EKJV Summary Resource and Reserve Report

ASX ANNOUNCEMENT

9 September 2015

Australian Securities Exchange Code: RND

Rand Mining Ltd (ASX code: RND) is pleased to announce the EKJV Resource and Reserve Report at 30 June 2015.

These were received by the Company from the Joint Venture Manager today.

Yours faithfully

Anton Billis
Director
Rand Mining Ltd

Encls:
Memorandum
Appendix 1: Mineral Resources and Ore Reserves
Appendix 2: JORC Table 1

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MEMORANDUM

TO: BOARD OF DIRECTORS

FROM: MICHAEL MULRONEY

DATE: 4 SEPTEMBER 2015

SUBJECT: **EKJV SUMMARY RESOURCE AND RESERVE REPORT - 30 JUNE 2015**

EXECUTIVE SUMMARY

The full statement of Mineral Resources and Ore Reserves for the East Kundana Joint Venture (**EKJV**) as at 30 June 2015 has been completed and is summarised in the following page.

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 30 June 2015 are outlined in the accompanying Table 1 document.

Mineral Resources, inclusive of assumed modifying factors, have been estimated using a gold price of A$1,600 per ounce. Further technical and economic evaluation will be required for conversion to Ore Reserves in the future. All Mineral Resources are 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$1,400 per ounce.

EKJV MINERAL RESOURCES

Mineral Resources defined within the EKJV tenements increased to a total of:

5.11 Million tonnes at 11.4 g/t gold for 1.87 Million ounces of gold

Deposit	30 June 2015 ('000 ozs)	30 June 2014 ('000 ozs)	Variation ('000 ozs)
Hornet Open Pit	20	20	-
Raleigh U/G	187	200	(13)
Hornet U/G	232	241	(9)
Rubicon U/G	181	120	61
Pegasus U/G	1,225	763	462
Stockpiles	26	4	22
TOTAL	**1,871**	**1,348**	**523**

1. Numbers are quoted on a 100% basis

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Comparison with the Mineral Resource Statement for the year ended 30 June 2014 shows an increase of approximately 523,000 ounces representing the following variations:

- The same resource estimation methodology as June 2014
- Mining depletion at Rubicon, Hornet and Raleigh
- Substantial extensions defined by drilling at Rubicon (at depth) and Pegasus (major expansion)

EKJV ORE RESERVE SUMMARY

Ore reserves defined within the EKJV tenements increased to a total of:

3.26 Million tonnes at 8.3 g/t gold for 0.87 Million ounces of gold

Deposit	30 June 2015 ('000 ozs)	30 June 2014 ('000 ozs)	Variation ('000 ozs)
Raleigh U/G	87	69	18
Rubicon - Hornet U/G	150	218	(68)
Pegasus U/G	609	249	360
Stockpiles	26	4	22
TOTAL	**872**	**541**	**332**

1. Numbers are quoted on a 100% basis

Comparison with the Ore Reserve statement for the year ended 30 June 2014 shows an increase of approximately 332,000 ounces representing the following variations:

- Mining depletion at Rubicon, Hornet, Pegasus and Raleigh
- Increase in Ore Reserve at Raleigh following conversion of in mine exploration success
- Increased Ore Reserves announced for Pegasus and Rubicon following significant drilling success

Attached in Appendix 1 are the summary tables for the Mineral Resource and Ore Reserve Statement for Northern Star's equity interest in the EKJV for the year ended 30 June 2015.

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

APPENDIX 1

MINERAL RESOURCES

MINERAL RESOURCES As at 30 June 2015	MEASURED			INDICATED			INFERRED			TOTAL RESOURCES		
Based on 100% attributable ounces gold	Tonnes (000's)	Grade (gpt)	Ounces (000's)	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(EKJV)												
Surface												
Hornet Pit				169	3.7	20	3	1.6	0	172	3.6	20
Underground												
Raleigh	48	67.9	106	24	48.1	37	27	52.3	45	99	58.9	187
Hornet	101	18.3	60	339	9.3	101	292	7.6	71	732	9.8	232
Rubicon	18	18.9	11	202	9.6	63	393	8.5	107	613	9.2	181
Pegasus				2,534	11.2	909	867	11.4	316	3,401	11.2	1,225
Stockpiles	95	8.4	26							95	8.4	26
Total EKJV	**263**	**23.9**	**202**	**3,267**	**10.7**	**1,129**	**1,582**	**10.6**	**540**	**5,112**	**11.4**	**1,871**

