JACK TRACK MAIDEN INFERRED HEAVY MINERAL RESOURCE ANNOUNCEMENT

Astro Resources NL (Astro) (ASX:ARO) is pleased to announce a Maiden Inferred Mineral Resource Estimate for the Jack Track heavy mineral (HM) deposit in the southern Perth Basin, Western Australia, on exploration licence 70/2464 which is the subject of the Farm-in and Exploration Joint Venture Agreement between Governor Broome Sands Pty Ltd (which is 100% owned by Astro) and Iluka Resources Limited.

The Jack Track deposit is located on E70/2464 on the Scott River Coastal Plain, 70km south of Busselton and 48km southwest of Nannup (Figure 1).

Exploration and geological modelling has resulted in a Maiden Inferred Mineral Resource of 18.8 Mt @ 4.7% HM containing 890 thousand tonnes of HM at a 3.0% HM lower cut off grade, estimated in accordance with the guidelines outlined in the JORC Code (2012) for the reporting of Exploration Results, Mineral Resources and Ore Reserves (Figures 1-2, Table 1).

The Jack Track deposit is on E70/2464 is subject to the Farm-in and Exploration Joint Venture Agreement between GBS and Iluka, with the parties current participating interests, and ownership of the tenement, at Iluka 51% and GBS 49%. Under the terms of the JV Agreement, Iluka is the operator and has the right to increase its interest to 80% by spending $320,000 on exploration the Jack Track tenement.

The Jack Track Mineral Resource is one of many HM resource located along the Scott River Coastal Plain. The assemblage of the Jack Track resource is ilmenite dominated, containing 75 per cent ilmenite and 10.8 per cent zircon with minor (2.4%) rutile (refer Table 1).

Mike Povey, Astro Director stated: “The outcomes to date provide further confirmation of the high level of regional prospectivity for mineral sands in the Scott River region, in which Astro has tenement holdings including Astro’s own Governor Broome Mineral Sands Project.”

Further details on the preparation of the resource estimate are presented in Attachment 1 and the supporting JORC Code Table 1 is presented as Attachment 2.

ENDS

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Attachment 1 – Jack Track Inferred Mineral Resource

The Jack Track deposit is located on the Scott River Coastal Plain, 70km south of Busselton and 48km southwest of Nannup. It is within the Nannup Shire Council area. The deposit is covered by Exploration Licence E70/2464. The tenement is the subject of the Farm–In and Exploration Joint Venture Agreement between Governor Broome Sands (which is 100% owned by Astro Resources NL) and Iluka Resources Limited. Currently, Iluka holds 51% ownership of the tenement and GBS holds 49%. Iluka can increase its ownership of the tenement and its participating interest in the JV to 80% by spending a total of $320,000 on exploration on the tenement

The mineralisation at Jack Track was first intersected in drilling by Iluka as part of a greenfield exploration programme during 2015 (Figures 1 & 2).

The Jack Track deposit is hosted in unconsolidated aeolian dune and underlying beach sands occurring on the Scott River Coastal Plain. The geological character of Jack Track is similar to the heavy mineral deposits occurring along the Swan Coastal Plain, which have a long history of mining and processing. The Jack Track mineralisation is thought to be hosted in beach placer facies sediments of the Pleistocene aged Barlee Shore line on the south ward facing Scott Coastal Plain. Locally the host to the Jack Track mineralisation is the Warren Sands. The deposit does not contain significant clay or rock, however it is situated below the water table.

A cross section through the Jack Track Deposit is presented in Figure 3 showing a simplified geological interpretation and the +3 per cent mineralised zone. A summary of significant drill intersections for Jack Track reporting greater than 3 per cent HM are given in Table 2.

The drilling of the deposit was undertaken using vertical NQ diameter air core drilling, with holes from predominantly 50 metres to 400 metres apart across strike, drilled on 5 lines spaced approximately 700 metres to 1450 metres apart along strike. Down hole sampling was conducted at 1 metre intervals and samples were selected for assay on the basis of the presence of visual HM.

The survey method for all Jack Track drill hole collars was Iluka's DGPS giving ±2m horizontal accuracy and ±5m vertical accuracy. The QA/QC data from 2015 drilling and sampling programmes was assessed as part of the resource estimation process, and this included exploration blind standards, laboratory standards and field and laboratory duplicate analyses. Samples collected in the field were transported to Iluka's Hamilton laboratory where they were analysed using Iluka's standard heavy media separation (Lithium Heteropolytungstate at a density of 2.85 grams per cubic centimetre) for HM. Clay and oversize fractions were screened at sizes of minus 53 micron and plus 2.0 millimetre respectively.

