Measured Mineral Resources to Proved Ore Reserves.
	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.	A global Mineral Resource estimate was completed for the Sierra Rutile Mine. The Mineral Resource estimate completed by the Competent Person as at 30 December 2022 formed the basis of the Ore Reserve estimation. The Ore Reserve estimation considers the Area 1 operations and the Sembehun Project only, and is therefore a local Ore Reserve estimate for the Sierra Rutile Mine.
	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.	The Competent Person is of the view that the information provided to the Competent Person is sound and no undue material risks pertaining to mining, metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues pose a material risk to the Ore Reserve estimates.
	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.	The Sierra Rutile Mine has been in production for more than 50 years. Technical studies were undertaken to conduct Ore Reserve estimations for the operating Area 1 deposits and the Sembehun Project. Planned production is comparable with actual production achieved during the operational history of the mine.