A.B.N. 41 004 669 658

ASX ANNOUNCEMENT

7 May 2021

ASX:RND

EKJV Summary Resources and Reserves Update

Please find following the Resources and Reserves Report as received from Northern Star Resources Limited on 6 May 2021.

The information contained in the attached Resources and Reserves Report has been prepared by Northern Star Resources Limited and Rand Mining Ltd makes no comment on its accuracy or completeness.

This announcement has been authorised for release by Anton Billis, Managing Director.

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MEMORANDUM

TO: RAND MINING LIMITED and TRIBUNE RESOURCES LIMITED

FROM: MICHAEL MULRONEY

DATE: 3 MAY 2021

SUBJECT: **EKJV SUMMARY RESOURCE AND RESERVE REPORT - 31 MARCH 2021**

EXECUTIVE SUMMARY

The full statement of Mineral Resources and Ore Reserves for the East Kundana Joint Venture (EKJV) as at 31 March 2021 has been completed and is summarised in the following pages.

The Mineral Resource and Ore Reserve Statement has been prepared and reported to compile with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 edition) with the relevant Competent Persons Statement noted and attached.

The general assumptions for reporting the Mineral Resource and Ore Reserve Statement as at 31 March 2021 are outlined in the accompanying Table 1 document (Appendix 2).

Mineral Resources, inclusive of assumed modifying factors, have been estimated using a gold price of A$2,250 per ounce. Further technical and economic evaluation will be required for conversion to Ore Reserves in the future. All Mineral Resources reported are inclusive of stated Ore Reserves.

Ore Reserves, inclusive of all technical and economic factors, have been estimated using a gold price of A$1,750 per ounce.

EKJV MINERAL RESOURCES

Total Mineral Resources defined within the EKJV tenements decreased by 69,000 ounces to a total of:

12.03 million tonnes at 5.1 gpt gold for 1.99 million ounces of gold

Deposit	31 March 2021 ('000 ozs)	30 June 2020 ('000 ozs)	Variation ('000 ozs)
Surface			
Hornet Pit	29	23	6
Golden Hind	11	23	(12)
Pegasus	9	7	2
Underground			
Drake	17	19	(2)
Falcon	263	270	(7)
Golden Hind	47	64	(17)
Hornet	264	277	(13)
Pegasus	426	391	35
Pode	355	381	(26)
Rubicon	196	218	(22)
Raleigh	331	331	-
Falcon North	16	16	-
Stockpiles RHP	8	2	6

Stockpiles Raleigh	-	-	-
Stockpiles GEM (100%)	1	0	1
Stockpiles R&T (100%)	13	33	(20)
Gold in Circuit	-	-	-
TOTAL	**1,986**	2,055	**(69)**

1. *Numbers are quoted on a 100% basis.*
2. *Rounding may result in apparent summation differences between tonnes, grade and contained metal content.*

Comparison with the Mineral Resource Statement for the year ended 30 June 2020 shows a decrease of approximately 69,000 ounces representing the following variations:

- Stable gold price at A$2,250/oz,
- Reflects substantial drilling at Pegasus, Pode, Hera,
- Mining depletion at Rubicon, Hornet, Pegasus, Pode and Hera,
- Slight refinement in resource estimation methodology from 30 June 2020,
- Revised modifying factors used from 30 June 2020,
- Significant back log of unreported assay data,
- Revised Stockpile reconciliation.

EKJV ORE RESERVE SUMMARY

Total Ore Reserves defined within the EKJV tenements decreased by 189,000 ounces to a total of:

3.53 million tonnes at 5.1 gpt gold for 0.57 million ounces of gold

Deposit	31 March 2021 ('000 ozs)	30 June 2020 ('000 ozs)	Variation ('000 ozs)
Surface			
Hornet	19	21	(2)
Golden Hind	11	0	11
Underground			
Drake	-	-	-
Falcon	-	-	-
Golden Hind	-	-	-
Hornet	34	52	(18)
Pegasus	197	254	(57)
Pode	145	192	(47)
Raleigh	108	108	-
Rubicon	37	102	(65)
Falcon North	-	-	-
Stockpiles RHP	8	2	6
Stockpiles Raleigh	-	-	-
Stockpiles GEM 100%	1	0	1
Stockpiles R&T 100%	13	33	(20)
Gold in Circuit	-	0	-
TOTAL	**575**	764	**(189)**

1. *Numbers are quoted on a 100% basis, some rounding differences.*
2. *Rounding may result in apparent summation differences between tonnes, grade and contained metal content.*

Comparison with the Ore Reserve statement for the year ended 30 June 2019 shows a decrease of approximately 189,000 ounces representing the following variations:

- Stable gold price at A$1,750/ozs,
- Mining depletion at Rubicon, Hornet, Pegasus and Pode,
- Revised cut-off grades to reflect current operations,
- Decrease in Ore Reserves at Pegasus, Rubicon, Hornet and Pode from depletion,
- Modest increase in grade,
- Revised Stockpile reconciliation.

Attached (Appendix 1) are the summary tables for the Mineral Resource and Ore Reserve Statement for the respective EKJV partner's equity interests for the year ended 30 June 2020.

The applicable Competent Person(s) disclosures and Table 1 compilation under JORC 2012 are appended in Appendix 2.

MICHAEL MULRONEY
Chief Geological Officer
Northern Star Resources Limited

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APPENDIX 1

EAST KUNDANA JV MINERAL RESOURCES

As at 31 March 2021		MEASURED			INDICATED			INFERRED			TOTAL RESOURCES		
		Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
Rand Mining & Tribune Resources' Attributable	Equity	(000's)	(gpt)	(000's)	(000's)	(gpt)	(000's)	(000's)	(gpt)	(000's)	(000's)	(gpt)	(000's)
EAST KUNDANA JOINT VENTURE													
Surface													
Hornet	49%	1	9.3	0	61	5.7	11	21	3.6	2	83	5.2	14
Golden Hind	49%	-	-	-	38	4.4	5	1	3.4	0	38	4.4	5
Pegasus	49%	-	-	-	22	5.7	4	3	4.4	0	25	5.5	4
Subtotal - Surface		*1*	*9.3*	*0*	*121*	*5.3*	*21*	*25*	*3.7*	*3*	*147*	*5.1*	*24*
Underground													
Drake	49%	-	-	-	25	3.6	3	63	2.7	5	88	3.0	8
Falcon	49%	-	-	-	-	-	-	858	4.7	129	858	4.7	129
Golden Hind	49%	-	-	-	59	5.0	9	98	4.3	13	156	4.6	23
Hornet	49%	129	4.3	18	632	3.9	79	198	5.1	32	959	4.2	130
Pegasus	49%	200	6.7	43	757	6.2	151	111	4.2	15	1,068	6.1	209
Pode	49%	346	6.4	72	442	4.9	70	241	4.2	32	1,029	5.3	174
Rubicon	49%	199	4.9	31	387	4.1	51	125	3.4	14	711	4.2	96
Raleigh	50%	161	9.1	47	356	7.5	86	214	4.8	33	730	7.1	166
Falcon North	50%	-	-	-	-	-	-	57	4.4	8	57	4.4	8
Subtotal - Underground		*1,035*	*6.3*	*211*	*2,657*	*5.3*	*449*	*1,963*	*4.5*	*282*	*5,655*	*5.2*	*942*
Stockpiles RHP	49%	42	3.0	4	-	-	-	-	-	-	42	3.0	4
Stockpiles Raleigh	50%	0	1.7	0	-	-	-	-	-	-	0	1.7	0
Stockpiles GEM (100% NST) (KB & Greenfields	0%	-	-	-	-	-	-	-	-	-	-	-	-
Stockpiles R&T (100% Rand & Tribune)	100%	130	3.0	13	-	-	-	-	-	-	130	3.0	13
Gold in Circuit	49%	-	-	-	-	-	-	-	-	-	-	-	-
Sub-Total East Kundana JV		**1,208**	**5.9**	**228**	**2,778**	**5.3**	**470**	**1,988**	**4.5**	**285**	**5,974**	**5.1**	**983**

APPENDIX 1 cont.

EAST KUNDANA JV ORE RESERVES

As at 31 March 2021

Rand Mining & Tribune Resources' Attributable	Equity	PROVED			PROBABLE			TOTAL RESERVES		
		Tonnes (000's)	Grade (gpt)	Ounces (000's)	Tonnes (000's)	Grade (gpt)	Ounces (000's)	Tonnes (000's)	Grade (gpt)	Ounces (000's)
EAST KUNDANA JOINT VENTURE										
Surface										
Hornet	49%	-	-	-	68	4.3	9	68	4.3	9
Golden Hind	49%	-	-	-	52	3.4	6	52	3.4	6
Pegasus	49%	-	-	-	-	-	-	-	-	-
Subtotal - Surface		*-*	*-*	*-*	*120*	*3.9*	*15*	*120*	*3.9*	*15*
Underground										
Drake	49%	-	-	-	-	-	-	-	-	-
Falcon	49%	-	-	-	-	-	-	-	-	-
Golden Hind	49%	-	-	-	-	-	-	-	-	-
Hornet	49%	37	2.6	3	106	4.0	14	143	3.7	17
Pegasus	49%	130	5.8	24	324	7.0	72	454	6.6	97
Pode	49%	325	4.4	46	175	4.5	25	499	4.4	71
Raleigh	50%	30	6.2	6	274	5.5	48	304	5.5	54
Rubicon	49%	63	6.5	13	43	3.6	5	106	5.3	18
Falcon North	50%	-	-	-	-	-	-	-	-	-
Subtotal - Underground		*584*	*4.9*	*93*	*922*	*5.5*	*165*	*1,506*	*5.3*	*257*
Stockpiles RHP	49%	42	3.0	4	-	-	-	42	3.0	4
Stockpiles Raleigh	50%	0	1.7	0	-	-	-	0	1.7	0
Stockpiles GEM (100% NST) (KB & Greenfields)	0%	-	-	-	-	-	-	-	-	-
Stockpiles R&T (100% Rand & Tribune)	100%	130	3.0	13	-	-	-	130	3.0	13
Gold in Circuit	49%	-	-	-	-	-	-	-	-	-
Sub-Total East Kundana JV		**756**	**4.5**	**109**	**1,042**	**5.4**	**180**	**1,798**	**5.0**	**289**

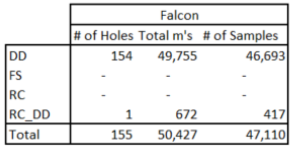
Appendix 2

JORC Code, 2012 Edition – Table 1 Report

Falcon Deposit: Resources and Reserves – 31 March 2021

Section 1: Sampling Techniques and Data

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td rowspan="3">Sampling techniques</td><td>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.</td><td>A combination of underground and surface diamond drilling (DD), surface reverse circulation drilling (RC) and surface RC drilling with diamond tail (RC_DD) were used to collect material for analysis.
<table><tr><th></th><th colspan="3">Falcon</th></tr><tr><th></th><th># of Holes</th><th>Total m's</th><th># of Samples</th></tr><tr><td>DD</td><td>154</td><td>49,755</td><td>46,693</td></tr><tr><td>FS</td><td>-</td><td>-</td><td>-</td></tr><tr><td>RC</td><td>-</td><td>-</td><td>-</td></tr><tr><td>RC_DD</td><td>1</td><td>672</td><td>417</td></tr><tr><td>Total</td><td>155</td><td>50,427</td><td>47,110</td></tr></table></td></tr>
<tr><td>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</td><td>DD drilling is sampled within geological boundaries with a minimum (0.3m) and maximum (1.0m) sample length.</td></tr>
<tr><td>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 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</td><td>DD drill core was nominated for either half core or full core sampling. Samples designated for half core were cut using an automated core saw. The mass of material collected was dependent on the drill hole diameter and sampling interval selected.
A sample size of at least 3kg of material was targeted for each face sample interval.
All samples were delivered to a commercial laboratory where they were dried and crushed to 90% of material ≤3mm. At this point, samples greater than 3kg were split using a rotary splitter, then pulverised to 90% ≤75µm. A 40g charge was selected for fire assay of diamond drill hole samples.</td></tr>
<tr><td>Drilling techniques</td><td>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.).</td><td>Surface diamond drill holes were completed using HQ2 (63.5mm) whilst underground diamond drill holes used NQ2 (50.5mm).
Historically, core was orientated using the Reflex ACT Core orientation system. Currently, core is orientated using the Boart Longyear Trucore Core Orientation system.
In one case, an RC pre-collar has been drilled, followed by a diamond tail.</td></tr>
<tr><td rowspan="3">Drill sample recovery</td><td>Method of recording and assessing core and chip sample recoveries and results assessed.</td><td>For DD drilling, any core loss is recorded on the core block by the driller. This is then captured by the logging geologist and entered as an interval into the hole log.</td></tr>
<tr><td>Measures taken to maximise sample recovery and ensure representative nature of the samples.</td><td>Contractors adjust the rate and method off drilling if recovery issues arise. All recovery is recorded by the drillers on core blocks. This is checked and compared to the measurements of the core by the geological team. Any issues are communicated back to the drilling contractor.</td></tr>
<tr><td>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.</td><td>Recovery was excellent for diamond core and no relationship between grade and recovery was observed. Average recovery across the Kundana camp is at 99%. No specific areas within the Falcon model area had issues with recovery.</td></tr>
<tr><td rowspan="3">Logging</td><td>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.</td><td>All diamond core is logged for lithology, veining, alteration, mineralisation, and structural data. Structural measurements of specific features are also taken through oriented zones.
Logging is entered in AcQuire using a series of drop-down menus which contain the appropriate codes for description of the rock.</td></tr>
<tr><td>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</td><td>All core logging is qualitative with mineralised zones assayed for quantitative measurements. Every core tray is photographed wet.</td></tr>
<tr><td>The total length and percentage of the relevant intersections logged.</td><td>For all drill holes, the entire length of the hole is logged.</td></tr>
<tr><td rowspan="2">Sub-sampling techniques and</td><td>If core, whether cut or sawn and whether quarter, half or all core taken.</td><td>The regolith in all drill holes was sampled as full core. Fresh rock was sampled as either full core or half core. Core cutting was completed using an automated core saw. Where drill core has been half core sampled, the remaining core has been retained.</td></tr>
<tr><td>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</td><td>No RC samples have been used to inform the Falcon Resource model.</td></tr>
</table>

APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
sample preparation	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Preparation of NSR samples was conducted at Bureau Veritas' Kalgoorlie or Perth facilities; commencing with sorting, then checking and drying samples at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal -6mm particle size. If the sample is greater than 3kg, a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverised to 90% ≤75µm, using a Labtechnics LM5 bowl pulveriser. 400g pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets. The sample preparation is considered appropriate for the deposit.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Standard procedures are used for all processes within the laboratory. Grind checks are performed at both the crushing stage (3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
	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.	Umpire sampling is performed monthly where 3% of the samples are sent to the umpire laboratory for processing.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate for the material being sampled.
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.	A 40g fire assay charge for diamond drill holes is used with a lead flux in the furnace. The prill is totally digested by HCl and HNO_3 acids before Atomic Absorption Spectroscopy (AAS) determination for gold analysis. For areas around the target zone and of prospective high-grade mineralisation, a fire assay to extinction method may be used. For the assay to extinction, a total of five 40g charges go through the above fire assay process. The average of these five charges is then taken and used as the primary assay value. These extent and selection of which zones are fire assayed to extinction is decided upon by the logging geologist at the sample selection stage.
	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.	No geophysical tools were used to determine any element concentrations.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	Certified reference materials (CRMs) are inserted into the sample sequence at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of three standard deviations are re-assayed with a new CRM. Blanks are inserted into the sample sequence at a rate of 1 per 20 samples. The insertion points are selected at random, except where high grade mineralisation is expected. In these cases, a blank is inserted after the high-grade sample to test for contamination. Results greater than 0.2gpt if received are investigated, and re-assayed if appropriate. New pulps are prepared if anomalous results cannot be resolved. Barren flushes are regularly inserted after anticipated high gold grades at the pulverising stage. No field duplicates were submitted for diamond core. Pulp duplicates are requested after any ore zone. These are indicated on the sample sheet and the submission sheet. When visible gold is observed in core, a quartz flush is requested after the sample. Laboratory performance was monitored using the results from the QA samples mentioned above. This was supplemented by the internal QA samples used by the laboratories, which included pulp duplicates and CRMs. The QA studies indicate that accuracy and precision are within industry accepted limits.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by a Northern Star geologist during the drill hole validation process, and later by a Competent Person to be signed off.
	The use of twinned holes.	No twinned holes were drilled into the Falcon deposit. Re-drilling of some drill holes has occurred due to issues downhole (e.g., bogged rods). These have been captured in the database with an 'A' suffix. Re-drilled holes are sampled, whilst the original drill hole is logged, but not sampled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging and sampling are directly recorded into AcQuire. Assay files are received in *.cvs format and loaded directly into the database using an AcQuire importer object. Assays are then processed through a form in AcQuire for QAQC checks. Hardcopy and non-editable electronic copies of these are stored.
	Discuss any adjustment to assay data.	No adjustments have been made to the 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.	Planned holes are marked up by the mine survey department using a total station survey instrument in mine grid (Kundana 10). The actual hole position is then located by the mine survey department once drilling is completed. Holes are lined up on the collar point using the DHS Minnovare Azimuth Aligner. Planned azimuths and dips of the holes are downloaded to the aligner which is then placed on the rod string to align the hole for drilling.

Criteria	JORC Code explanation	Commentary
		During drilling, single shot surveys are conducted at the 30m mark to check azimuth aligner set up and track off collar deviation. The DeviFlex tool is used at 50m intervals to track the deviation of the hole and to ensure it stays close to design. This is a relative change tool which measures the change in orientation along the path of the hole at 3m intervals. The DeviFlex tool is referenced back to the azimuth aligner measurement to provide a non-magnetic survey in true North. At the completion of the hole, a final DeviFlex survey is completed taking measurements for the entire hole. Results are uploaded from the DeviFlex software into cloud service. This data is then reviewed, downloaded, and imported into the AcQuire database. The download from the DeviFlex service utilises an average of all the DeviFlex surveys taken over the entire hole. These are review and validated and erroneous surveys discarded. Prior to the overshot mounted DeviFlex tool being available, a combination of magnetic and DeviFlex single shot surveys were used and 30m intervals whilst drilling. A final end of hole multi shot DeviFlex survey was taken to provide a continuous non-magnetic survey of the entire hole trace.
	Specification of the grid system used.	Collar coordinates are recorded in mine grid (Kundana 10) and transformed into MGA94_51.
	Quality and adequacy of topographic control.	Quality topographic control has been achieved through Lidar data and survey pickups of holes over the last 15 years.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill hole spacing varies across the deposit, with most of the drilling between 120m x 120m and 40m x 40m spacing. Some areas proximal to development have been drilled at a 20m x 20m drill spacing.
	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 data spacing and distribution is considered sufficient to support the current resource estimate.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.	The Falcon deposit is interpreted as a series of NNE-SSW trending structures that dip moderately (70°) to the west (local grid). Diamond drilling was designed to target the mineralisation as close to perpendicular as practical. Due to the collar locations available, much of the drilling was completed from footwall to hanging wall.
	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 sampling bias is considered to have been introduced by the drilling orientation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission, samples are stored by Northern Star Resources in a secure yard. Once submitted to the laboratories they are stored in a secure fenced compound, tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No independent audits have been undertaken of the data and sampling practices.

Section 2: Reporting of Exploration Results

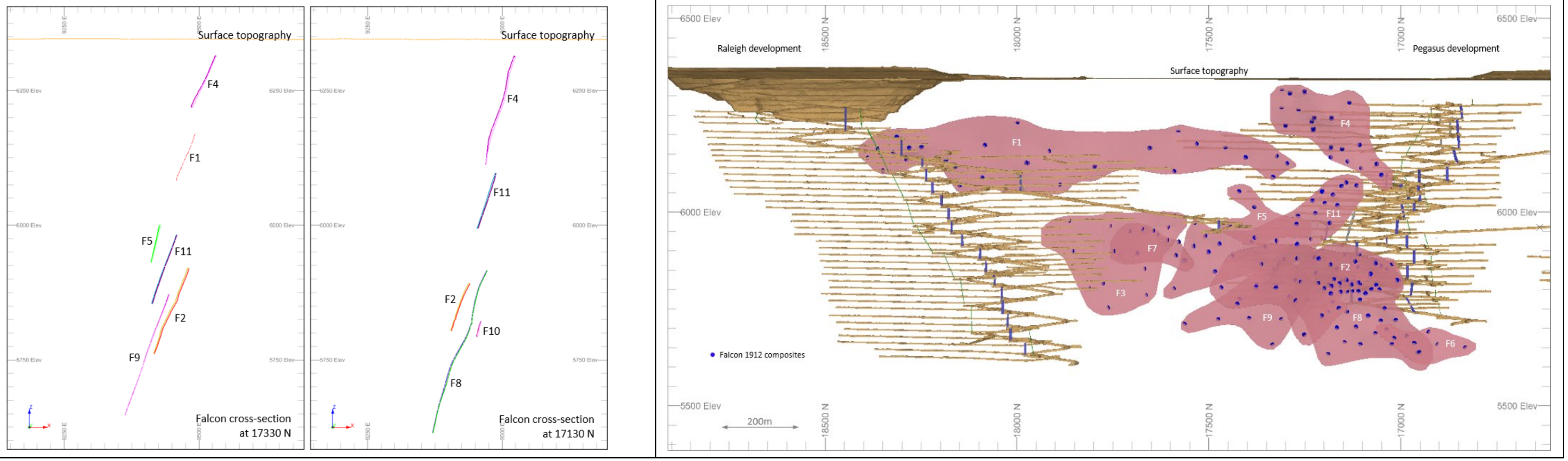
(Criteria listed in the preceding section also apply to this section.)

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.	All holes are located within the M16/309 and M15/993 Mining leases held by The East Kundana Joint Venture (EKJV). The EKJV is majority owned and managed by Northern Star Resources Limited (51%). The minority holding in the EKJV is held by Tribune Resources Ltd (36.75%) and Rand Mining Ltd (12.25%). The tenement on which the Falcon deposit is hosted (M16/309) is subject to three royalty agreements. The agreements that are on M16/309 are the Kundana-Hornet Central Royalty, the Lake Grace Royalty and the Kundana Pope John Agreement No. 2602-13.
	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.	No known impediments exist, and the tenements are in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The first reference to the mineralisation encountered at the Kundana project was the Mines Department report on the area produced by Dr. I. Martin (1987). He reviewed work completed in 1983 – 1984 by a company called Southern Resources who identified two geochemical anomalies, creatively named Kundana #1 and Kundana #2. The Kundana #2 prospect was subdivided into a further two prospects, dubbed K2 and K2A. Between 1987 and 1997, limited work was completed. Between 1997 and 2006, the East Kundana Joint Venture (Tern Minerals (subsequently Rand Mining and Tribune Resources) and Gilt-Edge Mining) (EKJV) focused on shallow open pit potential. The Rubicon open pit was considered economic and production commenced in 2002.

Criteria	JORC Code explanation	Commentary
		In 2011, Pegasus was highlighted by an operational review team and follow-up drilling commenced in 2012. Following the acquisition of the EKJV by Northern Star from Barrick in 2014, production commenced in 2015.
Geology	Deposit type, geological setting and style of mineralisation.	The Kundana camp is situated within the Norseman-Wiluna Greenstone Belt, in an area dominated by the Zuleika shear zone, which separates the Coolgardie domain from the Ora Banda domain. The Falcon deposit is interpreted as a series of mineralised splays off low angle structures that persist through lithological contacts from the K2B (Victorious Basalt - Bent Tree Basalt contact) across the K2A (Bent Tree Basalt- upper felsic and volcaniclastic/sedimentary rocks of the Black Flag Group). The Falcon mineralisation sits in the hangingwall of the regional ‘K2’ structure, west of the Pode deposit. The Pode lodes have been used as a proxy when interpreting the Falcon structures as similar trends are present, although continuity does not appear to be as high on the Falcon lodes as that displayed at Pode. Falcon mineralisation is comprised of laminated to brecciated to extensional-style quartz veining internal to a sheared biotite-sericite-ankerite altered siltstone/sandstone unit and an intermediate volcaniclastic unit. Mineralisation is present within veins, on vein selvedges, and within the altered host rock, with coarse gold often observed. There is a strong visual correlation between arsenopyrite and gold mineralisation. Vein orientation is varied as supported by structural measurements taken from drill core.
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.	A summary of the data present in the Falcon deposit can be found above. The collar locations are presented in plots contained in the NSR 2021 resource report. Drill holes vary in survey dip from +30 to -72 degrees, with hole depths ranging from 42m to 951m, with an average depth of 379m. The assay data acquired from these holes are described in the NSR 2021 resource report. All validated drill hole data was used directly or indirectly for the preparation of the resource estimates described in the resource report.
	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 exclusion of information is not material.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.	All reported assay results have been length weighted to provide an intersection width. A maximum of 2m of barren material (considered < 2gpt) between mineralised samples has been permitted in the calculation of these widths. Typically grades over 2gpt are considered significant, however, where low grades are intersected in areas of known mineralisation these will be reported. No top-cutting is applied when reporting intersection results.
	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.	Where an intersection incorporates short lengths of high grade results these intersections will be reported in addition to the aggregate value. These will typically take the form of ##.#m @ ##.##gpt including ##.#m @ ##.##gpt.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results:	True widths have been calculated for intersections of the known ore zones, based on existing knowledge of the nature of these structures. This can be difficult due to the multiple orientations of mineralisation at Falcon.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Both the downhole width and true width have been clearly specified when used.
	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’).	Not applicable.
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.	Appropriate plans and section have been included at the end of this table.
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.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and ‘From’ and ‘To’ depths.
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.	Petrology samples were selected for key lithologies and sent for thin section preparation and petrographic investigation.

