ASX ANNOUNCEMENT

Tajiri Project – Resources increase by 80% to 268Mt



9 July 2019

STRANDLINE

Tajiri confirmed as a world-scale mineral sands deposit with 80% Resource increase to 268Mt

With 8.8Mt of contained heavy mineral, Tajiri underpins Strandline's outstanding long-term production outlook in Tanzania

HIGHLIGHTS

- Tajiri JORC-compliant Mineral Resource Estimate increases to 268Mt @ 3.3% Total Heavy Minerals (THM), up +80% from 147Mt at 3.1% THM
- All Tajiri resources start from surface, with no overburden and contain large coherent high-grade domains comprising mostly high-value titanium-dominated mineral assemblage
- Contained Heavy Mineral (HM) content rises to 8.8Mt, up from 4.6Mt, with in-situ rutile (580,000t), zircon (335,000t), ilmenite (5,206,000t) and almandine garnet (1,477,000t)
- Tajiri project is likely to continue to grow over time with high grade resources remaining open
- Outstanding result significantly enhances the strategic value of Strandline's mineral sands portfolio, with Tajiri advancing strongly behind the Company's construction ready projects the Fungoni project in Tanzania and Coburn project in Western Australia
- In light of this substantial Tajiri Resource, Strandline has initiated strategic project reviews and partnering discussions in order to advance feasibility evaluation and project permitting activities
- "Strandline is ideally placed to capitalise on the growing demand for new mineral sands supplies, with debt funding now secured for the Fungoni project, Tajiri confirmed as a world-scale deposit and Coburn established as a technically and economically robust Australian project." – Strandline MD Luke Graham

Strandline Resources (**ASX: STA**) is pleased to announce that the JORC-compliant Mineral Resource at its 100%-owned Tajiri mineral sands project in Tanzania has increased by 80 per cent.

The new Resource of 268Mt at 3.3% THM (from 147Mt @ 3.1%THM), with contained HM of 8.8Mt (up from 4.6Mt, see ASX announcement dated 18 February 2019 and 28 March 2019), confirms Tajiri as a world-scale deposit which will underpin Strandline's strong production outlook in Tanzania for many years.

The outstanding result also means that Tajiri now has the geological critical mass, robustness and market appeal to advance project feasibility, development approvals/permitting and partnering activities.

The northern tip of the Tajiri Mineral Resource is situated just 35km south of the established Tanga port facilities - refer Figures 2 and 3.

The Tajiri resources have been defined through a series of air core drilling campaigns. All resources start from surface, with no overburden and contain large coherent higher-grade domains comprising mostly high-value titanium-dominated mineral assemblage, with elevated zones of zircon and almandine garnet. Furthermore,



several resources remain open along or across strike providing significant opportunities to grow resources further over time.

Strandline Managing Director Luke Graham said the Tajiri resource upgrade significantly enhances the strategic value of Strandline's mineral sands portfolio and further strengthens the economic outlook for the project.

"Tajiri comprises a world-scale series of coherent high-grade titanium-dominated deposits which all start from surface and are situated favourably to the existing infrastructure at Tanga."

"This last phase of drilling has also confirmed large upside to resources with several deposits remaining open, as well as Strandline recently acquiring new prospective tenure along strike to the south of Tajiri."

"Tajiri's valuable mineral mix and scalability provides Strandline with a range of development pathways and options for project feasibility, which are now under strategic review."

"Overall the Company is ideally placed to capitalise on the growing demand for new mineral sands supplies, with debt funding now secured for the Fungoni project, Tajiri confirmed as a world-scale deposit, and Coburn established as a technically and economically robust Australian project."



Notes:

¹ The Vumbi deposit of 29 Mt @ 3.0% THM is not shown, but is included in the Tajiri Project Global MRE of 268Mt @ 3.3% THM

Figure 1 Tajiri Project Mineral Resources (excluding Vumbi Deposit) - 3D Image showing target areas for future exploration





Figure 2 Tajiri Project Mineral Resources T3, T4, TC and TN deposits -3D Image showing target areas for future exploration



Figure 3 Strandline suite of tenements in Tanzania, with the northern projects, including Tajiri, situated in proximity to Tanga infrastructure (plan view)

Figure 4 Tajiri Project Mineral Resources, showing a series of high value deposits from surface (plan view)



TAJIRI PROJECT - MINERAL RESOURCE ESTIMATE

Results from the recent air-core infill and extension drilling campaign and subsequent JORC-Compliant Mineral Resources Estimation (MRE) work have resulted in Tajiri's Global Mineral Resources increasing to 268Mt at 3.3% THM.

The 100%-owned tenements comprise a series of higher-grade mineral sands deposits stretching along 30kms of Tanzanian coastline, including T1, T2, T3, T4, TC, Tajiri North and Vumbi deposits. The latest drilling targeted extensions to the existing T3 resource and the adjacent channel deposit, TC. The Vumbi strandline-style deposit has also been incorporated into the Global Mineral Resource estimate due to its proximity and geological similarities.

The resources combine to form part of a potential major mine development in the mineralised province south of Tanga.

The MRE was supervised and conducted by IHC Robbins' Greg Jones, a specialist consultant in mineral sands resources, metallurgy and processing technology (refer to Competent Person statement).

Table 1 below displays the Mineral Resources estimated for the Tajiri tenement. Importantly, most of the Mineral Resources are classified as Measured (28%) or Indicated (62%) and all resources start from surface.

Summary of Mineral Resources (1)					THM Assemblage (2)							
Deposit	THM % cut-off	Mineral Resource	Tonnage	Insitu HM	THM	SLIMES	OS	Ilmenite	Zircon	Rutile	Leucoxene	Garnet
·		Category	(Mt)	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
T3	1.7%	Measured	19	0.6	3.4	37	6	64	4	7	0	5
тс	1.7%	Measured	55	1.9	3.5	23	10	42	2	5	0	38
		Total	74	2.5	3.4	27	9	48	3	5	0	30
Tajiri T1	1.5%	Indicated	36	1.3	3.7	34	4	71	6	10	0	3
Tajiri North	1.7%	Indicated	60	1.7	2.8	47	4	75	4	6	1	1
T2	1.7%	Indicated	17	0.5	2.8	32	11	58	4	7	0	18
T3	1.7%	Indicated	3	0.1	2.8	39	4	66	5	8	1	4
T4	1.7%	Indicated	14	0.4	3.0	24	6	61	4	8	0	12
TC	1.7%	Indicated	35	1.4	4.1	27	9	46	3	6	0	36
		Total	165	5.4	3.3	36	6	64	4	7	0	13
Vumbi	1.7%	Inferred	29	0.9	3.0	30	12	64	4	7	1	2
		Total	29	0.9	3.0	30	12	64	4	7	1	2
		Grand Total	268	8.8	3.3	33	7	59	4	7	0	17

Table 1 JORC 2012 Mineral Resource Estimate for the Tanga South Tajiri Project, at July 2019

Notes:

¹ Mineral Resources reported at various THM cut-offs

² Mineral Assemblage is reported as a percentage of insitu THM content

³ Appropriate rounding applied

Tajiri Project Resources Remain Open

This last phase of drilling has also confirmed the potential for further upside to Tajiri project resources with several deposits remaining open and new exploration targets being generated. Furthermore, Strandline has recently acquired new prospective tenure along strike to the south of Tajiri. An updated Exploration Target will be developed and issued in due course - Figure 2 highlights the key Exploration Target areas.