Mineral assemblage data was obtained by compositing the sand fraction (plus 53 micron to minus 2.0 millimetre) of samples from similar geological horizons, recovering the HM over a Wilfrey table and then conducting a magnetic separation (Permroll Magnet), heavy media fractionation (Thallium Malonate Formate 3.85 to +4.38 grams per cubic centimetre). X-ray Fluorescence analysis of various fractions was used to determine the mineral assemblage and indicative mineral quality. A total of 9 composite samples were collated from the exploration drill samples and incorporated into the geological modelling.

At a 3 per cent HM cut-off grade, the Jack Track deposit comprises 2 mineralised zones over an area of 5 kilometres in strike by 1.3 kilometres in width. The mineralisation varies from 1 to 5 metres thick (2.5m on average) and is located beneath 2 to 12 metres of sedimentary cover (5.5m on average). The entire Jack Track resource lies below the water table. The mineralisation narrows at either end of the drill grid however has not been completely closed off to the north west.. If mineralisation continues along strike in the north west end, it is expected to terminate within around 500m of strike.

The resource estimation was based on samples collected from drilling and assaying of 161 aircore drillholes from drilling conducted during June/July 2015 and October 2015. All samples used in the resource estimate were collected at 1 metre intervals down hole. A geological resource model has been prepared for the Jack Track deposit using Datamine Studio mining software. Geological interpretations used to constrain the modelling were prepared by company geologists. The resource estimate was derived from a 3 dimensional block model constructed using geological and mineralogical domain constraints. Industry standard block estimation techniques (Inverse Distance weighting) were used to interpolate grades into the model. The bulk density for the resource was estimated using Iluka's standard bulk density formula based on operational experience gained from mining this style of mineralisation.

The estimation of the mineral resource tonnes and grade was undertaken using a lower cut-off of 3 per cent HM which was based on:

- current operational practices for dry mining and concentrating HM strand mineralisation in Western Australia with a similar mineral assemblage and mineral quality;
- consideration of mineralisation grade and thickness compared to the. depth of burial;
- the mineral being shallow and amenable to extraction using open cut mining methods; and
- the reasonable prospects for eventual economic extraction as determined by the Competent Person.

The Jack Track resource has been classified as Inferred, and reported in accordance with the guidelines of the JORC Code (2012), based on:

- drill hole spacing and sampling density;
- coverage of mineralogical composite samples;
- geological and grade continuity;
- Presence of sufficient supporting QA/QC data;
- prospects for economic extraction; and
- the level of confidence in the HM and mineralogical grade continuity established by the Competent Person

From this an Inferred Mineral Resource has been estimated in accordance with the guidelines of the JORC Code (2012 edition), comprising 18.8 million tonnes of mineralised material averaging 4.7% HM and containing 890 thousand tonnes of HM above a cut-off grade of 3 per cent HM. The HM assemblage of the Jack Track deposit has an ilmenite content of 75 per cent, 6.9% combined magnetic leucoxene and non-magnetic leucoxene, 10.8 per cent zircon and 2.4 per cent rutile. The average sizing for the HM is 89.2 microns and the clay content is low at 7.7 per cent. The summary resource estimate is presented in Table 1 below

Table 1. Jack Track Mineral Resource (>3% HM cut-off grade)

Mineral Resource Category	**Material Tonnes (Million)**	**In Situ HM Tonnes (thousand)**	**HM (%)**	**Clay (%)**	**HM Assemblage**			
					Ilmenite *(%)	Leucoxene *(%)	Zircon (%)	Rutile (%)
Inferred	18.8	890	4.7	7.7	75	6.9	10.8	2.4

*Includes magnetic and non-magnetic leucoxene, which is a high grade titanium feedstock.

The description of the resource estimation in this announcement is based on information compiled by Shaun Seah under the review of Brett Gibson who is a member of The Australasian Institute of Geoscientists and a full time employee of Iluka. Brett Gibson has sufficient experience which is relevant to this style of mineralisation to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code and consents to the inclusion in the report of the matters based on information in the form and context in which it appears.