Criteria	JORC Code explanation	Commentary
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	Wide spaced drilling will continue to test continuity of the mineralised trend along strike and at depth, utilising drill platforms at RHP and Raleigh mines. Tighter spaced drilling will also be conducted in specific areas to better define the future drill density requirement of the deposit.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Appropriate diagrams accompany this release.

FALCON DEPOSIT



Cross section views of Falcon ore lodes

Long section view looking east of the Falcon deposit and data used for estimation

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.	Sampling and logging data is either recorded on paper and manually entered into a database system or captured digitally via a logging laptop and directly loaded into the database system. There are checks in place to avoid duplicate holes and sample numbers. Where possible, raw data is loaded directly into the database from laboratory and survey-tool derived files.
	Data validation procedures used.	The complete exported data base including drill and face samples is brought into Datamine RM and checked visually for any apparent errors i.e., holes or faces sitting between levels or not on surface DTM's. Multiple checks are then made on numerical data including: • Empty table checks to ensure all relevant fields are populated. • Unique collar location check • Distances between consecutive surveys is no more than 50m for drill holes • Differences in azimuth and dip between consecutive surveys of no more than 0.3 degrees

Criteria	JORC Code explanation	Commentary
		- The end of hole extrapolation from the last surveyed shot is no more than 30m - Underground face sample lines are not greater than +\- 5 degrees from horizontal Errors are corrected where possible. When not possible, the data is resource flagged as "No" in the database and the database is re-exported. This data is not used in the estimation process. In addition to being validated, drill holes are assigned a Data Class, which provides a secondary level of confidence in the quality of the data. A review of all the historic data for Falcon was undertaken in 2019 and Data Class (DC) values from 0 - 3 assigned, criteria summarised below: - DC 3 = Recent data; all data high quality, validated and all original data available. - DC 2 = Historic data; may or may not have all data in AcQuire or hard copy available but has proximity to recent drilling which confirms the dip, width and tenor. Used to assist in classification. - DC 1 = Historic data; same criteria as DC 2 but cannot be verified with recent drilling. Not used in Resource estimate. - DC 0 = Historic data; no original information or new drilling in proximity to verify. Not used in Resource estimate.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The geological interpretations underpinning these resource models have been prepared by geologists working in adjacent mines and in direct, daily contact with similar ore bodies. The estimation of grades was undertaken by personnel familiar with the orebody and the general style of mineralisation encountered. The Senior Resource Geologist, a Competent Person for reviewing and signing off on estimations of the Falcon lode maintained a presence throughout the process.
	If no site visits have been undertaken indicate why this is the case.	The Competent Person has maintained a presence onsite.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The interpretation of the Falcon deposit has been carried out using a systematic approach to ensure continuity of the geology and estimated mineral resource. The confidence in the geological interpretation is reasonable given the current density of data present. Interpretation of the Falcon mineralised envelopes were conducted using the sectional interpretation method in Datamine RM software. Sectional interpretation was completed at approximately 20m spacing in cross-section. Wireframes were checked for unrealistic volumes and updated where appropriate.
	Nature of the data used and of any assumptions made.	All available geological data was used in the interpretation including drill holes (lithology, assay, and structure), regional structural models and adjacent analogous deposits.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Due to the wide data spacing, alternative interpretations have been considered. This includes a single steep mineralised trend (as opposed to the current 'stacked' moderately dipping lodes) aligned with regional foliations. Shorter strike-length 'pods' have also been considered a possibility and development completed on the Falcon lodes to date suggests this may be the case. The potential for alternative interpretations has been considered when applying Resource Classification to the MRE.
	The use of geology in guiding and controlling Mineral Resource estimation.	The interpretation of the main Falcon structures is based predominantly on moderate to steep dipping mineralised shears within the host unit. Current understanding is that interbedded sediments form a rheological and stratigraphic control to mineralisation. Continuity of structure and mineralisation style along-strike and down-dip is required for at least three consecutive holes along the expected orientation of the mineralised trend in order for a mineralised envelope to be created for estimation.
	The factors affecting continuity both of grade and geology.	Offsetting structures are not present in the adjacent Pode deposits although significant undulations exist which may have some impact on continuity of the mineralised trends. Mineralised envelopes for Falcon are confined to the interbedded sediment (SASL) lithological unit. Contacts to the east with Bent Tree basalt and to west with Black Flags intermediate volcaniclastic form the bounding structures for the Falcon mineralisation.
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.	Mineralisation has been modelled at Falcon over a strike length of 1,500m. Individual mineralised envelopes range from 200m to 1000m along strike and from 50m to 300m down dip. Mineralised envelope true widths range from 0.5m to 8.0m. Mineralisation is known to occur from the base of cover to around 750m below surface.
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.	Multiple estimation methodologies have been tested to ascertain the sensitivity of the estimate to various input parameters, including top-cut, influence limitation model block size and kriging neighbourhood. This test work was completed on the Falc4 lode which has the highest data density. To reflect the geological variability, a two-dimensional approach has been used for sample selection. Samples and blocks are transformed into two-dimensional space (a single plane in the Y-Z orientation), the estimate is completed, then samples and blocks are back-transformed to their original position. This back-transformation is checked to ensure it agrees with the original position of the wireframe. This methodology negates the requirement for dynamic anisotropy and allows the variogram to be used to estimate grade in the major (down plunge) and semi-major (down dip) orientations. Firstly, a 'categorical estimate' is completed on a grade cut-off of 0.30gpt (0.75gpt for the Falc4 lode). This cut-off grade has been determined by looking for a break in the grade distribution.

Criteria	JORC Code explanation	Commentary
		Blocks above 0.30gpt are coded with '1' and blocks below with '0'. An estimate is completed on the binary values to ascertain the probability of the block being above the grade cut-off. For instance, if the block estimate returned 0.65, the assumption would be that 65% of that block volume would be above the 0.30gpt cut-off grade. Following this, two separate data sets are created: all samples above 0.30gpt and all samples below 0.30gpt. These two data sets are used individually to estimate a high-grade and low-grade model. For lodes with limited sample points where a coherent variogram model is not possible, Inverse Distance was used for both the proportional and grade estimates. For all other areas, Ordinary Kriging was used. The final model is created by summing the products of the block proportion estimate and high and low-grade estimates which is a weighted combination of the two models returning a single gold grade for the original block. All estimation uses a three-pass search strategy completed in Datamine RM v 1.4 software. As all estimates use data transformed into two-dimensional space, the direction 3 search has been manipulated to equal the direction 1 search. Shape specific estimation parameters are outlined below. **Falc1** – Data is top cut to 20gpt using the influence limitation approach. Variography was completed on the composited data file. For categorical estimate, search ranges of 200m in directions 1 and 3 and 150m in direction 2 were used. Three passes were used for estimation with distances based on variography. LG and HG data set estimates use the same search ranges as the categorical estimate. **Falc2** – Data was top cut to 20gpt using the influence limitation approach. A hard, top cut of 40gpt was also applied to remove any genuinely anomalous results. Variography was completed on the composited data file. For categorical estimate, search ranges of 120m in direction 1, 80m in direction 2 and 40m in direction 3. Three passes were used for estimation with distances based on variography. For both the LG and HG estimates, a generic variogram has been used to estimate the HG and LG models. **Falc3** – Data was top cut to 30gpt using the influence limitation approach. Variography was completed on the composited data file. For categorical estimate, search ranges of 190m in direction 1, 130m in direction 2 and 50m in direction 3. Three passes were used for estimation with distances based on variography. LG and HG data set estimates use the same search ranges as the categorical estimate above. A generic variogram has been used to estimate the HG and LG models. **Falc4** – Data was top cut to 15gpt using the influence limitation approach. In addition, a hard, top cut of 40gpt has been applied to limit impact of genuine outliers on the influence limitation model. Variography was completed on the composited data file. For categorical estimate, search ranges of 110m in direction 1, 70m in direction 2 and 50m in direction 3 were used. A generic variogram has been used to estimate the HG and LG models. **Falc5** – Data was top cut to 40gpt using the influence limitation approach. No variography was completed for the Falc5 lode as not enough sets of data points were available for realistic variogram calculation. An ID^2 model was used to inform all Falc5 block estimates with grade continuity inferred from adjacent shapes. For categorical estimate, search ranges of 70m in direction 1, 50m in direction 2 and 30m in direction 3 were used. LG and HG data set estimates use the same search ranges as the categorical estimate above. **Falc6** – No top cuts were applied due the low coefficient of variance and lack of genuine outliers. No variography was completed for the Falc6 lode as not enough sets of data points were available for realistic variogram calculation. An ID^2 model was used to inform all Falc6 block estimates. Grade continuity trend has been inferred from nearby shapes. For categorical estimate, search ranges of 70m in direction 1, 50m in direction 2 and 30m in direction 3 were used. Three passes were used for estimation with distances based on adjacent lodes. LG and HG data set estimates use the same search ranges as the categorical estimate above. **Falc7** – Data was top cut to 15gpt using the influence limitation approach. No variography was completed for the Falc7 lode as not enough sets of data points were available for realistic variogram calculation. An ID^2 model was used to inform all Falc7 block estimates. Grade continuity trend has been inferred from nearby shapes. For categorical estimate, search ranges of 70m in direction 1, 50m in direction 2 and 30m in direction 3 were used. Three passes were used for estimation with distances based on adjacent lodes. LG and HG data set estimates use the same search ranges as the categorical estimate above. **Falc8** – Data was top cut to 35gpt using the influence limitation approach. In addition to this, a hard top cut of 50gpt has been applied to limit impact of genuine outliers on the influence limitation model. For categorical estimate, search ranges of 110m in direction 1, 90m in direction 2 and 50m in direction 3 were used. A generic variogram has been used to estimate the HG and LG models. **Falc9** – No top cuts were applied due the low coefficient of variance and lack of genuine outliers. No variography was completed for the Falc9 lode as not enough sets of data points were available for realistic variogram calculation. An ID^2 model was used to inform all Falc9 block estimates. Grade continuity trend has been inferred from nearby shapes. For categorical estimate, search ranges of 70m in direction 1, 50m in direction 2 and 30m in direction 3 were used. LG and HG data set estimates use the same search ranges as the categorical estimate above. **Falc11** – Data was top cut to 30gpt using the influence limitation approach. For categorical estimate, search ranges of 190m in direction 1, 130m in direction 2 and 50m in direction 3 were used. LG and HG data set estimates use the same search ranges as the categorical estimate above. A generic variogram has been used to estimate the HG and LG models
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource Estimate takes appropriate account of such data.	Check estimates have been completed for all lodes. These include conventional Ordinary Kriging (OK) in three-dimensional space (with and without dynamic anisotropy applied), conventional Ordinary Kriging (OK) with data and model transformed into two-dimensional space, OK with a generic variogram and isotropic search, Inverse Distance (ID) and Nearest Neighbour (NN) estimates.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of any by-products.

Criteria	JORC Code explanation	Commentary
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).	No deleterious elements have been considered or estimated for this deposit.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Data spacing for the Falcon deposit varies from 20m x 20m to 120m x 120m. For all lodes, a block size of 10m x 10m x 10m has been chosen. Search ellipse dimensions were derived from the variogram model ranges (generally the distance corresponding to 80% of the total semivariance is used for pass 1, and the range of the variogram used for pass 2), or isotropic ranges based on data density where insufficient data was present for variographic analysis.
	Any assumptions behind modelling of selective mining units.	No selective mining units are assumed in this estimate.
	Any assumptions about correlation between variables.	No other elements other than gold have been estimated.
	Description of how the geological interpretation was used to control the resource estimates.	Hanging wall and foot wall wireframe surfaces were created using sectional interpretation for each of the Falcon mineralised envelopes. These wireframes are then combined and closed to make a solid which is in turn used to control the volume and samples used to estimate each lode. For mine planning purposes a waste model is created by projecting the hangingwall and footwall surfaces 15m either side. A default grade of 0.1gpt is assigned and the same resource classification as the adjacent ore lode is applied to ensure consistency in MSO Resource Classification reporting.
	Discussion of basis for using or not using grade cutting or capping.	Top cuts were applied to the composited sample data to reduce the impact of outlier values on the average grade. Top cuts were selected based on a statistical analysis of the data. The top cut values are applied in several steps, using influence limitation top cutting. A top cut (AU) and non-top cut (*_NC) variable is created, as well as a spatial variable (*_IL) which only has values where the top cut values appear. For example, where gold requires a topcut, the following variables will be created and estimated: • AU (top cut gold) • AU_NC (non- top-cut gold) • AU_IL (spatial variable; values present where AU data is top cut) The top-cut and non-top cut values are estimated using search ranges based on the variogram, and the *_IL values estimated using very small ranges (e.g., 5m x 5m x 5m). Where the *_IL values produce estimated blocks within these restricted ranges, the *_NC estimated values replace the original top cut estimated values (AU).
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Statistical measures of estimation performance, such as the Slope of Regression, are used to assess the quality of the estimation for each domain. Differences in the global grade of the declustered, top-cut composite data set and the average model grade were within 10%, or justification for a difference outside 10% was explicable. Swath plots comparing declustered, top-cut composites to block model grades are prepared and reviewed. Plots are also prepared summarising the critical model parameters. Visually, block grades are assessed against drill hole and face data.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource Estimate has been reported at a 2.1gpt cut off within 2.5m minimum mining width (excluding dilution) MSOs using a $A2,250/oz gold price.
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 mining assumptions have been made during the resource wireframing or estimation process.
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	No metallurgical assumptions have been made during the resource wireframing or estimation process.

Criteria	JORC Code explanation	Commentary
	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.	
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 green fields 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.	A "Licence to Operate" is held by the operation which is issued under the requirement of the "Environmental Protection Act 1986", administered by the Department of Environment (DoE). The licence stipulates environmental conditions for the control of air quality, solid waste management, water quality, and general conditions for operation. Groundwater Licences are held for water abstraction, including production bore field water use for mineral processing, and mine dewatering, in accordance with the Rights in Water and Irrigation Act 1914. These Licences are also regulated by DoE and are renewable on a regular basis. Kanowna Operations conduct extensive environmental monitoring and management programs to ensure compliance with the requirements of the licences and lease conditions. An Environmental Management System is in place to ensure that Northern Star employees and contractors exceed environmental compliance requirements. The Kalgoorlie operations are fully permitted including groundwater extraction and dewatering, removal of vegetation, mineral processing, and open pits. Kalgoorlie Operations have been compliant with the International Cyanide Management Code since 2008. Compliance with air quality permits is particularly important at Kanowna because of the roaster operation and because there are three facilities in the Kalgoorlie region emitting SO_2 gas. Kanowna has a management program in place to minimize the impact of SO_2 on regional air quality and ensure compliance with regulatory limits.
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.	A thorough investigation into average density values for the various lithological units at Falcon was completed and the mean densities by lithology were coded into the database. Where there were no measurements for a specific lithology, a default of value 2.8 t/m^3 was applied. Density was then estimated by Ordinary Kriging or Inverse Distance Squared, using the associated gold estimation parameters for that domain. Post estimation, default density values for the oxide and transition zones were applied, based on regional averages.
	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.	No significant voids are encountered in the ore zones for Falcon.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Assumptions on the average bulk density of individual lithologies from the regional data set. 21,549 bulk density samples have been used. Results are in line with regional expectations. Default densities have been applied to oxide (1.9 t/m^3) and transitional (2.3 t/m^3) material, due to lack of data in this area. These values are in line with regional averages.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Classification is based on a series of factors including: • Geologic grade continuity • Confidence in current interpretation • Density of available drilling • Statistical evaluation of the quality of the kriging estimate • Confidence in historical data, based on the new Data Class system No blocks at Falcon have been assigned a classification above Inferred due to uncertainty around the continuity of mineralised structure at Falcon.
	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).	All relevant factors have been given due weighting during the classification process.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource model methodology is appropriate and reflects the Competent Persons view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource Estimates.	The Resource model has been subjected to internal peer reviews.
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.	These Mineral Resource Estimates are considered representative of the Falcon style of mineralisation. The relative accuracy of the Mineral Resource Estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.
	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.	This resource report relates to the Falcon deposit. The model will show local variability even though the global estimate reflects the total average tonnes and grade.

Criteria	JORC Code explanation	Commentary
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No reconciliation factors are applied to the resource post-modelling.

JORC Code, 2012 Edition – Table 1 Report

Golden Hind: Resources and Reserves – 31 March 2021

Section 1: Sampling Techniques and Data

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>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.</td><td>Sampling was completed using a combination of Reverse Circulation (RC), Rotary Air Blast (RAB) and Diamond (DD) drilling. RAB drilling was excluded for resource estimation work.
<table>
<tr><th></th><th colspan="3">Golden Hind</th></tr>
<tr><th></th><th>Number of Holes</th><th>Total metres</th><th>Number of Samples</th></tr>
<tr><td>DD</td><td>30</td><td>7976</td><td>3349</td></tr>
<tr><td>RC</td><td>111</td><td>10038</td><td>9450</td></tr>
<tr><td>RC_DD</td><td>18</td><td>6034</td><td>1546</td></tr>
<tr><td>TOTAL</td><td>159</td><td>24047</td><td>14345</td></tr>
</table></td></tr>
<tr><td></td><td>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</td><td>RC samples were split using a rig-mounted cone splitter on 1m intervals to obtain a sample for assay.
Diamond core was placed in core trays for logging and sampling. Half core samples were nominated by the geologist from diamond core with a minimum sample width of either 20cm (HQ) or 30cm (NQ2).</td></tr>
<tr><td></td><td>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 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</td><td>RC sampling was split using a rig mounted cone splitter to deliver a sample of approximately 3kg.
DD drill core was cut in half using an automated core saw, where the mass of material collected will vary on the hole diameter and sampling interval.
All samples were delivered to a commercial laboratory where they were dried, crushed to 90% passing 3mm if required, at this point large samples may be split using a rotary splitter, pulverisation to 90% passing 75µm, a 40g charge was selected for fire assay.</td></tr>
<tr><td>Drilling techniques</td><td>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.).</td><td>Both Reverse Circulation and Diamond Drilling techniques were used to drill the Golden Hind deposit.
Surface diamond drillholes were predominantly completed using HQ2 (63.5mm) coring.
Historically, core was orientated using the Reflex ACT Core orientation system.
RC Drilling was completed using a 5.75” drill bit, downsized to 5.25” at depth.
In limited cases, RC pre-collars were drilled, followed by diamond tails. Pre-collar depth was determined in the drill design phase.</td></tr>
<tr><td>Drill sample recovery</td><td>Method of recording and assessing core and chip sample recoveries and results assessed.</td><td>Any core loss in diamond drilling is recorded on the core block by the driller. This is captured by the logging geologist and entered as an interval into the hole log.
Moisture content and sample recovery is recorded for each RC sample</td></tr>
<tr><td></td><td>Measures taken to maximise sample recovery and ensure representative nature of the samples.</td><td>For diamond drilling, the contractors adjust their rate of drilling and method if recovery issues arise. All recovery is recorded by the drillers on core blocks. This is checked and compared to the measurements of the core by the geological team. Any issues are communicated back to the drilling contractor.</td></tr>
<tr><td></td><td>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.</td><td>Recovery of the ore lode is challenging at Golden Hind. Triple-tube drilling techniques have been employed by the drilling contractor in order to alleviate reduced recovery, due in part to the nature of the material being drilled and to the drill orientation oblique to the target structure. In order to mitigate the impacts on the estimate, samples which have logged core loss through the ore zone are excluded.</td></tr>
<tr><td>Logging</td><td>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.</td><td>All diamond core is logged for regolith, lithology, veining, alteration, mineralisation, and structure. Structural measurements of specific features are also taken through oriented zones.
RC sample chips are logged in 1m intervals for the entire length of each hole. Regolith, lithology, alteration, veining, and mineralisation are all recorded.</td></tr>
</table>

APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
		All logging codes for regolith, lithology, veining, alteration, mineralisation, and structure is entered into the AcQuire database using suitable pre-set dropdown codes to remove the likelihood of human error.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All core logging is qualitative with mineralised zones assayed for quantitative measurements. Every core tray is photographed wet.
	The total length and percentage of the relevant intersections logged.	In all instances, the entire drill hole is logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond core is cut using an automated core saw. In most cases, half the core is taken for sampling with the remaining half being stored for later reference. Full core sampling is taken where data density of half core stored is sufficient for auditing purposes.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	For recent RC drilling (2015 onwards), RC samples were split using a rig-mounted cone splitter to collect a sample 3 - 4kg in size from each 1m interval. These samples were utilised for any zones approaching known mineralisation and from any areas identified as having anomalous gold. Outside known mineralised zones, spear samples were taken over a 4m interval for composite sampling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	For recent data (2015 onwards), preparation of samples was conducted at Bureau Veritas' Kalgoorlie facilities. Sample preparation commences with sorting, checking, and drying at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal -6mm particle size. If the sample is greater than 3kg a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverised to 90% passing 75µm, using a Labtechnics LM5 bowl pulveriser. 300g pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets. The sample preparation is considered appropriate for the deposit.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	For recent data (2015 onwards), procedures are utilised to guide the selection of sample material in the field. Standard procedures are used for all processes within the laboratory. Grind checks are performed at both the crushing stage (3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
	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.	No umpire assays have been completed in this reporting period.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate for the material being sampled.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	For recent data, a 40g fire assay charge for is used with a lead flux in the furnace. The prill is totally digested by HCl and HNO_3 acids before Atomic Absorption Spectroscopy (AAS) determination for gold 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.	No geophysical tools were used to determine any element concentrations.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	For recent data (2015 onwards), certified reference materials (CRMs) are inserted into the sample sequence randomly at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of three standard deviations are re-assayed with a new CRM. Blanks are inserted into the sample sequence at a rate of 1 per 20 samples. The insertion points are selected at random, except where high grade mineralisation is expected. In these cases, a Blank is inserted after the high-grade sample to test for contamination. Results greater than 0.2gpt are investigated, and re-assayed if appropriate. New pulps are prepared if anomalous results cannot be resolved. Barren flushes are regularly inserted after anticipated high gold grades at the pulverising stage. No field duplicates were submitted for diamond core. Pulp duplicates are requested after any ore zone. These are indicated on the sample sheet and the submission sheet. When visible gold is observed in core, a quartz flush is requested after the sample. Laboratory performance was monitored using the results from the QA samples mentioned above. This was supplemented by the internal QA samples used by the laboratories, which included pulp duplicates and CRMs. The QA studies indicate that accuracy and precision are within industry accepted limits.
	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by another Northern Star geologist during the drill hole validation process, and later by a Competent Person to be signed off.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	The use of twinned holes.	No twinned holes were drilled for this data set. Re-drilling of some drillholes has occurred due to issues downhole (e.g., bogged rods). These have been captured in the database as an 'A' suffix. Re-drilled holes are sampled whilst the original drillhole is logged but not sampled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging and sampling are directly recorded into AcQuire. Assay files are received in *.cvs format and loaded directly into the database using an AcQuire importer object. Assays are then processed through a form in AcQuire for QAQC checks. Hardcopy and non-editable electronic copies of these are stored.
	Discuss any adjustment to assay data.	No adjustments are made to this 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.	As a majority of the data in the Golden Hind data set is historic, it is unknown what QC procedures have been used. For more recent data (2015 onwards), planned hole collars are pegged using a Differential GPS by the field assistants. The final collar is picked up after hole completion by Cardno Survey with a Real Time Kinematic Differential Global Positioning System (RTKDGPS) in the MGA 94_51 grid. During drilling single-shot surveys are conducted every 30m to ensure the hole remains close to design. This is performed using the Reflex EZ-Trac system which measures the gravitational dip and magnetic azimuth results are uploaded directly from the Reflex software export into the AcQuire database. At the completion of diamond drilling the DeviFlex RAPID continuous in-rod survey instrument taking readings every 2 seconds, In and Out runs and reported in 3m intervals was also used along with DeviSight GPS compass for surface alignment application True North Azimuth, DIP, latitude and longitude coordinates for set up.
	Specification of the grid system used.	Collar coordinates are recorded in mine grid (Kundana 10) and transformed into MGA94_51.
	Quality and adequacy of topographic control.	Quality topographic control has been achieved through Lidar data and survey pickups of holes over the last 15 years.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill hole spacing varies across the deposit, with majority of drilling between 120m x 120m down to 20m x 20m within the planned Golden Hind Open Pit.
	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 data spacing and distribution is considered sufficient to support the resource estimate.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.	Most of the structures in the Kundana area dip steeply (80°) to the west (local grid). Golden Hind dips at a shallower angle of 55° to the west. Diamond drilling was designed to target the ore bodies perpendicular to this orientation to allow for a favourable intersection angle.
	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 sampling bias is considered to have been introduced by the drilling orientation. Where drillholes have been particularly oblique, they have been flagged as unsuitable for resource estimation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission, samples are stored by Northern Star Resources in a secure yard. Once submitted to the laboratories they are stored in a secure fenced compound, tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No independent audits have been undertaken of the data and sampling practices.

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.	All information in this report is located within M16/309 which is held by The East Kundana Joint Venture (EKJV). The EKJV is majority owned and managed by Northern Star Resources Limited (51%). The minority holding in the EKJV is held by Tribune Resources Ltd (36.75%) and Rand Mining Ltd (12.25%). The tenement on which the Golden Hind deposit is hosted is subject to three royalty agreements. The agreements are the Kundana- Hornet Central Royalty, the Lake Grace Royalty and the Kundana Pope John Agreement No. 2602-13.
	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.	No known impediments exist, and the tenements are in good standing.