Note :

1. Mineral Resources are inclusive of Reserves
2. Mineral Resources are reported at A$1,600/oz gold price
3. Rounding may result in apparent summation differences between tonnes, grade and contained metal content
4. Numbers are 100% EKJV attributable

ORE RESERVES

ORE RESERVES As at 30 June 2015	PROVED			PROBABLE			TOTAL RESERVES		
Based on 100% attributable ounces gold	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 (EKJV)									
Underground									
Raleigh	179	13.1	75	34	10.7	12	212	12.7	87
Rubicon / Hornet	209	10.2	69	349	7.3	82	558	8.4	150
Pegasus	6	4.8	1	2,390	7.9	608	2,396	7.9	609
Stockpiles	95	8.4	26				95	8.4	26
Subtotal EKJV	**489**	**10.8**	**170**	**2,773**	**7.9**	**701**	**3,262**	**8.3**	**871**

Note :

1. Ore Reserves are reported at a gold price of A$,1400/oz
2. Tonnages include allowances for losses resulting from mining methods with tonnages rounded to the nearest 1,000 tonnes
3. Ounces are estimates of metal contained in the Mineral Reserve and do not include allowances for processing losses.
4. Numbers are 100 % EKJV attributable

Competent Persons Statements

The information in this announcement that relates to exploration results, data quality, geological interpretations and Mineral Resource estimations for the EKJV area is based on information compiled by Darren Cooke and fairly represents this information. Mr. Cooke is a Member of the Australian Institute of Geoscientists who is a full-time employee of Northern Star Resources Limited who has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Cooke consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to Ore Reserve estimations for the EKJV area is based on information compiled by Jeff Brown and fairly represents this information. Mr. Brown is a Member of the Australian Institute of Mining and Metallurgy who is a full-time employee of Northern Star Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Brown consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

APPENDIX 2

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (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.	Sampling was completed using a combination of Reverse Circulation (RC) and Diamond Drilling (DD). RC drilling was used to drill pre-collars for many of the Resource Definition holes with diamond tails. Diamond drilling constitutes the rest of the drilling.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Diamond core was transferred to core trays for logging and sampling. Half core samples were nominated by the geologist from both NQ2 and HQ diamond core, with a minimum sample width of either 20cm (HQ) or 30cm (NQ2). RC samples were split using a rig-mounted cone splitter on 1m intervals to obtain a sample for assay. 4m Composite spear samples were collected for most of each hole, with 1m samples submitted for areas of known mineralization or anomalism.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Samples were taken to Genalysis Kalgoorlie for preparation by drying, crushing to <3mm, and pulverizing the entire sample to <75µm. 300g Pulps splits were then dispatched to Genalysis Perth for 50g Fire assay charge and AAS analysis.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Both RC and DD techniques were used at the K2 deposits. Diamond drill holes completed pre-2011 were predominantly NQ2 (50.5mm). All resource definition holes completed post 2011 were drilled using HQ (63.5mm) diameter core 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. 7 RC pre-collars were drilled followed by diamond tails. Pre-collar depth was to 180m or less if approaching known mineralization.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	RC drilling contractors adjust their drilling approach to specific conditions to maximize sample recovery. Moisture content and sample recovery is recorded for each RC sample. No recovery issues were identified during 2014 RC drilling. Recovery was poor at the very beginning of each hole, as is normal for this type of drilling in overburden.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	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.
	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.	Recovery was excellent for diamond core and no relationship between grade and recovery was observed. For RC drilling, pre-collars were ended before known zones of mineralization and recovery was very good through any anomalous zones, so no issues occurred.

Criteria	JORC Code explanation	Commentary
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	All diamond core is logged for regolith, lithology, veining, alteration, mineralisation and structure. Structural measurements of specific features are also taken through oriented zones.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All logging is quantitative where possible and qualitative elsewhere. A photograph is taken of every core tray.
	The total length and percentage of the relevant intersections logged.	RC sample chips are logged in 1m intervals. For the entire length of each hole. Regolith, lithology, alteration, veining and mineralisation are all recorded.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	All Diamond core is cut and half the core is taken for sampling. The remaining half is stored for later use.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All RC samples are split using a rig-mounted cone splitter to collect a 1m sample 3-4kg in size. These samples are submitted to the lab from any zones approaching known mineralization and from any areas identified as having anomalous gold. Outside of mineralized 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.	The sample preparation is considered appropriate
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Field duplicates were taken for RC samples at a rate of 1 in 20
	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.	Sample preparation was conducted at Genalysis Kalgoorlie, 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 pulverized 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.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Grind checks are performed at both the crushing stage (3mm) and pulverising stage (75µm), requiring 90% of material to pass through the relevant size.
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 50g fire assay charge is used with a lead flux, dissolved 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

