PRESS RELEASE ASX/TSX: CDV
Monday, 5 March 2018 2018-5

CARDINAL UPGRADES INDICATED MINERAL RESOURCE TO 6.5Moz

Cardinal Resources Limited (ASX/TSX: CDV) (**"Cardinal"** or **"the Company"**) is pleased to advise that it has completed an update to the Mineral Resource estimate for its Namdini Gold Project ("Namdini") in Ghana, West Africa.

As a result of an additional 15,684m of HQ diamond drilling within 35 holes since the last Mineral Resource estimate in September 2017, the infill drilling program has been successful in delivering a substantial conversion of the Inferred category ounces into the Indicated Mineral Resource category which is now at 6.5Moz of Indicated Mineral Resources and 0.5Moz of Inferred Mineral Resources.

HIGHLIGHTS

- **6.5Moz** of gold contained in 180Mt at 1.13g/t Au at a cut-off of 0.5g/t Au within the Indicated Mineral Resource category
- **0.5Moz** of gold contained in 13Mt at 1.2g/t Au at a cut-off of 0.5g/t Au within the Inferred Mineral Resource category
- Remains open along strike and down dip
- Maiden Ore Reserve estimate and Pre-Feasibility Study due mid-2018

Cardinal's Chief Executive Officer / Managing Director, Archie Koimtsidis stated:
"We are extremely pleased that our intensive infill drilling campaign has significantly upgraded our confidence in the Namdini deposit with an overall lift in Indicated Mineral Resources from 4.3Moz to 6.5Moz. Further to this, we are confident that Namdini can continue to grow with more drilling given it remains open both along strike and down dip, with mineralisation intersected down to 650 vertical metres, and still open.

"This upgrade to the Mineral Resource is more than a 50% increase in the Indicated category from the estimate published in the September 2017 NI 43-101 technical report and supports a long mine life as demonstrated by the results of the recently announced Preliminary Economic Assessment.

"With the majority of the Indicated Mineral Resource continuous from surface to an approximate vertical depth of 400m, we anticipate a conversion of Mineral Resources to Ore Reserves within a simple, single, large-scale open pit, with a very low strip ratio of 1.2 to 1 over the life of mine as the preferred mining method.

"The higher-grade areas of the deposit, close to surface, will be targeted within the Stage 1 pit in the early years of production, as the recent results of our PEA study indicate, this pit will be the area most likely to repay capital investment soonest. The Stage 1 pit will see approximately 400,000oz to 900,000oz produced over three to four years at an average head grade of approximately 1.3 to 1.5 g/t Au based upon the PEA results and the throughput size selected."

MINERAL RESOURCE UPGRADE

This Mineral Resource update incorporates the results from the latest infill drilling program which was completed in Q4 2017 totalling approximately 15,684m in 35 drill holes. The primary aim of the drilling program was to infill the deposit within the conceptual pit to focus on converting the remaining Inferred Mineral Resource to the Indicated category. This drill program also incorporated grade control, pit geotechnical, hydrogeology and tailings infrastructure drilling. With all of these programs completed, we will be able to produce an Ore Reserve estimation as part of the Pre-Feasibility study which is currently scheduled to be completed in mid-2018.

Indicated Mineral Resources

Cut off (g/t Au)	Tonnes (Mt)	Grade (g/t Au)	Metal (Moz Au)
0.3	240	0.9	7.2
0.4	210	1.0	6.9
0.5	***180***	***1.1***	***6.5***
0.6	152	1.2	6.0
0.7	128	1.3	5.5
0.8	107	1.4	5.0

Inferred Mineral Resources

Cut off (g/t Au)	Tonnes (Mt)	Grade (g/t Au)	Metal (Moz Au)
0.3	18	1.0	0.6
0.4	15	1.1	0.6
0.5	***13***	***1.2***	***0.5***
0.6	11	1.4	0.5
0.7	9	1.5	0.5
0.8	8	1.6	0.4

Table 1: Summary of the Mineral Resources at Namdini

Table 1 highlights the Mineral Resource estimation reported at a series of cut-off grades. Currently the 0.5 g/t Au cut-off grade approximates an operational parameter that the Company believes to be applicable. This is in accordance with the guidelines of Reasonable Prospects for Eventual Economic Extraction ("RPEEE") per the Canadian Institute of Mining, Metallurgy and Petroleum "CIM Definition Standards for Mineral Resources and Mineral Reserves" (CIM, 2014) and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code 2012). Refer to ***Sections 1, 2 and 3*** of the JORC Code 2012 Edition Table 1 criteria in Appendix 1. The effective date of this Mineral Resource estimate is 5 March 2018.

All figures in Table 1 have been rounded to reflect the relative accuracy of the estimates.

MINERAL RESOURCE ESTIMATE PARAMETERS

The following information summarizes key parameters relating to the Mineral Resource estimation:

- **Geological and structural modelling**: Logging, interpretation and modelling were undertaken by Cardinal Resources' technical staff and specialist structural consultants Orefind Pty Ltd, (Davis and Cowan, 2016-2018) updated the three-dimensional model of key lithologies, structures and weathering zones.