Figure 2 Jack Track resource outline and drill line locations, Perth Basin, WA

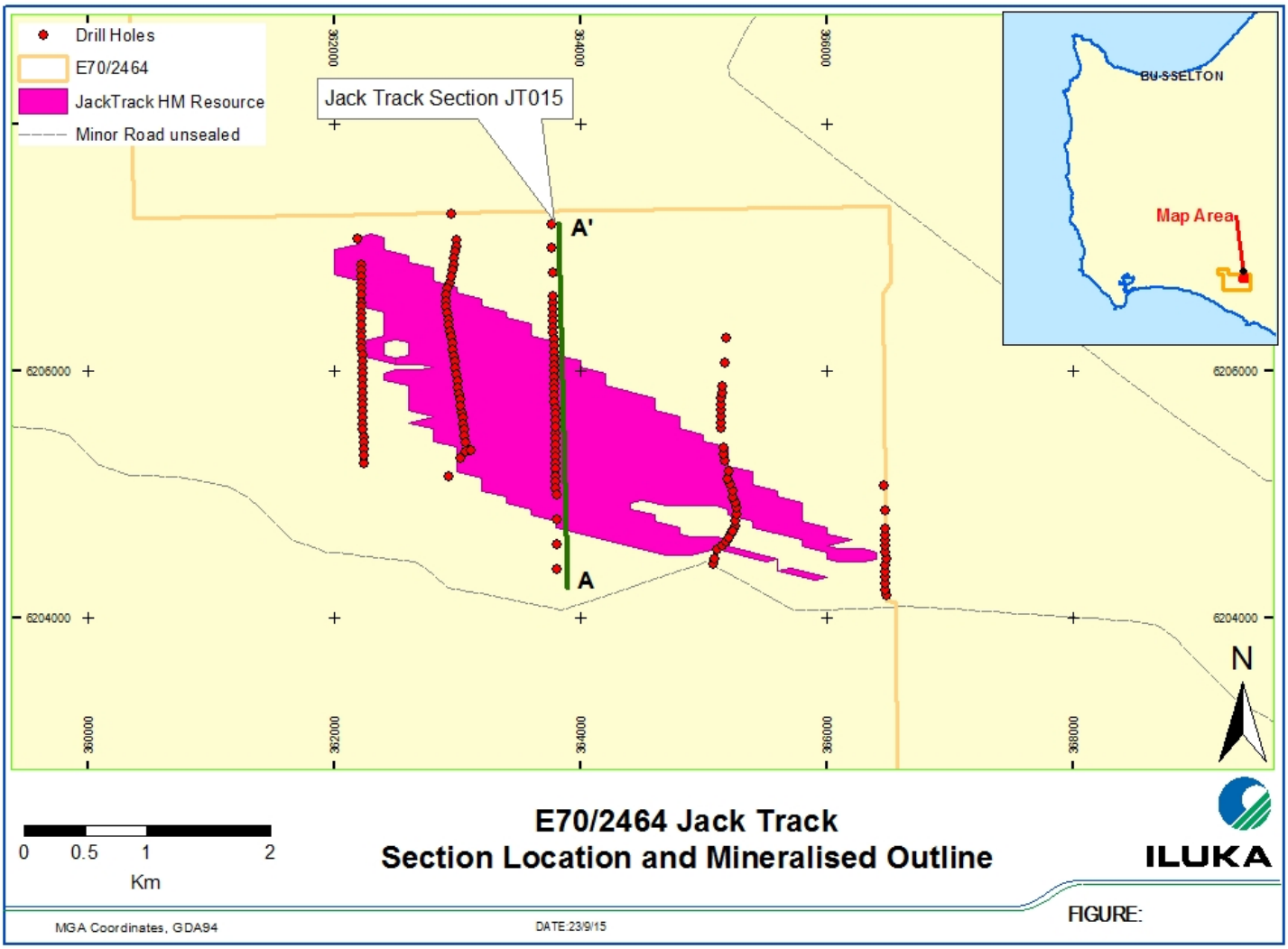
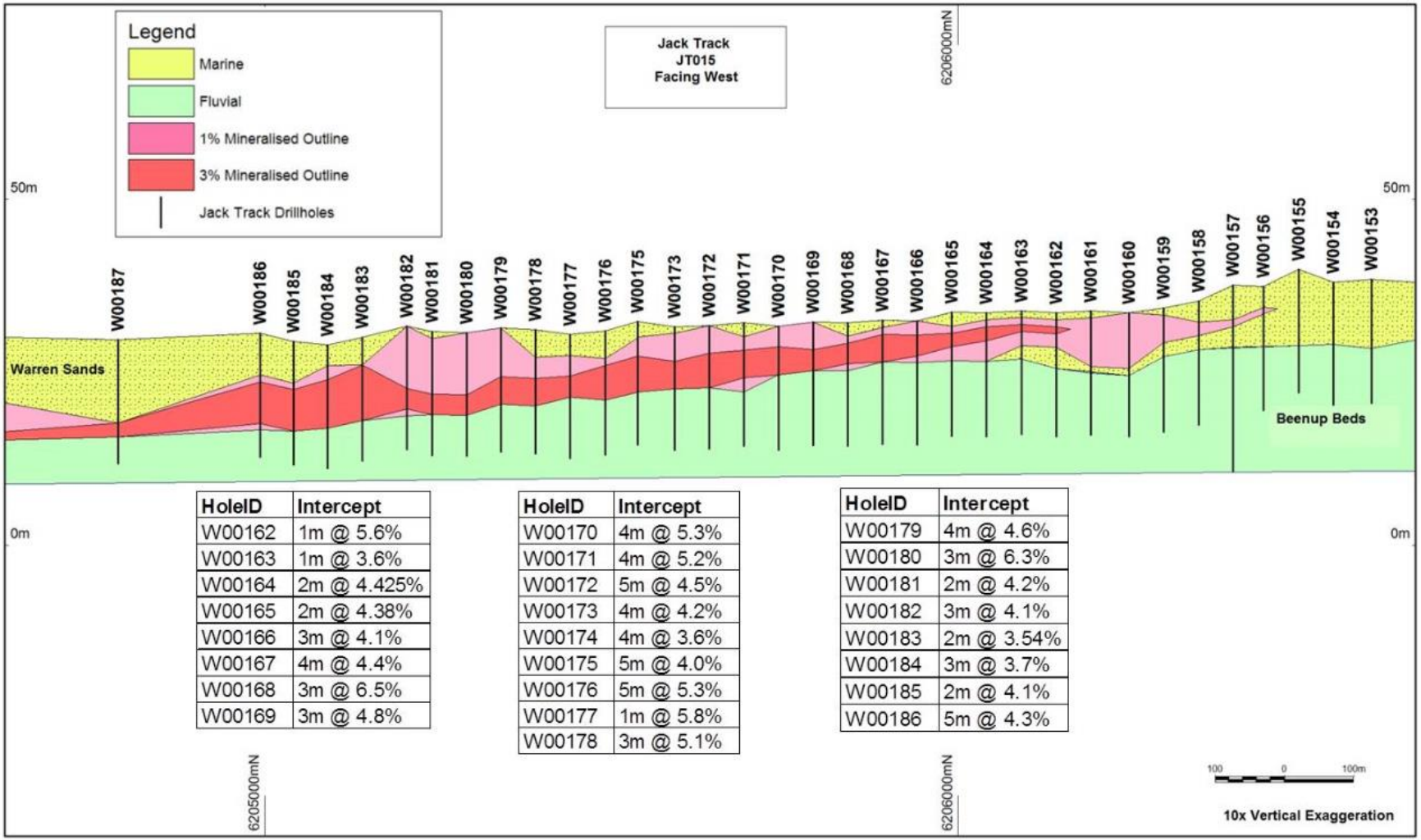