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Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No other parties performed exploration work at Golden Hind during the reporting period. Previous exploration by other parties is summarised in open file annual reports which are available from the DMIRS.
Geology	Deposit type, geological setting and style of mineralisation.	The Kundana gold camp is situated within the Norseman-Wiluna Greenstone Belt, in an area dominated by the Zuleika shear zone, which separates the Coolgardie domain from the Ora Banda domain. Golden Hind mineralisation is located along the Strzelecki-Raleigh structure. The majority of mineralisation consists of narrow, laminated quartz veining on the contact between volcanogenic sedimentary rock unit and andesite/gabbro (RMV).
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.	A summary of the data present in the Golden Hind deposit can be found above. The collar locations are presented in plots contained in the NSR 2021 resource report. Drill holes vary in survey dip from -73 degrees to +18 degrees with hole depths ranging from 18m to 537m and having an average depth of 151m. The assay data acquired from these holes are described in the NSR 2021 resource report. All of the drill hole data were used directly or indirectly for the preparation of the resource estimates described in the resource report.
	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.	No material information has been excluded from this report.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.	All reported assay results have been length weighted to provide an intersection width. A maximum of 2m of low-grade material (considered < 2.0gpt) between mineralised samples has been permitted in the calculation of these widths. Typically grades over 2.0gpt are considered significant, however, where wide zones of low grade are intersected in areas of known mineralisation these will be reported. No top-cutting is applied when reporting intersection results.
	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.	Where an intersection incorporates short lengths of high grade results these intersections will be reported in addition to the aggregate value. These will typically take the form of ##.#m @ ##.##gpt including ##.#m @ ##.##gpt.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results:	True widths have been calculated for intersections of the known ore zones based on existing knowledge of the nature of these structures.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Both the downhole width and true width have been clearly specified when used.
	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').	Where true widths cannot be estimated, the intercepts are clearly labelled as down hole thickness.
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.	Appropriate plans and section have been included at the end of this Table and in the body of the NSR 2021 resource 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.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and 'From' and 'To' depths.
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.	No other material exploration data has been collected for this area.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	There are plans for further drilling at Golden Hind to extend the Indicated Resource to the north and investigate the potential for Underground mining below the current planned open Pit.

Criteria	JORC Code explanation	Commentary
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Appropriate diagrams accompany this release.

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.	Sampling and logging data is either recorded on paper and manually entered into a database system or captured digitally via a logging laptop and directly loaded into the database system. There are checks in place to avoid duplicate holes and sample numbers. Where possible, raw data is loaded directly into the database from laboratory and survey-tool derived files.
	Data validation procedures used.	The complete exported data base including drill and face samples is brought into Datamine RM and checked visually for any apparent errors i.e., holes or faces sitting between levels or not on surface DTM's. Multiple checks are then made on numerical data including: • Empty table checks to ensure all relevant fields are populated • Unique collar location check, • Distances between consecutive surveys is no more than 50m for drill-holes • Differences in azimuth and dip between consecutive surveys of no more than 0.3 degrees • The end of hole extrapolation from the last surveyed shot is no more than 30m Errors are corrected where possible. When not possible the data is resource flagged as "No" in the database and the database is re-exported. This data is not used in the estimation process. In addition to being validated, drill holes are assigned a Data Class, which provides a secondary level of confidence in the quality of the data. A review of all the historic data for Golden Hind was undertaken in 2019 and Data Class (DC) values from 0 - 3 assigned, criteria summarised below: • DC 3 = Recent data; all data high quality, validated and all original data available. • DC 2 = Historic data; may or may not have all data in AcQuire or hard copy available but has proximity to recent drilling which confirms the dip, width and tenor. Used to assist in classification OR Recent data; minor issues with data such as QAQC fail but not proximal to the ore zone. • DC 1 = Historic data; same criteria as DC 2 but cannot be verified with recent drilling, i.e., too far away or too dissimilar dip, width and/or tenor to recent drilling. Not to be used in Resource estimate. • DC 0 = Historic data; no original information or new drilling in proximity to verify. Not to be used in Resource estimate.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The geological interpretations underpinning these Resource models have been prepared by geologists working in adjacent mines and in direct, daily contact with similar ore bodies. The estimation of grades was undertaken by personnel familiar with the orebody and the general style of mineralisation encountered. The Senior Resource Geologist, a Competent Person for reviewing and signing off on estimations of the Golden Hind lode maintained a presence throughout the process.
	If no site visits have been undertaken indicate why this is the case.	Site visits have been undertaken.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The interpretation of the Golden Hind deposit has been carried out using a systematic approach to ensure continuity of the geology and estimated mineral resource. The confidence in the geological interpretation is high and is supported with information acquired from drilling. Towards the northern end of the mineralisation, the structure between Raleigh and Golden Hind is not as well defined. This will be accounted for in MRE classifications applied. The interpretation of the Golden Hind mineralisation wireframe was conducted using the sectional interpretation method in Vulcan software. Sectional interpretation was completed in vertical east-west sections at approximately 10m spacing where the drill density was good, and at approximately 40m spacing in the North where the drill density data was sparser. Wireframes were checked for unrealistic volumes and updated where appropriate.
	Nature of the data used and of any assumptions made.	All available geological data was used in the interpretation including drill holes and regional structural models.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Due to the consistency of the structure conveyed by this dataset and knowledge from the adjacent Raleigh deposit, no alternative interpretations have been considered.
	The use of geology in guiding and controlling Mineral Resource estimation.	Golden Hind is an extension of the Raleigh Main Vein (RMV) hosted in the Strzelecki Structure and located to the south of the Raleigh mining area. The continuity of the RMV from Raleigh to Golden Hind is not well understood and the northern extent.

Criteria	JORC Code explanation	Commentary
		The interpretation of the Raleigh Main Vein (RMV) is based on the presence of quartz veining and continuity between sections on the main Raleigh structure. The RMV was constrained to high-grade intercepts with all holes with available photography reviewed for lithology logging. The RMS was identified as a lower-grade halo surrounding the RMV, usually hosted in brecciated volcaniclastics or andesite. The RMS is not always present and is modelled as coincident with the RMV when halo grades were absent, to eliminate overestimation of the volume.
	The factors affecting continuity both of grade and geology.	Grade continuity is affected when the percentage of quartz decreases within the main Raleigh structure and only a sheared structure remains. This results in lower grade in areas where only shear is present and higher grade where quartz veining is developed.
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 Golden Hind structure is approximately 1500m long and is limited by limited drilling to the north and diamond drilling at depth. The Golden Hind mineralisation occurs in a major regional shear system, the Strzelecki structure that extends over tens of kilometres. The Golden Hind RMV varies in width but is typically in the range of 0.1m to 1m. Mineralisation is known to occur from the base of cover to around 900m below surface in the region.
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.	All Golden Hind mineralisation used 1.0m composites with direct grade estimation of gold. The primary method of estimation was by categorical indicated kriging (CIK) (unless otherwise stated), utilising a three pass search strategy using Datamine Studio RM software. Details of the estimation parameters for each mineralisation zone are summarised below. RMV divided into two data density subdomains based on near-surface, high-density RC drilling and sparser RC and DD drilling at depth. A binary estimate is completed on composited data set with indicators (0 or 1) applied based on grade cut-off (> 0.8gpt). Estimate returns result between 0 and 1. Cut-off of 0.70 chosen to ascertain two grade subdomains (high grade and low grade) for final gold estimate. Data sets top cut to 30gpt and 25gpt (high grade subdomain, high- and low-density subdomains respectively) or 2gpt and 0.8gpt (low grade subdomain, high- and low-density subdomains respectively) using the hard top-cut approach. Same variogram and search parameters used for both high- and low-grade subdomains. Variograms indicate grade continuity plunging steeply to the north. Searches were completed in three passes. Search ranges of 180m in dir1, 100m in dir2 and 25m in dir3 were used for the high data density subdomain and 280m in dir1, 160m in dir2 and 40m in dir3 for the low data density subdomain. RMS divided into two data density subdomains based on near-surface, high-density RC drilling and sparser RC and DD drilling at depth. Variography attempted for the RMS lode, but completed with low confidence. ID^2 has been used for grade interpolation, with no top-cutting required due to low coefficients of variance within the RMS lode. Searches were completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 20m in dir3 were used for the high data density subdomain and 80m in dir1, 40m in dir2 and 30m in dir3 for the low data density subdomain
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource Estimate takes appropriate account of such data.	All mineralisation zones had check estimates using ID^2 and Nearest Neighbour completed as a comparison.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of any by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).	No deleterious elements have been considered and therefore estimated for this deposit.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The data spacing varies considerably within the deposit ranging from closed spaced drilling 20m (along strike) and 20m (down dip) through to more widely spaced intercepts at over 80m (along strike) and 80m (down dip). As such, the block sizes varied depending on sample density. In areas of where the close spaced data existed, a 10m x 10m x 10m block size was chosen. For lower density drilling with wider spacing a block size of 20m x 20m x 20m was selected. All the varying block sizes are added together after being estimated individually. Search ellipse dimensions were derived from the variogram model ranges.
	Any assumptions behind modelling of selective mining units.	No selective mining units are assumed in this estimate.
	Any assumptions about correlation between variables.	No other elements other than gold have been estimated.
	Description of how the geological interpretation was used to control the resource estimates.	Closed volume wireframes have been created using sectional interpretation. These were used to define the RMV, and RMS mineralised zones based on the shearing intensity, veins and gold grade. RMV (Golden Hind) is a steeply dipping structure with quartz veining evident from drilling. RMS (Golden Hind) is a steeply dipping sheared lower grade structure usually hosted in brecciated volcaniclastics. For mine planning purposes a waste model is created by making a waste solid wireframe approximately 30m either side of the mineralisation. A default grade of 0.1gpt is assigned and the same resource classification as the adjacent ore lode is applied to ensure consistency in MSO Resource Classification reporting.

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Criteria	JORC Code explanation	Commentary
	Discussion of basis for using or not using grade cutting or capping.	Top cuts were applied to the composited sample data with the intention of reducing the impact of outlier values on the average grade. The top cut values are applied in several steps, using a technique called influence limitation top cutting. A top cut (AU) and non-top cut (*_NC) variable is created, as well as a spatial variable (*_IL) which only has values where the top cut values appear. For example, where gold requires a topcut, the following variables will be created and estimated: • AU (top cut gold) • AU_NC (non- top-cut gold) • AU_IL (spatial variable; values present where AU data is top cut) The top-cut and non-top cut values are estimated using search ranges based on the variogram, and the *_IL values estimated using very small ranges (e.g., 5m x 5m x 5m). Where the *_IL values produce estimated blocks within these restricted ranges, the *_NC estimated values replace the original top cut estimated values (AU).
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Statistical measures of estimation performance, such as the Slope of Regression have been used to assess the quality of the estimation for each domain. Differences in the global grade of the declustered, top-cut composite data set and the average model grade were within 10%, or justification for a difference outside 10% was explicable. Swath plots comparing declustered, top-cut composites to block model grades are prepared and reviewed. Plots are also prepared summarising the critical model parameters. Visually, block grades are assessed against drill hole data.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnes have been estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource Estimate has been split into an Underground and Open Pit Resource model. The Open Pit Resource is reported above a $AUD2,250/oz optimised pit shell within SMUs of 2.5m x 2.5m x 2.5m. Cut-off grade used for Open Pit reporting is 1.08gpt. The Underground Resource is reported below the $AUD2,250/oz optimised pit shell at a 2.13gpt cut off within 2.5m minimum mining width (excluding dilution) MSOs.
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 mining assumptions have been made during the resource wireframing or estimation process.
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.	No metallurgical assumptions have been made during the resource wireframing or estimation process.
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 green fields 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.	A “Licence to Operate” is held by the operation which is issued under the requirement of the “Environmental Protection Act 1986”, administered by the Department of Environment (DoE). The licence stipulates environmental conditions for the control of air quality, solid waste management, water quality, and general conditions for operation. Groundwater Licences are held for water abstraction, including production bore field water use for mineral processing, and mine dewatering, in accordance with the Rights in Water and Irrigation Act 1914. These Licences are also regulated by DoE and are renewable on a regular basis. Kanowna Operations conduct extensive environmental monitoring and management programs to ensure compliance with the requirements of the licences and lease conditions. An Environmental Management System is in place to ensure that Northern Star employees and contractors exceed environmental compliance requirements. The Kalgoorlie operations are fully permitted including groundwater extraction and dewatering, removal of vegetation, mineral processing, and open pits. Kalgoorlie Operations have been compliant with the International Cyanide Management Code since 2008.
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.	A thorough investigation into density values for the various lithological units at Golden Hind was completed and the mean densities by lithology were coded into the database. Where there were no measurements for a specific lithology, a default value of 2.7 t/m³ was applied. Density was then estimated by Ordinary Kriging

Criteria	JORC Code explanation	Commentary
		or ID^2, using the associated gold estimation parameters for that domain. Post estimation, default density values for the oxide and transition zones were applied, based on regional averages.
	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.	No voids are encountered in the ore zones and underground environment as Golden Hind is unmined.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The average bulk density of individual lithologies is based on 502 bulk density measurements at the Golden Hind deposit. Assumptions were based on regional averages for the default density applied to oxide (1.8 t/m³) and transitional (2.3 t/m³) material, due to lack of data in this area.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Classification is based on a series of factors including: • Geologic grade continuity • Density of available drilling • Statistical evaluation of the quality of the kriging estimate • Confidence in historical data, based on the new Data Class system
	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).	All relevant factors have been given due weighting during the classification process.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource model methodology is appropriate, and the estimated grades reflect the Competent Persons view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource Estimates.	The Resource model has been subjected to internal peer reviews.
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 Mineral Resource Estimate is considered robust and representative of the Golden Hind style of the RMV mineralisation. The application of geostatistical methods has helped to increase the confidence of the model and quantify the relative accuracy of the resource.
	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.	This resource report relates to the Golden Hind deposit. The model will show local variability even though the global estimate reflects the total average tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No reconciliation factors are applied to the resource post-modelling.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	Northern Star 2021MY Resource.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resources are reported inclusive of the Ore Reserve.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Site visits have been undertaken by the competent person.
	If no site visits have been undertaken indicate why this is the case.	Site visits are undertaken.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	A minimum Pre-Feasibility level study is completed prior to converting an ore zone into ore Reserve.

Criteria	JORC Code explanation	Commentary
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Ore Reserves have been calculated by generating detailed mining shapes for the proposed Golden Hind pit. A series of nested optimised pit shells were generated using Whittle software, an analysis of the shells was completed to select one which was then used to complete a detailed pit design to closely resemble the selected whittle shell. The Whittle optimisation used parameters generated from NSR technical personnel and technical consultants. A detailed mine schedule and cost model has been generated and appropriate ore dilution and recoveries have been applied within the model.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	The pit cut-off grade has been calculated based on the key input components (processing, recovery and administration). Forward looking forecast costs and physicals form the basis of the cut-off grade calculations. The AUD gold price as per corporate guidance. Mill recovery factors are based on historical data and metallurgical test work.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e., either by application of appropriate factors by optimisation or by preliminary or detailed design).	Ore Reserves have been calculated by generating detailed mining shapes for the proposed open pit. All open pit mining shapes include planned and unplanned dilution, being waste material that is located within the minable shape. Open pit unplanned dilution has been modelled within the mining shapes as a skin of material likely to be taken additional to material considered to be the smallest mining unit (SMU). This method is considered to be appropriate given the expected ground conditions, orebody width and proposed mining style.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The proposed open pit is to be mined using conventional open pit mining methods (drill, blast, load and haul) by a mining contractor utilising 120 t class excavators and 90 t trucks. This method is used widely in mines across Western Australia and is deemed appropriate given the nature of the ore body.
	The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Pit slope design parameters are defined by considering expected rock type, weathering profile and depth below surface.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	This Table 1 applies to open pit mining.
	The mining dilution factors used.	Physicals are reported within the generated mining shapes for the open pit Ore Reserve. SMU shapes have been generated for the reporting of Ore Reserve physicals. Dilution accounted for within the SMU is 75%; that is waste material carried within the mining shape.
	The mining recovery factors used.	No recovery factors were applied for the reporting of Open pit Reserve physicals. Mining recovery is considered to be 100% of the SMU.
	Any minimum mining widths used.	The minimum minable selective mining unit (SMU) dimensions for the Open pit Reserve Estimate are 3.5m Wide x 2.5m High x 4.0m Long.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Inferred material has not been included within the Open pit Ore Reserve estimate (treated as waste) but has been considered in LOM planning. The amount of inferred material has no impact on the sensitivity of the project.
	The infrastructure requirements of the selected mining methods.	Infrastructure required for the proposed Golden Hind Project has been accounted for and included in all work leading to the generation of the Ore Reserve estimate. Ore from the Golden Hind Project will be processed through the Kanowna Belle Gold Mine Processing Plant at the Kanowna Belle operation; hence no processing infrastructure is required. The Golden Hind Project is connected by internal private haul roads to Kanowna Belle. Infrastructure will be shared with the Rubicon and Raleigh projects and includes offices, workshops and associated facilities, dewatering pipeline, and ROM Pad. New infrastructure includes a waste rock storage dump.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	Golden Hind ore will be treated at the Kanowna Belle milling facilities or additional ore to toll treatment facilities as required. The Kanowna Belle Mill is designed to handle approximately 2.0million tonnes of feed per annum. The plant has the capability to treat both refractory and free milling ores, through either using the flotation circuit and associated concentrate roaster circuit, including carbon-in-leach (CIL) gold recovery, or bypassing the flotation circuit and going directly to a CIL circuit designed to treat flotation tails. The plant campaigns both refractory and free milling ores every month. Between campaigns, the circuit is "cleaned out" using mineralised waste. The plant is made up of crushing, grinding, gravity gold recovery, flotation, roasting, CIL, elution and gold recovery circuits. Ore Reserves are calculated using processing plant recovery factors that are based on test work and historical performance.
	Whether the metallurgical process is well-tested technology or novel in nature.	Milling experience gained over plus 10 years operation.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	Milling experience gained over plus 10 years operation.
	Any assumptions or allowances made for deleterious elements.	No assumption made.

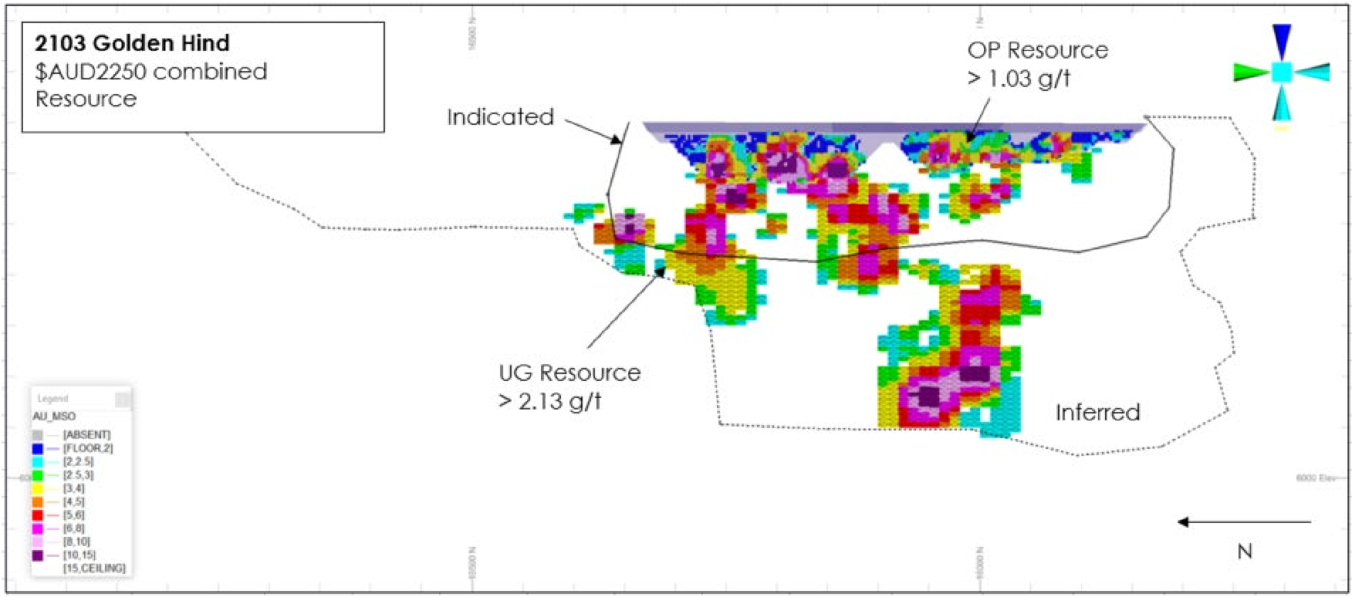
APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody.	Milling experience gained over plus 10 years operation.
	For minerals that are defined by a specification, has the ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	Not applicable.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Environmental impacts and hazards are being considered as part of the DMIRS application process. Waste rock characterisation and hydrogeological investigations indicates the rock mass is considered non-acid forming. Tailings from the open pit operation are proposed to be stored within the existing Tailings Storage Facility (TSF) at Kanowna Belle.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.	All current site infrastructure is suitable to the proposed underground operations mining plan. Additional infrastructure is planned for the Golden Hind Open pit and has been allowed for in the financial model.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	Mining costs based on mining contract rates supplied by a reputable WA based mining contractor. Mining costs were built up from first principals on mine designs supplied by NSR.
	The methodology used to estimate operating costs.	The estimation of Open pit mine operating costs was based on a contractor mining and maintenance operation using first principles to determine equipment productivities and associated operating hours to generate mine schedules. Provided contract pricing were than applied to the schedule to calculate all unit costs.
	Allowances made for the content of deleterious elements.	No allowances made.
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	Corporate guidance.
	The source of exchange rates used in the study.	Corporate guidance.
	Derivation of transportation charges.	Historic performance.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Historic performance.
	The allowances made for royalties payable, both Government and private.	All royalties are built into the cost model.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	A$1,750/oz gold.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Corporate guidance.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	All gold is assumed sold directly to market at the nominated Corporate gold price.
	A customer and competitor analysis along with the identification of likely market windows for the product.	Not Applicable.
	Price and volume forecasts and the basis for these forecasts.	Corporate guidance.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Not Applicable.
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	The Open pit Ore Reserve estimate is based on a financial model for that has been prepared at a "pre-feasibility study" level of accuracy economic modelling. All inputs from mining operations, processing, transportation, and capital have been scheduled and evaluated to generate a full life of mine cost model.
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	Sensitivities have been used with gold price ranges of A$1,500 to A$2,000 per ounce.

Criteria	JORC Code explanation	Commentary
Social	The status of agreements with key stakeholders and matters leading to social Licence to operate.	Agreements are in place and are current with all key stakeholders.
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	No Issues.
	Any identified material naturally occurring risks.	No Issues.
	The status of material legal agreements and marketing arrangements.	No Issues.
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Reserve is contingent.	No Issues.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	Ore Reserves classifications are derived from the underlying resource model classifications – i.e., Measured Resource material is converted to either Proved or Probable Reserves, with Indicated Resource material converting to Probable Reserve.
	Whether the result appropriately reflects the Competent Person’s view of the deposit.	The results accurately reflect the competent persons view of the deposit.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Nil.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	The Ore Reserve has been internally reviewed in line with Northern Star Resource governance standard for Reserves and Resources. There have been no external reviews of this Ore Reserve estimate.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the Reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	Confidence in the model and Ore Reserve Estimate is considered high.
	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.	Estimates are global but will be reasonably accurate on a local scale.
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	Not applicable.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Not applicable.