- **Survey Control:** A detailed topographic survey was completed using Lidar technology, a remote sensing method used to examine the surface of the Earth. Drill hole collars were surveyed using differential GPS (DGPS), with down hole surveys taken at 30m intervals using electronic multi-shot and gyroscopic equipment.

- **Bulk density data**: Bulk densities are routinely measured as part of exploration data acquisition protocols. The bulk density database for the Mineral Resource estimate comprised 8,132 measurements. Statistical analysis was undertaken on the bulk density data and a matrix of bulk densities were applied based on lithology and weathering zone. The large majority of the Namdini deposit is fresh rock. Bulk densities vary from 1.80 tonnes per cubic metre (t/m^3) for strongly weathered rock to 2.73 t/m^3 (for granite) and 2.82-2.83 t/m^3 for metavolcanics, diorite and metasediments.

- **Grade Estimation**: MPR Geological Consultants Pty Ltd ("MPR") (QP/CP Mr. Nicolas Johnson) estimated recoverable Mineral Resources for Namdini using Multiple Indicator Kriging ("MIK") with block support adjustment, a method that has been demonstrated to provide reliable estimates of recoverable open pit resources in gold deposits of diverse geological styles. The mineralized domain used for the current study was interpreted by MPR and Cardinal geologists on the basis of two metre down-hole composited gold grades and captures zones of continuous mineralization with composite grades of greater than nominally 0.1g/t Au. The domain trends north-northeast over 1.2km and dips approximately 60° to the west with an average horizontal width of approximately 350 m. The Mineral Resource can reasonably be expected to provide appropriately reliable estimates of potential mining outcomes at the assumed selectivity, without application of additional mining dilution or mining recovery factors. Validation of the MIK model was undertaken visually, statistically and comparatively, with an alternate Ordinary Kriged model estimate (OK). All checks were found to be within estimation accuracy.

  The Mineral Resource classification also considered the quality of the data collected (geology, survey and assaying data), the density of data, the confidence in the geological models and mineralization model and grade estimation quality.

- **Variance Adjustment**: MPR's resource estimates include a variance adjustment to give estimates of recoverable resources at various gold cut off grades. The variance adjustments were applied using the direct lognormal method. The variance adjustment factors reflect comparatively large scale, open pit mining consistent with Cardinal's perception of potential mining scenarios. The variance adjustment factors were estimated from the variogram model for gold grades assuming mining selectivity of 5m by 10m by 2.5m (across strike, strike, vertical) with high quality grade control sampling on an 8 by 12 by 1.25m pattern.

Figure 1 below, is a perspective view of the mineralization wireframe constructed to encapsulate the data used for the block model generation. The conceptual Starter and Life of Mine pits from the recent Preliminary Economic Assessment ("PEA") results, are displayed.