The Tajiri TC and Vumbi resources remain open. The TC resource is open to the south east adjacent to the highgrade ilmenite dominant mineralisation associated with the bend in topography. Vumbi remains open along strike to the northeast.



The Company has recently secured Prospecting License PL 13336/2018 (Sakura) located to the southwest of the Tajiri tenement (refer Figure 3). The new tenement overlies 7.5km of strike continuation along the Tajiri mineralised corridor.

The current Tajiri Mineral Resources (including Vumbi) extends over 30km forming a semi continuous string of outcropping heavy mineral sands. With the Company's Sakura tenement and adjacent Mkwaja licence to south, the strike potential has increased a further 18km. The Company will continue to evaluate Tajiri's significant exploration and development upside over time.

Tajiri Grade Tonnage Curves



Figure 5 Tanga South Tajiri Global Mineral Resources Grade-Tonnage Curve (excluding Vumbi)



Figure 6 Tanga South Tajiri Global Mineral Resources Grade-THM Curve (excluding Vumbi)



Using an elevated cut-off grade of 2.0% THM there are 194Mt @ 3.7% THM containing 7.2Mt of contained HM and using an elevated cut-off grade of 2.35% THM there are 150Mt @ 4.1% THM containing 6.2Mt of contained heavy mineral.

Tajiri project Hosts a Valuable Titanium-Dominated Mineral Sands Assemblage

The resource update has nearly doubled the contained Heavy Mineral (HM) to over 8,800,000t from previous 4,600,000t (up 4,200,000t), comprising a high-value titanium dominated mineral assemblage. This includes contained valuable minerals rutile (580,000t), zircon (335,000t), ilmenite (5,206,000t), almandine garnet (1,477,000t).

The Tajiri T1 deposit is exceptionally rich with 10% rutile, 6% zircon and 71% ilmenite with an endowment of 1,300,000t contained heavy mineral. The remainder of the resources contain between 5% to 8% rutile and 4% to 5% zircon with an average of 11% combined rutile-zircon.

As the Global MRE has continued to grow the valuable heavy mineral (VHM) content remains high with respect to higher value rutile and zircon proportions. The garnet content has increased on a global basis with significant expansion of TC mineralisation along the "channel zone". The recent resource expansion drilling has continued to confirm an upper ilmenite-rutile-zircon rich domain while at depth, beyond 30m, garnet typically displaces ilmenite.

Garnet is used primarily for abrasive blasting, water-filtration media, water-jet-assisted cutting, and other end uses, such as in abrasive powders, nonslip coatings, and sandpaper. The majority of garnet is used in industries such as oil and gas, energy, construction, water and wastewater treatment. The suppliers generally produce a specialised product for specific purposes in 20kg or 1000kg bulka bags. Depending on the application, garnet sizing, angularity and chemistry are the most important parameters to consider. Market pricing for garnet is relatively opaque with the USGS (Annual Mineral Report 2018 on Garnet) estimating that in 2018 the average unit value of garnet was US\$210/t (similar to ilmenite pricing). The pricing is driven by quality of the product, end use application and method or size of packaging. A high portion of the garnet imported into the US was traditionally sourced from India, but more recent supply restrictions have seen more garnet sourced from Africa. Globally Australia dominates the production of industrial garnet generating approximately one third or 330,000t of garnet in 2018. This was followed by South Africa (270,000t) and India (180,000t).

The Company has undertaken bench-scale metallurgical testwork of a composited 30kg sample of garnet enriched TC channel material. The results show that an almandine garnet product was recoverable providing a potentially valuable co-product when mining mineralisation along the extensive TC Mineral Resource. Mineral classification studies, including size distribution and assessment of the angularity, show the Tajiri garnet co-product has characteristics suitable for a range of commercial applications.

Tajiri's optimum saleable product suite will be evaluated further during subsequent feasibility study evaluation.

Tajiri T1 Mineral Resource

The Tajiri T1 deposit has an Indicated Mineral Resource of 36 million tonnes @ 3.7% THM with a valuable mineral assemblage comprising 71% ilmenite, 10% rutile and 6% zircon at a cut-off grade of 1.5% THM. Slime (defined as silt <45 μ m) content at this cut-off is 34%. A 30kg composite sample from the Tajiri deposit, has been subjected to sighter-scale mineral assemblage and characterisation test work performed by TZMI's Allied Mineral Laboratories. The test work has shown potentially a lower slime content of 12% (defined as clay/silt <53 μ m).

Looking at the elevated surface expression of the Tajiri deposit and cross section (Figure 8), the mineralised body shows excellent geological continuity along strike and down dip. Very low strip ratios are anticipated with a large portion of the high-grade mineral resource favourably positioned at surface.





Figure 7 Tajiri T1 Mineral Resource Grade-Tonnage Curve



Figure 8 Tajiri T1 Mineral Resource Block Model and Cross Section (looking north x7 vertical exaggeration)



Tajiri North (TN) Mineral Resource

The Tajiri North deposit has an Indicated Mineral Resource of 60 million tonnes @ 2.8% THM with a valuable mineral assemblage comprising 75% ilmenite, 6% rutile and 4% zircon at a cut-off grade of 1.7% THM. Slime (defined as silt <45µm) content at this cut-off is 47%. The mineralisation forms a blanket overlying a limestone basement high and shows a high-grade strandline on its western flank. The mineralisation starts from surface.