GOLDEN HIND DEPOSIT

Long section view of the Golden Hind deposit



JORC Code, 2012 Edition – Table 1 Report

Kundana Area Deposits (Drake, Pegasus, Rubicon and Hornet): Resources and Reserves – 31 March 2021

Section 1: Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Several sample types were used to collect material for analysis: underground and surface diamond drilling (DD), surface reverse circulation drilling (RC) and face channel (FC) sampling. Rotary air blast (RAB) holes were excluded from the estimate. Where sufficient DD holes were present, RC holes were also excluded. Tabulated statistics below include the Pode and Hera trend. A more detailed breakdown will be made available in the Drake, Pegasus, Rubicon and Hornet 2021 Resource Report.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td><table>
<tr><th></th><th colspan="3">Hornet, Rubicon, Pegasus, Drake (inc. Pode and Hera)</th></tr>
<tr><th></th><th>Number of Holes</th><th>Total metres</th><th>Number of Samples</th></tr>
<tr><td>DD</td><td>3288</td><td>593670</td><td>485299</td></tr>
<tr><td>FS</td><td>11130</td><td>53668</td><td>91083</td></tr>
<tr><td>RC</td><td>230</td><td>21600</td><td>15348</td></tr>
<tr><td>RC_DD</td><td>49</td><td>15414</td><td>12000</td></tr>
<tr><td>TOTAL</td><td>14697</td><td>684352</td><td>603730</td></tr>
</table></td></tr>
<tr><td></td><td>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</td><td>DD drilling is sampled within geological boundaries with a minimum (0.3m) and maximum (1.0m) sample length. Face channel sampling is constrained within geological and mineralised boundaries with a minimum (0.2m) and maximum (1.0m) channel sample length. In some cases, smaller samples (0.1m – 0.2m) have been taken to account for smaller structures in the face.</td></tr>
<tr><td></td><td>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 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</td><td>DD drill core was nominated for either half core or full core sampling. Core designated for half core was cut using an automated core saw. The mass of material collected was dependent on the drillhole diameter and sampling interval selected. Core designated for full core was broken with a rock hammer if sample segments were too large to fit into sample bags.
A sample size of at least 3kg of material was targeted for each face sample interval.
All samples were delivered to a commercial laboratory where they were dried and crushed to 90% of material ≤3mm. At this point large samples were split using a rotary splitter, then pulverised to 90% ≤75µm.
A 40g charge was selected for fire assay for all recent samples. Historically, charge weights of 50g have also been used.</td></tr>
<tr><td>Drilling techniques</td><td>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.).</td><td>Both Reverse Circulation and Diamond Drilling techniques were used to drill the Kundana deposits.
Surface diamond drill holes were completed using HQ2 (63.5mm) core, whilst underground diamond drill holes were completed using NQ2 (50.5mm) core.
Historically, core was orientated using the Reflex ACT Core orientation system. Currently, core is oriented using the Boart Longyear Trucore Core Orientation system.
RC Drilling was completed using a 5.75” drill bit, downsized to 5.25” at depth.
In many cases, RC pre-collars were drilled, followed by diamond tails. Pre-collar depth was determined in the drill design phase depending on the target being drilled and production constraints.</td></tr>
<tr><td rowspan="3">Drill sample recovery</td><td>Method of recording and assessing core and chip sample recoveries and results assessed.</td><td>For DD drilling, any core loss is recorded on the core block by the driller. This is captured by the logging geologist and entered as an interval into the hole log.</td></tr>
<tr><td>Measures taken to maximise sample recovery and ensure representative nature of the samples.</td><td>Contractors adjust the rate and method of drilling if recovery issues arise. All recovery is recorded by the drillers on core blocks. This is checked and compared to the measurements of the core by the geological team. Any issues are communicated back to the drilling contractor.</td></tr>
<tr><td>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.</td><td>Recovery was excellent for diamond core and no relationship between grade and recovery is observed. Average recovery across the Kundana camp is at 99%.</td></tr>
<tr><td rowspan="3">Logging</td><td>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.</td><td>All diamond core is logged for lithology, veining, alteration, mineralisation, and structural data. Structural measurements of specific features are also taken through oriented zones.
Logging is entered in AcQuire using a series of drop-down menus which contain the appropriate codes for description of the rock.
All underground faces are logged for lithology and mineralisation. Logging is captured on a face sample sheet underground which is then transferred to AcQuire. Faces are then input into AcQuire using a series of drop-down menus which contain appropriate codes for description of the rock.</td></tr>
<tr><td>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</td><td>All core logging is qualitative with mineralised zones assayed for quantitative measurements. Every core tray is photographed wet.
All underground faces are logged and sampled to provide both qualitative and quantitative data. Faces are washed down and photographed before sampling is completed.</td></tr>
<tr><td>The total length and percentage of the relevant intersections logged.</td><td>For all drill holes, the entire length of the hole is logged.</td></tr>
<tr><td>Sub-sampling techniques and</td><td>If core, whether cut or sawn and whether quarter, half or all core taken.</td><td>Diamond core is cut using an automated core saw. Sampling and cutting methodology is dependent on the type of drilling completed. Half core is utilised for exploration drilling. Some exploration drill holes have been whole core sampled and all Grade Control drilling is whole core sampled.</td></tr>
</table>

APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC samples are split using a rig-mounted cone splitter to collect a sample 3 - 4kg in size from each 1m interval. These samples were from any zone approaching known mineralisation and from any areas identified as having anomalous gold. Outside known mineralised zones spear samples were taken over a 4m interval for composite sampling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Preparation of NSR samples was conducted at Bureau Veritas' Kalgoorlie facilities; commencing with sorting, checking, and drying at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal -6mm particle size. If the sample is greater than 3kg a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverised to 90% ≤75µm, using a Labtechnics LM5 bowl pulveriser. 400g Pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets. The sample preparation is considered appropriate for the deposit.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Standard procedures are used for all processes within the laboratory. Grind checks are performed at both the crushing stage (3mm) and pulverising stage (75µm), requiring 90% of material to pass through a sieve of relevant size.
	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.	Umpire sampling is performed monthly, where 3% of the samples are sent to the umpire laboratory for processing. Umpire samples of faces were analysed using a 40g charge weight.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate for the material being sampled.
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.	A 40g fire assay charge for diamond drillholes and a 40g charge for face samples is used with a lead flux in the furnace. The prill is totally digested by HCl and HNO_3 acids before Atomic Absorption Spectroscopy (AAS) determination for gold 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.	No geophysical tools were used to determine any element concentrations
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	Certified reference materials (CRMs) are inserted into the sample sequence at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of 3 standard deviations are re-assayed with a new CRM. Blanks are inserted into the sample sequence at a rate of 1 per 20 samples. The insertion points are selected at random, except where high grade mineralisation is expected. In these cases, a Blank is inserted after the high-grade sample to test for contamination. Results greater than 0.2gpt if received are investigated, and re-assayed if appropriate. New pulps are prepared if anomalous results cannot be resolved. Barren flushes are regularly inserted after anticipated high gold grades at the pulverising stage. No field duplicates were submitted for diamond core. Pulp duplicates are requested after any ore zone. These are indicated on the sample sheet and the submission sheet. When visible gold is observed in core, a quartz flush is requested after the sample. Laboratory performance was monitored using the results from the QA samples mentioned above. This was supplemented by the internal QA samples used by the laboratories, which included pulp duplicates and CRMs. The QA studies indicate that accuracy and precision are within industry accepted limits.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by another Northern Star geologist during the drill hole validation process, and later by a Competent Person to be signed off.
	The use of twinned holes.	No specific twinned holes were drilled. Re-drilling of some drillholes has occurred due to issues downhole (e.g., bogged rods). These have been captured in the database with an 'A' suffix. Re-drilled holes are sampled, whilst the original drillhole is logged but not sampled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging and sampling are directly recorded into AcQuire. Assay files are received in *.cvs format and loaded directly into the database using an AcQuire importer object. Assays are then processed through a form in AcQuire for QAQC checks. Hardcopy and non-editable electronic copies of these are stored.
	Discuss any adjustment to assay data.	No adjustments have been made to this 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.	Planned holes are marked up by the mine survey department using a total station survey instrument in mine grid (Kundana 10). The actual hole position is then located by the mine survey department once drilling is completed. Holes are lined up on the collar point using the DHS Minnovare Azimuth Aligner. Planned azimuths and dips of the holes are downloaded to the aligner which is then placed on the rod string to align the hole for drilling.

APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
		During drilling, single shot surveys are conducted at the 30m mark to check azimuth aligner set up and track off collar deviation. The DeviFlex tool is used at 50m intervals to track the deviation of the hole and to ensure it stays close to design. This is a relative change tool which measures the change in orientation along the path of the hole at 3m intervals. The DeviFlex tool is referenced back to the azimuth aligner measurement to provide a non-magnetic survey in true North. At the completion of the hole, a final DeviFlex survey is completed taking measurements for the entire hole. Results are uploaded from the DeviFlex software into cloud service. This data is then reviewed, downloaded, and imported into the AcQuire database. The download from the DeviFlex service utilises an average of all the DeviFlex surveys taken over the entire hole. These are review and validated and erroneous surveys discarded. Prior to the overshot mounted DeviFlex tool being available, a combination of magnetic and DeviFlex single shot surveys were used and 30m intervals whilst drilling. A final end of hole multi shot DeviFlex survey was taken to provide a continuous non-magnetic survey of the entire hole trace.
	Specification of the grid system used.	Collar coordinates are recorded in mine grid (Kundana 10) and transformed into MGA94_51.
	Quality and adequacy of topographic control.	Quality topographic control has been achieved through Lidar data and survey pickups of holes over the last 15 years.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill hole spacing varies across the deposit. Resource Targeting drilling at an 80m x 80m nominal spacing is infilled during Resource Definition down to an average of 30m x 30m. Grade control drilling follows development and is generally comprised of stab drilling from the development drive at 10m to 15m spaced centres.
	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 data spacing and distribution is considered sufficient to support the Resource and Reserve estimates.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.	Most of the structures in the Kundana area dip steeply (80°) to the west (local grid). Diamond drilling was designed to target the ore bodies perpendicular to this orientation to allow for a favourable intersection angle. Instances where this was not achievable (primarily due to drill platform location), drilling was not completed, or re-designed once a more suitable platform became available. Drill holes with low intersection angles are excluded from resource estimation where more suitable data is available.
	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 sampling bias is considered to have been introduced by the drilling orientation. Where drillholes have been particularly oblique, they have been flagged as unsuitable for resource estimation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission samples are stored by Northern Star Resources in a secure yard. Once submitted to the laboratories they are stored in a secure fenced compound, tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No recent audits have been undertaken of the data and sampling practices.

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.	All holes mentioned in this report are located on the M16/309 Mining lease held by the East Kundana Joint Venture (EKJV). The EKJV is majority owned and managed by Northern Star Resources Limited (51%). The minority holding in the EKJV is held by Tribune Resources Ltd (36.75%) and Rand Mining Ltd (12.25%). The tenement on which the Rubicon, Hornet, Pegasus, and Drake deposits are hosted (M16/309) is subject to three royalty agreements. The agreements that are on M16/309 are the Kundana- Hornet Central Royalty, the Lake Grace Royalty and the Kundana Pope John Agreement No. 2602-13.
	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.	No known impediments exist, and the tenements are in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The first reference to the mineralisation style encountered at the Kundana project was the mines department report on the area produced by Dr. I. Martin (1987). He reviewed work completed in 1983 – 1984 by a company called Southern Resources, who identified two geochemical anomalies, creatively named Kundana #1 and Kundana #2. The Kundana #2 prospect was subdivided into a further two prospects, dubbed K2 and K2A. Between 1987 and 1997, limited work was completed.

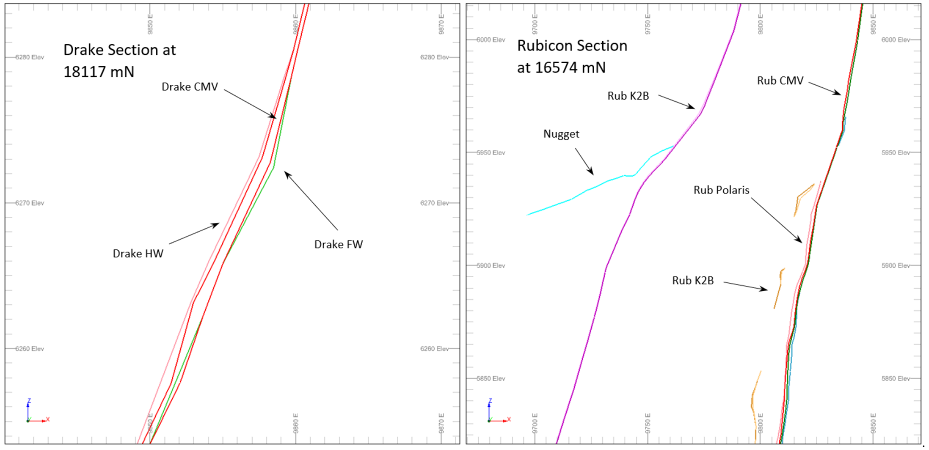
APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
		Between 1997 and 2006, Tern Minerals (subsequently Rand Mining and Tribune Resources) and Gilt-Edge Mining focused on shallow open pit potential with production from the Rubicon open pit commenced in 2002. In 2011, Pegasus was highlighted by an operational review team and follow-up drilling was planned through 2012.
Geology	Deposit type, geological setting and style of mineralisation.	The Kundana camp is situated within the Norseman-Wiluna Greenstone Belt, in an area dominated by the Zuleika shear zone, which separates the Coolgardie domain from the Ora Banda domain. K2-style mineralisation (Pegasus, Rubicon, Hornet, Drake) consists of narrow vein deposits hosted by shear zones located along steeply dipping overturned lithological contacts. The K2 structure is present along the contact between a black shale unit (Centenary Shale) and intermediate volcaniclastics (Black Flag Group). Minor mineralisation, termed K2B, also occurs further west, on the contact between the Victorious basalt and Bent Tree Basalt (both part of the regional upper Basalt Sequence). Additional mineralised structures include the K2E and K2A veins, Polaris/Rubicon Breccia (Silicified and mineralised Shale) and several other HW lodes adjacent to the main K2 structure. A 60° W dipping fault offsets the K2B contact and exists as a zone of vein-filled brecciated material hosting the Pode-style mineralisation in the Nugget lode at Rubicon.
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.	A summary of the data present in the RHP deposits can be found above. The collar locations are presented in plots contained in the NSR 2021 resource report. Drill holes vary in survey dip from +44 to -89 degrees, with hole depths ranging from 10m to 1,413m with an average depth of 233m. The assay data acquired from these holes are described in the NSR 2021 resource report. All validated drill hole data was used directly or indirectly for the preparation of the resource estimates described in the resource report.
	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 exclusion of any drill hole data is not material to this report.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.	All reported assay results have been length weighted to provide an intersection width. A maximum of 2m of barren material (considered <2gpt) between mineralised samples has been permitted in the calculation of these widths. Typically grades over 2gpt are considered significant, however where low grades are intersected in areas of known mineralisation, these will be reported. No top-cutting is applied when reporting intersection results.
	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.	Where an intersection incorporates short lengths of high grade results these intersections will be reported in addition to the aggregate value. These will typically take the form of ##.#m @ ##.#gpt including ##.#m @ ##.#gpt.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results:	True widths have been calculated for intersections of the known ore zones, based on existing knowledge of the nature of these structures.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Both the downhole width and true width have been clearly specified when used.
	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').	Both the downhole width and true width have been clearly specified when used.
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.	Appropriate plans and section have been included at the end of this table and in the NSR 2021 resource 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.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and 'From' and 'To' depths.
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	Fifteen geotechnical holes were drilled targeting several different areas through lower Rubicon and Pegasus. Holes have been designed for seismic monitoring. Holes were geologically logged to ensure no mineralisation was intersected. Where mineralisation was intersected, appropriate sampling was completed.

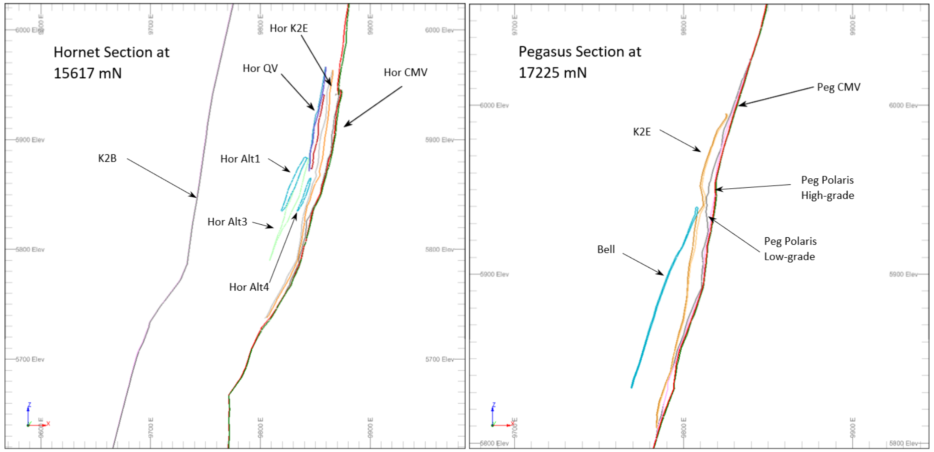
Criteria	JORC Code explanation	Commentary
	samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	Drilling will continue in various parts of the mine with the intention of extending areas of known mineralisation. Areas of focus across RHP will be those down dip of current high-grade trends on the K2 ahead of development. GC drilling will also be conducted as required on a level-by-level basis.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Appropriate diagrams accompany this release and are detailed in the NSR 2021 resource report.

DRAKE & RUBICON ORE LODES

Cross section views of Drake and Rubicon ore lodes

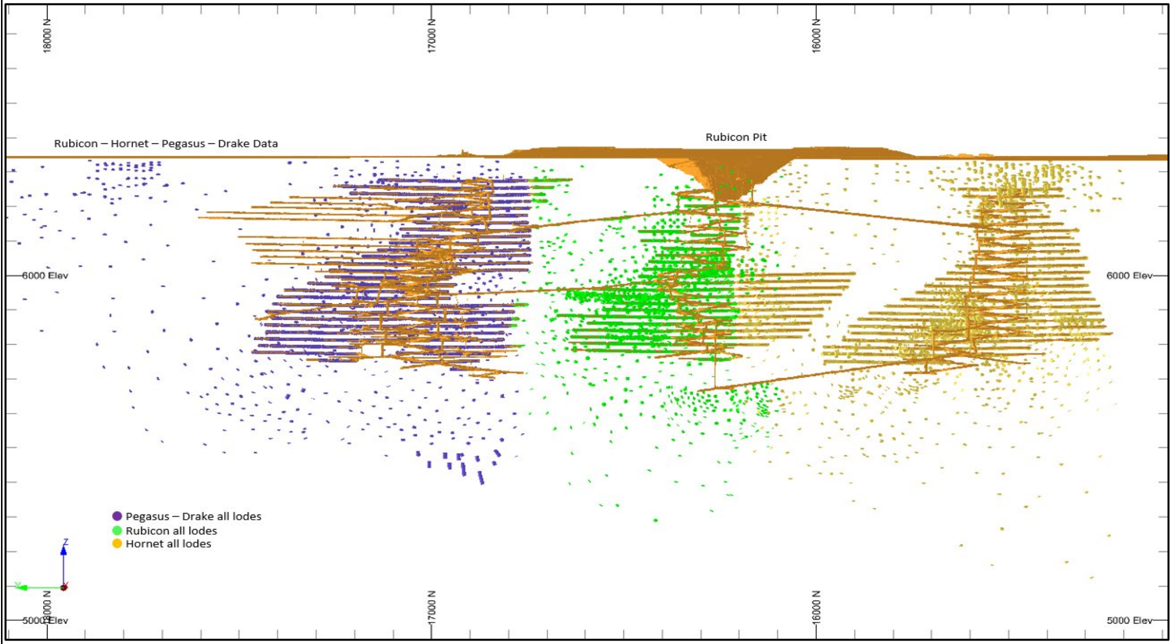


Cross section views of Pegasus and Hornet ore lodes



DRAKE RUBICON AND HORNET ORE LODES

Long section views of Drake, Pegasus, Rubicon and Hornet ore lodes and data used in resource estimations



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.	Sampling and logging data are either recorded on paper and manually entered into a database system or captured digitally via a logging laptop and directly loaded into the database system. There are checks in place to avoid duplicate holes and sample numbers. Where possible, raw data is loaded directly into the database from laboratory and survey-tool derived files.
	Data validation procedures used.	The complete exported data base including drill and face samples is brought into Datamine and checked visually for any apparent errors i.e., holes or faces sitting between levels or not on surface DTM's. Multiple checks are then made on numerical data. This includes: • Empty table checks to ensure all relevant fields are populated • Unique collar location check • Distances between consecutive surveys is no more than 60m for drill-holes • Differences in azimuth and dip between consecutive surveys of no more than 0.3 degrees • The end of hole extrapolation from the last surveyed shot is no more than 30m • Underground face sample lines are not greater than +\- 5 degrees from horizontal

Criteria	JORC Code explanation	Commentary
		Errors are corrected where possible. When not possible the data is resource flagged as “No” in the database and the database is re-exported. This data will not be used in the estimation process. Several drilling programs completed between 2014 and 2016 had erroneous metre depths recorded by the drillers, therefore these drill holes have been omitted from the ore wireframe interpretations and flagged as invalid. However, where there were no QAQC issue with the assays, the correct intervals have been recorded, the translation in the easting direction required for them to be in the ‘correct’ location (based on development above and below) applied and these intervals were appended to the data set before compositing. The sample translation method has been applied to surface drilling in between development levels which are deemed to cause an unrealistic kink in the wireframe interpretation. This is only done after a thorough investigation of the surrounding data to ensure that no secondary veining is present in the footwall or hanging wall and that no separate lodes are missed. In addition to being Resource Flagged as “Yes” or “No”, drill holes are assigned a Data Class, which provides a secondary level of confidence in the data quality. Data Class (DC) values range from 0 to 3, with criteria summarised below: • DC 3 = Recent data - all data high quality, validated and all original data available. • DC 2 = Historic data - may or may not have all data in AcQuire or hard copy available but has proximity to recent drilling which confirms the dip, width and tenor which is used to assist in classification Or Recent data - minor issues with data but away from the ore zone. • DC 1 = Historic data - same criteria as DC 2 but cannot be verified with recent drilling, i.e., too far away, or dissimilar dip, width and/or tenor to recent drilling. Not used in Resource estimate. • DC 0 = Historic data - no original information or new drilling in proximity to verify. Not used in Resource estimate.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The geological interpretations underpinning these resource models were prepared by geologists working in the mine who were in direct, daily contact with the ore body. The estimation of grades was undertaken by personnel familiar with the ore body and the general style of mineralisation encountered. The Senior Resource Geologist, a Competent Person for reviewing and signing off on the RHP and Drake estimates, maintained a site presence throughout the process.
	If no site visits have been undertaken indicate why this is the case.	Not applicable
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The interpretation of the RHP and Drake deposits were carried out using a systematic approach to ensure continuity of the geology and estimated mineral resource. The confidence in the geological interpretation is high and is supported with information acquired during ore development as well as from underground and surface diamond drilling. The interpretation of all RHP and Drake mineralised wireframes was conducted using the sectional interpretation method in Datamine RM software. All lodes have been interpreted in plan-view section. Where development levels were present, sectional interpretation was completed at approximately 5m spacing. Where only drilling data was present, sectional interpretation was completed at approximately 10m - 20m spacing. Checks were made to ensure that the wireframed volume agreed with the true ore widths of drill hole intersections. As a rule, wireframe extrapolation was limited to one half of the average drill spacing.
	Nature of the data used and of any assumptions made.	All available geological data was used in the interpretation including mapping, drill holes, underground face channel data, 3D photogrammetry and structural models.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative interpretations are not considered, the mineralisation is well defined and understood from underground exposures.
	The use of geology in guiding and controlling Mineral Resource estimation.	The interpretation of the RHP and Drake mineralisation is based on the presence of mineralised structure (veining and shear), ore-bearing mineralogy (gold and associated sulphides), assayed samples and continuity between sections.
	The factors affecting continuity both of grade and geology.	Individual RHP and Drake mineralised structures are thought to be reasonably continuous at the current drill spacing, as similar mineralisation styles, structures and grade tenor exists between adjacent drillholes. Post-mineralisation dextral offsetting faults (locally called D4 structures) affect the continuity of the K2 structure. These structures are steep-dipping, and the general trend is NNW-SSE. The largest is the Mary fault with a ~600m offset. The White Foil and Poseidon faults form the bounding structures between the Hornet/Rubicon and Rubicon/Pegasus mine areas, respectively. Offset on these structures varies between 1 and 10m. Many smaller scale faults exist within the mining areas (especially at the southern end of Hornet) although none have a material impact on the Resource model.
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 strike length of the different ore systems varies from ~100m to 600m, with the individual Rubicon Hornet, Pegasus, and Drake cmV structures having the longest strike lengths. The individual ore bodies occur in a major regional Zuleika shear system extending over tens of kilometres. Ore body widths are typically in the range of 0.2 – 3.0m. The widest orebody is Rubicon Nugget at approximately 7m. The narrowest is the K2B (present at Rubicon, Hornet and Pegasus) at approximately 0.5m. The main cmV structure has an average thickness of 0.65m. Mineralisation is known to occur from the base of cover to ~1,000m below surface. The structure is open at depth.
	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and	RHP and Drake mineralised zones with high data-density use direct grade estimation by Ordinary Kriging (unless otherwise stated) supported by composited sample data. Composite lengths of 1m were used for all lodes, determined from statistical analysis of all sample lengths in the estimation dataset. In smaller