Table 2 Summary results from intersections with >3%HM, with a minimum intercept width of 3m

HoleID	EAST_ MGA	NORTH_ MGA	RL	Interval From	Interval To	Length	HM	SLIMES	OS
W00166	363791	6205940	33.0	2	5	3	4.1	7.7	0.4
W00167	363792	6205891	33.3	2	6	4	4.4	7.8	0.6
W00168	363793	6205841	32.8	3	6	3	6.5	6.2	0.2
W00169	363794	6205791	32.8	4	7	3	4.8	7.4	0.9
W00170	363794	6205741	32.8	3	7	4	5.3	7.1	0.2
W00171	363795	6205691	32.5	4	8	4	5.2	4.7	1.5
W00172	363796	6205641	32.0	4	9	5	4.5	6.4	1.7
W00173	363796	6205591	32.0	5	9	4	4.2	6.4	0.9
W00174	363796	6205541	32.0	5	9	4	3.6	6.6	5.0
W00175	363796	6205538	32.0	5	10	5	4.0	8.0	1.6
W00176	363798	6205491	31.5	5	10	5	5.3	6.0	0.8
W00177	363798	6205440	31.5	6	10	4	5.0	7.5	0.9
W00178	363800	6205391	31.5	7	11	4	4.7	8.3	1.7
W00179	363800	6205340	31.5	7	13	6	4.2	6.8	4.2
W00180	363801	6205291	31.5	9	12	3	6.3	9.2	1.3
W00181	363802	6205241	30.6	2	5	3	3.4	7.6	0.3
W00182	363802	6205205	30.5	9	12	3	4.1	7.4	0.9
W00184	363803	6205091	30.9	5	8	3	3.7	6.9	0.1
W00186	363805	6204994	30.5	7	12	5	4.3	6.1	0.9
W00187	363807	6204788	30.7	12	15	3	6.2	11.7	1.1
W00200	362916	6206607	35.2	3	7	4	4.1	8.7	1.3
W00202	362914	6206512	34.0	3	6	3	4.5	8.4	0.3
W00203	362923	6206459	33.4	3	6	3	6.9	9.5	0.3
W00204	362931	6206410	33.0	4	7	3	6.4	9.6	0.6
W00205	362936	6206359	32.3	3	8	5	5.0	9.2	1.0
W00206	362946	6206309	31.7	5	8	3	6.9	11.0	0.1
W00207	362952	6206264	31.6	4	8	4	6.9	7.9	0.8
W00208	362960	6206212	32.0	4	9	5	6.4	9.4	0.6
W00209	362968	6206162	31.8	4	9	5	4.8	8.8	0.5
W00210	362971	6206114	31.5	4	8	4	5.6	9.6	0.1
W00211	362981	6206063	31.0	5	9	4	6.4	7.6	0.3
W00212	362989	6206015	30.9	5	9	4	6.1	7.1	0.9
W00213	362987	6206015	30.9	6	9	3	6.1	6.8	0.2
W00214	362995	6205965	30.5	6	9	3	4.9	6.4	2.1
W00220	363037	6205659	30.0	3	6	3	5.5	7.7	0.4
W00222	363050	6205565	30.0	5	8	3	6.2	8.3	0.3
W00225	363071	6205412	30.0	8	12	4	5.7	9.5	0.5
W00226	363072	6205336	30.4	9	13	4	5.6	10.3	1.9
W00235	362221	6206657	33.5	5	8	3	5.7	8.8	1.5
W00242	362226	6206313	31.1	8	11	3	3.5	8.5	4.9
W00248	362230	6206068	30.1	8	11	3	6.3	10.1	3.4
W00249	362231	6206019	30.0	7	11	4	4.7	9.6	2.1
W00250	362232	6205968	30.0	8	11	3	4.9	9.1	3.5
W00288	365151	6204571	15.0	9	13	4	3.5	7.8	4.2
W00300	365218	6205071	12.0	4	8	4	5.9	6.2	0.5