Figure 9 Tajiri North TN Mineral Resource Grade-Tonnage Curve





Tajiri T2 Mineral Resource

The T2 deposit has an Indicated Mineral Resource of 17 million tonnes @ 2.8% THM with a valuable mineral assemblage comprising 58% ilmenite, 7% rutile and 4% zircon with 18% almandine garnet at a cut-off grade of 1.7% THM. Slime (defined as clay and silt <45 μ m) content at this cut-off is 32%.



Figure 11 Tajiri T2 Mineral Resource Grade-Tonnage Curve



Figure 12 Tajiri T2 Mineral Resource Block Model and Cross-Section (looking north x7 VE)



Tajiri T3 Mineral Resource

The upgraded T3 Resource now has a combined Measured and Indicated Mineral Resource of 22 million tonnes @ 3.3% THM with a valuable mineral assemblage comprising 64% ilmenite, 7% rutile and 4% zircon at a cut-off grade of 1.7% THM. Slime (defined as silt <45 μ m) content at this cut-off is 37%. The extension drilling to the north and south was successful in adding 14Mt of mineral resource.



Figure 13 Tajiri T3 Mineral Resource Grade-Tonnage Curve



Figure 14 Tajiri T3 Mineral Resource Block Model and Cross-Section (looking north x7 VE)



Tajiri T4 Mineral Resource

The T4 Resource comprises Indicated Mineral Resource of 14 million tonnes @ 3.0% THM with a valuable mineral assemblage comprising 61% ilmenite, 8% rutile and 4% zircon at a cut-off grade of 1.7% THM. Slime (defined as silt <45 μ m) content at this cut-off is 24%. The mineralisation is outcropping and forms a 3km long sinuous strandline ridge with good grade continuity.



Figure 15 Tajiri T4 Mineral Resource Grade-Tonnage Curve



Figure 16 Tajiri T4 Mineral Resource Block Model and Cross-Section (looking north x7 VE)



TC "Channel" Mineral Resource

The TC Channel Resource has increased substantially with a combined Measured and Indicated Mineral Resource of 90 million tonnes @ 3.7% THM with a valuable mineral assemblage comprising 44% ilmenite, 5% rutile, 3% zircon with 36% almandine garnet at a cut-off grade of 1.7% THM. Slime (defined as silt <45 μ m) content at this cut-off is 25%. The extensional drilling campaign to the south of the previous mineralisation has increased the resource by 80 million tonnes of which 55 million tonnes is now classified as Measured. The resource remains open to the southeast of the higher-grade material encountered at a bend in the topography. The channel target also remains open along strike to the northeast where an Exploration Target will be estimated upon the receipt of mineral assemblage and grade review of recently completed AC drilling.

Additional mineralogy test work on the garnet from Tajiri Channel has concluded that the species is almandine with more than half of the garnet sizing greater than 180μ m for the samples tested. The information is positive indicating that the garnet from the project is potentially saleable with premium prices expected to be achieved for garnet exceeding 180μ m.



Figure 17 Tajiri TC Channel Mineral Resource Grade-Tonnage Curve





Figure 18 Tajiri TC Channel Mineral Resource Block Model and Cross-Section (looking north x7 VE)



Vumbi Mineral Resource

A maiden Mineral Resource has been estimated for the Vumbi deposit. The Inferred Vumbi resource comprises 29 million tonnes at @ 3.0% THM with a valuable mineral assemblage comprising 64% ilmenite, 7% rutile and 4% zircon at a cut-off grade of 1.7% THM. Slime (defined as silt <45µm) content at this cut-off is 30%. The mineralisation remains open to the north east. A potential Exploration Target will be estimated for the north eastern extension upon completion of a field investigation.



Figure 19 Vumbi Mineral Resource Grade-Tonnage Curve



Figure 20 Vumbi Mineral Resource Block Model and Cross-Section (looking north x7 VE)



SUMMARY OF RESOURCE ESTIMATE AND REPORTING CRITERIA

As per ASX Listing Rule 5.8 and the 2012 JORC reporting guidelines, a summary of the material information used to estimate the Mineral Resource is detailed below (for more detail please refer to Table 1, Sections 1 to 3 included below in Appendix 1).

Geology and geological interpretation

In Tanzania two types of heavy mineral placer style deposits have potential for resources delineation:

- 1. Thin but high grade strandlines which may be related to marine or fluvial influences; and
- 2. Large but lower grade deposits related to windblown sands.

The surface geology of the tenement is dominated by pale orange and red soils overlying limestone basement.

The Tajiri resources are situated in a number of topographical situations that include:

- 1. Vumbi at the base of a north nor east trending steep ridge forming an elevated bank that slopes gently to the east and towards the coast. The basement to the resource is Pleistocene reefal limestone which has an undulating contact with the overlying mineralised sands and silt.
- 2. T2 and T3 straddling the slopes of the north nor east trending elevated hill slope.
- 3. TC located at the base of the steep indurated cliff composed predominantly of limestone.
- 4. T1 at the base of a north nor east trending steep ridge forming an elevated bank that slopes gently to the east and towards the coast. The basement to the resource is Pleistocene reefal limestone which has an undulating contact with the overlying mineralised sands and silt.
- 5. Tajiri North on top of an elevated limestone platform which may have been uplifted during the East African Rift event.
- 6. T4 enrichment located on the more recent coastal plain.

Drilling techniques and hole spacing

Aircore drilling technique was used to drill the Tanga South prospects. Aircore is considered a standard industry technique for evaluating HMS mineralisation and is a form of reverse circulation drilling where the sample is collected at the drill bit face and returned inside an inner tube. The drill bit is 76mm in diameter (NQ) and the rods are 3m long. All of the holes were drilled vertically.

The following drill spacing were used at each resource area:

- 1. Vumbi 400 x 200m
- 2. T2, T3, T4 and T4C 200 x 50m
- 3. Tajiri North 400 x 200m
- 4. Tajiri/T1 400 x 100 and 400 x 50m

A moderate to high degree of confidence in the geological models and grade continuity between drill holes has been established for the resources areas that supports the mineral resource classifications.

For the purpose of the geological interpretation and resource modelling a local grid was set up along the long axis of the deposits so that the majority of drill lines were east-west (as they have been drilled perpendicular to the strike of most mineralised domains) and model cells were aligned north-south along that long axis. This allows for a simplification of the geological interpretation and subsequent model preparation, interpolation and analysis.

Sampling and sub-sampling techniques

Aircore drilling was used to obtain samples at 1.5m intervals which generated about 8kg of drill spoil that was progressively split down to 500g using a levelled three tier riffle splitter on site. The smaller split samples were labelled and bagged for export to the primary laboratory for processing. Any wet or damp samples were



allowed to dry prior to the splitting stage. The sampling method and sample size dispatched for processing is considered appropriate and reliable based on accepted industry practices and experience.