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	mineralised zones where construction of a coherent variogram was not possible, Inverse Distance has been used. All estimation was completed using Datamine RM software. Details of estimation by ore lode is summarised below: **CMV** (Rubicon, Hornet and Pegasus) - divided into two grade subdomains based on data density: high density around development levels and lower density for the remainder. Each domain was analysed for top cuts and had variography completed separately. The high-density domain has search ranges between 30m - 90m in direction 1, 20m - 65m in direction 2 and 15m - 30m in direction 3. The low-density domain has search ranges between 50m – 200m for direction 1 and 30m – 150m for direction 2 and 18m - 100m in direction 3, Three passes were used for estimation with distances based on variography. Estimation was completed using a soft boundary between the high and low-density domains and between adjacent cmV domains. Restrictions by drill hole have been applied to the high-density domain and restrictions by drill hole type have been applied to the low-density domain. Rubicon cmV utilised a lower cut estimation (outline below) and was restricted on a high-grade low-grade flag. This low cut estimation was applied to samples < 3gpt and using a search of 30m in direction 1 and 20m in direction 2. **Hornet cmV** contains two additional subdomains, one based on grade and the other on the weathering profile. The low-grade domain that was analysed for top cuts and had variography completed separately. It indicates grade continuity with search ranges of 90m in direction 1 and 60m in direction 2. Three search passes were used. Restrictions by drill hole have been applied. A semi-soft boundary has been applied between the fresh and weathered domains of the Hornet cmV as boundary analysis suggested neither a completely hard nor completely soft boundary. The weathering domain was analysed for top cuts and had variography completed separately, there was insufficient data for variographic analysis therefore ID^2 was used for estimation. Three search passes were used. Restriction by drill hole was applied. **Polaris** (RHP) - Rubicon Polaris is divided into two subdomains based on data density: high density around development levels and lower density distant to development. For high density and low density domains in Rubicon polaris has search distances of 45m & 50m in direction 1, 25m & 35m in direction 2 and 15m in direction 3. Pegasus Polaris is divided into an additional two subdomains based on grade. These separate domains have separate variography and topcuts. The high grade domain uses search distances of 30m for direction 1, 30m for direction 2 and 15m for direction 3. The low grade domain uses search distances of 20m for direction 1, 15m for direction 2 and 10m for direction 3. Hornet Polaris comprises two domains; Polaris North situated proximal to northern Hornet development and Polaris situated proximal to southern Hornet development. Each domain was analysed for top cuts and had variography completed separately. Rubicon Polaris is a singular lode and has search distances of 40m for direction 1 and 30m for direction 2 in the high data density domain and 110m for direction 1 and 90m for direction 2 in the low data density domain. Pegasus Polaris has search distances of 50m for direction 1 and 35m for direction 2 in the high grade domain and search distances of 40m for direction 1 and 30m for direction 2 in the low-grade domain. Hornet Polaris has search distances of 45m for direction 1 and 30m for direction 2 in Polaris North and 45m for direction 1 and 40m for direction 2 in Polaris. Three search passes were used in all domains. Restrictions by drill hole were applied to both Hornet Polaris domains. No restrictions were applied to Pegasus Polaris domains. **K2E** (RHP) - Rubicon K2E is divided into two subdomains based on data density: high density around development levels and lower density distant to development. Pegasus K2E is divided into two domains (K2E and K2E Lower) based on two spatially separate areas of similar data density. Hornet K2E comprises two domains: A northern Hornet K2E proximal to northern Hornet development and a Hornet K2E proximal to southern Hornet development. Each domain was analysed for top cuts and had variography completed separately. Rubicon K2E has search distances of 35m for direction 1 and 35m for direction 2 in the high data density domain and 165m for direction 1 and 85m for direction 2 in the low data density domain. Pegasus K2E has search distances of 50m for direction 1 and 30m for direction 2 for both the upper and lower domains. Hornet K2E domains have search distances of 40m for direction 1 and 20m for direction 2 for the high data density domain and 65m for direction 1 and 40m for direction 2 in the low density domain. Three search passes were used in all domains. Restrictions by drill hole type were applied to both domains in the Rubicon K2E. Restrictions by drill hole were applied to Pegasus and Hornet K2E. **K2B** (Rubicon and Hornet) - Rubicon and Hornet K2B divided into two subdomains based on data density. Each domain was analysed for top cuts and had variography completed separately. All Rubicon K2B domains have search distances of 70m for direction 1 and 40m for direction 2. Hornet K2B has search distances of 80m for direction 1 and 60m for direction 2 for the high-density subdomain and 250m for direction 1 and 200m for direction 2 for the low-density subdomain. Three search passes were used in all domains. Estimation was completed using a soft boundary between the high and low-density subdomains. No restrictions by drill hole or drill hole type have been applied. **Nugget** (Rubicon)- includes one domain which was top cut and had variography analysis completed with ranges of 80m in direction 1 and 40m in direction 2. Restriction by drill hole was applied. **Footwall** (Rubicon and Hornet) – Rubicon footwall is divided into two subdomains based on data density: high density around development levels and lower density for the remainder. High data density uses search directions of 20m for direction 1 and 2. The lower data density domain has search distances of 60m for direction 1 and 55m for direction 2. Each domain was analysed for top cuts and had variography completed separately. Hornet footwall comprises two domains in upper and lower levels – Hornet foot wall and hornet footwall upper. Hornet footwall domain has a search distance of 40m for direction 1 and 30m for direction 2. Hornet Footwall upper had uses search distances of 40m in direction 1 and 20m in direction 2. Three search passes were used in all domains. Estimation was completed using a soft boundary between the Rubicon footwall high and low-density subdomains. Restriction by drill hole type was applied to both Rubicon and Hornet footwall restriction by drillhole ID was used for Hornet footwall upper. **Belle**(Pegasus) – includes one domain which was not top cut and had variography analysis with ranges of 50m in direction 1 and 15m in direction 2. Three search passes were used. Restriction by drill hole was applied. **FWVN** (Pegasus) – includes one domain which was not top cut. There was insufficient data for variographic analysis therefore ID^2 was used for estimation. Pegasus cmV variography with NNW plunge direction was used for rotation angles in the ID^2 estimate. Three search passes were used. Restriction by drill hole was applied. **INTW** (Pegasus) – includes one domain which was top cut. There was insufficient data for variographic analysis therefore isotropic search was used for estimation. Three search passes were used. Restriction by drill hole was applied.

Criteria	JORC Code explanation	Commentary
		CMV (Drake)- divided into two subdomains based on data density: high density near surface and lower density at depth. Both domains were analysed for top cuts and had variography completed. Each domain has a search distance of 200m for direction 1 and 150m for direction 2. Three search passes were used. Estimation was completed using a soft boundary between the high and low-density domains and between adjacent cmV domains (Moonbeam to the north and Pegasus to the south). No restrictions by drill hole or drill hole type have been applied. **Halo** (Drake) – divided into the Hanging wall (HW) and Footwall (FW) domains either side of the Drake cmV. Both domains were analysed for top cuts separately. Drake cmV variography was used. Three search passes were used. No restrictions by drill hole or drill hole type have been applied. **HORVQ, ALT1, ALT2, ALT3, ALT4, ALT5, LEAF, HONEY** (Hornet) – all comprised single estimation domains and had variographic analysis completed. All domains used ranges of 20m – 80m in direction 1 and 20m – 50m in direction 2. Three search passes were used. All lodes were restricted by drillhole. **Caesar** (Rubicon) comprised of one estimation domain and had variographic analysis completed. This domain used ranges of 130m for direction 1 and 80m for direction 2. **RK2BFW** (Rubicon) comprised of one estimation domain. There was insufficient data for variographic analysis therefore ID2 search was used. This domain used ranges of 15m for direction 1 and 7.5m for direction 2. This estimate was restricted by drillhole. **Hophw & hopfw** (Hornet) Hornet open pit foot wall and Hornet open pit hanging wall each consisted of a single estimation domain. These has separate top cut and variographic analysis. Both HOPFW and HOPHW used search ranges of 70m for direction 1 and 40m for direction 2. **SPGN** (Hornet) comprised of one estimation domain, which was top cut and had variography analysis completed with ranges of 50m in direction 1 and 30m in direction 2. **F18** (Hornet) comprised of one estimation domain, which was top cut, there was insufficient data for variographic analysis therefore ID^2 was used for estimation. Three search passes were used. No restrictions by drill hole or drill hole type have been applied. **MFZ** (Hornet) comprised of one estimation domain, which was top cut. There was insufficient data for variographic analysis therefore ID^2 was used for estimation. Hornet cmV variography orientation was used for rotation angles in the ID^2 estimate. Estimation was completed using a soft boundary between adjacent cmV domains. This estimate was restricted by drillhole.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource Estimate takes appropriate account of such data.	Check estimates have been completed for all lodes. These include Inverse Distance (ID) and Nearest Neighbour (NN) estimates. Isotropic searches have also been tested to corroborate chosen search orientations. All mineralised zones at RHP and Drake for the current estimate were compared with previous grade and resource models. This allowed a comparison of tonnes and gold grade for each zone and an overall global comparison.
	The assumptions made regarding recovery of by-products.	No assumptions have been made.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).	No deleterious elements were estimated in these models.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block sizes varied depending on sample density. In areas of high data density (underground face samples with average spacing of 3m – 4m) a 5m x 5m x 5m block size was chosen. Low density drill spacing is defined as approximately 30m or greater and a 10m x 10m x 10m block size was chosen. Estimates were completed with soft boundaries between varying block size estimates unless a geological feature and contact analysis indicated a hard boundary was required and added together following individual estimation for final validations. Search ellipse dimensions were derived from the variogram model ranges, or isotropic ranges based on data density where insufficient data was present for variography analysis.
	Any assumptions behind modelling of selective mining units.	Selective mining units were not used during the estimation process.
	Any assumptions about correlation between variables.	All variables were estimated independently of each other. Density has used estimation parameters based on the equivalent gold estimation for that domain.
	Description of how the geological interpretation was used to control the resource estimates.	Hanging wall and footwall wireframe surfaces were created using sectional interpretation. These were used to define the RHP and Drake mineralised zones based on the geology (usually a quartz vein) and gold grade. CMV (RHP and Drake) - Steeply dipping structure with quartz veining evident from drilling and development. MFZ (Hornet) – Faulted and stepped cmV-style mineralisation in the Mary Fault Zone. Laminated quartz-vein present but fractured by late-stage faulting. Polaris (RHP)- Steeply dipping silicified shale structure in the hanging-wall of the cmV with quartz stringers evident from drilling and underground development. K2E (RHP)- Steeply dipping hangingwall structure with quartz veining evident from drilling and underground development. K2B (Rubicon/Hornet)- Steeply dipping hangingwall structure with quartz veining evident from drilling and underground development. Bell/Nugget/Nugget3 (Pegasus/Rubicon) – Low angled dilatational fault zones with quartz veining evident from drilling and underground development.

Criteria	JORC Code explanation	Commentary
		Honey, Alteration 1/2/3/4/5, HORVQ/Caesar/F18/SPGN (Hornet hangingwall mineralised zones) - Sheared and silicified shale with quartz stringers evident from drilling and underground development. Halo (Drake)- Steeply dipping hangingwall and footwall brecciated veining and shearing directly adjacent to the Drake cmV. For mine planning purposes a waste model is created by projecting the hanging wall and footwall surfaces 15m either side. A default grade of 0.1gpt is assigned and the same resource classification as the adjacent ore lode is applied.
	Discussion of basis for using or not using grade cutting or capping.	Top cuts were applied to the composited sample data with the intention of reducing the impact of outlier values on the average grade. Top cuts vary by domain (ranging from 4gpt to 250gpt for individual domains). The top cut values are applied in several steps, using influence limitation top capping. A top cut (AU) and non-top cut (*_NC) variable is created, as well as a spatial variable (*_IL) which only has values where the top cut values appear; this applies to gold top cutting only. For example, where gold requires a top cut, the following variables will be created and estimated: • AU (top cut gold) • AU_NC (non- top-cut gold) • AU_IL (spatial variable; values present where AU data is top cut) The top-cut and non-top cut values are estimated using search ranges based on the modelled gold variogram, and the *_IL values estimated using very small ranges (e.g., 5m x 5m x 5m). Where the *_IL values produce estimated blocks within these restricted ranges, the *_NC estimated values replace the original top cut estimated values (AU). The same principle has been applied to produce a ‘lower-cut’ to the composited sample data with the intention of limiting the impact of high-grade samples on genuine low-grade areas, especially where there is an order of magnitude difference in assayed grade. A spatial variable (*_LC) is created using the non-top cut (*_NC) variable which only has values where the low-cut values appear; this applies to gold low cutting only. For example, where gold requires a low cut, the following variables will be created and estimated: • AU_NC (non- cut gold) • AU_LC (spatial variable; values present where AU data is low-cut) The non-top cut values are estimated using search ranges based on the modelled gold variogram, and the *_LC values estimated using small ranges (e.g., 30m x 20m x 15m). Where the *_LC values produce estimated blocks within these restricted ranges, the *_LC estimated values replace the original top cut estimated values (AU). Multiple iterations are tested with different search distance and minimum sample fulfillments applied. A hard top cut is applied instead of/as well in the following situations: • If there are extreme outliers within an ore domain • If the area has a history of poor reconciliation (i.e., overcalling)
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Statistical measures of Kriging error, such as Kriging Efficiency and Slope of Regression, are used to assess the quality of the estimation for each domain. Differences between the declustered, top-cut composite data set and the average model grade must be within 10%. Swath plots comparing declustered, top-cut composites to block model grades are created and visual plots are prepared summarising the critical model parameters. Visually, block grades are assessed against drill hole and face data.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	Drake and Rubicon comprise only an Underground Resource. This has been reported at a 2.13gpt cut off within 2.5m minimum mining width MSOs using a $AUD2,250/oz gold price. Hornet and Pegasus have Open Pit and Underground Resources reported. The Open Pit Hornet and Pegasus Resources are reported above a $AUD2,250/oz optimised pit shell within SMUs of 2.5m x 2.5m x 2.5m. Cut-off grade used for Open Pit reporting is 1.08gpt. The Underground Hornet and Pegasus Resources are reported beneath the $AUD2,250/oz optimised pit shell, at a 2.13 /pt cut off within 2.5m minimum mining width MSOs.
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	No mining assumptions have been made during the resource wireframing or estimation process.

Criteria	JORC Code explanation	Commentary
	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.	
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 test work results show that the mineralisation is amendable to processing through the Kanowna Belle treatment plant. Ore processing throughput and recovery parameters were estimated based on historic and current performance and potential improvements available using current technologies and practices.
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 green fields 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.	A "Licence to Operate" is held by the operation which is issued under the requirement of the "Environmental Protection Act 1986", administered by the Department of Environment (DoE). The licence stipulates environmental conditions for the control of air quality, solid waste management, water quality, and general conditions for operation. Groundwater Licences are held for water abstraction, including production bore field water use for mineral processing, and mine dewatering, in accordance with the Rights in Water and Irrigation Act 1914. These Licences are also regulated by DoE and are renewable on a regular basis. Kanowna Operations conduct extensive environmental monitoring and management programs to ensure compliance with the requirements of the licences and lease conditions. An Environmental Management System is in place to ensure that Northern Star employees and contractors meet or exceed environmental compliance requirements. The Kalgoorlie operations are fully permitted including groundwater extraction and dewatering, removal of vegetation, mineral processing, and open pits. Kalgoorlie Operations have been compliant with the International Cyanide Management Code since 2008. Compliance with air quality permits is particularly important at Kanowna because of the roaster operation. Kanowna has a management program in place to minimize the impact of SO_2 on regional air quality and ensure compliance with regulatory limits.
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.	A thorough investigation into average density values for the various lithological units at RHP and Drake was completed and the mean densities by lithology were coded into the database. Where there were no measurements for a specific lithology and default of 2.8 t/m^3 was applied. Density was then estimated by Ordinary Kriging using the associated gold estimation parameters for that domain. Post estimation, default density values for the oxide and transitional zones were applied, based on regional averages.
	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.	No significant voids are encountered in the ore zones and underground environment
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Assumptions on the average bulk density of individual lithologies, based on 7,543 bulk density measurements at RHP and Drake. Assumptions were also made based on regional averages, on the default densities applied to oxide (1.8 t/m^3) and transitional (2.3 t/m^3) material, due to a lack of data in these zones.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Classification is based on a series of factors including: • Geologic grade continuity • Density of available drilling • Statistical evaluation of the quality of the kriged estimate • Confidence in historical data, based on the new Data Class system
	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).	All relevant factors have been given due weighting during the classification process.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource estimation methodology is considered appropriate, and the estimated grades reflect the Competent Persons view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource Estimates.	All resource models have been subjected to internal peer review.
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.	These Mineral Resource Estimates are considered as robust and representative of the RHP and Drake styles of mineralisation. The relative accuracy of the Mineral Resource Estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.
	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 global estimates of tonnes and grade.

Criteria	JORC Code explanation	Commentary
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No reconciliation factors are applied to the resource post-modelling.

Section 4: Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource Estimate for conversion to Ore Reserves	Description of the Mineral Resource Estimate used as a basis for the conversion to an Ore Reserve.	Northern Star 2021MY Resource.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resources are reported inclusive of the Ore Reserve.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Site visits have been undertaken by the competent person.
	If no site visits have been undertaken indicate why this is the case.	Site visits are undertaken.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	Feasibility Study.
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Upgrade of previous Ore Reserve.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Underground Budget costs and physicals form the basis for Cut Off Grade calculations. Mill recovery is calculated based on historical recoveries achieved. Various cut off grades are calculated including a break-even cut-off grade (BCOG), variable cut-off grade (VCOG) and Mill cut-off grade (MCOG). The VCOG is used as the basis for stope design, with areas requiring significant development assessed by detailed financial analysis to confirm their profitability. Open Pit The pit cut-off grade has been calculated based on the key input components (processing, recovery and administration). Forward looking forecast costs and physicals form the basis of the cut-off grade calculations. The AUD gold price as per corporate guidance. Mill recovery factors are based on historical data and metallurgical test work.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e., either by application of appropriate factors by optimisation or by preliminary or detailed design).	Underground Mineral Resource is converted to Ore Reserve after completing a detailed mine design and associated financial assessment. Open Pit Ore Reserves have been calculated by generating detailed mining shapes for the proposed open pit. All open pit mining shapes include planned and unplanned dilution, being waste material that is located within the minable shape. Open pit unplanned dilution has been modelled within the mining shapes as a skin of material likely to be taken additional to material considered to be the smallest mining unit (SMU). This method is considered to be appropriate given the expected ground conditions, orebody width and proposed mining style.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	Underground Selected mining method deemed appropriate as it has been used at Raleigh since 2005 & Rubicon / Hornet / Pegasus since 2012. Open Pit The proposed open pit is to be mined using conventional open pit mining methods (drill, blast, load and haul) by a mining contractor utilising 120 t class excavators and 90 t trucks. This method is used widely in mines across Western Australia and is deemed appropriate given the nature of the ore body.

Criteria	JORC Code explanation	Commentary
	The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Underground Design parameters include a 20m to 25m level spacing with a stope strike length of 15m to 20m for dilution control purposes. This correlates to a Hydraulic Radius of 4.3 to 4.9. Open Pit Pit slope design parameters are based on recommendations provided from geotechnical reviews and defined considering expected rock type, weathering profile and depth below surface.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	This Table 1 applies to both underground and open pit mining. A detailed interface review was conducted to ensure separation between underground and open pit Reserve material.
	The mining dilution factors used.	Underground For the reporting of Underground Reserve physicals, a mining recovery factor of 97.5% is applied to Pegasus, 92.5% applied Hornet, 95% is applied to Rubicon based on historical data. A recovery of 90% was applied to future Trans-cad and 80% applied to Retrofit Trans-cad Open Pit Physicals are reported within the generated mining shapes for the open pit Ore Reserve. SMU shapes have been generated for the reporting of Ore Reserve physicals. Dilution accounted for within the SMU is 75%; that is waste material carried within the mining shape.
	The mining recovery factors used.	For the reporting of Underground Reserve physicals, a mining recovery factor of 98.5% is applied to Pegasus and Hornet, 94% is applied to Rubicon based on historical data. No recovery factors were applied for the reporting of Open pit Reserve physicals. Mining recovery is considered to be 100% of the SMU.
	Any minimum mining widths used.	At Rubicon, Hornet, and Pegasus: Minimum stope width of 3.0m where the vein is less than 2m wide. 1m additional to vein width when greater than 2m wide. The minimum minable selective mining unit (SMU) dimensions for the Open pit Reserve Estimate are 3.5m Wide x 2.5m High x 4.0m Long.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Designed stopes with greater than 50% inferred blocks are excluded from the reported Reserve. Inferred material has not been included within the Open pit Ore Reserve estimate (treated as waste) but has been considered in LOM planning. The amount of inferred material has no impact on the sensitivity of the project.
	The infrastructure requirements of the selected mining methods.	Infrastructure in place, currently an operating mine.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	EKJV ore is treated at the Kanowna Belle milling facilities or additional ore to toll treatment facilities as required. The Kanowna Belle Mill is designed to handle approximately 2.0 million tonnes of feed per annum. The plant has the capability to treat both refractory and free milling ores, through either using the flotation circuit and associated concentrate roaster circuit, including carbon-in-leach (CIL) gold recovery, or bypassing the flotation circuit and going directly to a CIL circuit designed to treat flotation tails. The plant campaigns both refractory and free milling ores every month. Between campaigns, the circuit is "cleaned out" using mineralised waste. The plant is made up of crushing, grinding, gravity gold recovery, flotation, roasting, CIL, elution and gold recovery circuits. Ore Reserves are calculated using processing plant recovery factors that are based on test work and historical performance.
	Whether the metallurgical process is well-tested technology or novel in nature.	Milling experience gained over plus 10 years operation.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	Milling experience gained over plus 10 years operation.
	Any assumptions or allowances made for deleterious elements.	No assumption made.
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody.	Milling experience gained over plus 10 years operation.
	For minerals that are defined by a specification, has the ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	Not applicable.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Underground Rubicon, Hornet, Pegasus operations are currently compliant with all legal and regulatory requirements. All government permits and Licences and statutory approvals are granted.

Criteria	JORC Code explanation	Commentary
		Open Pit Environmental impacts and hazards are being considered as part of the DMIRS application process. Waste rock characterisation and hydrogeological investigations indicates the rock mass is considered non-acid forming. Tailings from the open pit operation are proposed to be stored within the existing Tailings Storage Facility (TSF) at Kanowna Belle. A previously granted clearing permit has expired. This will be re-applied for and expected to be granted closer to expected start of the pit.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.	All current site infrastructure is suitable to the proposed underground operations mining plan. Additional infrastructure is planned for the Hornet Open pit and has been allowed for in the financial model.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	Mine development capital cost based on historical performance on site and life-of-mine forward planning. Plant and equipment capital are based on site experience and the LOM plan.
	The methodology used to estimate operating costs.	Underground overhead costs and operational costs are projected forward on a first principles modelling basis. The estimation of Open pit mine operating costs was based on a contractor mining and maintenance operation using first principles to determine equipment productivities and associated operating hours to generate mine schedules. Provided contract pricing were than applied to the schedule to calculate all unit costs.
	Allowances made for the content of deleterious elements.	No allowances made.
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	Corporate guidance.
	The source of exchange rates used in the study.	Corporate guidance.
	Derivation of transportation charges.	Historic performance.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Historic performance.
	The allowances made for royalties payable, both Government and private.	All royalties are built into the cost model.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	A$1,750/oz gold.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Corporate guidance.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	All gold is assumed sold directly to market at the nominated Corporate gold price.
	A customer and competitor analysis along with the identification of likely market windows for the product.	Not Applicable.
	Price and volume forecasts and the basis for these forecasts.	Corporate guidance.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Not Applicable.
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	All costs assumptions are made based on historical performance from the mine and current economic forecast seen as representative of current market conditions. The Open pit Ore Reserve estimate is based on a financial model for that has been prepared at a “pre-feasibility study” level of accuracy economic modelling. All inputs from mining operations, processing, transportation, and capital have been scheduled and evaluated to generate a full life of mine cost model.
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	Sensitivities have been used with gold price ranges of A$1,500 to A$2,000 per ounce.
Social	The status of agreements with key stakeholders and matters leading to social Licence to operate.	Agreements are in place and are current with all key stakeholders.

Criteria	JORC Code explanation	Commentary
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	No Issues.
	Any identified material naturally occurring risks.	No Issues.
	The status of material legal agreements and marketing arrangements.	No Issues.
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Reserve is contingent.	No Issues. All Open pit permitting was in place, but the clearing permit has expired. This will be re-applied for and expected to be granted closer to expected start of the pit.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	Ore Reserves classifications are derived from the underlying resource model classifications – i.e., Measured Resource material is converted to either Proved or Probable Reserves, with Indicated Resource material converting to Probable Reserve.
	Whether the result appropriately reflects the Competent Person’s view of the deposit.	The results accurately reflect the competent persons view of the deposit.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Nil.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	The Ore Reserve has been internally reviewed in line with Northern Star Resource governance standard for Reserves and Resources. There have been no external reviews of this Ore Reserve estimate.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the Reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	Confidence in the model and Ore Reserve Estimate is considered high based on current mine and reconciliation performance.
	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.	Estimates are global but will be reasonably accurate on a local scale.
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	Not applicable.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Historical reconciliation of Rubicon, Hornet and Pegasus mine production has been used in the generation both the underlying Mineral Resource Estimate and subsequent modifying factors applied to develop an Ore Reserve.