Figure 3: Summary drill section through Jack Track Deposit (JT015) highlighting the >3 per cent HM deposit envelope



HoleID	Intercept
W00162	1m @ 5.6%
W00163	1m @ 3.6%
W00164	2m @ 4.425%
W00165	2m @ 4.38%
W00166	3m @ 4.1%
W00167	4m @ 4.4%
W00168	3m @ 6.5%
W00169	3m @ 4.8%

HoleID	Intercept
W00170	4m @ 5.3%
W00171	4m @ 5.2%
W00172	5m @ 4.5%
W00173	4m @ 4.2%
W00174	4m @ 3.6%
W00175	5m @ 4.0%
W00176	5m @ 5.3%
W00177	1m @ 5.8%
W00178	3m @ 5.1%

HoleID	Intercept
W00179	4m @ 4.6%
W00180	3m @ 6.3%
W00181	2m @ 4.2%
W00182	3m @ 4.1%
W00183	2m @ 3.54%
W00184	3m @ 3.7%
W00185	2m @ 4.1%
W00186	5m @ 4.3%

Attachment 2

Table 1 JORC 2012 – Jack Track Deposit

It is a requirement under JORC 2012 reporting arrangements for this release to include the following information

Section 1 Sampling Techniques and Data		
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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	Drilling has been done in 2015 which was completed by Wallis Drilling. All drill holes are drilled with reverse circulation air core drill rigs. A total of 2432m has been drilled utilising one metre length samples collected from a rotary splitter chute. All holes were drilled vertically which is essentially perpendicular to the mineralisation.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	A rotary splitter is used to disperse material exiting the cyclone and 25% sub sample splits are collected from quadrants beneath the splitter. Sample weights are recorded and monitored to detect any sample material bias.
	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.	•All samples have been assayed at Iluka internal laboratories using industry best standard techniques for HM determination. RC-AC drilling was used to obtain 1m samples from which a ~1.5kg sample was collected using a rotary splitter. •Heavy mineral determination was done on 2191 samples: The sample was dried, de-slimed (material <53µm removed) and then had oversize (material +2mm) screened off. 100g of the sand fraction (53 to 2000um) sample then had a Heavy Mineral (HM) sink performed on it using Lithium-Sodium-Tungsten (SG=2.85). The resulting HM concentrate was then dried and weighed to determine the insitu HM content. •Following each drilling campaign, HM concentrate from similar geological domains were grouped together to form Mineralogical Bulk Samples to

		determine the mineral assemblage and indicative mineral quality. These Bulk Samples underwent a magnetic separation using a permanent magnetic roll separator set up. The magnetic and non-magnetic fractions (that come out of the magnetic separator) then had an XRF analysis completed. A small portion (~10grams) was sent for Specific Gravity (SG) separation using Thallium Malonate Solution (TMF). This separation technique was used to determine grain size and indicative chemistry for Zircon and Rutile
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).	All drilling was done using reverse circulation air core drill holes with NQ (75.7mm hole diameter) drill rods.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Sample quality is recorded at time of logging samples and also supported by recorded laboratory weights.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RCAC samples were visually checked for recovery, moisture and contamination.
	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.	There is no relationship between sample recovery and grade however samples with increased induration have lower recovery.
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.	Samples were logged by qualified geologists and the geological information recorded is adequate to support the resource estimate. Drill samples were unconsolidated sands, therefore geotechnical information was not available.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of RC samples recorded estimated slimes, colour, lithology, dominant grainsize, coarsest grainsize, sorting, induration type, hardness, estimated rock and estimated HM.