A sample ledger is kept at the drill rig for recording sample intervals and sample mass, and photographs are taken of samples at each hole location to cross-reference with logging.

Sample analysis method - THM

The 500g samples representing 1.5m drill intervals were analysed by Western Geolabs in Perth, Western Australia, which is considered the primary laboratory for this resource estimate. The 500g samples were initially sieved to remove the +3mm fraction and the weight recorded and then split to 250g which was soaked overnight and screened for removal and determination of Slimes (-45µm) and Oversize (+1mm). The residual 45µm to 1mm fraction was then micro-riffle split down to approximately 100g which was analysed for THM using tetrabromoethane (TBE) as the liquid heavy media. The density range of TBE is between 2.92 and 2.96 g/ml. This is an industry standard process used to determine heavy mineral contents.

Sample analysis method - mineral assemblage

Mineral assemblage composites are used to prepare weighted average analysis for mineralogy and mineral species chemistry for designated zones or domains within an ore body. For the Tajiri project the following methodology was used to determine which samples from the drill hole program would be used to contribute to each composite analysis.

- Detailed sachet scanning/logging of heavy mineral sinks from the drill assay process was carried out to determine regions of gross mineralogy as well as an overall consideration of valuable heavy mineral (VHM) content. Other considerations undertaken during this sachet logging were presence of iron oxide coatings on THM, and gross composition of other HM that included garnet, kyanite and sillimanite.
- Sachet logging then formed the input to the geological/mineralogical/THM grade interpretation which was
 then used to guide domain control for modelling, as well as providing the guidance for the allocation of
 mineral assemblage composites.
- Various domains were identified for the purpose of guiding the allocation of composites for each of the prospects. These domains were further subdivided into north-south sample regions, with each mineral assemblage composite collected from one or two drill lines approximately 200m apart.
- A total of 68 mineral assemblage composites were used to characterise the mineralogy and chemistry for the various Tajiri Resource areas completed in February 2018
- A total of 32 mineral assemblage composites were used to characterise the mineralogy and chemistry for the TC Mineral Resource area
- A total of 15 mineral assemblage composites were used to characterise the mineralogy and chemistry for the T3 Mineral Resource area
- A total of 3 mineral assemblage composites were used to characterise the mineralogy and chemistry for the Vumbi Mineral Resource area
- Individual drill hole samples were selected based on whether they fell within a particular domain. 50% of each THM sink was collected and combined to form each mineral composite. Therefore higher grade samples contributed a greater weighting of THM to an overall composite. The average starting weight for each float/sink assay was approximately 100g and therefore there was no need to re-proportion each contributing HM assay into the greater mineral assemblage composite.
- A spreadsheet with sample identification and mineral assemblage composite number was submitted to Diamantina Laboratories in Perth for the 50% sub-splitting and compositing.
- Once composited the samples from T3 and TC where dispatched to CSIRO, Waterford, WA for sample processing and analysis using QEMSCAN.



- Once composited the samples from Vumbi where dispatched to Geoff Lane at Process Mineralogical Consulting Ltd (PMC) in Canada for sample processing and analysis (SEM-EDX).
- Preparing the mineral assemblage composites in this manner allows for composite results to be applied to the resource block model and for those results to then be reported and weighted on THM in the final Mineral Resource estimate.

The selected mineral assemblage composites were received by PMC and CSIRO, they were mounted on a slide and then analysed. PMC uses a proprietary method of SEM (Scanning Electron Microscope) and then an EDX (Energy Dispersive X-Ray analyser). For the purpose of this description we will refer to the methodology as SEM-EDX. The methodology is similar in some ways to Mineral Liberation Analyser (MLA) and QEMSCAN (Quantitative Evaluation of Minerals by Scanning Electron Microscopy) that was used by CSIRO. The semi quantitative analysis methods undertake mineralogical identification and assignment using mineral libvraires that classify the grain such as an Ilmenite or rutile etc based on predefined elemental cut-offs using titanium and iron oxides as an example.

All of the VHM and trash mineral species were identified using the QEMSCAN and SEM-EDX method. Zircon was calculated from whole rock XRF, which represents a more comprehensive analysis for that mineral species.

Previously for the Tajiri Mineral Resources mineral assemblages were undertaken using SEM-EDX exclusively however 6 samples were tested by QEMSCAN and applying various mineral chemistry libraries the methods wre calibrated and are comparable.

Estimation Methodology

Geological interpretation, wireframing, 3D block modelling and grade interpolation was carried out Datamine Studio RM mining software. Construction of the geological grade model was based on a combination of coding model cells and drill holes below open wireframe surfaces, including topography and basement and inside closed wireframes defined by mineralised domains. Modelling convention has the largest parent cell size possible used which is generally based on half the distance between holes of the dominant drill hole spacing in the X and Y dimensions. Cell dimensions are generally used so as to avoid overly small cells that imply a level of refinement in the model that is not justified by the drill hole spacing.

The dominant drill grid spacing for the Tajiri deposit was 400m along strike \times 50 m across strike \times 1.5m down hole (with some drill holes spaced 100m across strike). This led to the selection of parent cell dimensions in XYZ of 25 x 200 x 1.5m in order to have a floating cell between drill holes and drill lines. The dominant drill grid spacing for the Tajiri North deposit was 400m along strike \times 200m across strike \times 1.5m down hole. This led to the selection of parent cell dimensions in XYZ of 25 x 200 x 1.5m down hole. This led to the selection of parent cell dimensions in XYZ of 100 x 200 x 1.5m in order to have a floating cell between drill holes and drill lines.

For T2 the average drill grid spacing was 200m along strike x 50m across strike x 1.5m down hole. This led to a parent cell dimensions in XYZ of $25 \times 100 \times 1.5m$. For T3 the average drill grid spacing was between 150m and 300m along strike, 50m across strike and 1.5m down hole. This led to a parent cell dimensions in XYZ of $25 \times 100 \times 1.5m$. The average drill spacing for T4 and T4C was 200m along strike x 50m across strike x 1.5m down hole. This led to a parent cell dimensions in XYZ of $25 \times 100 \times 1.5m$.