Criteria	JORC Code explanation	Commentary
	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, This is random, except where high grade mineralisation is expected. Here, a Blank is inserted after the high grade sample to test for contamination. Failures above 0.2g/t are followed up, and re-assayed. New pulps are prepared if failures remain. Field Duplicates are taken for all RC samples (1 in 20 sample). No Field duplicates are submitted for diamond core.
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 this data set
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological logging was captured using Excel templates. Both a hardcopy and electronic copy of these are stored, as well as being loaded in to the database using automatic acquire loaders. Assay files are received in csv format and loaded directly into the database by the Database administrator (DBA). A geologist then checks that the results have inserted correctly. Hardcopy and electronic copies of these are stored. No adjustments are made to this assay data.
	Discuss any adjustment to 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.	A planned hole is pegged using a Differential GPS by the field assistants Underground diamond holes are picked up by mine surveyors During drilling single-shot surveys are every 30m to ensure the hole remains close to design. This is performed using the Reflex Ez-Trac system. Upon hole completion, a Gyroscopic survey is conducted by ABIMS, taking readings every 5m for improved accuracy. This is done in true north. The final collar is picked up after hole completion by Differential GPS in the MGA 94_51 grid. Quality topographic control has been achieved through Lidar data and survey pickups of holes over the last 15 years.
	Specification of the grid system used.	
	Quality and adequacy of topographic control.	
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill hole spacing across the area varies. For the Resource definition drilling, spacing was typically 40m x 40m, to allow the resource to be upgraded to Indicated. For the Pode drilling, spacing was approximately 20m x 20m. The HRPD drilling was much more wide spaced as this is largely unclassified. Spacing is wider than 160m in some areas.
	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 is considered appropriate
	Whether sample compositing has been applied.	No compositing has been applied to these exploration results, although composite intersections are reported.
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 majority of the structures in the Kundana camp dip steeply (80°) to WSW. The Pode structure has a much shallower dip in a similar direction, approximately 60°. To target these orientations, drill hole dips of 60°-70° towards ~060° are common to achieve high angle intersections on all structures.

Criteria	JORC Code explanation	Commentary
	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, and 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 or reviews have recently been conducted on sampling techniques.

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 Hornet, Rubicon and Pegasus project tenements are 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 Hornet, Rubicon Pegasus and Drake deposits are hosted on M16/309. The tenement on which the Hornet, Rubicon, Pegasus and Drake deposits are hosted (M16/309) is subject to two royalty agreements, however neither of these is applicable to the actual Pegasus deposit. The agreements that are on M16/309 but not relevant to the Pegasus project are the Kundana- Hornet Central Royalty and the Kundana Pope John Agreement No. 2602-13. The Raleigh and Skinners deposits are located on M15/993. A small portion of the Raleigh orebody (Raleigh North) crosses on to M16/157. The Ambition prospect is located on M16/326.
	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 Pegasus 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-Edge Mining focused on shallow open pit potential which was not considered viable. In 2011, Pegasus was highlighted by an operational review team and follow-up drilling was planned through 2012. This report is concerned solely with 2014 drilling that led on from this period. Raleigh was discovered by Goldfields Limited in the early 2000's

Criteria	JORC Code explanation	Commentary
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 and Hornet) 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 volcanoclastic (Sparogville Formation). Minor mineralization, 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). A 60° W dipping fault offsets this contact and exists as a zone of vein-filled brecciated material hosting the Pode-style mineralisation. Raleigh is a laminated vein hosted on the Strzelecki structure which is a discrete fault zone within the broader Zuleika Shear. Skinners Vein is a flatter splay in the hangingwall of the Raleigh main vein.
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: o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o hole length.	Too many holes to practically list the complete dataset, the long section and plan reflect the hole positions used for previous estimation stated. All recent drill intersections yet to be reported to the ASX are presented with this 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.	
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 2 metres of barren material between mineralized samples has been permitted in the calculation of these widths.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No assay results have been top-cut for the purpose of this report. A lower cut-off of 1g/t has been used to identify significant results, although lower results are included where a known ore zone has been intercepted and the entire intercept is low grade.
	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').	