	The total length and percentage of the relevant intersections logged.	All samples have had lithology data logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No core has been taken. Samples were unconsolidated.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Samples were collected beneath a rotary splitter. Approximately 25% of the sample is collected for geological logging and analysis. Water injection was used to clean the drill string if required. Samples taken from below the water table were wet.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation is consistent with industry best practice.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	QA/QC was conducted during the drilling in the Jack Track Deposit. This included field duplicates and insertion of standards in the drilling stage. The original and the duplicate samples are each 25% splits taken simultaneously from the rotary splitter mounted on the drill rig.
	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.	Flushing of the drill rods was carried out at the end of each sample interval to ensure contamination was minimised. Field duplicates were taken at a rate of 1:34. HM duplicate precision is relatively poor, especially at grades above the typical resource cut-off grade of 3% HM, where precision is expected to improve. Twinned holes were drilled at a ratio of 1:31 holes. Twin hole variability is probably caused by the same issues causing poor duplicate performance. There was no overall HM% bias in the twinned hole pairs.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Grain size was determined from field logging and bulks. The sample size of ~1.5Kg is appropriate for the mineralised fine to medium grained host sand material.
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.	The assay technique utilised is appropriate for the mineralisation at Jack Track. The Mineralogical Bulk Sample evaluation processes are appropriate for the current level of study and applied resource classification. The analysis technique is considered a total analysis.

	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.	This data does not contain any results generated by geophysical methods.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicate, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Standards and duplicate samples were used in the checks for quality control. 71 field standards were inserted at a ratio of 1:34. 71 duplicate pairs were collected at a ratio of 1:34. Overall the standard performance (accuracy) is acceptable with no consistent bias noted for HM. However precision was relatively poor.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant mineral intersections are verified by the project geologist when sample results are returned from analysis and then again by an Iluka development geologist at the time of resource estimation.
	The use of twinned holes.	Twin holes were drilled at a rate of approximately 1:31 holes. Relatively poor correlation between twinned hole pairs might be attributed to in-ground variability in the Beenup Beds unit. However it is likely that sampling issues are responsible for twin hole variability which is also reflected in poor duplicate performance. There was no overall HM% bias in the twinned hole pairs.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data has been logged straight into portable computers. Logged data was validated (usually in Micromine Field Marshal) and then uploaded and stored into the Iluka Geological Database (acQuire).
	Discuss any adjustment to assay data.	No adjustments were made.
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.	Drill hole collars were surveyed with DGPS with an estimated accuracy of ±2m horizontal accuracy and ±5m vertical accuracy. The drill holes were projected to the topographic surface generated by Landgate and derived from photogrammetry sourced from digital aerial photography.

	Specification of the grid system used.	The Jack Track model utilises MGA94 Zone 50. Data was transformed to a local grid for ease of modelling. This involved a 90° clockwise rotation with a translated origin of X0 = 370000 and Y0 = 6200000
	Quality and adequacy of topographic control.	The topographic surface used is adequate for the level of drilling and resource classification applied.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The drilling at Jack Track has been carried out on irregularly spaced lines between 800m and 1400m (1000m on average). Drill holes spaced along the lines vary between 50m to 200m apart (50m on average).
	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.	The drilling is sufficiently spaced for the style of mineralisation being considered to demonstrate geological and grade continuity which is cognisant with the Mineral Resource estimation method and classifications applied.
	Whether sample compositing has been applied.	No sample compositing has been done.
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.	No bias is anticipated due to the drilling being perpendicular to the mineralisation.
	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.	No orientation based sampling bias has been identified within the data at this point.
Sample security	The measures taken to ensure sample security	Samples were collected and placed in polyweave bags which were in turn placed in wooden storage crates for transportation. Dispatch instructions were then forwarded to the laboratory electronically from the database while a hard copy inventory of the samples contained in each crate was dispatched with each crate, a copy being retained by the geologist. A check of the samples dispatched against the samples delivered is done by Iluka's laboratory staff. Samples were securely stored at Iluka compounds

		while in the laboratory queue.
Audits or reviews	The results of any audits or reviews of sampling techniques and data	The sampling technique used by Iluka has previously been reviewed by Snowden and Associates. No issues or concerns were identified by Snowden.