A model was generated for each deposit and interpolated using inverse distance weighting (with a power of 3) and the preliminary estimates were compared with drill hole grades. It was found that this cell size and parameters chosen were resulting in an acceptable interpolation process. The search ellipse used for the grade interpolation was guided by the dynamic ellipsoid routine employed by Datamine. This allows for variations in mineralisation strike, dip and plunge to be accounted for during the grade interpolation. The mineral assemblage composite identifiers were interpolated into the block model utilising a nearest neighbour method. Variography was carried out prior to interpolation as part of developing search ellipse directions and sizes. Resulting variograms were used to test the drill spacing (and continuity of HM grade) and these supported the final selected JORC Mineral Resource category.



A bulk density (BD) was applied to the model using a standard linear formula originally described by Baxter (1977). This approach was refined in a practical application by this author using first principles calculations. The resultant graph and regression formula was then used to calculate the conversion of tonnes from each cell volume and from there the calculation of material, HM and SLIMES tonnes. The formula used was:

Bulk Density = (0.009 * THM) + 1.698

Cut-off grades

A cut-off-grade of either 1.5% or 1.7% THM was selected for each deposit based on grade tonnage curves and the percentage of valuable heavy mineral (VHM). Tajiri was reported at a cut-off grade of 1.5% THM and the other prospects were reported at a 1.7% THM cut-off grade.

Classification criteria

The Tajiri deposits, encompassed by T1, T2, T3, T4,TC and Tajiri North Mineral Resource estimates have been assigned a JORC classification of Measured and Indicated which is supported by the following criteria:

- drill hole spacing;
- continuity of geology, THM mineralisation and mineralogical identification; and
- distribution and weighting of mineral assemblage composites.

The density/number of samples and distribution of mineral assemblage composites is to an adequate level of density for the JORC Classification. The drill hole spacing for the Tajiri North deposit is wider across strike than for the other Tajiri prospects, however the interpreted mineralisation style at Tajiri North is dunal, and therefore more homogenous, as opposed to interpreted strandlines at the other Tajiri prospects.

The distribution of the mineral assemblage composites throughout each of the deposits has enabled a clear picture – even at this early stage of exploration and development – to be gained of the VHM grade and distribution for each deposit.

The Vumbi Mineral Resource estimate has been classified as Inferred based on the wider spaced drilling (400 m along strike, 200 m across strike and 1.5 m downhole). The style of mineralisation is more typical of the T1 deposit and the continuity informed by the variography does not support any greater than an Inferred Mineral Resource classification. A limited number (3) mineral assemblage composites also does not allow for enough differentiation in the mineralogical continuity.

Mining and metallurgical methods and parameters

The Company has undertaken heavy mineral composite analysis from all of the Tajiri Resource areas that has provided detailed data for the VHM assemblage and chemistry from the total heavy mineral. This information compares favorably with the closest operational mineral sands mine – Kwale, located in Kenya – owned by ASX listed company Base Resources. The Company has also completed benchtop scale metallurgical processing and mineral species characterization on representative samples (30kg sand composite) from T1, Tajiri North and TC. The test work did not identify any fatal flaws in relation to potential recoveries, product quality and marketability. No mining studies have been undertaken on the Tajiri Resources but the Company intends to investigate the potential economic viability of the project with an initial Scoping Study. After this study then additional bulk tonnage metallurgical testwork will be undertaken to understand the metallurgical performance of the heavy mineral sand and to generate additional material for marketing and pricing purposes.

Statement of Mineral Resources

The Tajiri-Vumbi project contains the following Mineral Resources:

- Measured Mineral Resources totalling 74 Mt @ 3.4% THM for a contained 2.5 Mt of THM.
- Indicated Mineral Resources totalling 165 Mt @3.3% THM for a contained 5.4 Mt of THM.
- Inferred Mineral Resources totalling 29 Mt @ 3.0% THM for a contained 0.9 Mt of THM.
- For a total of 268 Mt @ 3.3% THM for a contained 8.8 Mt of THM.





Figure 21 IHC Robbins image of Tajiri Project Mineral Resources

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ABOUT STRANDLINE – CAPITALISING ON THE GROWING MINERAL SANDS MARKET

Strandline Resources Limited (**ASX: STA**) is an emerging heavy mineral sands (**HMS**) developer with a growing portfolio of 100%-owned development assets located in Western Australia and within the world's major zircon and titanium producing corridor in South East Africa. Strandline's strategy is to develop and operate quality, high margin, expandable mining assets with market differentiation and global relevance.

Strandline's project portfolio comprises development optionality, geographic diversity and scalability. This includes two zircon-rich, 'development ready' projects, the Fungoni Project in Tanzania and the large Coburn Project in Western Australia, as well as a series of titanium dominated exploration targets spread along 350km of highly prospective Tanzanian coastline, including the advanced Tanga South Tajiri Project and emerging Bagamoyo and Sudi projects.

The Company's focus is to continue its aggressive exploration and development strategy and execute its multi-tiered and staged growth strategy to maximise shareholder value.



Figure 1 Strandline's world-wide mineral sands exploration & development projects

FORWARD LOOKING STATEMENTS

This report contains certain forward looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside of the control of Strandline. These risks, uncertainties and assumptions include commodity prices, currency fluctuations, economic and financial market conditions, environmental risks and legislative, fiscal or regulatory developments, political risks, project delay, approvals and cost estimates. Actual values, results or events may be materially different to those contained in this announcement. Given these uncertainties, readers are cautioned not to place reliance on forward looking statements. Any forward looking statements in this announcement reflect the views of Strandline only at the date of this announcement. Subject to any continuing obligations under applicable laws and ASX Listing Rules, Strandline does not undertake any obligation to update or revise any information or any of the forward looking statements in this announcement to reflect changes in events, conditions or circumstances on which any forward looking statements is based.



TANZANIA MINERAL SANDS COMPETENT PERSON'S STATEMENTS

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation prepared by Mr Brendan Cummins, Chief Geologist and employee of Strandline. Mr Cummins is a member of the Australian Institute of Geoscientists and he has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been undertaken to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Cummins consents to the inclusion in this release of the matters based on the information in the form and context in which they appear. Mr Cummins is a shareholder of Strandline Resources.

The information in this report that relates to Mineral Resources is based on, and fairly represents, information and supporting documentation prepared by Mr Greg Jones, (Consultant to Strandline and Geological Services Manager for IHC Robbins) and Mr Brendan Cummins (Chief Geologist and employee of Strandline). Mr Jones is a member of the Australian Institute of Mining and Metallurgy and Mr Cummins is a member of the Australian Institute of Geoscientists and both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Cummins is the Competent Person for the drill database, geological model interpretation and completed the site inspection. Mr Jones is the Competent Person for the resource estimation. Mr Jones and Mr Cummins consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.