Criteria	JORC Code explanation	Commentary
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 in this 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.	Metallurgical test work was conducted on 9 Pegasus samples. The results are summarized as follows: - All Pegasus recoveries were above 91% for the leach tests - Gravity gold recovery estimated at 55% - Cyanide consumption 0.62 kg/t; Lime 2.29 kg/t - Oxygen Consumption 60 g/t per hour - Bond Ball mill work index average 18.1 kWh/t - Bond Abrasion Index average 0.1522
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 work will continue in 2015 to extend the Indicated Resource deeper through additional drilling and identify new mineralised shoots on the K2 structure. Further work will be conducted to test continuity of mineralisation at Ambition. At Skinners Vein, definition and extensional drilling are ongoing.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

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 into to an AcQuire database, or transferred from a logging laptop over to Acquire via an offline database. There are checks in place to avoid duplicate holes and sample numbers. Where possible, raw data is loaded directly to the database from laboratory and survey derived files.
	Data validation procedures used.	Random checks through use of the data and data validation procedure prior to resource estimation.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	This resource estimate has been conducted by geologists working in the mine and in direct, daily contact with the ore body data used in this resource estimate.
	If no site visits have been undertaken indicate why this is the case.	Multiple site visits undertaken by Geologists supervising the drilling programs and preparing the Geological interpretation.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The interpretation of the 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 with the information gained from ore development and underground drilling.
	Nature of the data used and of any assumptions made.	All available geological data was used in the interpretation including mapping, drill holes, 3D photogrammetry and structures.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretations have been completed.
	The use of geology in guiding and controlling Mineral Resource estimation.	The interpretation of the main K2 structure is based on the presence of Quartz veining and continuity between sections on the K2 structure. Drill core logging and face development mapping is used to create 3D constrained wireframes.
	The factors affecting continuity both of grade and geology.	Continuity is affected by the orientation of the K2 structure, and several dextral offset fault structures
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 dimensions for each deposit reported vary, however typically the following dimensions: • Strike length = Up to 1000m for each K2 and Strzelecki shoot and associated structures • Width = ~0.5-2m average, with widths up greater than 5 metres • Depth = from surface to ~700m maximum 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.	Estimation and modelling techniques varied depending on the deposit: **Rubicon, Hornet & Raleigh Resources:** Ordinary Kriging (OK) was used to estimate this resource, using Datamine Studio 3. Two separate domains were used to constrain the main K2 with dilution skins of 0.5m used to constrain the immediate footwall and hangingwall outside the main ore zone. Hangingwall lodes were constrained according to geological features. Each domain is validated against the lithology, and then snapped to the drill-hole and face data to constrain the mineralized envelope as a footwall and hangingwall surface. Compositing of drill-hole samples was completed downhole against any domain flagged in the sample file to belong to the corresponding wireframe for the main K2. Domains within the hangingwall lodes were flagged via use of the 3D wireframes. Post estimation, resource estimations do not have tonnage or grade factors applied. Only gold was estimated and no deleterious elements are noted or estimated.
		Pegasus Ordinary Kriging was used in areas with good drill coverage, Simple Kriging was used to estimate areas with poor drill coverage. Drill holes were composited into 1m intervals down hole within each interpreted domain. The composite lengths were allowed to vary between 0.5m and 1.5m to ensure that no sampling was lost during the compositing process. The average grade and total length of the composite data was compared against the average grade and total length of the uncomposited data to check the compositing process. The distribution of composite lengths was checked to ensure that the majority of the composites were close to the targeted length. The local mean value used for Simple Kriging was calculated from the declustered mean of the top-cut composited sample data. Search distances used for estimation based on variogram ranges and vary by domain. Drill spacing is generally around 20m x 20m for the indicated resource and around 40m x 40m for the inferred resource. Top-cuts were applied to the sample data based on a statistical analysis of the data and vary by domain. The Kriging neighbourhood was refined using statistical measures of Kriging quality. The estimated grades were assessed against sample grades and against declustered mean values Post estimation, resource estimations do not have tonnage or grade factors applied.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	The estimated grades were assessed against sample grades and, where applicable, previous estimates.
	The assumptions made regarding recovery of by-products.	No assumptions are made and only gold is defined for estimation