Section 2 Reporting of Exploration Results		
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 environment settings.	The Jack Track deposit is located on the Scott River Coastal Plain, 70km south of Busselton and 48km southwest of Nannup. The deposit is covered by exploration licence E70/2464 which is currently held by Iluka Resources Limited (51%) and Governor Broome Sands Pty Ltd (49%). E70/2464 is the subject of the Farm-In and Exploration Joint Venture Agreement between Governor Broome Sands Pty Ltd (100% owned by Astro Resources NL) and Iluka Resources Limited. According to the terms of the JV Agreement, Iluka can increase its ownership to 80% of the tenement if certain expenditure requirements are satisfied. The tenement contains environmentally sensitive areas such as the Geomorphic Wetlands, Gingilup-Jasper Wetland System and a Threatened Ecological Community Buffer Zone. The area is also a Dieback Risk Zone. E70/2464 is comprised of private land. There is no native title determination; however there is a native title application by the South West Boojarah People. The Blackwood River is a registered Aboriginal Site (20434) and the Scott River is lodged as a registered site (22982). Neither of the sites are proximal to the Jack Track Deposit. This information is obtained from the Aboriginal Heritage Inquiry System which is administered by the Government of W.A Department of Aboriginal Affairs.

	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement (E70/2464) that the Jack Track Deposit is located within is held by Iluka Resources Limited (51%) and Governor Broome Sands Pty Ltd (49%).
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	The data used for this estimate was drilled by Iluka Resources Limited in 2015.
Geology	Deposit type, geological setting and style of mineralisation	The Jack Track Deposit is located in the Scott Coastal Plain, within the Perth Basin. It consists of beach deposited HM strands. The host beach sand facies (Warren Sands) is overlain by sand and soil at surface. The poorly sorted and arkosic (fluvial) Beenup Beds forms the basement.
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:	The Jack Track dataset comprises over 2432m of drilling so it is impractical to table all drill results. A summary of representative HM intersections is provided in the main text.
	easting and northings 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 dole	
	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.	
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.	No weighting of assay values has been done. A nominal lower HM cut-off grade of 3% has been used for the reporting of significant intercepts and for the reporting of the resource estimate.

	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.	No aggregation of samples was required as the samples within the mineralised domain were all 1m lengths.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are used in the reporting of the mineralisation.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.	The Jack Track deposit is hosted within a palaeo beach placer. The geology, geometry and mineralisation of this style of deposit are well understood. The drilling is essentially perpendicular to the mineralisation so all intercepts represent true widths.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	
	If it is not known and only the down hole 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 the drill collar locations and appropriate sectional views.	Several representative cross sections through the Jack Track Deposit and a plan showing the drill hole distribution are given in the geological report.
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.	Representative reporting of low and high grades has been employed within this report.

Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Logging of the samples includes visually estimating the HM present, the results of which corroborate the presence of HM mineralization. Sand residues from similar geological domains were grouped together to form Mineralogical Bulk Samples to determine the mineral assemblage and indicative mineral quality (12 composite samples were collated). These Bulk Samples underwent a magnetic separation using a permanent magnetic roll separator set up. The magnetic and non-magnetic fractions (that come out of the magnetic separator) then had an XRF analysis completed. A small portion (~10grams) was sent for Specific Gravity (SG) separation using Thallium Malonate Solution (TMF). This separation technique was used to determine grain size and indicative chemistry for Zircon and Rutile. The Iluka Standard Bulk Density formula used accounts for void space and variable material composition. It is the same formula used at current Iluka mine sites which mine similar material. Apart from minor sulphide detected, no deleterious or potentially deleterious or contaminating substances have been identified in the Jack Track deposit.
Further work	The nature and scale of planned further work (eg test for lateral extensions or depth extensions or large-scale step-out drilling).	No further test work is currently planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	No further test work is currently planned.

Section 3 Estimation and Reporting of Mineral Resources		
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.	Logging of RC-AC samples was input directly into a laptop computer using Micromine software with data verification routines enabled. Data was then transferred into Iluka's Geology Database (acQuire) which incorporated further verification routines. Assay data was stored in Iluka's CCLASS laboratory database at the time of analysis and transferred electronically to the Geology Database.
	Data validation procedures used.	Drill data was validated to ensure no duplicate records were present and statistical evaluation was conducted to ensure all results were within acceptable ranges.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Several Iluka Competent Persons have visited the Jack Track Deposit since its discovery.
	If no site visits have been undertaken indicate why this is the case.	
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The geological interpretation is appropriate for the amount and distribution of the drill data. The geological style of mineralisation (strand) is generally regarded as fairly consistent. The deposit is similar in style to many of other strand deposits from within the Perth Basin.
	Nature of the data used and of any assumptions made.	All relevant information has been sourced from the drill samples and the interpretations have been developed over the 2015 drill campaign. The interpretations were developed based on a nominal 3% HM cut-off.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No other interpretations have been considered due to the consistent and continuous nature of the deposit. The style of mineralisation is well understood from this geological environment.