Appendix 1 JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 Aircore drilling was used to obtain samples at 1.5m intervals Each 1.5m sample was homogenized within the bag by rotating the sample bag after removing from the cyclone A sample of sand, approx. 20gm, is scooped from the sample bag for visual THM% estimation and logging. The same sample mass is used for every pan sample for visual THM% estimation The standard sized sample (20g) is to ensure calibration is maintained for consistency in visual estimation A sample ledger is kept at the drill rig for recording sample intervals and sample mass, and photographs are taken of samples for each hole to cross-reference with logging The large 1.5m Aircore drill samples have an average of about 8kg and were split down to approximately 500gm by a levelled 3 tier riffle splitter for export to the processing laboratory The laboratory sample was dried, de-slimed (removal of -45µm fraction) and then had oversize (+1mm fraction) removed. Approximately 100gm of sample was then split to use for heavy liquid separation using TBE to determine total heavy mineral content
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 Aircore drilling with inner tubes for sample return was used Aircore is considered a standard industry technique for HMS mineralization. Aircore drilling is a form of reverse circulation drilling where the sample is collected at the face and returned inside an inner tube Aircore drill rods used were 3m long NQ diameter (76mm) drill bits and rods were used All drill holes were vertical
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 	 Drill sample recovery is monitored by measuring and recording the total mass of each 1.5m sample at the drill rig with a standard spring balance While initially collaring the hole, limited sample recovery can occur in the initial 0.0m to 1.5m sample interval owing to sample and air loss into the surrounding loose soil



Criteria	JORC Code explanation	Commentary
	occurred due to preferential loss/gain of fine/coarse material.	 The initial 0.0m to 1.5m sample interval is drilled very slowly in order to achieve optimum sample recovery The entire 1.5m sample is collected at the drill rig in large numbered plastic bags for dispatch to the initial split preparation facility At the end of each drill rod, the drill string is cleaned by blowing down with air to remove any clay and silt potentially built up in the sample pipes The twin-tube aircore drilling technique is known to provide high quality samples from the face of the drill hole Wet and moist samples are placed into large plastic basins to sun dry prior to splitting
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 The 1.5m aircore samples were each qualitatively logged onto paper field sheets prior to digital entry into an Microsoft Excel spreadsheet The aircore samples were logged for lithology, colour, grainsize, rounding, sorting, estimated THM%, estimated Slimes% and any relevant comments - such as slope, vegetation, or cultural activity Every drill hole was logged in full Logging is undertaken with reference to a Drilling Guideline with codes prescribed and guidance on description to ensure consistent and systematic data collection
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 The entire 1.5m drill sample collected at the source was dispatched to a sample preparation facility to split with a level 3 tier riffle splitter to reduce sample size The water table depth was noted in all geological logs when intersected Dry samples with aggregates are gently hit with a rubber mallet to break them down so the sample with flow easily through the splitter chutes A total of 450 to 650gm of each sample was inserted into calico sample bags and exported to Western Geolabs laboratory for analysis Employees undertaking the splitting are closely monitored by a geologist to ensure sampling quality is maintained Almost all of the samples are sand, silty sand, sandy silt, clayey sand or sandy clay and this sample preparation method is considered appropriate The sample sizes were deemed suitable to reliably capture THM, slime, and oversize characteristics, based on industry experience of the geologists involved and consultation with laboratory staff



Criteria	JORC Code explanation	Commentary
Quality of assay data and	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the	 Field duplicates of the samples were completed at a frequency of 1 per 25 primary samples Standard Reference Material samples are inserted into the sample stream in the field at a frequency of 1 per 50 samples The wet panning at the drill site provides an estimate of the THM% which is sufficient for the number of determining approximate
tests	 technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the 	concentrations of THM in the first instance Aircore sample:
	parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	 The individual 1.5m aircore sub-samples (approx. 500gm) were assayed by Western Geolabs in Perth, Western Australia, which is considered the Primary laboratory The aircore samples were first screened for removal and determination of Slimes (- 45µm) and Oversize (+1mm), then the sample was analysed for total heavy mineral (-1mm to +45µm) content by heavy liquid separation The laboratory used TBE as the heavy liquid medium – with density range between 2.92 and 2.96 g/ml This is an industry standard technique Field duplicates of the samples were collected at a frequency of 1 per 25 primary samples Western Geolabs completed its own internal QA/QC checks that included laboratory duplicates every 10th sample prior to the results being released Analysis of QA/QC samples show the laboratory data to be of acceptable accuracy and precision The density of the heavy liquid was checked every morning and then after every 20 samples by volumetric flask The adopted QA/QC protocols are acceptable for this stage test work 1/40 samples from the Primary Laboratory have been sent to a Secondary Laboratory (Diamantina Laboratories for check analysis and have been found to have very good
Verification of	The verification of significant	 All results are checked by the Chief
sampling and assaying	 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. 	 Geologist The Chief Geologist and independent geologist make periodic visits to Western Geolabs to observe sample processing A process of laboratory data validation using mass balance is undertaken to identify entry errors or questionable data Field and laboratory duplicate data pairs (THM/oversize/slime) of each batch are plotted to identify potential quality control



Criteria	JORC Code explanation	Commentary
		 issues Standard Reference Material sample results are checked from each sample batch to ensure they are within tolerance (<2SD) and that there is no bias The field and laboratory data has been updated into a master spreadsheet which is appropriate for this stage in the programme. Data validation criteria are included to check for overlapping sample intervals, end of hole match between 'Lithology', 'Sample', 'Survey' files and other common errors No twin holes were drilled specifically in the drill programme but as part of the 2018 infill drilling some twin holes were drilled when a second hole was collared in order to drill deeper because the first hole ended in mineralisation No adjustments are made to the primary assay data
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 Down hole surveys for shallow vertical aircore holes are not required A handheld GPS was used to identify the positions of the drill holes in the field. The handheld GPS has an accuracy of +/- 10m in the horizontal The datum used is WGS84 and coordinates are projected as UTM zone 37S The drill hole collar elevation was collected from a detailed Digital Terrain Model collected in 2012. One metre contours were generated and the x-y coordinates were cut to the RL using the contour information. To account for the disparity between collars and the topographic DTM all drill hole collars were pinned to the supplied topography wireframe surface. The accuracy of the locations is sufficient for this stage of exploration
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	 Grid spacing used for the resource drill program was 400 x 200 or 200m x 50m. Closer spaced drilling (50m spaced holes) provided a high degree of confidence in geological models and grade continuity between the holes Each aircore drill sample is a single 1.5m sample of sand intersected down the hole No compositing has been applied to models for values of THM, slime and oversize Compositing of samples for was been undertaken on HM concentrates for mineral assemblage determination. Composite samples were classified into 6 domains. Domain 1 high grade (>3% THM) Ti rich, Domain 3 High grade (>3% THM) blend (garnet and Ti), Domain 4 is Low grade (< 3% THM)