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 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.	**Rubicon, Hornet, Raleigh:** Block size is 5m x 5m sub-blocked to 2.5m x 2.5m to suit the narrow north-south orientation of the majority of the domains Average sample spacing is 3.5m (Rub-Hor) and 3.1m (Ral) in the case of face samples. Search ellipsoids are 50 * 80 * 30m to 75 * 80 * 70m (Rub-Hor) & 50 * 120 * 30m to 75 * 120 * 75m (Ral), varying for each zone and the minimum number of samples required on successive passes. **Pegasus:** Grades were estimated into 10m (N/S) x 10m (elev) panels.
	Any assumptions behind modelling of selective mining units.	No assumptions made
	Any assumptions about correlation between variables.	No assumptions made
	Description of how the geological interpretation was used to control the resource estimates.	"Ore" wireframes are created within the geological shapes based on drill core logs, face samples, 3D digitized mapping and grade. Low grades can form part of an ore wireframe. A dilution 'skin' is translated 0.5m on both the footwall and hangingwall of the main ore wireframe and is estimated separately to the main ore and surrounding waste but not reported.
	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 were selected based on a statistical analysis of the data with a general aim of not impacting the mean by more than 5% and vary by domain (ranging from 1 to 400g/t for individual domains and deposits)
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Validation is through swath plots comparing composites to block model grades, along 20m eastings and RL. 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.	A cut-off grade (COG) of 3.26g/t was developed based on an assumed $1600/oz gold price. The COG was calculated by site based engineers using the cost inputs at the producing Kundana operations. A minimum mining width of 2.0m was assumed.
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.	Historical mining and reconciliation data does not affect wire frame interpretation.

Criteria	JORC Code explanation	Commentary
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 operating 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 greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	A "License 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 licenses 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 licenses 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 licenses 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 (including Kundana) are fully permitted including groundwater extraction and dewatering, removal of vegetation, mineral processing, and open pits.
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.	Bulk density is assumed and comparable to neighbouring deposits at Kundana. Bulk densities from neighbouring deposits were determined from surface diamond drill holes with intervals taken from mineralized and non-mineralised zones within the project area. The bulk densities are derived from wet and dry weighting of core no greater than 30 cm total length with core samples selected by changes in lithology/alteration or every 30-40m where no change is evident.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, 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.	Bulk densities are applied to domains for the ore zone, footwall and hangingwall as constrained by the lode wireframes
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
	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).	Full account has been taken of all relevant factors, including historical reconciliations and mining performance, in applying the appropriate classification.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	This mineral resource estimate is considered representative.

Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The resources have not been routinely audited externally. The 2014 YE Pegasus estimate was audited externally by CSA Global, with no significant issues identified. The methodology has not since changed.
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.	This mineral resource estimate is considered as robust and representative of the Kundana style of 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 entirety of the ore zone and surrounding dilution skins. Each of these 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

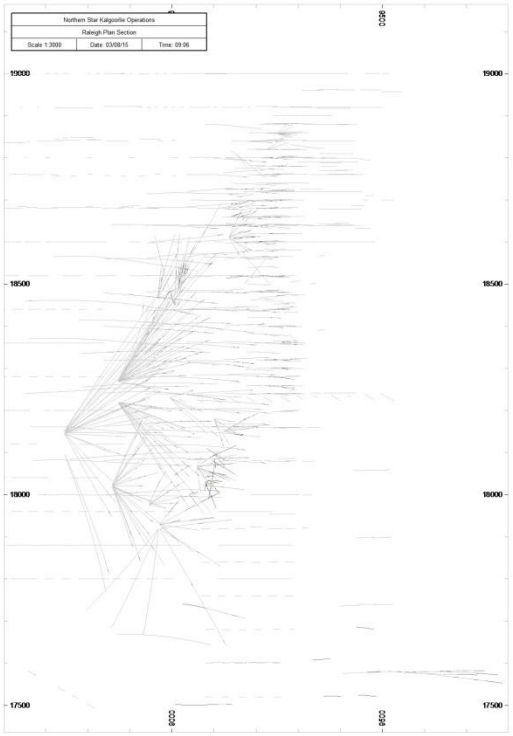
(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