JORC Code, 2012 Edition – Table 1 Report

Kundana Area Deposits (Pode and Hera): Resources and Reserves – 31 March 2021

Section 1: Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	A combination of sample types were used to collect material for analysis; underground and surface diamond drilling (DD), surface Reverse Circulation drilling (RC) and face channel (FC) sampling. Tabulated statistics below include the Hornet, Rubicon, Pegasus, Drake trend. A more detailed breakdown will be made available in the Pode/Hera 2021 Resource Report.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td><table><tr><th></th><th colspan="3">Pode and Hera (inc. Hornet, Rubicon, Pegasus, Drake</th></tr><tr><th></th><th>Number of Holes</th><th>Total metres</th><th>Number of Samples</th></tr><tr><td>DD</td><td>3288</td><td>593670</td><td>485299</td></tr><tr><td>FS</td><td>11130</td><td>53668</td><td>91083</td></tr><tr><td>RC</td><td>230</td><td>21600</td><td>15348</td></tr><tr><td>RC_DD</td><td>49</td><td>15414</td><td>12000</td></tr><tr><td>**TOTAL**</td><td>**14697**</td><td>**684352**</td><td>**603730**</td></tr></table></td></tr>
<tr><td></td><td>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</td><td>DD drilling is sampled within geological boundaries with a minimum (0.3m) and maximum (1.0m) sample length. Face channel sampling is constrained within geological and mineralised boundaries with a minimum (0.2m) and maximum (1.0m) channel sample length. In some cases, smaller samples (0.1m – 0.2m) have been taken to account for narrower structures in the face. Where possible, face sampling is conducted from channels perpendicular to the vein structure.</td></tr>
<tr><td></td><td>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 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</td><td>DD drill core was nominated for either half core or full core sampling. Samples designated for half core were cut using an automated core saw. The mass of material collected was dependent on the drillhole diameter and sampling interval selected.
A sample size of at least 3kg of material was targeted for each face sample interval.
All samples were delivered to a commercial laboratory where they were dried and crushed to 90% of material ≤3mm. At this point, samples greater than 3kg were split using a rotary splitter, then pulverised to 90% ≤75µm.
A 40g charge was selected for fire assay for all recent samples. Historically, charge weights of 50g have also been used.</td></tr>
<tr><td>Drilling techniques</td><td>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.).</td><td>Both Reverse Circulation and Diamond Drilling techniques are used to drill the Kundana deposits.
Surface diamond drillholes were completed using HQ2 (63.5mm), whilst underground diamond drillholes were completed using NQ2 (50.5mm).
Historically, core was orientated using the Reflex ACT Core orientation system. Currently, core is orientated using the Boart Longyear Trucore Core Orientation system.
RC Drilling was completed using a 5.75” drill bit, downsized to 5.25” at depth.
In many cases RC pre-collars were drilled, followed by diamond tails. Pre-collar depth was determined in the drill design phase.</td></tr>
<tr><td>Drill sample recovery</td><td>Method of recording and assessing core and chip sample recoveries and results assessed.</td><td>For DD drilling, any core loss is recorded on the core block by the driller. This is then captured by the logging geologist and entered as an interval into the hole log.</td></tr>
<tr><td></td><td>Measures taken to maximise sample recovery and ensure representative nature of the samples.</td><td>Contractors adjust the rate and method of drilling if recovery issues arise. All recovery is recorded by the drillers on core blocks. This is checked and compared to the measurements of the core by the geological team. Any issues are communicated back to the drilling contractor.</td></tr>
<tr><td></td><td>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.</td><td>Recovery was excellent for diamond core and no relationship between grade and recovery was observed. Average recovery across the Kundana camp is at 99%. No specific areas within Pode had issues with recovery.</td></tr>
<tr><td>Logging</td><td>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.</td><td>All diamond core is logged for lithology, veining, alteration, mineralisation, and structural data. Structural measurements of specific features are also taken through oriented zones.
Logging is entered in AcQuire using a series of drop-down menus which contain the appropriate codes for description of the rock.
All underground faces are logged for lithology and mineralisation. Logging is captured on a face sample sheet underground which is then transferred to AcQuire. Faces are then input into AcQuire using a series of drop-down menus which contain appropriate codes for description of the rock.</td></tr>
<tr><td></td><td>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</td><td>All core logging is qualitative with mineralised zones assayed for quantitative measurements. Every core tray is photographed wet.
All underground faces are logged and sampled to provide both qualitative and quantitative data. Faces are washed down and photographed before sampling is completed.</td></tr>
<tr><td></td><td>The total length and percentage of the relevant intersections logged.</td><td>For all drillholes, the entire length of the hole is logged.</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>If core, whether cut or sawn and whether quarter, half or all core taken.</td><td>Diamond core is cut using an automated core saw. Sampling and cutting methodology is dependent on the type of drilling completed. Half core is utilised for exploration drilling and Resource Definition drilling. Grade Control and rare Resource Definition drill holes are whole core sampled.</td></tr>
<tr><td></td><td>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</td><td>RC samples are split using a rig-mounted cone splitter to collect a sample 3 - 4kg in size from each 1m interval. These samples were utilised for any zones approaching known mineralization and from any areas identified as having anomalous gold. Outside known mineralised zones spear samples were taken over a 4m interval for composite sampling.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Preparation of samples was conducted at Bureau Veritas' Kalgoorlie facilities; commencing with sorting, checking, and drying at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal -6mm particle size. If the sample is greater than 3kg a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverised to 90% ≤75µm, using a Labtechnics LM5 bowl pulveriser. 400g pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets. The sample preparation is considered appropriate for the deposit.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Standard procedures are used for all processes within the laboratory. Grind checks are performed at both the crushing stage (3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
	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.	Umpire sampling is performed monthly, where 3% of the samples are sent to the umpire laboratory for processing. Umpire samples of faces were analysed using a 40g charge weight.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate for the material being sampled.
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.	A 40g fire assay charge for diamond drillholes and a 40g charge for face samples is used with a lead flux in the furnace. The prill is totally digested by HCl and HNO_3 acids before Atomic Absorption Spectroscopy (AAS) determination for gold 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.	No geophysical tools were used to determine element concentrations.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	Certified reference materials (CRMs) are inserted into the sample sequence randomly at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of 3 standard deviations are re-assayed with a new CRM. Blanks are inserted into the sample sequence at a rate of 1 per 20 samples. The insertion points are selected at random, except where high grade mineralisation is expected. In these cases, a Blank is inserted after the high-grade sample to test for contamination. Results greater than 0.2gpt if received are investigated, and re-assayed if appropriate. New pulps are prepared if anomalous results cannot be resolved. Barren flushes are regularly inserted after anticipated high gold grades at the pulverising stage. No field duplicates were submitted for diamond core or face samples. Pulp duplicates are requested after any ore zone. These are indicated on the sample sheet and the submission sheet. When visible gold is observed in core, a quartz flush is requested after the sample. Laboratory performance was monitored using the results from the QA samples mentioned above. This was supplemented by the internal QA samples used by the laboratories, which included pulp duplicates and CRMs. The QA studies indicate that accuracy and precision are within industry accepted limits.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by another Northern Star geologist during the drill hole validation process, and later by a Competent Person to be signed off.
	The use of twinned holes.	No twinned holes were drilled at Pode. Re-drilling of some drillholes has occurred due to issues downhole (e.g., bogged rods). These have been captured in the database with an 'A' suffix. Re-drilled holes are logged and sampled, whilst the original drillhole is logged, but not sampled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging and sampling are recorded directly into AcQuire. Assay files are received in *.cvs format and loaded directly into the database using an AcQuire importer object. Assays are then processed through a form in AcQuire for QAQC checks. Hardcopy and noneditable electronic copies are stored.
	Discuss any adjustment to assay data.	No adjustments have been made to this 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.	Planned holes are marked up by the mine survey department using a total station survey instrument in mine grid (Kundana 10). The actual hole position is then located by the mine survey department once drilling is completed. In some cases, drillhole collar points are measured off survey stations if a mark-up cannot be completed. Holes are lined up on the collar point using the DHS Azimuth Aligner. Planned azimuths and dips of the holes are downloaded to the aligner which is then placed on the rod string to align the hole for drilling. During drilling, single shot surveys are conducted every 30m to track the deviation of the hole and to ensure it stays close to design. This is performed using the DeviShot camera which measures the gravitational dip and magnetic azimuth. Results are uploaded from the DeviShot software into a *.cvs format which is then imported into the AcQuire database. At the completion of the hole, a Multishot (using the DeviFlex non-magnetic strain gauge instrument) survey is completed, taking measurements every 3m to ensure accuracy of the hole. This is converted to csv format and imported into the AcQuire database.

Criteria	JORC Code explanation	Commentary
	Specification of the grid system used.	Collar coordinates are recorded in mine grid (Kundana 10) and transformed into MGA94_51.
	Quality and adequacy of topographic control.	Quality topographic control has been achieved through Lidar data and survey pickups of holes over the last 15 years.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drillhole spacing varies across the deposit. Resource Targeting drilling at an 80m x 80m nominal spacing is infilled during Resource Definition drilling down to an average of 30m x 30m. Grade Control drilling follows development and is generally comprised of stab drilling from the development drive at 10m to 15m drill centres.
	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 data spacing and distribution is considered sufficient to support the resource and reserve estimates.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.	Pode structures in the Kundana area dip on average (50°) to the west (local grid). Diamond drilling was designed to target the orebodies perpendicular to this orientation to allow for a favourable intersection angle. In instances where this was not possible (primarily due to drill platform location), drilling was not completed, or re-designed once a more suitable platform became available. Drillholes with extremely poor intersection angles are excluded from resource estimation.
	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 sampling bias is considered to have been introduced by the drilling orientation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission samples are stored by Northern Star Resources in a secure yard. Once submitted to the laboratories they are stored in a secure fenced compound, tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been undertaken of the data and sampling practices.

Section 2: Reporting of Exploration Results

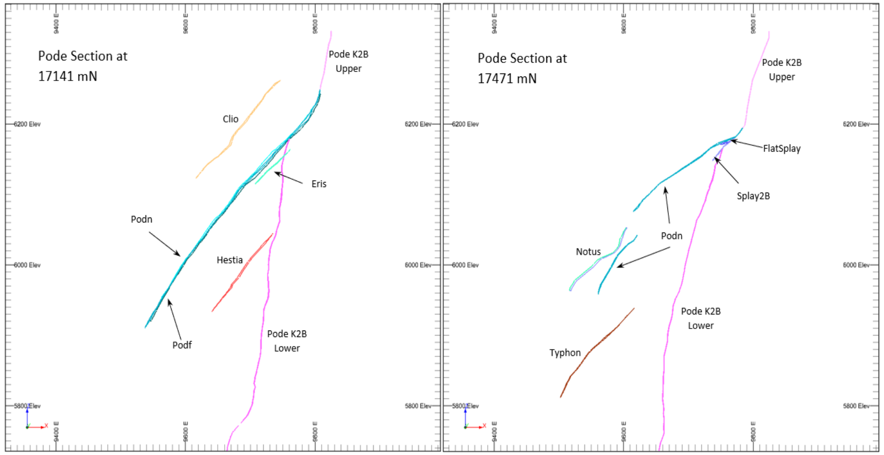
(Criteria listed in the preceding section also apply to this section.)

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 Pode deposit is located within the M16/309 and M16/326 mining leases held by the East Kundana Joint Venture (EKJV). The EKJV is majority owned and managed by Northern Star Resources Limited (51%). The minority holding in the EKJV is held by Tribune Resources Ltd (36.75%) and Rand Mining Ltd (12.25%). The tenement on which the Pode deposits are hosted (M16/309) is subject to three royalty agreements. The agreements that are on M16/309 are the Kundana-Hornet Central Royalty, the Lake Grace Royalty and the Kundana Pope John Agreement No. 2602-13.
	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.	No known impediments exist, and the tenements are in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The first reference to the mineralization style encountered at the Kundana project was the mines department report on the area produced by Dr. I. Martin (1987). He reviewed work completed in 1983 – 1984 by a company called Southern Resources, who identified two geochemical anomalies, creatively named Kundana #1 and Kundana #2. The Kundana #2 prospect was subdivided into a further two prospects, dubbed K2 and K2A. Between 1987 and 1997, limited work was completed. Between 1997 and 2006 Tern Resources (subsequently Rand Mining and Tribune Resources), and Gilt-Edged Mining focused on shallow open pit potential, which was not considered viable for Pegasus, however the Rubicon open pit was considered economic, and production commenced in 2002. In 2011, Pegasus was highlighted by an operational review team and follow-up drilling was planned through 2012.
Geology	Deposit type, geological setting and style of mineralisation.	The Kundana camp is situated within the Norseman-Wiluna Greenstone Belt, in an area dominated by the Zuleika shear zone, which separates the Coolgardie domain from the Ora Banda domain. K2-style mineralisation (Pegasus, Rubicon, Hornet, Drake) consists of narrow vein deposits hosted by shear zones located along steeply dipping overturned lithological contacts. The K2 structure is present along the contact between a black shale unit (Centenary Shale) and intermediate volcaniclastics (Black Flag Group).

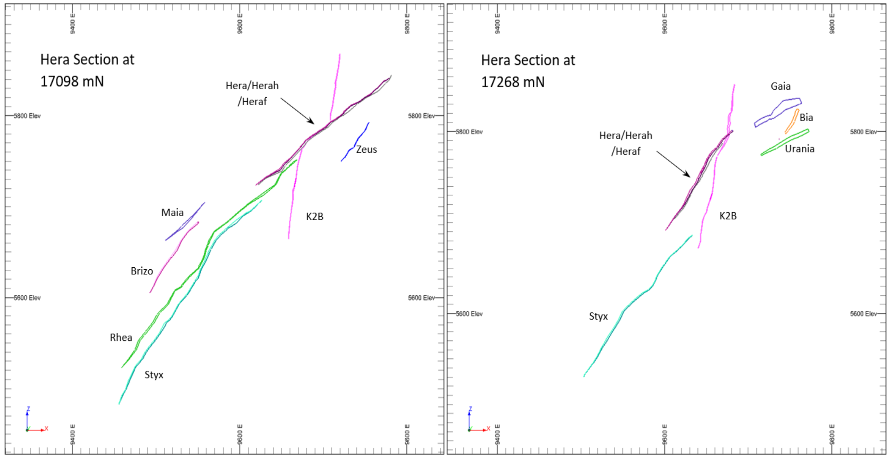
Criteria	JORC Code explanation	Commentary
		Minor mineralisation, termed K2B, also occurs further west, on the contact between the Victorious basalt and Bent Tree Basalt (both part of the regional upper Basalt Sequence). Additional mineralisation includes the K2E and K2A veins, Polaris/Rubicon Breccia (Silicified and mineralised Shale) and several other HW lodes adjacent to the main K2 structure. A 60° W dipping fault, offsets this contact and exists as a zone of vein-filled brecciated material hosting the Pode-style mineralisation at Pegasus and the Nugget lode at Rubicon.
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.	A summary of the data present in the Pode deposits can be found above. The collar locations are presented in plots contained in the NSR 2021 resource report. Drillholes vary in survey dip from +53 to -84 degrees, with hole depths ranging from 8m to 1,413m. Average hole depth is 248m. The assay data acquired from these holes are described in the NSR 2021 resource report. All validated drill hole data was used directly or indirectly for the preparation of the resource estimates described in the resource report.
	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 exclusion of the drill hole information does not materially detract from the understanding of this report.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.	All reported assay results have been length weighted to provide an intersection width. A maximum of 2m of barren material (considered < 2gpt) between mineralised samples has been permitted in the calculation of these widths. Typically grades over 2.0gpt are considered significant, however, where low grades are intersected in areas of known mineralisation these will be reported. No top-cutting is applied when reporting intersection results.
	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.	Where an intersection incorporates short lengths of high grade results these intersections will be reported in addition to the aggregate value. These will typically take the form of ##.#m @ ##.##gpt including ##.#m @ ##.##gpt.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results:	True widths have been calculated for intersections of the known ore zones based on existing knowledge of these structures.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Both the downhole width and true width have been clearly specified when used.
	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').	Not applicable.
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.	Appropriate plans and section have been included at the end of this table and in the NSR 2021 resource 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.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and 'From' and 'To' depths.
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.	No other material exploration data has been collected for this area.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further drilling will continue to define the extents of the Pode-style mineralisation.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Appropriate diagrams accompany this release.

PODE & HERA ORE LODES

.Cross section views of Pode ore lodes

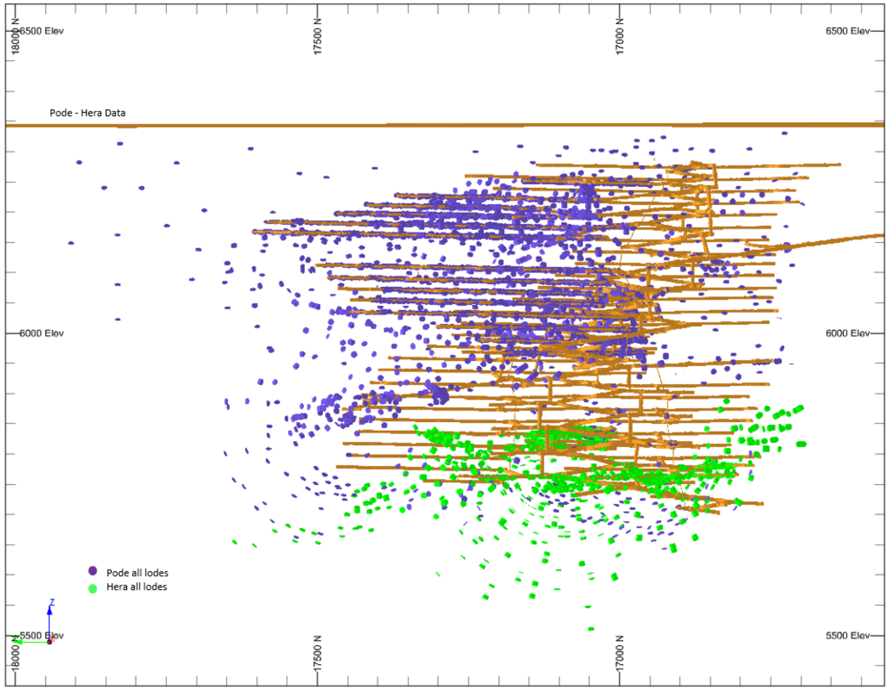


. Cross section views of Hera ore lodes



PODE & HERA ORE LODES

Long section view of Pode and Hera ore lodes and data used in resource estimations



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.	Sampling and logging data are either recorded on paper and manually entered into a database system or is captured digitally via a logging laptop and directly loaded into the database system. There are checks in place to avoid duplicate holes and sample numbers. Where possible, raw data is loaded directly into the database from laboratory and survey-tool derived files.
	Data validation procedures used.	The complete exported database (including drill and face samples) is imported into Datamine and checked visually for any apparent errors i.e., holes or faces sitting between levels or not on surface DTM's. Multiple checks are then made on numerical data. These include: • Empty table checks to ensure all relevant fields are populated. • Unique collar location check. • Distances between consecutive surveys is no more than 60m for drill-holes. • Differences in azimuth and dip between consecutive surveys of no more than 0.3 degrees. • The end of hole extrapolation from the last surveyed shot is no more than 30m. • Underground face sample lines are not greater than +\- 5 degrees from horizontal.

Criteria	JORC Code explanation	Commentary
		Errors are corrected where possible. When not possible the data is resource flagged as "No" in the database and the database is re-exported. This data will not be used in the estimation process. Several drilling programs completed between 2014 and 2016 had erroneous meter depths recorded therefore these drill holes have been omitted from the ore wireframe interpretations and flagged as invalid. However, where there were no QAQC issue with the assays, the correct intervals have been recorded, the translation in the easting direction required for them to be in the 'correct' location (based on development above and below) applied and these intervals were appended to the data set before compositing. In addition to being Resource Flagged as "Yes" or "No", drill holes are assigned a Data Class, which provides a secondary level of confidence in the data quality. Data Class (DC) values range from 0 to 3, with criteria summarised below: • DC 3 = Recent data; all data high quality, validated and all original data available. • DC 2 = Historic data; may or may not have all data in AcQuire or hard copy available but has proximity to recent drilling which confirms the dip, width and tenor. Used to assist in classification • DC 1 = Historic data; same criteria as DC 2 but cannot be verified with recent drilling, i.e., too far away, or dissimilar dip, width and/or tenor to recent drilling. Not used in Resource estimate. • DC 0 = Historic data; no original information or new drilling in proximity to verify. Not used in Resource estimate.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The geological interpretations underpinning these resource models were prepared by geologists working in the mine who were in direct, daily contact with the ore body. The estimation of grades was undertaken by personnel familiar with the ore body and the general style of mineralisation encountered. The Senior Resource Geologist, a Competent Person for reviewing and signing off on the Pode estimate maintained a site presence throughout the process.
	If no site visits have been undertaken indicate why this is the case.	Not applicable
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The interpretation of the Pode deposits were carried out using a systematic approach to ensure continuity of the geology and estimated mineral resource. The confidence in the geological interpretation is high and is supported with information acquired during ore development as well as from underground and surface diamond drilling. The interpretation of all Pode mineralised wireframes was conducted using the sectional interpretation method in Datamine RM software. Most Pode lodes have been interpreted in plan-view section (with the remainder in cross-section view). Where development levels were present, sectional interpretation was completed at approximately 5m spacing. Where only drilling data was present, sectional interpretation was completed at approximately 10m-20m spacing. Checks were made to ensure that the wireframed volume agreed with the true ore widths of drillhole intersections. As a rule, wireframe extrapolation was limited to one half of the average drill spacing.
	Nature of the data used and of any assumptions made.	All available geological data was used in the interpretation including surface mapping, DD and RC drill holes, underground face channel data, 3D photogrammetry and regional and local structural models.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretations have been proposed.
	The use of geology in guiding and controlling Mineral Resource estimation.	The interpretation of the Pode mineralisation is based on the presence of mineralised structure (veining and shear), ore-bearing mineralogy (gold and associated sulphides), assayed samples and continuity between sections.
	The factors affecting continuity both of grade and geology.	Individual Pode mineralised envelopes are reasonably continuous at the current drill spacing, as similar mineralisation styles, structures and grade tenor exists between adjacent drill holes. Offsetting structures are not known to be present in Pode although significant undulations exist which may have some impact on continuity of the mineralised trends and metal estimated within. Mineralised envelopes for Pode are confined to the Victorious (porphyritic) and Bent Tree (fine-grained) basalt lithological units.
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 strike length of the different ore systems varies from ~200m to ~1,200m. The individual ore bodies occur in a major regional Zuleika shear system extending over tens of kilometres. Ore body widths are typically in the range of 0.4m - 2m. The widest orebody is Hera Halo at approximately 2m. The narrowest is Zeus at approximately 0.4m. The PodN structure has an average thickness of 1.5m. Mineralisation is known to occur from the base of cover to ~800m below surface and is open in all directions.
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.	Pode mineralised zones used direct grade estimation by Ordinary Kriging (unless otherwise stated) supported by composited sample data. Composite lengths of 1m were used for most lodes (except Maia and Athena lodes, which used 0.5m composite lengths), determined from statistical analysis of all sample lengths in the estimation dataset. In smaller mineralised zones where construction of a coherent variogram was not possible, Inverse Distance has been used. All estimation was completed using Datamine RM software. Details of estimation by Pode ore lode is summarised below:

Criteria	JORC Code explanation	Commentary
		PodN (Pode) – Divided into two subdomains based on data density. Data was top cut to 190gpt using the influence limitation approach. In addition to this a hard topcut of 400gpt was used to limit the impact of genuinely anomalous data points. Variography was completed on the composited data file with searches completed in three passes. For the high data-density estimate, search ranges of 50m in direction 1 (dir1), 30m in direction 2 (dir2) and 25m in direction 3 (dir3) were used. For the low data-density estimate, search ranges of 100m in dir1, 80m in dir2 and 50m in dir3 were used. Dynamic anisotropy has been used for the estimate, with the plunge component hard coded to 40° based on the variogram-derived search orientation. **PodH** (Pode) – Divided into two subdomains based on data density. A hard topcut of 25gpt was used to limit the impact of anomalous data points. Variography was completed on the composited data file with searches completed in three passes. For the high data-density estimate, search ranges of 15m in dir1, 15m in dir2 and 10m in dir3 were used. For the low data-density estimate, search ranges of 80m in dir1, 70m in dir2 and 20m in dir3 were used. Dynamic anisotropy has been used for the estimate, with the plunge component hard coded to 40° based on the variogram-derived search orientation. **PodF** (Pode) – Divided into two subdomains based on data density. A hard topcut of 20gpt was used to limit the impact of anomalous data points. Variography was completed on the composited data file with searches were completed in three passes. For the high data-density estimate, search ranges of 15m in dir1/dir2 and 10m in dir3 were used. For the low data-density estimate, search ranges of 80m in dir1, 70m in dir2 and 20m in dir3 were used. Dynamic anisotropy has been used for the estimate, with the plunge component hard coded to 40° based on the variogram-derived search orientation. **Splay2B** (Pode) – Estimated as a single domain. A hard topcut of 30gpt was used to limit the impact of anomalous data points. No variography completed due to lack of data pairs in domain. Searches were completed in three passes. Search ranges of 30m in dir1, 30m in dir2 and 30m in dir3 were used. **K2B** (Pode and Hera) – Divided into two subdomains based on grade. Top cutting was completed separately on the high-grade and low-grade subdomains (60gpt and 15gpt respectively). Variography was completed on the composited data files separately with searches completed in three passes. For the high-grade estimate, search ranges of 90m in dir1, 50m in dir2 and 30m in dir3 were used. For the low-grade estimate, search ranges of 50m in dir1/2/3 (isotropic) were used. ID was used for both subdomains. **Hestia** (Pode) – Estimated as a single domain. Data was top cut to 30gpt using the influence limitation approach. Variography was completed on the composited data file with searches completed in three passes. Search ranges of 50m in dir1, 30m in dir2 and 15m in dir3 were used. **Ceto** (Pode) – Estimated as a single domain. Data was top cut to 10gpt using the influence limitation approach. Variography was completed on the composited data file with searches completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 30m in dir3 were used. **Eris** (Pode) – Estimated as a single domain. Data was top cut to 8gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 75m in dir1, 35m in dir2 and 15m in dir3 were used. **Clio** (Pode) – Estimated as a single domain. Data was top cut to 12gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 80m in dir1, 50m in dir2 and 30m in dir3 were used. **Notus** (Pode) – Estimated as a single domain, no top-cut applied as no anomalous samples present and coefficient of variance within acceptable range. No variography completed due to lack of data pairs in domain. Searches were completed in three passes. Search ranges of 70m in dir1, 40m in dir2 and 15m in dir3 were used. **Kratos** (Pode) – Estimated as a single domain. Data was top cut to 10gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 80m in dir1, 50m in dir2 and 30m in dir3 were used. **Ares** (Pode) – Estimated as a single domain. No top-cut applied as no anomalous samples present and coefficient of variance within acceptable range. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 60m in dir1/3 and 3 were used. **Athena** (Pode) – Estimated as a single domain. Data was top cut to 28gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and isotropy. Searches were completed in three passes. Search ranges of 30m in dir1, 30m in dir2 and 30m in dir3 were used. **Apollo** (Pode) – Estimated as a single domain. Data was top cut to 8gpt using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging moderately to the north. Searches were completed in three passes. Search ranges of 40m in dir1, 20m in dir2 and 20m in dir3 were used. **PodS** (Pode) – Estimated as a single domain. No top cutting required. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 40m in dir1, 40m in dir2 and 40m in dir3 were used. **Typhon** (Pode) – Estimated as a single domain. Data was top cut to 12gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 30m in dir3 were used. **Hera** (Hera) – Divided into two subdomains based on data density. Data was top cut to 400gpt for the high-grade subdomain and 35gpt for the low-grade subdomain using the influence limitation approach. Variography was completed on the composited data file with searches were completed in three passes. For the high data-density estimate, search ranges of 20m in dir1/dir2 and 15m in dir3 were used. For the low data-density estimate, search ranges of 35m in dir1,

Criteria	JORC Code explanation	Commentary
		25m in dir2 and 15m in dir3 were used. Categorical Indicated Kriging has been used for the estimate using dynamic anisotropy with the plunge component hard coded to 40° based on the variogram-derived search orientation. **Hera Footwall Halo** (Hera) **–** Divided into two subdomains based on data density. Hard top cuts were applied to the data of 25gpt for the high-grade subdomain and 8gpt for the low-grade subdomain. Search ranges of 30m in dir1/dir2 and 15m in dir3 were used. **Hera Hangingwall Halo** (Hera) – Divided into two subdomains based on data density. Hard top cuts were applied to the data of 30gpt for the high-grade subdomain and 6gpt for the low-grade subdomain. For the high data-density estimate, search ranges of 30m in dir1, 20m in dir2 and 10m in dir3 were used. For the low data-density estimate, search ranges of 30m in dir1, 20m in dir2 and 15m in dir3 were used. **Hera Breccia lode** (Hera) – Estimated as a single domain. A hard top cut of 7gpt has been applied to the data. Searches were completed in three passes. Search ranges of 30m in dir1, 15m in dir2 and 10m in dir3 were used. **Rhea** (Hera) – Divided into two subdomains based on data density. Data was top cut to 6gpt for the low-grade subdomain using the influence limitation approach. No top cut was required for the high-grade subdomain. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 30m in dir3 were used. **Styx** (Hera) – Estimated as a single domain. Data was top cut to 16gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 30m in dir3 were used. **Brizo** (Hera) – Estimated as a single domain. Data was top cut to 6gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 30m in dir3 were used. **Maia** (Hera) – Estimated as a single domain. No top cutting required. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 40m in dir1, 30m in dir2 and 15m in dir3 were used. **Thalia** (Hera) – Estimated as a single domain. Data was top cut to 5gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 30m in dir1, 20m in dir2 and 10m in dir3 were used. **Selene** (Hera) – Estimated as a single domain. Data was top cut to 25gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 60m in dir1, 40m in dir2 and 30m in dir3 were used. **Zeus** (Hera) – Estimated as a single domain. Data was top cut to 80gpt using the influence limitation approach. No variography completed due to lack of data pairs in domain. Continuity fans analysed to ascertain search orientation and anisotropy. Searches were completed in three passes. Search ranges of 75m in dir1, 35m in dir2 and 15m in dir3 were 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.	Check estimates have been completed for all lodes. These include Inverse Distance (ID) and Nearest Neighbour (NN) estimates. Isotropic searches have also been tested to corroborate chosen variogram angles.
	The assumptions made regarding recovery of by-products.	No assumptions have been made
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).	No deleterious elements were estimated in these models.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block sizes varied depending on sample density. In areas of high data-density (underground face samples with average spacing of 3m – 4m) a 5m x 5m x 5m block size was chosen. Low density drill spacing is defined as approximately 30m or greater and a 10m x 10m x 10m block size was chosen. Estimates were completed with soft boundaries between varying block size estimates (unless a geological feature and contact analysis indicated a hard boundary was required) and added together following individual estimation for final validations. Search ellipse dimensions were derived from the variogram model ranges, or isotropic ranges based on data density where insufficient data was present for variographic analysis.
	Any assumptions behind modelling of selective mining units.	Selective mining units were not used during the estimation process.
	Any assumptions about correlation between variables.	All variables were estimated independently of each other. Density has used estimation parameters based on the equivalent gold estimation for that domain.
	Description of how the geological interpretation was used to control the resource estimates.	Hanging-wall and foot-wall wireframe surfaces were created using sectional interpretation. These were used to define the Pode/Hera mineralised zones based on the geology (usually a quartz vein) and gold grade. Pode/Hera mineralised zones are predominantly low angled dilatational fault zones with quartz veining evident from drilling (all lodes) and development (PodN, PodF, PodH, Hera and Hera Halo only). For mine planning purposes a waste model is created by projecting the hanging wall and footwall surfaces 15m either side. A default grade of 0.1gpt is assigned and the same resource classification as the adjacent ore lode is applied.