Criteria	JORC Code explanation	Commentary
		blend (garnet and Ti), Domain 5 is garnet rich – low and high grade.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 The aircore drilling was oriented perpendicular to the strike of mineralization defined by reconnaissance data interpretation The strike of the mineralization is subparallel to the contemporary coastline and is known to be relatively well controlled by the 20m topographic contour Drill holes were vertical and the nature of the mineralisation is relatively horizontal The orientation of the drilling is considered appropriate for testing the lateral and vertical extent of mineralization without any bias
Sample security	The measures taken to ensure sample security.	 Aircore samples remained in the custody of Company representatives while they were transported from the field to Dar es Salaam for final packaging and securing The samples were inspected by Tanzanian Government officials from MEM and TRA who took sub samples composites for analysis. Once they were inspected the drums holding the samples were sealed. MEM and TRA require sample analysis for royalty payment calculation prior to issuing an exportation license and allowing the samples to be dispatched. The samples were then transported by air using Deugro to Perth and delivered directly to the laboratory after quarantine inspection and heat treatment of the samples < 3m depth. The laboratory inspected the packages and did not report tampering of the samples
Audits or reviews	 The results of any audits or reviews of sampling techniques and data. 	Internal reviews were undertaken



Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	 The exploration work was completed on tenements that are 100% owned by Strandline in Tanzania The drill samples were taken from tenement PL7321/2011 and PL7666/2012 (Application PL14224/2018). Tenement PL7321/2011 is 8 years old and is valid until 16 Nov. 2020. Tenement PL7666/2012 is currently active but will be replaced by PL14224/2018 which was applied for 21/05/2018 and will likely be granted by the end of the year. Traditional landowners and village Chiefs of the affected villages were supportive of the drilling program
		Provide Provide
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 Historic exploration work was completed by Tanganyika Gold in 1998 and 1999. OmegaCorp undertook reconnaissance exploration in 2005 and 2007 The Company has obtained the hardcopy reports and maps in relation to this information The historic data comprises surface sampling, limited aircore drilling and mapping The historic results are not reportable under JORC 2012
Geology	Deposit type, geological setting and style of mineralisation.	 Two types of heavy mineral placer style deposits are possible in Tanzania 1. Thin but high grade strandlines which may be related to marine or fluvial influences 2. Large but lower grade deposits



Criteria	JORC Code explanation	Commentary
		related to windblown sands
		 The coastline of Tanzania is not well known for massive dunal systems such as those developed in Mozambique, however some dunes are known to occur and cannot be discounted as an exploration model. Palaeo strandlines are more likely and will be related to fossil shorelines or terraces in a marine or fluvial setting. In Tanzania three terraces have been documented and include the Mtoni terrace (1-5m ASL), Tanga (20-40m ASL) and Sakura Terrace (40 to 60m ASL). Strandline mineral sand accumulations related to massive storm events are thought to be preserved at these terraces above the current sea level.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	 The drill hole data has not been reported. The previous resource estimate released in February 2018, reported in full composited intervals at greater than 1.7% THM for T1, T2, T3, T4, TC and TN. The additional drilling is infill and extensional drilling and is not material to the Mineral Resources Estimate.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	No data aggregation methods were utilised, no top cuts were employed and all cut-off grades have been reported.
Relationship between	These relationships are particularly important in the reporting of Exploration	 The nature of the mineralisation is broadly horizontal, thus vertical aircore holes are
mineralisation	Results.	thought to represent close to true
widths and	In the geometry of the mineralisation with	unicknesses of the mineralisation



Criteria	JORC Code explanation	Commentary
intercept lengths	 respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	Downhole widths are reported
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	 Figures and plans are displayed in the main text of the Release
Balanced reporting	 Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	 Exploration results are not being reported at this time
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.	 Detailed mineral assemblage work was undertaken on composite samples from across the resource areas using QEMSCAN analysis undertaken by CSIRO in Perth, WA. Detailed aerial geophysics was flown over the lease in 2012
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Additional Aircore drilling is planned to further extend mineralisation at TC and Vumbi Additional work required for the determination of bulk density Larger scale bulk metallurgical samples for metallurgical performance product marketability are also being considered

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 has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	 Original laboratory files used to populate exploration database assay tables via an automatic software assay importer where available. Checks of data by visually inspecting on screen (to identify translation of samples), duplicate and twin drilling was visually examined to check the reproducibility of assays. Database assay values have been subjected to random reconciliation with laboratory certified values to ensure agreement. Visual and statistical comparison was



Criteria	JORC Code explanation	Commentary
		undertaken to check the validity of results
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	 Regular site trips before and during the resource drilling phase were undertaken by Brendan Cummins. Mr Cummins was onsite between the 1st and 3rd August 2018 to observe the drilling and data collection activities
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	 The geological interpretation was undertaken by Brendan Cummins and data was used by IHC Robbins and then validated using all logging and sampling data and observations. Current data spacing and quality is sufficient to indicate grade continuity. The possibility of narrow washouts between drill lines exists but they are not considered likely. Interpretation of modelling domains was restricted to the main mineralised envelopes utilising THM sinks and geology logging. No other interpretations were considered as the Competent Person was satisfied that the sachet logging which was used to define the mineral assemblage composites was effective in outlining the major mineralogical domains. This is the primary objective for any mineral sands resource estimation. The Mineral Resource estimate was controlled to an extent by the geological and basement surfaces. The mineralisation for the deposits at Tajiri have been truncated at surface by erosion of the original deposit apart from TC that seems to be covered with low grade material.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	 The Mineral Resource for Tajiri is approximately 3 km long and 800 m wide on average. The deposit ranges in thickness from approximately 1.5 to 24 metres (averaging 11 metres) Tajiri North the resource is 2.5 km long and 2 km wide with thickness ranging from 1.5 to 15 metres (averaging 6 metres) T2 resource is approximately 2.4 km long and 0.7 km wide ranging from 4.5 to 16.5 metres thick (averaging 11 metres) T3 resource is approximately 4.2 km long and 0.7 km wide ranging from 1.5 to 15 metres) T4 resource is approximately 3.8 km long and 0.4 km wide ranging from 1.5 to 21 metres thick (averaging 12.5 metres) TC resource is approximately 3.6 km long