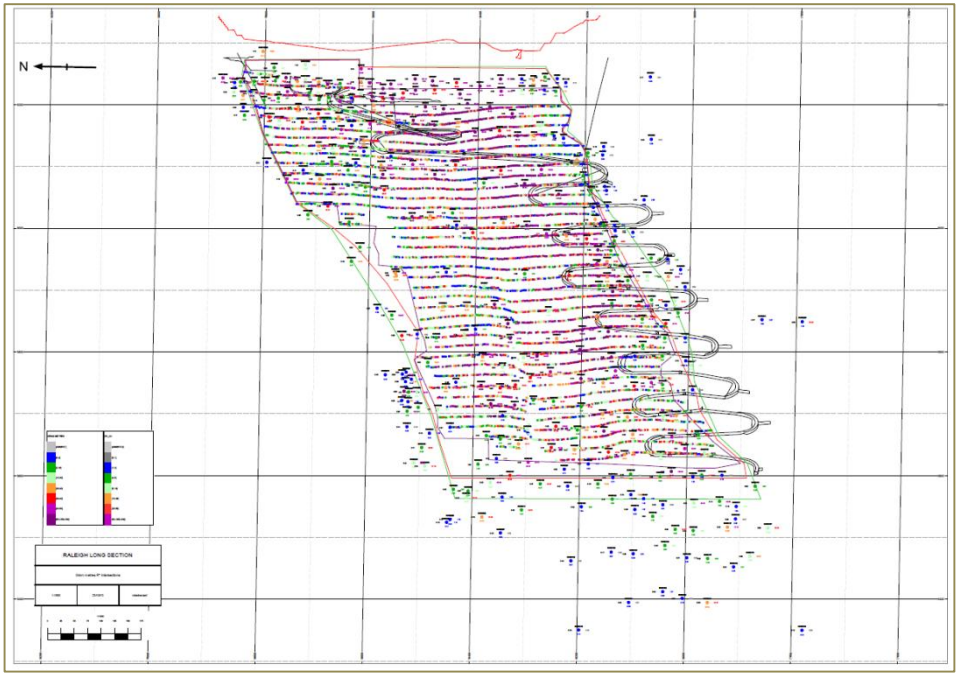
Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	Northern Star 2015MY resource
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resources are reported inclusive of the quoted Ore Reserves.
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 Persons. The Competent Persons are currently engaged to work on site.
	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.	Internal Feasibility Study and ongoing Mining Operations.
	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 Reserves within the operating Mine area.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Break even cut off of 3.67g/t applied based on existing and forecast operating costs within the existing Mining Operation.
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).	Indicated Resources are converted to Probable Ore Reserves through the application of existing mine design parameters and economic evaluation based on the performance of the existing Mining Operation.

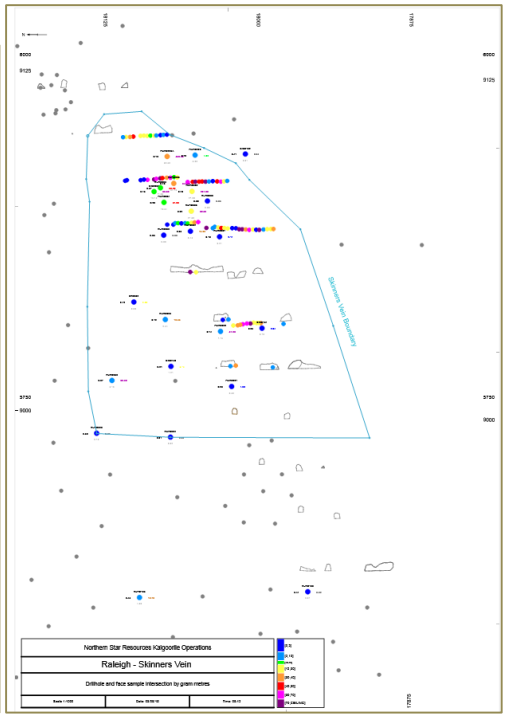
Criteria	JORC Code explanation	Commentary
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	Selected mining methods applied from proved appropriate through continuous operations at Raleigh since 2005 and at Rubicon Hornet since 2011.
	The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	Stope strike lengths are generally restricted to 15m for dilution control purposes
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	All underground mining assumptions and factors used are based on the existing practices at the Mining Operation within the EKJV area.
	The mining dilution factors used.	Based on historical mine performance, mining dilution factors of 2% Rock and 7% Paste dilution (9% total) for stoping additional to minimum mining width are applied, 10% dilution for ore development.
	The mining recovery factors used.	Mining recovery factor of 95% is applied based on historical mining data.
	Any minimum mining widths used.	At Rubicon-Hornet-Pegasus and Skinners Vein (Raleigh) deposits: Minimum stope width of 3 metres where the structure is less than 2 metres wide. For structures in excess of 2 metres width, minimum mining width is an additional 1 metre to structure vein width. At Raleigh: Minimum stope width of 2.7 metres where the vein is less than 2 metres wide or vein width plus 1 metre where vein width exceeds 2 metres.
	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 Ore Reserve.
	The infrastructure requirements of the selected mining methods.	All infrastructure is in place as part of the current Mining Operation. Extraction of the Pegasus ore reserve will make use of existing infrastructure.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	All Kundana ore is treated at the Kanowna Belle milling facilities. These facilities are designed to handle approximately 1.8 million tonnes of ore 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.
	Whether the metallurgical process is well-tested technology or novel in nature.	Metallurgical assumptions are based on milling experience gained over 8 years' continuous 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.	Metallurgical assumptions are based on milling experience gained over 8 years' continuous 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 8 years' continuous 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 required.