Criteria	JORC Code explanation	Commentary
	Discussion of basis for using or not using grade cutting or capping.	Topcuts were applied to the composited sample data with the intention of reducing the impact of outlier values on the average grade. Top cuts were selected based on a statistical analysis of the data with a general aim of not impacting the mean by more than 5% and reducing the coefficient of variation to around 1.2. Topcuts vary by domain and range from 8 to 400gpt. The top cut values are applied in several steps, using a technique called influence limitation top cutting. A top cut (AU) and non-top cut (*_NC) variable is created, as well as a spatial variable (*_IL) which only has values where the top cut values appear. For example, where gold requires a top cut, the following variables will be created and estimated: • AU (top cut gold) • AU_NC (non- top-cut gold) • AU_IL (spatial variable; values present where AU data is top cut) The top-cut and non-top cut values are estimated using search ranges based on the modelled gold variogram, and the *_IL values estimated using very small ranges (e.g., 5m x 5m x5m). Where the *_IL values produce estimated blocks within these restricted ranges, the *_NC estimated values replace the original top cut estimated values (AU).
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Statistical measures of Kriging error, such as Kriging Efficiency and Slope of Regression, are used to assess the quality of the estimation for each domain. Differences in the global grade of the declustered, top-cut composite data set and the average model grade were within 10%, or justification for a difference outside 10% was explicable. Swath plots comparing declustered, top-cut composites to block model grades are created and visual plots are prepared summarising the critical model parameters. Visually, block grades are assessed against drill hole and face data.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource Estimate has been reported at a 2.13gpt cut off within 2.5m minimum mining width (no dilution) MSOs using a $AS2,250/oz gold price.
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 mining assumptions have been made during the resource wireframing or estimation process.
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 test work results show that the mineralisation is amendable to processing through the existing Kanowna Belle treatment plant. Ore processing throughput and recovery parameters were estimated based on historic performance and potential improvements available using current technologies and practices.
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 green fields 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.	A “Licence to Operate” is held by the operation which is issued under the requirement of the “Environmental Protection Act 1986”, administered by the Department of Environment (DoE). The licence stipulates environmental conditions for the control of air quality, solid waste management, water quality, and general conditions for operation. Groundwater Licences are held for water abstraction, including production bore field water use for mineral processing, and mine dewatering, in accordance with the Rights in Water and Irrigation Act 1914. These Licences are also regulated by DoE and are renewable on a regular basis. Kanowna Operations conduct extensive environmental monitoring and management programs to ensure compliance with the requirements of the licences and lease conditions. An Environmental Management System is in place to ensure that Northern Star employees and contractors exceed environmental compliance requirements. The Kalgoorlie operations are fully permitted including groundwater extraction and dewatering, removal of vegetation, mineral processing, and open pits. Kalgoorlie Operations have been compliant with the International Cyanide Management Code since 2008. Compliance with air quality permits is particularly important at Kanowna because of the roaster operation and because there are three facilities in the Kalgoorlie region emitting SO_2 gas. Kanowna has a management program in place to minimize the impact of SO_2 on regional air quality and ensure compliance with regulatory limits.

Criteria	JORC Code explanation	Commentary
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.	A thorough investigation into average density values for the various lithological units at Pode was completed and the mean densities by lithology were coded into the database. Where there were no measurements for a specific lithology and default of 2.8 t/m^3 was applied. Density was then estimated by Ordinary Kriging using the associated gold estimation parameters for that domain. Post estimation, default density values for the oxide and transition zones were applied, based on regional averages.
	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.	Bulk density measurements adequately account for any voids within the measured material.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Assumptions on the average bulk density of individual lithologies, based on 14,613 bulk density measurements at Pode and RHP. Assumptions were also made based on regional averages, on the default densities applied to oxide (1.80 t/m^3) and transitional (2.30 t/m^3) material, due to a lack of data in these zones.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Classification is based on a series of factors including: • Geologic grade continuity • Density of available drilling • Statistical evaluation of the quality of the kriging estimate • Confidence in historical data, based on the new Data Class system
	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).	All relevant factors have been given due weighting during the classification process.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource estimation methodology is considered appropriate and reflects the Competent Persons view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource Estimates.	All resource models have been subjected to internal peer review.
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.	These Mineral Resource Estimates are considered as robust and representative of the Pode style of mineralisation. The relative accuracy of the Mineral Resource Estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.
	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 global estimates of tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No reconciliation factors are applied to the resource post-modelling.

Section 4: Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource Estimate for conversion to Ore Reserves	Description of the Mineral Resource Estimate used as a basis for the conversion to an Ore Reserve.	Northern Star 2021MY Resource.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resources are reported inclusive of the Ore Reserve.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Site visits have been undertaken by the Competent Person.
	If no site visits have been undertaken indicate why this is the case.	Site visits are undertaken.

Criteria	JORC Code explanation	Commentary
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	Feasibility Study.
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Upgrade of previous Ore Reserve.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Budget costs and physicals form the basis for Cut Off Grade calculations. Mill recovery is calculated based on historical recoveries achieved. Various cut off grades are calculated including a break-even cut-off grade (BCOG), variable cut-off grade (VCOG) and Mill cut-off grade (MCOG). The VCOG is used as the basis for stope design, with areas requiring significant development assessed by detailed financial analysis to confirm their profitability.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e., either by application of appropriate factors by optimisation or by preliminary or detailed design).	Mineral Resource is converted to Ore Reserve after completing a detailed mine design and associated financial assessment.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	Selected mining method deemed appropriate as it has been used at Raleigh since 2005 & Rubicon / Hornet / Pegasus since 2011.
	The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Design parameters include a 20m to 25m level spacing with a stope strike length of 15m for dilution control purposes. This correlates to a Hydraulic Radius of 4.3 to 4.6
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	Not applicable - this Table 1 applies to underground mining only.
	The mining dilution factors used.	Based on historical mine performance, mining dilution of 20% Rock and 10% Paste dilution (10 -30% total) for stoping additional to minimum mining width is applied, as well as 10% dilution for Ore development.
	The mining recovery factors used.	Mining recovery factor of 92.5% is applied based on historical data.
	Any minimum mining widths used.	Minimum stope width of 3.0m where the vein is less than 2m wide. 1m additional to vein width when greater than 2m wide.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Designed stopes with greater than 50% inferred blocks are excluded from the reported Reserve.
	The infrastructure requirements of the selected mining methods.	Infrastructure in place, currently an operating mine.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	EKJV ore is treated at the Kanowna Belle milling facilities or additional ore to toll treatment facilities as required. The Kanowna Belle Mill is designed to handle approximately 2.0m million tonnes of feed per annum. The plant has the capability to treat both refractory and free milling ores, through either using the flotation circuit and associated concentrate roaster circuit, including carbon-in-leach (CIL) gold recovery, or bypassing the flotation circuit and going directly to a CIL circuit designed to treat flotation tails. The plant campaigns both refractory and free milling ores every month. Between campaigns, the circuit is “cleaned out” using mineralised waste. The plant is made up of crushing, grinding, gravity gold recovery, flotation, roasting, CIL, elution and gold recovery circuits. Ore Reserves are calculated using processing plant recovery factors that are based on test work and historical performance.
	Whether the metallurgical process is well-tested technology or novel in nature.	Milling experience gained over plus 10 years operation.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	Milling experience gained over plus 10 years operation.
	Any assumptions or allowances made for deleterious elements.	No assumption made.
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody.	Milling experience gained over plus 10 years operation.
	For minerals that are defined by a specification, has the ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	Not applicable.

Criteria	JORC Code explanation	Commentary
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Rubicon, Hornet, Pegasus operations are currently compliant with all legal and regulatory requirements. All government permits, licences and statutory approvals are granted.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	All current site infrastructure is suitable to the proposed mining plan.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	Mine development capital cost based on historical performance on site and life-of-mine forward planning. Plant and equipment capital are based on site experience and the LOM plan.
	The methodology used to estimate operating costs.	All overhead costs and operational costs are projected forward on a first principals modelling basis.
	Allowances made for the content of deleterious elements.	No allowances made.
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	Corporate guidance.
	The source of exchange rates used in the study.	Corporate guidance.
	Derivation of transportation charges.	Historic performance.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Historic performance.
	The allowances made for royalties payable, both Government and private.	All royalties are built into the cost model.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	A$1,750/oz gold.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Corporate guidance.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	It is assumed all gold is sold directly to market at the Corporate gold price guidance of A$1,750/oz.
	A customer and competitor analysis along with the identification of likely market windows for the product.	Not Applicable.
	Price and volume forecasts and the basis for these forecasts.	Corporate guidance.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Not Applicable.
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	All costs assumptions are made based on historical performance from the mine and current economic forecast seen as representative of current market conditions.
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	Sensitivities have been used with gold price ranges of A$1,500 to A$2,000 per ounce.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	Agreements are in place and are current with all key stakeholders.
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	No Issues.
	Any identified material naturally occurring risks.	No Issues.
	The status of material legal agreements and marketing arrangements.	No Issues.

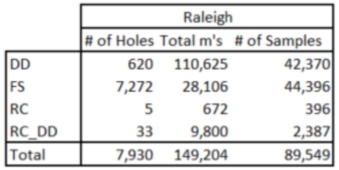
Criteria	JORC Code explanation	Commentary
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Reserve is contingent.	No Issues.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	Ore Reserves classifications are derived from the underlying resource model classifications – i.e., Measured Resource material is converted to either Proved or Probable Reserves, with Indicated Resource material converting to Probable Reserve.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results accurately reflect the Competent Person's view of the deposit.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Nil.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	The Reserve has been internally reviewed in line with Northern Star Resource governance standard for Reserves and Resources. There have been no external reviews of this Ore Reserve estimate.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the Reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	Confidence in the model and Ore Reserve Estimate is considered high based on current mine and reconciliation performance.
	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.	Estimates are global but will be reasonably accurate on a local scale.
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	Not applicable.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Historical reconciliation of mine production has been used in the generation both the underlying Mineral Resource Estimate and subsequent modifying factors applied to develop an Ore Reserve.

JORC Code, 2012 Edition – Table 1 Report

Raleigh-Sadler: Resources and Reserves –31 March 2021

Section 1: Sampling Techniques and Data

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td rowspan="3">Sampling techniques</td><td>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.</td><td>A combination of sample types was used to collect material for analysis, including surface and underground diamond drilling (DD), surface reverse circulation drilling (RC) and face channel (FC) sampling. RAB holes were excluded from the estimate. Where sufficient diamond drill holes were present, RC holes were also

<table><tr><th></th><th colspan="3">Raleigh</th></tr><tr><th></th><th># of Holes</th><th>Total m's</th><th># of Samples</th></tr><tr><td>DD</td><td>620</td><td>110,625</td><td>42,370</td></tr><tr><td>FS</td><td>7,272</td><td>28,106</td><td>44,396</td></tr><tr><td>RC</td><td>5</td><td>672</td><td>396</td></tr><tr><td>RC_DD</td><td>33</td><td>9,800</td><td>2,387</td></tr><tr><td>Total</td><td>7,930</td><td>149,204</td><td>89,549</td></tr></table>
excluded.</td></tr>
<tr><td>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</td><td>DD drilling is sampled within geological boundaries with a minimum (0.3m) and maximum (1.0m) sample length. Face channel sampling is constrained within geological and mineralised boundaries with a minimum (0.2m) and maximum (1.0m) channel sample length. In some cases, smaller samples (0.1m – 0.2m) have been taken to account for narrower structures in the face.</td></tr>
<tr><td>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 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</td><td>DD drill core is either half core or full core sampled. Half core samples were cut using an automated core saw. The mass of material collected was dependent on the drill hole diameter and sampling interval selected.
A sample size of at least 3kg of material was targeted for each face sample interval.
All samples were delivered to a commercial laboratory where they were dried and crushed to 90% of material ≤3mm. At this point, samples greater than 3kg were split using a rotary splitter, then pulverised to 90% ≤75µm.
A 40g charge was selected for fire assay for all recent samples. Historically, charge weights of 50g have also been used.</td></tr>
<tr><td>Drilling techniques</td><td>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.).</td><td>Both RC and DD techniques were used to drill the Raleigh deposit.
Surface diamond drill holes were completed using HQ2 (63.5mm) core whilst underground diamond drill holes were completed using both NQ2 (50.5mm) and NQ3 (43mm) core.
Historically, core was oriented using the Reflex ACT Core orientation system. Currently, core is oriented using the Boart Longyear Trucore Core Orientation system.
RC Drilling was completed using a 5.75" drill bit, downsized to 5.25" at depth.
In many cases, RC pre-collars were drilled, followed by diamond tails. Pre-collar depth was determined in the drill design phase.</td></tr>
<tr><td rowspan="3">Drill sample recovery</td><td>Method of recording and assessing core and chip sample recoveries and results assessed.</td><td>Any core loss in diamond drilling is recorded on the core block by the driller. This is then captured by the logging geologist and entered as an interval into the hole log.</td></tr>
<tr><td>Measures taken to maximise sample recovery and ensure representative nature of the samples.</td><td>For diamond drilling, the contractors adjust their rate of drilling and method if recovery issues arise. All recovery is recorded by the drillers on core blocks. This is checked and compared to the measurements of the core by the geological team. Any issues are communicated back to the drilling contractor.</td></tr>
<tr><td>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.</td><td>Sample recovery of the ore is challenging at Raleigh with the brittle quartz vein RMV lode adjacent to the much softer RMS lode. Triple tubing has been employed by the drilling contractor in order to minimise core loss. Samples which have logged core loss through the ore zone are excluded. No relationship between sample recovery and grade has been discerned.</td></tr>
<tr><td>Logging</td><td>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.</td><td>All diamond core is logged for lithology, veining, alteration, mineralisation, and structural data. Structural measurements of specific features are also taken through oriented zones.
Logging is entered in AcQuire using a series of drop-down menus which contain the appropriate codes for description of the rock.
All underground faces are logged for lithology and mineralisation. Logging is captured on a face sample sheet underground which is then transferred to AcQuire. Faces are then entered into AcQuire using a series of drop-down menus which contain appropriate codes for description of the rock.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All core logging is qualitative with mineralised zones assayed for quantitative measurements. Every core tray is photographed wet. All underground faces are logged and sampled to provide both qualitative and quantitative data. All faces are washed down and photographed before sampling is completed.
	The total length and percentage of the relevant intersections logged.	For all drill holes, the entire length of the hole was logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond core is cut using an automated core saw. Sampling and cutting methodology are dependent on the type of drilling completed. Half core is generally utilised for exploration drilling. Some exploration and all Grade Control drilling (GC) is whole core sampled.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC samples are split using a rig-mounted cone splitter to collect a sample 3-4kg in size from each 1m interval. These samples were utilised for any zones approaching known mineralization and from any areas identified as having anomalous gold. Outside known mineralised zones spear samples were taken over a 4m interval for composite sampling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Preparation of samples was conducted at Bureau Veritas' Kalgoorlie facilities commencing with sorting, checking and drying at less than 110°C to prevent sulphide breakdown. Samples are jaw crushed to a nominal -6mm particle size. If the sample is greater than 3kg a Boyd crusher with rotary splitter is used to reduce the sample size to less than 3kg (typically 1.5kg) at a nominal <3mm particle size. The entire crushed sample (if less than 3kg) or sub-sample is then pulverised to 90% ≤75µm, using a Labtechnics LM5 bowl pulveriser. 400g Pulp subsamples are then taken with an aluminium scoop and stored in labelled pulp packets. The sample preparation is considered appropriate for the deposit.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Procedures are utilised to guide the selection of sample material in the field. Standard procedures are used for all processes within the laboratory. Grind checks are performed at both the crushing stage (3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
	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.	Umpire sampling is performed monthly, where 3% of the samples are sent to the umpire lab for processing. Umpire samples of faces were analysed using a 40g charge weight.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate for the material being sampled.
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.	A 40g fire assay charge for diamond drill holes and a 40g charge for face samples is used with a lead flux in the furnace. The prill is totally digested by HCl and HNO_3 acids before Atomic Absorption Spectroscopy (AAS) determination for gold 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.	No geophysical tools were used to determine any element concentrations.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	Certified reference materials (CRMs) are inserted into the sample sequence at a rate of 1 per 20 samples to ensure correct calibration. Any values outside of 3 standard deviations are re-assayed with a new CRM. Blanks are inserted into the sample sequence at a rate of 1 per 20 samples. The insertion points are selected at random, except where high grade mineralisation is expected. In these cases, a Blank is inserted after the high-grade sample to test for contamination. Results greater than 0.2gpt if received are investigated, and re-assayed if appropriate. New pulps are prepared if anomalous results cannot be resolved. Barren flushes are regularly inserted after anticipated high gold grades at the pulverising stage. No field duplicates were submitted for diamond core. Pulp duplicates are requested after any ore zone. These are indicated on the sample sheet and the submission sheet. When visible gold is observed in core, a quartz flush is requested after the sample. Laboratory performance was monitored using the results from the QA samples mentioned above. This was supplemented by the internal QA samples used by the laboratories, which included pulp duplicates and CRMs. The QA studies indicate that accuracy and precision are within industry accepted limits.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All significant intersections are verified by another Northern Star geologist during the drill hole validation process, and later by a Competent Person to be signed off.
	The use of twinned holes.	No twinned holes were drilled for Raleigh. Re-drilling of some drill holes has occurred due to issues downhole (e.g., bogged rods). These have been captured in the database with an 'A' suffix. Re-drilled holes are sampled whilst the original drill hole is logged but not sampled.

Criteria	JORC Code explanation	Commentary
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging and sampling are directly recorded into AcQuire. Assay files are received in csv format and loaded directly into the database using an AcQuire importer object. Assays are then processed through a form in AcQuire for QAQC checks. Hardcopy and non-editable electronic copies of these are stored.
	Discuss any adjustment to assay data.	No adjustments are made to this 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.	Planned holes are marked up by the mine survey department using a total station survey instrument in mine grid (Kundana 10). The actual hole position is then located by the mine survey department once drilling is completed. In some cases, drill hole collar points are measured off survey stations if a mark-up cannot be completed. Holes are lined up on the collar point using the DHS Azimuth Aligner. Planned azimuths and dips of the holes are downloaded to the aligner which is then placed on the rod string to align the hole for drilling. During drilling, single shot surveys are conducted every 30m to track the deviation of the hole and to ensure it stays close to design. This is performed using the DeviShot camera which measures the gravitational dip and magnetic azimuth. Results are uploaded from the DeviShot software into a csv format which is then imported into the AcQuire database. At the completion of the hole, a Multishot (using the DeviFlex non-magnetic strain gauge instrument) survey is completed, taking measurements every 3m to ensure accuracy of the hole. This is converted to *.cvs format and imported into the AcQuire database.
	Specification of the grid system used.	Collar coordinates are recorded in mine grid (Kundana 10) and transformed into MGA94_51.
	Quality and adequacy of topographic control.	Quality topographic control has been achieved through Lidar data and survey pickups of holes over the last 15 years.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill hole spacing varies across the deposit. For resource targeting drill spacing was typically 60m x 60m. This allowed for infill drilling at 30m x 30m spacing known as resource definition. Grade control drilling was drilled on a level by level basis with drill spacing between 10m to 15m.
	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 data spacing and distribution is considered sufficient to support the Resource and Reserve estimates.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.	The major Raleigh structures dip steeply (80°) to the west (local grid). Diamond drilling was designed to target the ore bodies as close to perpendicular as possible, allowing for a favourable intersection angle. In instances where this was not achievable (mostly due to drill platform location), drilling was not completed or re-designed once a suitable platform became available. Drill holes with low intersection angles are excluded from resource estimation where more suitable data is available.
	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.	Robust data validation has been completed to ensure no sample bias is introduced by including these holes. Where drill holes have been particularly oblique, they have been flagged as unsuitable for resource estimation.
Sample security	The measures taken to ensure sample security.	Prior to laboratory submission samples are stored by Northern Star Resources in a secure yard. Once submitted to the laboratories they are stored in a secure fenced compound, tracked through their chain of custody and via audit trails.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been undertaken of the data and sampling practices at this stage.

Section 2: Reporting of Exploration Results

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

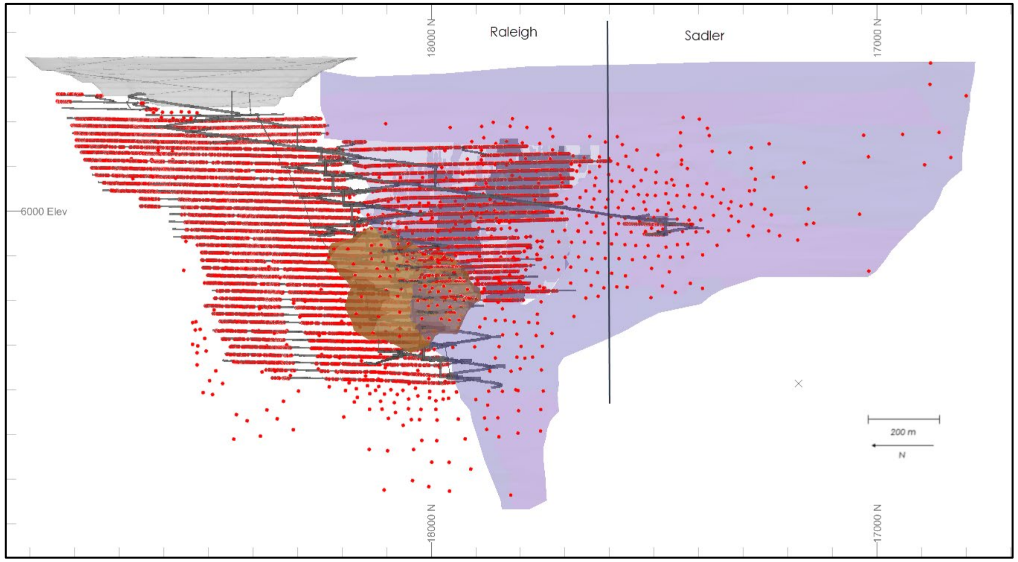
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	All holes mentioned in this report are located within either the M15/993 or M16/157 Mining leases. M15/993 which is held by the East Kundana Joint Venture (EKJV). The EKJV is majority owned (51%) and managed by Northern Star Resources Limited. The minority holding in the EKJV is held by Tribune Resources Ltd and Rand Mining Ltd. M16/157 is fully owned by Northern Star Resources Limited. The tenements on which the Raleigh and Sadler deposit is hosted is subject to three royalty agreements. The agreements are the Kundana-Hornet Central Royalty, the Lake Grace Royalty and the Kundana Pope John Agreement No. 2602-13.
	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.	No known impediments exist, and the tenements are in good standing.