	The use of geology in guiding and controlling Mineral Resource estimation.	Appropriate geological domaining and corresponding flagging of drill data has been used to control grade interpolation and distribution during resource estimation.
	The factors affecting continuity both of grade and geology.	No factors are known which might affect the continuity of the geology. There is potential for "wash-outs" from post depositional drainage, in between drill lines.
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 mineralisation displays continuity over a strike length of 5km, with an across-strike width of approximately 800m (1300m at maximum). On average, the mineralisation is ~3m thick and is typically located between 2m and 12m below the surface (~5.5m on average).
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 grade interpolation was carried out using the Estima Superprocess within Datamine Studio software. Grade estimation was completed using Inverse Distance Cubed which is an Iluka standard and is deemed appropriate for this style of mineralisation. Mineralogical Bulk Sample Composite Identifier and Hardness values were interpolated using Nearest Neighbour (NN) method. No HM topcut has been used nor deemed necessary. Drill hole sample data was flagged with domain codes corresponding to the geology of the deposit and the domains imprinted on the model from 3-dimensional surfaces generated from the geological and mineralisation interpretations. A primary search dimension of 100m*1500m*2m (X*Y*Z) was used for all assay data. Successive search volume factors of 2 and 3 have been adopted to interpolate grade in areas of lower data density.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	A comparison estimate was undertaken using the Nearest Neighbour method which correlated well, with a near identical global estimate produced. No previous estimate has been completed for Jack Track. The deposit has not been mined, therefore no mine production records are available.
	The assumptions made regarding recovery of by-products.	No by-products have been considered as part of this estimate.

	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	The mineralisation is located below the water table and is known to contain minor sulphides. It is expected that a suitable management plan would be put in place to mitigate any potential acid drainage.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	A parent cell size of 50mE by 200mN by 1mRL was used with 2 by 2 by 1 (X x Y x Z) cell splitting in comparison to the average drill spacing of 50mE by 1000mN by 1mRL.
	Any assumptions behind modelling of selective mining units.	If the deposit was to be mined then selective open cut mining techniques would be employed.
	Any assumptions about correlation between variables.	No correlation between variables has been considered.
	Description of how the geological interpretation was used to control the resource estimates.	Appropriate geological domaining and corresponding flagging of drill data and model cells has been used to control mineralisation estimation during resource estimation.
	Discussion of basis for using or not using grade cutting or capping.	A top cut was not deemed necessary for HM assays following evaluation of the sample assay statistics and consideration of the extent and consistency of the relatively high grade sample grades.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Validation of the model was done by comparing model statistics to drill data statistics, visual comparison of drill hole and model grades and comparison of the Resource Estimate generated by ID3 to a NN Resource Estimate.
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 are estimated on a dry basis using an Iluka proprietary density formula. The formula is considered appropriate and is used at other Iluka deposits which are geologically similar and currently being mined for HM.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	A nominal grade cut-off of 3% HM has been chosen. A 3% HM cut-off is considered appropriate for an Ilmenite dominated deposit of this magnitude and morphology.

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.	Mining is likely to be by open cut mining using suitable excavation machinery. The geometry of the deposit makes it amenable to bulk open cut mining methods currently employed in previous open cut mines operated by Iluka. The unconsolidated nature of the sediments allow for a range of options to be considered including the use of scrapers or large scale truck and shovel, dredging, or dozer trap.
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 nature of the mineralisation is geologically consistent with mineral sands deposits that are currently being mined by Iluka. Further metallurgical testing is required to confirm the best methods for optimal mineral recovery.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential	All environmental impacts will be considered by appropriate studies during feasibility studies prior to mining. All waste streams including sand and fines residues will be returned to the mine void as is typical for mineral sands mining operations. Environmentally sensitive areas cover a portion of the deposit that could restrict mining. The deposit area is comprised of cleared land, blue gum plantations and native vegetation. The deposit cuts across a portion of the Scott River.

	environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	The bulk density values are calculated using an Iluka proprietary density formula. The formula is considered appropriate and is used at other Iluka deposits which are geologically similar and currently being mined for HM.
	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.	The Iluka Standard Bulk Density formula used accounts for void space and variable material composition. It is the same formula used at current Iluka mine sites which mine similar material.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	It is assumed that the material in the jack Track Deposit has the same density relationship that is seen in Iluka deposits that are currently being mined. This assumption is considered valid as the deposit is geologically similar to other deposits mined In the Perth Basin.
Classification	The basis for the classification of the Mineral Resource into varying confidence categories	The Jack Track resource has been given an Inferred classification due to the widely spaced drilling (1000*50m). The classification is supported by adequate mineralogical characterisation.
	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 resource estimate appropriately reflects the Competent Person's impression of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No audit of the Jack Track Deposit has been completed to date.

	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.	An Inferred Resource Classification has been assigned to the deposit as per the guidelines set out in the 2012 JORC code. It is the view of the Competent Person that the frequency and integrity of data, and the Resource Estimation methodology are appropriate for this style of mineralisation and support the Resource Classification applied.
	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	The statement relates to the global estimate of tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No production data is available as the deposit is not in production.