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 and Raleigh are currently compliant with all legal and regulatory requirements. All government permits and licenses and statutory approvals are either granted or in the process of being 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 also based on site experience and the LOM plan
	The methodology used to estimate operating costs.	All operational costs are projected forward based on actual operating data for the Mining Operation.
	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.	All in $A
	Derivation of transportation charges.	Existing contract.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Existing contract.
	The allowances made for royalties payable, both Government and private.	All royalties are built into the cost model.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.	All revenue factors are based modelled ore reserve grades and existing contract rates for other factors. Gold price of A$ 1,400/oz applied.
	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 product is sold direct at market prices with no hedges in place.
	A customer and competitor analysis along with the identification of likely market windows for the product.	Not required, guaranteed offtake.
	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 Mining Operation and forecasts representative of current market conditions.
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	Not calculated.

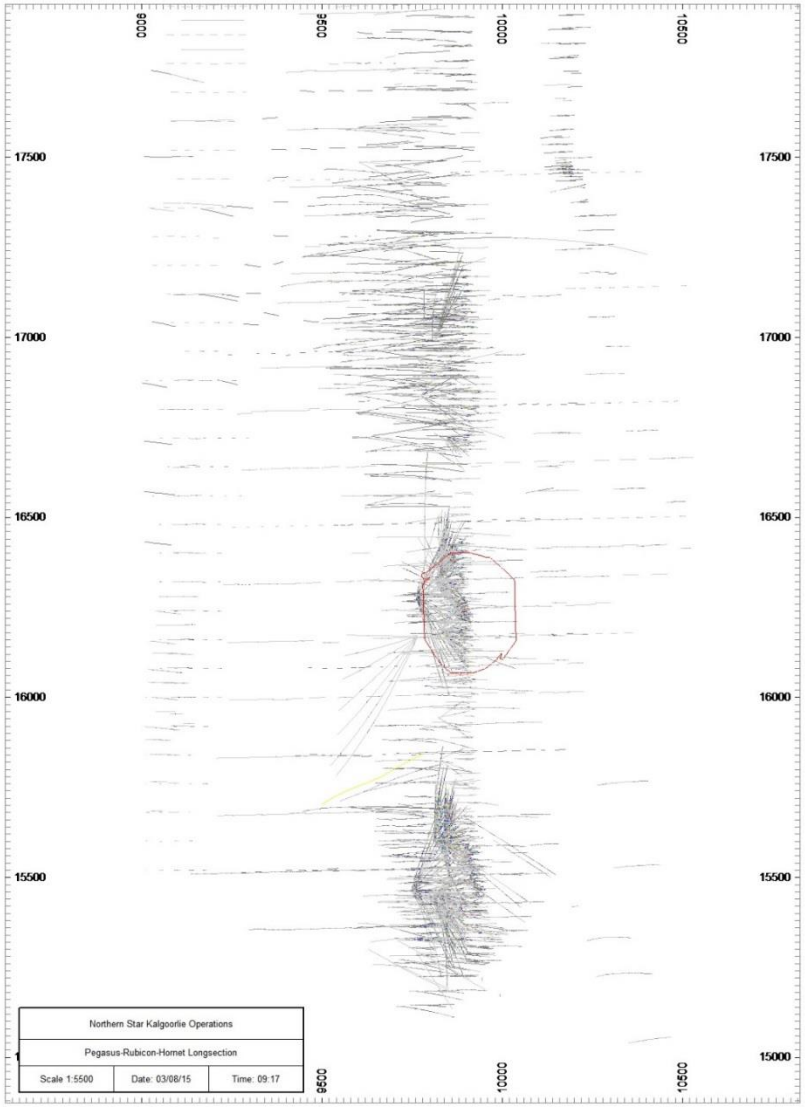
Criteria	JORC Code explanation	Commentary
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	Agreements are in place and are current with all key stakeholders
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	No issues.
	Any identified material naturally occurring risks.	All risk mitigation practices in place for existing Mining Operations.
	The status of material legal agreements and marketing arrangements.	All required agreements and arrangements in place for existing Mining Operations.
	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.	All approvals in place in place for existing Mining Operations.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	All Ore Reserves include Proved (if any) and Probable classifications
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The results accurately reflect the Competent Persons view of the deposits
	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.	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 reasonable 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.	Confidence in the Ore Reserve Estimate is considered high based on current mining and reconciliation performance within the Mining Operation.
	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.	Reconciliation of Rubicon and Hornet to date reflects estimates in studies