APPENDIX B: TABLE 1

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No other parties performed exploration work at Raleigh during the reporting period. All previous exploration by other parties is summarised in open file annual reports which are available from the DMIRS.
Geology	Deposit type, geological setting and style of mineralisation.	The Kundana gold camp is situated within the Norseman-Wiluna Greenstone Belt, in an area dominated by the Zuleika shear zone, which separates the Coolgardie domain from the Ora Banda domain. Raleigh ore lodes are located along the Strzelecki structure, with mining commencing in 2000. The Raleigh mineralisation consists of narrow, laminated quartz veining on the contact between volcanogenic sedimentary rock unit and andesite/gabbro (RMV). Sadler is the southern extent of Raleigh with no clear geological boundary distinguishing them. Underground mining began in Sadler in FY19.
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.	No new information released in this report. The collar locations are presented in plots contained in the NSR 2021 resource report. Drill holes vary in survey dip from +48 to -83, with hole depths ranging from 15m to 950m, and having an average depth of 180m. The assay data acquired from these holes are described in the NSR 2021 resource report. All the drill hole data were used directly or indirectly for the preparation of the resource estimates described in the resource report.
	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.	No new information released in this report. Excluded information is not thought material to this release.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.	No new information released in this report. All reported assay results have been length weighted to provide an intersection width. A maximum of 2m of low-grade material (considered < 2.0gpt) between mineralised samples has been permitted in the calculation of these widths. Typically grades over 2.0gpt are considered significant, however, where wide zones of low grade are intersected in areas of known mineralisation these will be reported. No top-cutting is applied when reporting intersection results.
	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.	Where an intersection incorporates short lengths of high grade results these intersections will be reported in addition to the aggregate value. These will typically take the form of ##.#m @ ##.##gpt including ##.#m @ ##.##gpt.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used for the reporting of these exploration results.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results:	True widths have been calculated for intersections of the known ore zones, based on existing knowledge of the nature of these structures.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Both the downhole width and true width have been clearly specified when used.
	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').	Generally estimated true width is reported. Down hole lengths are noted where used.
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.	Appropriate plans and section have been included at the end of this Table.
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.	Both high and low grades have been reported accurately, clearly identified with the drill hole attributes and 'From' and 'To' depths.
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.	No other material exploration data has been collected for this area.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	There are no plans for drilling at Raleigh-Sadler in the coming year, although this does not preclude future drilling to extend Raleigh-Sadler.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Appropriate diagrams accompany this release.

RALEIGH & SADLER DEPOSITS

Long section view of the Raleigh and Sadler deposits and data used for estimation



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.	Sampling and logging data is either recorded on paper and manually entered into a database system or is captured digitally via a logging laptop and directly loaded into the database system. There are checks in place to avoid duplicate holes and sample numbers. Where possible, raw data is loaded directly into the database from laboratory and survey derived files.
	Data validation procedures used.	The database has further checks performed prior to estimation to confirm data validity. The complete exported database (including drill and face samples) is imported into Datamine and checked visually for any apparent errors i.e., holes or faces sitting between levels or not on surface DTM's. Multiple checks are then made on numerical data. These include: • Empty table checks to ensure all relevant fields are populated • Unique collar location check • Distances between consecutive surveys is no more than 60m for drill-holes • Differences in azimuth and dip between consecutive surveys of no more than 0.3 degrees • The end of hole extrapolation from the last surveyed shot is no more than 30m • Underground face sample lines are not greater than +\- 5 degrees from horizontal Errors are corrected where possible. When not possible the data is resource flagged as "No" in the database and the database is re-exported. This data will not be used in the estimation process.

Criteria	JORC Code explanation	Commentary
		Several drilling programs completed between 2015 and 2016 had erroneous meter depths recorded therefore these drill-holes have been omitted from the ore wireframe interpretations and flagged as invalid. However, where there were no QAQC issue with the assays, the correct intervals have been recorded, the translation in the easting direction required for them to be in the 'correct' location (based on development above and below) applied, and these intervals were appended to the data set before compositing. In addition to being Resource Flagged as "Yes" or "No", drill holes are assigned a Data Class, which provides a secondary level of confidence in the data quality. Data Class (DC) values range from 0 to 3, with criteria summarised below: • DC 3 = Recent data; all data high quality, validated and all original data available. • DC 2 = Historic data; may or may not have all data in AcQuire or hard copy available but has proximity to recent drilling which confirms the dip, width and tenor OR recent data with minor issues but away from the ore zone. • DC 1 = Historic data; same criteria as DC 2 but cannot be verified with recent drilling, i.e., too far away, or dissimilar dip, width and/or tenor to recent drilling. Not to be used in Resource estimate. • DC 0 = Historic data; no original information or new drilling in proximity to verify. Not to be used in Resource estimate.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The geological interpretations underpinning these resource models were prepared by geologists working in the mine and in direct, daily contact with the ore body. The estimation of grades was undertaken by personnel familiar with the ore body and the general style of mineralisation encountered. The Senior Resource Geologist, a competent person for reviewing and signing off the Raleigh estimate maintained a site presence throughout the process.
	If no site visits have been undertaken indicate why this is the case.	Site visits undertaken.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The interpretation of the Raleigh and Sadler deposit was carried out using a systematic approach to ensure continuity of the geology and estimated mineral resource. The confidence in the geological interpretation is high and is supported with information acquired during ore development as well as from drilling.
	Nature of the data used and of any assumptions made.	All available geological data was used in the interpretation including mapping, drill holes, underground face channel data, 3D photogrammetry and structural models.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretations have been proposed.
	The use of geology in guiding and controlling Mineral Resource estimation.	The interpretation of Raleigh and Sadler mineralisation is based on the presence of mineralised structure (veining and shear), ore-bearing mineralogy (gold and associated sulphides), assayed samples and continuity between sections. The Raleigh Main Vein (RMV) is based on a high-grade laminated quartz vein. Pinch-outs are common and significant time has been invested into ensuring a wireframe model is created that best represents the variable width of the lode. Volume considerations are of importance for the RMV as the average ore width is < 0.3m. The Raleigh Main Shear (RMS) is located adjacent to the RMV and migrates between the hangingwall and footwall along the contact between the quartz arenite (SAQ) and intermediate andesite (IA). It presents as a zone of increased shearing and, on rare occasions, some minor veining can also be present. A halo lode has been used to estimate grade between the RMV and RMS. Skinners Lode (SKV) is in the hanging wall of the RMV and presents as a chalky-white vein (as opposed to the laminated grey-white RMV). Pinch-outs are less common, and width is more consistent than the RMV. Skinners Lode truncates against the RMV at its southern extent. The ZZ and ZZ2 are hanging wall lodes comprised of stockwork-style vein arrays which dips shallowly to the west. They are truncated at the east by the RMV and at the west by the SKV. The RMVS lode includes both the Raleigh vein and shear structures where data density is not sufficient to confidently separate the two mineralisation types. This has been extended from Raleigh to Sadler and constitutes much of the Sadler ore body where the RMV has not been delineated from ore development.
	The factors affecting continuity both of grade and geology.	Grade continuity is affected when the percentage of quartz decreases within the main Raleigh structure and only a sheared structure remains. This results in lower grade in areas where only shear is present and higher grade where quartz is evident.
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 strike length of the different ore systems varies from ~100m to 600m, the Raleigh Main Vein and Shear (RMVS) being the most extensive. The individual ore bodies occur in a major regional Zuleika shear system extending over 10s of kilometres. Ore body widths are typically in the range of 0.1 - 1.1m. RMV records the narrowest at 0.1m and SKV the widest at 1.1m. RMV has an average width of 0.3m Mineralisation is known to occur from the base of cover to around 900m below surface.

Criteria	JORC Code explanation	Commentary
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.	Raleigh mineralisation zones, except for the Raleigh Main Shear (RMS), used direct grade estimation by Ordinary Kriging. The RMS was estimated using Categorical Indicator Kriging. Typically, full length composites were used, determined from statistical analysis of all sample lengths in the domain dataset. All estimation was completed using Datamine RM software. Details on the estimation by ore lode is summarised below: **RMV** – Estimated as a single domain. Data was top cut to 1,000gpt using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging moderately to the north. Searches were completed in three passes. Search ranges of 100m in direction 1 (dir1), 75m in direction 2 (dir2) and 50m in direction 3 (dir3) were used. **RMS** – divided into two grade subdomains. Binary estimate completed on composited data set with indicators (0 or 1) applied based on grade cut-off (> 2.5gpt) and quartz vein presence (vein logged in LITH1 field). Estimate returns result between 0 and 1. Cut-off of 0.45 chosen to ascertain two grade subdomains (high grade and low grade) for final gold estimate. Data sets top cut to 150gpt (high grade subdomain) or 50gpt (low grade subdomain) using the influence limitation approach. Same variogram and search parameters used for both high- and low-grade subdomains. Variograms indicate grade continuity plunging moderately to the north. Searches were completed in three passes. Search ranges of 100m in dir1, 80m in dir2 and 40m in dir3 were used. **RMVN** – Divided into two subdomains based on data density. Data was top cut to 500gpt and 100gpt (for high-density and low-density subdomains respectively) using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging steeply to the north. Searches were completed in three passes. For the high data-density estimate, search ranges of 100m in dir1, 50m in dir2 and 100m in dir3 were used. For the low data-density estimate, search ranges of 190m in dir1, 140m in dir2 and 70m in dir3 were used. Estimation was completed using a soft boundary between the high and low-density subdomains and between adjacent Raleigh domains (RMV, RMS and RMVS). **RMVS** – Divided into two subdomains based on grade. Data was top cut to 200gpt and 10gpt (for high-grade and low-grade subdomains respectively) using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging moderately to the south. Searches were completed in three passes. For the high-grade estimate, search ranges of 150m in dir1, 80m in dir2 and 50m in dir3 were used. For the low-grade estimate, search ranges of 250m in dir1, 150m in dir2 and 100m in dir3 were used. Estimation was completed using a soft boundary between the high and low-density subdomains and between adjacent Raleigh domains (RMV, RMS and RMVN). **RMV/RMS Halo** (halo) - Estimated as a single domain. Data was top cut to 10gpt using the influence limitation approach. Variography borrowed from the RMV estimate, as not enough sample pairs were available to construct a coherent variogram. Searches were completed in three passes. Search ranges of 100m in dir1, 75m in dir2 and 50m in dir3 were used. **SKV** – Divided into two subdomains based on grade. Data was top cut to 600gpt and 30gpt (for high-grade and low-grade subdomains respectively) using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging moderately to the north. Searches were completed in three passes. For the high-grade estimate, search ranges of 100m in dir1, 60m in dir2 and 40m in dir3 were used. For the low-grade estimate, search ranges of 100m in dir1, 50m in dir2 and 30m in dir3 were used. **ZZ** - Estimated as a single domain. Data was top cut to 60gpt using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging shallowly to the south. Searches were completed in three passes. Search ranges of 30m in dir1, 15m in dir2 and 10m in dir3 were used. **ZZ2** - Estimated as a single domain. Data was top cut to 40gpt using the influence limitation approach. Variography was completed on the composited data file, indicating grade continuity plunging moderately to the north. Searches were completed in three passes. Search ranges of 25m in dir1, 15m in dir2 and 10m in dir3 were 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.	Check estimates have been completed for all lodes. These include Inverse Distance (ID^3) and Nearest Neighbour (NN) estimates.
	The assumptions made regarding recovery of by-products.	No assumptions are made, and gold is the only metal defined for estimation.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).	No deleterious elements were estimated in the model.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block sizes varied depending on sample density. In areas of high data-density (underground face samples with average spacing of 3 – 4m) a 5 x 5 x 5m block size was chosen. Low density drill spacing is defined as approximately 30m or greater and a 10 x 10 x 10m block size was chosen. Estimates were completed with soft boundaries between varying block size estimates (unless a geological feature and contact analysis indicated a hard boundary was required) and added together following individual estimation for final validations. Search ellipse dimensions were derived from the variogram model ranges, or isotropic ranges based on data density where insufficient data was present for variography analysis.
	Any assumptions behind modelling of selective mining units.	Selective mining units were not used during the estimation process.
	Any assumptions about correlation between variables.	All variables were estimated independently of each other. Density has used estimation parameters based on gold.

Criteria	JORC Code explanation	Commentary
	Description of how the geological interpretation was used to control the resource estimates.	Hangingwall and footwall wireframe surfaces were created using sectional interpretation. These were used to define the Raleigh mineralised zones based on the geology and gold grade. Raleigh Main Vein (RMV) - Steeply dipping structure with smoky quartz veining evident from drilling and development. Raleigh Main Vein South (RMVS) - Steeply dipping structure with smoky quartz veining and shearing evident from drilling and development. Raleigh Main Vein North (RMVN) - Steeply dipping structure with smoky quartz veining evident from drilling and development. Raleigh Main Shear (RMS) - Steeply dipping shear structure sitting in the footwall of the RMV with occasional quartz vein strings, evident from development. Skinners Vein (SKV) - Steeply dipping structure with chalky-white quartz veining sitting in the hanging wall of the RMV. ZZ/ZZ2 - Low angled narrow stacked quartz veining, sitting between the RMV and SKV, evident from drilling and development in the 5880 level. For mine planning purposes a waste model is created by projecting the hanging wall and footwall surfaces 15m either side. A default grade of 0.1gpt is assigned and the same resource classification as the adjacent ore lode is applied.
	Discussion of basis for using or not using grade cutting or capping.	Top cuts were applied to the composited sample data. Top cuts were selected based on a statistical analysis of the data. Top cuts vary by domain and range from 10gpt to 1,000gpt. The top cut values are applied using technique called influence limitation top cutting. A top cut (AU) and non-top cut (*_NC) variable is created, as well as a spatial variable (*_BC) which only has values where the top cut values appear. For example, where gold requires a top cut, the following variables will be created and estimated: • AU (top cut gold) • AU_NC (non- top-cut gold) • AU_BC (spatial variable; values present where AU data is top cut) The top-cut and non-top cut values are estimated using search ranges based on the modelled gold variogram, and the *_BC values estimated using very small ranges (e.g., 5m x 5m x5m). Where the *_BC values produce estimated blocks within these restricted ranges, the *_NC estimated values replace the original top cut estimated values (AU). A hard top cut is applied instead of/as well in the following situations: • If there are extreme outliers within an ore domain • If the area has a history of poor reconciliation (i.e., overcalling)
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Statistical measures of Kriging error, such as Kriging Efficiency and Slope of Regression, are used to assess the quality of the estimation for each domain. Differences in the global grade of the top-cut, declustered composite data set and the average model grade were within 10%, or justification for a difference outside 10% was explicable. Swath plots comparing top-cut, declustered composites to block model grades are created and visual plots are prepared summarising the critical model parameters. Visually, block grades are assessed against drill hole and face data.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource Estimate has been reported at a 2.11gpt cut off within 2.5m minimum mining width (no dilution applied) MSOs using a $AUD2,250/oz gold price
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 mining assumptions have been made during the resource wireframing or estimation process.
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 test work results show that the mineralisation is amendable to processing through the Kanowna Belle treatment plant. Ore processing throughput and recovery parameters were estimated based on historic performance and potential improvements available using current technologies and practices.

Criteria	JORC Code explanation	Commentary
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 green fields 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.	A "Licence to Operate" is held by the operation which is issued under the requirement of the "Environmental Protection Act 1986", administered by the Department of Environment (DoE). The licence stipulates environmental conditions for the control of air quality, solid waste management, water quality, and general conditions for operation. Groundwater Licences are held for water abstraction, including production bore field water use for mineral processing, and mine dewatering, in accordance with the Rights in Water and Irrigation Act 1914. These Licences are also regulated by DoE and are renewable on a regular basis. Kanowna Operations conduct extensive environmental monitoring and management programs to ensure compliance with the requirements of the licences and lease conditions. An Environmental Management System is in place to ensure that Northern Star employees and contractors meet or exceed environmental compliance requirements. The Kalgoorlie operations are fully permitted including groundwater extraction and dewatering, removal of vegetation, mineral processing, and open pits. Kalgoorlie Operations have been compliant with the International Cyanide Management Code since 2008. Compliance with air quality permits at Kanowna because of the roaster operation. Kanowna has a management program in place to minimize the impact of SO_2 on regional air quality and ensure compliance with regulatory limits.
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.	A thorough investigation into average density values for the various lithological units at Raleigh-Sadler was completed and the mean densities by lithology were coded into the database. Where there were no measurements for a specific lithology and default of 2.7 t/m^3 was applied. Density was then estimated by Ordinary Kriging using the associated gold estimation parameters for that domain. Post estimation, default density values for the oxide and transition zones were applied, based on regional averages.
	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.	No/minimal voids are encountered in the ore zones and underground environment.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Assumptions on the average bulk density of individual lithologies, based on 2,920 bulk density measurements at Raleigh. Assumptions were also made based on regional averages, on the default densities applied to oxide (1.8 t/m^3) and transitional (2.3 t/m^3) material, due to lack of measurements in these zones.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Classification is based on a series of factors including: • Geologic grade continuity • Density of available drilling • Statistical evaluation of the quality of the kriging estimate • Confidence in historical data, based on the new Data Class system
	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).	All relevant factors have been given due weighting during the classification process.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resource model methodology is appropriate, and the estimated grades reflect the Competent Persons' view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource Estimates.	All resource models have been subjected to internal peer reviews.
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.	These Mineral Resource Estimates are considered as robust and representative of the Strzelecki style of mineralisation. The relative accuracy of the Mineral Resource Estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.
	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 global estimates of tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No reconciliation factors are applied to the resource post-modelling.

Section 4: Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource Estimate for conversion to Ore Reserves	Description of the Mineral Resource Estimate used as a basis for the conversion to an Ore Reserve.	Northern Star 2021MY Resource.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resources are reported inclusive of the Ore Reserve.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Site visits have been undertaken by the Competent Person.
	If no site visits have been undertaken indicate why this is the case.	Site visits undertaken.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	Feasibility Study.
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Upgrade of previous Ore Reserve.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Budget costs and physicals form the basis for Cut Off Grade calculations. Mill recovery is calculated based on historical recoveries achieved. Various cut off grades are calculated including a break-even cut-off grade (BCOG), variable cut-off grade (VCOG) and Mill cut-off grade (MCOG). The VCOG is used as the basis for stope design, and then final designs assessed by detailed financial analysis to confirm their profitability.
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e., either by application of appropriate factors by optimisation or by preliminary or detailed design).	Mineral Resource is converted to Ore Reserve after completing a detailed mine design and associated financial assessment.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	Selected mining method deemed appropriate as it has been used at Raleigh since 2005.
	The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Design parameters include a 22m level spacing with a stope strike length of 15m for dilution control purposes. This correlates to a Hydraulic Radius of 4.5m.
	The major assumptions made, and Mineral Resource model used for pit and stope optimisation (if appropriate).	Not applicable - this table one applies to underground mining only.
	The mining dilution factors used.	Based on historical mine performance, mining dilution of 20% rock plus 10% paste for stoping additional to minimum mining width is applied, as well as 10% dilution for Ore development.
	The mining recovery factors used.	Mining recovery factor of 98% is applied based on historical data.
	Any minimum mining widths used.	A minimum stope width of 3.0m where the vein is less than 2m wide. An additional 1m is applied where the vein width is greater than 2m wide.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Designed stopes with greater than 50% inferred blocks are excluded from the reported Reserve.
	The infrastructure requirements of the selected mining methods.	Infrastructure in place, currently an operating mine.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	EKJV ore is treated at the Kanowna Belle milling facilities or additional ore to toll treatment facilities as required. The Kanowna Belle Mill is designed to handle approximately 2.0 million tonnes of feed per annum. The plant has the capability to treat both refractory and free milling ores, through either using the flotation circuit and associated concentrate roaster circuit, including carbon-in-leach (CIL) gold recovery, or bypassing the flotation circuit and going directly to a CIL circuit designed to treat flotation tails. The plant campaigns both refractory and free milling ores every month. Between campaigns, the circuit is “cleaned out” using mineralised waste. The plant is made up of crushing, grinding, gravity gold recovery, flotation, roasting, CIL, elution and gold recovery circuits.

Criteria	JORC Code explanation	Commentary
	Whether the metallurgical process is well-tested technology or novel in nature.	Milling experience gained over plus 10 years operation.
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	Milling experience gained over plus 10 years operation.
	Any assumptions or allowances made for deleterious elements.	No assumption made.
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.	Milling experience gained over plus 10 years operation.
	For minerals that are defined by a specification, has the ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	Not applicable.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Raleigh is currently compliant with all legal and regulatory requirements. All government permits and Licences and statutory approvals are granted.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.	All current site infrastructure is suitable to the proposed mining plan.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	Mine development capital cost based on historical performance on site and life-of-mine forward planning. Plant and equipment capital are based on site experience and the LOM plan.
	The methodology used to estimate operating costs.	All overhead costs and operational costs are projected forward on a first principals modelling basis.
	Allowances made for the content of deleterious elements.	No allowances made.
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	Corporate guidance.
	The source of exchange rates used in the study.	Corporate guidance.
	Derivation of transportation charges.	Historic performance.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Historic performance.
	The allowances made for royalties payable, both Government and private.	All royalties are built into the cost model.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	AUD$ 1,750/oz gold.
	The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Corporate guidance.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	It is assumed all gold is sold directly to market at the Corporate gold price guidance of AUD$1,750/oz.
	A customer and competitor analysis along with the identification of likely market windows for the product.	Not Applicable.
	Price and volume forecasts and the basis for these forecasts.	Corporate guidance.
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Not Applicable.

Criteria	JORC Code explanation	Commentary
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	All costs assumptions are made based on historical performance from the mine and current economic forecast seen as representative of current market conditions.
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	Sensitivities have been used with gold price ranges of AUD$1,500 to AUD$2,000 per ounce.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	Agreements are in place and are current with all key stakeholders.
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	No Issues.
	Any identified material naturally occurring risks.	No Issues.
	The status of material legal agreements and marketing arrangements.	No Issues.
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Reserve is contingent.	No Issues.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	Ore Reserves classifications are derived from the underlying resource model classifications – i.e., Measure Resource material is converted to either Proved or Probable Reserves, with Indicated Resource material converting to Probable Reserve.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results accurately reflect the competent persons view of the deposit.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Nil.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	The Ore Reserve has been internally reviewed in line with Northern Star Resource governance standard for Reserves and Resources. There have been no external reviews of this Ore Reserve estimate.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the Reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	Confidence in the model and Ore Reserve Estimate is considered high based on current mine and reconciliation performance.
	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.	Estimates are global but will be reasonably accurate on a local scale.
	Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	Not applicable.
	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Historical reconciliation of Raleigh Mine production has been used in the generation both the underlying Mineral Resource Estimate and subsequent modifying factors applied to develop an Ore Reserve.

NORTHERN STAR
RESOURCES LIMITED

COMPETENT PERSON'S CONSENT FORM

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and Clause 9 of the JORC Code 2012 Edition (Written Consent)

REPORT DESCRIPTION

Report	Resource and Reserve Report for period ending 31 March 2021
Company:	Northern Star Resources Rand Mining Limited Tribune Resources Limited
Tenement(s):	East Kundana Joint Venture
Dated:	3 May 2021

STATEMENT

I, Michael Mulroney, confirm that

- I have read and understood the requirements of the JORC 2012 Edition of the Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code 2012 Edition").
- I am a Competent Person as defined by the JORC Code 2012 Edition, having over 35 years experience that is relevant to the style of mineralisation and the type of the deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of the Australian Institute of Mining And Metallurgy.
- I have reviewed the Report to which this Consent Statement applies.
- I am a full-time employee of Northern Star Resources Limited.

I verify that the Report is based on and fairlyand accurately reflects in the form and context in which it appears, the information in my supporting documentation relation to the Mineral Resources for the East Kundana Joint Venture areas.

CONSENT

I consent to the release of the Report and this Consent Statement by the Directors of Northern Star Resources Limited, Rand Mining Limited and Tribune Resources Limited.

Signature of Michael Mulroney
3 May 2021
AusIMM Membership No: 108318

Hilary Macdonald

Hilary Macdonald
Name & Signature of Witness

COMPETENT PERSON'S CONSENT FORM

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

REPORT DESCRIPTION

Report: Resource, Reserve & Exploration Update for period ending 31 March 2021

Company: Northern Star Resources Limited
Rand Mining Limited
Tribune Resources Limited

Project(s): East Kundana Joint Venture

Dated: 3 May 2021

STATEMENT

I, Jeff Brown, confirm that:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code, 2012 Edition").
- I am a Competent Person as defined by the JORC Code 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of the Australasian Institute of Mining and Metallurgy (AusIMM).
- I have reviewed the Report to which this Consent Statement applies.
- I am a fulltime employee of Northern Star Resources Limited.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Ore Reserve estimations for the East Kundana Joint Venture areas.

CONSENT

I consent to the release of the Report and this Consent Statement by the directors of Northern Star Resources Limited.

Signature of Jeff Brown
3 May 2021
AusIMM Membership No: 210720

Hilary Macdonald

Hilary Macdonald