Criteria	JORC Code explanation	Commentary
		 and 0.5 km wide ranging from 3 to 66 metres thick (averaging 39 metres) The Vumbi resource is approximately 3.8 km long and 1.2 km wide with thickness ranging from 1.5 to 18 metres (averaging 5.7 metres)
Estimation and modelling techniques	 The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 	 The mineral resource estimate was conducted using CAE mining software (also known as Datamine Studio). Inverse distance weighting techniques were used to interpolate assay grades from drill hole samples into the block model and nearest neighbour techniques were used to interpolate index values and nonnumeric sample identification into the block model. The mostly regular dimensions of the drill grid and the anisotropy of the drilling and sampling grid allowed for the use of inverse distance methodologies as no de-clustering of samples was required. Appropriate and industry standard search ellipses were used to search for data for the interpolation and suitable limitations on the number of samples and the impact of those samples was maintained. An inverse distance weighting of three was used so as not to over smooth the grade interpolations. Hard domain boundaries were used and these were defined by the geological wireframes that were interpreted. No assumptions were made during the resource estimation as to the recovery of byproducts. Slimes and oversize contents are estimated at the same time as estimating the THM grade. Further detailed geochemistry is required to ascertain deleterious elements that may affect the marketability of the heavy mineral products The average parent cell size used for the interpolation was approximately half the standard drill hole width and a half the standard drill hole setion line spacing. The dominant drill grid spacing for the T3 deposit was 50 m across strike x 150 m along strike x 1.5 m down hole (with some wider spaced drill holes at 200 to 300 m along strike). This led to the selection of parent cell dimensions in XYZ of 25 m x 75 m x 1.5 m in order to have a floating cell between drill holes and drill lines. For the T4, and TC deposits the dominant drill spacing was 50 m x 200 m x 1.5 m down hole. This led to a parent cell size of 25 m x 100 m x 1.5 m.



Criteria J	ORC Code explanation	Commentary
		 The Vumbi deposit dominant drill spacing was 200 m x 400 m x 1.5 m down hole. This led to a parent cell size of 100 m x 200 m x 1.5 m. No assumptions were made regarding the modelling of selective mining units however it is assumed that a form of dry mining will be undertaken and the cell size and the sub cell splitting will allow for an appropriate dry mining preliminary reserve to be prepared. Any other mining methodology will be more than adequately catered for with the parent cell size that was selected for the modelling exercise. No assumptions were made about correlation between variables. The Mineral Resource estimates were controlled to an extent by the geological / mineralisation and basement surfaces. Grade cutting or capping was not used during the interpolation because of the regular nature of sample spacing and the fact that samples were not clustered nor wide spaced to an extent where elevated samples could have a deleterious impact on the resource estimation. Sample distributions were reviewed and no extreme outliers were identified either high or low that necessitated any grade cutting or capping. The sample length of 1.5 m does result in a degree of grade smoothing also negating the requirement for grade cutting or capping. Validation of grade interpolations were done visually In CAE Studio (Datamine) software by loading model and drill hole files and annotating and colouring and using filtering to check for the appropriateness of interpolations. Statistical distributions were also prepared for model zones from drill hole and model files to compare the effectiveness of the interpolation. Along strike distributions of section line averages (swath plots) for drill holes and models were also prepared for comparison purposes
Moisture •	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages were estimated on an assumed dry basis. A bulk density algorithm was prepared using first principles techniques coupled with industry experience that is exclusive to IHC Robbins. We believe the bulk density formula to be appropriate and fit for purpose at this level of confidence for the Mineral Resource estimates.



Criteria	JORC Code explanation	Commentary
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	• Cut-off grades for THM and SLIMES as well as hardness were used to prepare the reported resource estimates. These cut-off grades were defined by IHC Robbins as being based soundly on experience, the percentage of VHM and the grade tonnage curves taken in consideration with the grade distribution along the length of the deposits.
Mining factors or assumptions	 Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	 No specific mining method is assumed other than potentially the use of dry mining scrapers and excavators into trucks. This allows for quite a selective mining process while still maintaining bulk economies of scale as the dark THM at the base of the orebody allows for excellent visual acuity and therefore grade control. To this end no minimum thickness was assumed for the reporting of the mineral resource.
Metallurgical factors or assumptions	 The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made. 	 Metallurgical assumptions were used based on mineral assemblage composites which at this stage only allow for preliminary commentary with no detailed chemistry or sizing of mineral species.
Environmen-tal factors or assumptions	 Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	 No assumptions have been made regarding possible waste and process residue however disposal of byproducts such as SLIMES, sand and oversize are normally part of capture and disposal back into the mining void for eventual rehabilitation. This also applies to mineral products recovered and waste products recovered from metallurgical processing of heavy mineral.
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of	 The bulk density used for the Tajiri project has been developed by IHC Robbins from experience of working with these styles of ore bodies. A bulk density algorithm was prepared using first principles techniques



Criteria	JORC Code explanation	Commentary
	 the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	 coupled with industry experience that is exclusive to IHC Robbins. We believe the bulk density formula to be appropriate and fit for purpose at this level of confidence for the Mineral Resource estimates The bulk density is calculated as an in situ dry bulk density and once material has been dug up invariably this bulk density cannot be used. The bulk density is however used on wet poured HMC (heavy mineral concentrate) from mining and concentrating and is successful at estimating density and therefore tonnages for stockpiles.
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	 The resource classification for the Tajiri deposits was based on the following criteria: drill hole spacing and the distribution of bulk samples. The classification of the Indicated Resources was supported by all of the supporting criteria as noted above. As a Competent Person, IHC Robbins Principal Greg Jones considers that the result appropriately reflects a reasonable view of the deposit categorisation.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	• No audits or reviews of the mineral resource estimate has been undertaken at this point in time.
Discussion of relative accuracy/ confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	 Local (nearest neighbour) estimates were undertaken as a preliminary evaluation process. The overall grade interpolation of this method was a fair comparison with inverse distance weighting methodology. Geostatistical analysis (i.e variography) was undertaken on the THM during the resource estimation of the T3, T4, TC, and Vumbi deposits to determine optimal drill hole and sample spacing to assist with the JORC classification process. Validation of the model vs drill hole grades by observation, swathe plot and population distribution analysis was favourable The statement refers to global estimates for the entire known extent of the Tajiri deposits. No production data is available for comparison with the Tajiri deposits.