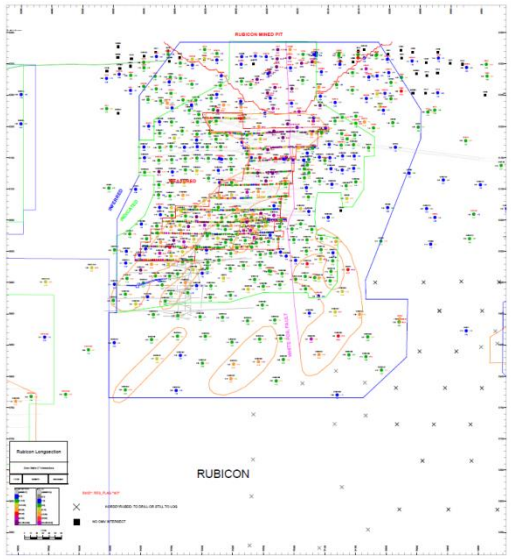


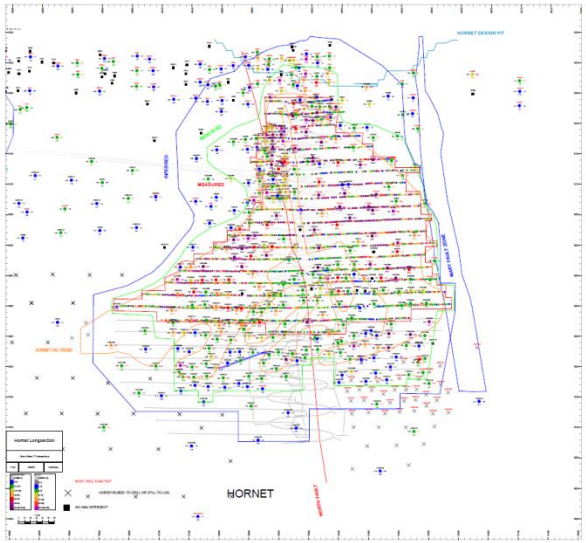


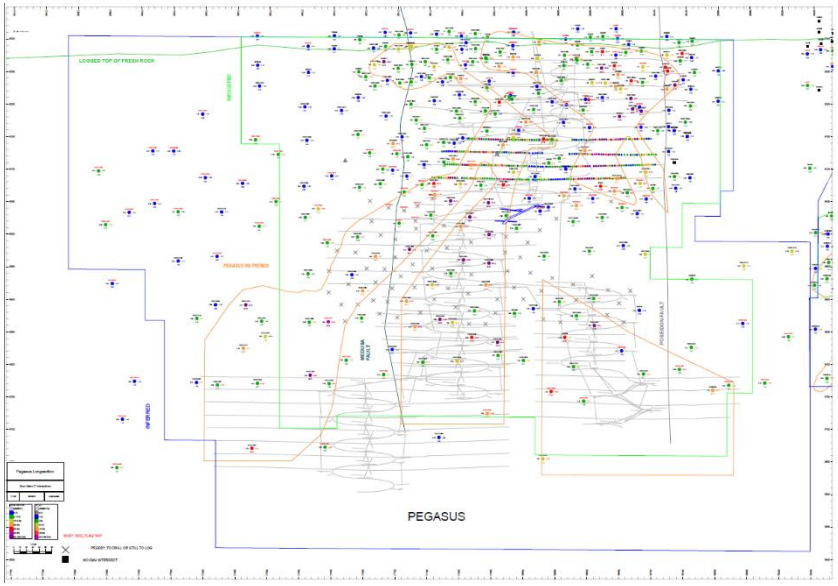


Plan View and Section Views of the Raleigh and Skinners Vein Deposits









Plan and sections of the Rubicon Hornet and Pegasus Deposits