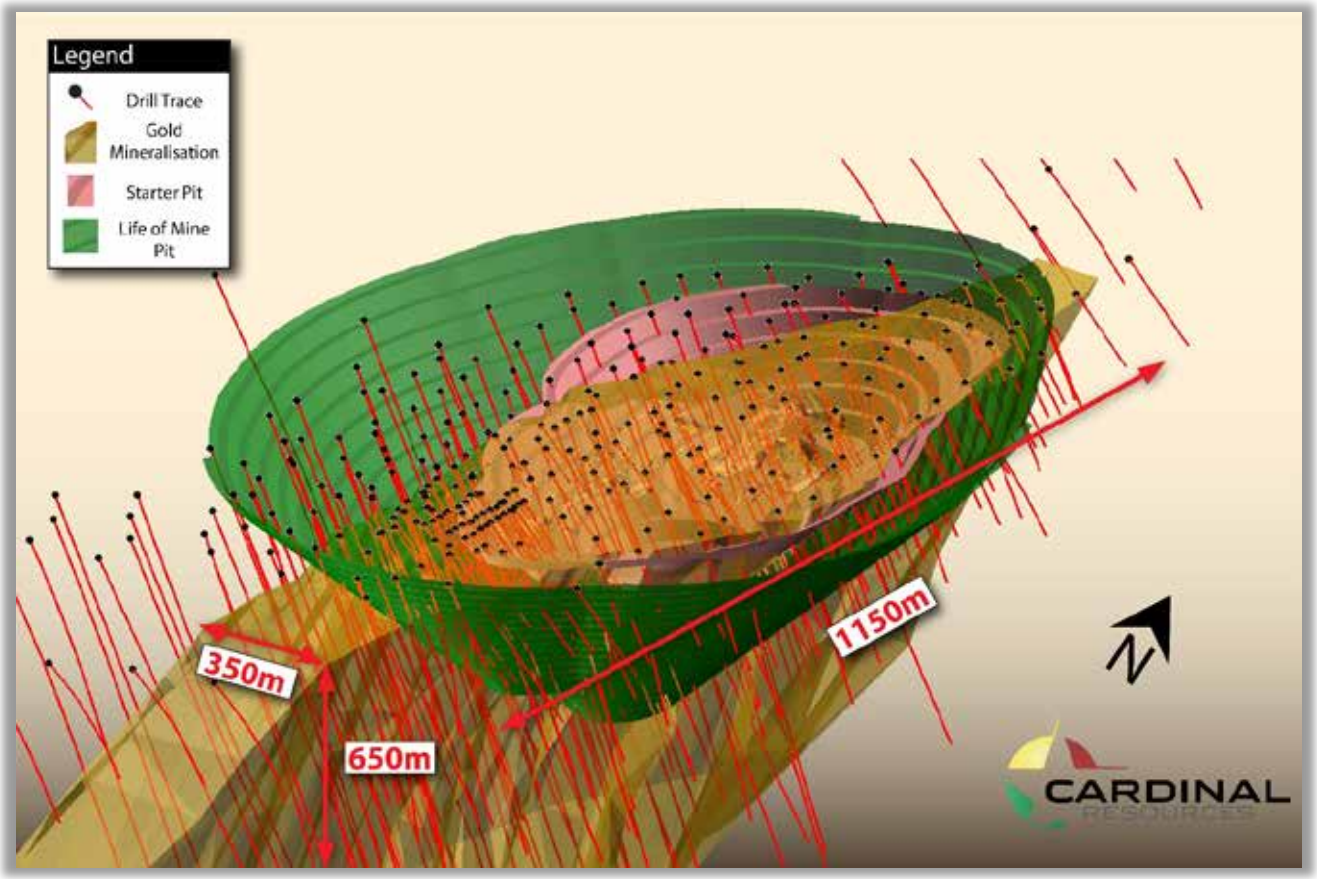

Figure 1: Perspective view of the Namdini gold mineralized envelope.

Figure 2 below, shows the distribution of Indicated and Inferred Mineral Resources through a longitudinal slice of the block model.

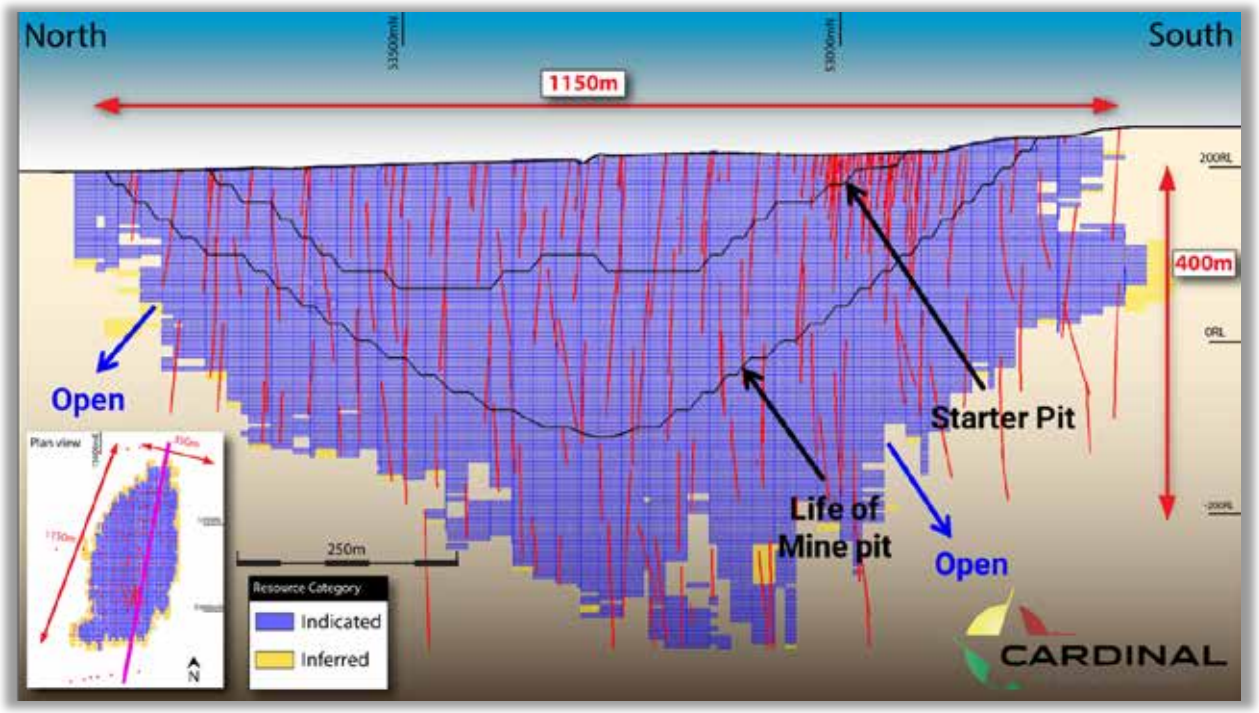

Figure 2: Typical Long section of the model showing Indicated and Inferred Mineral Resource blocks.

Figure 3 below, shows the grade distribution and continuity through a longitudinal slice of the block model. The higher-grade areas towards the northern part of the resource, close to surface, will be targeted in the early years of production within the starter pit.

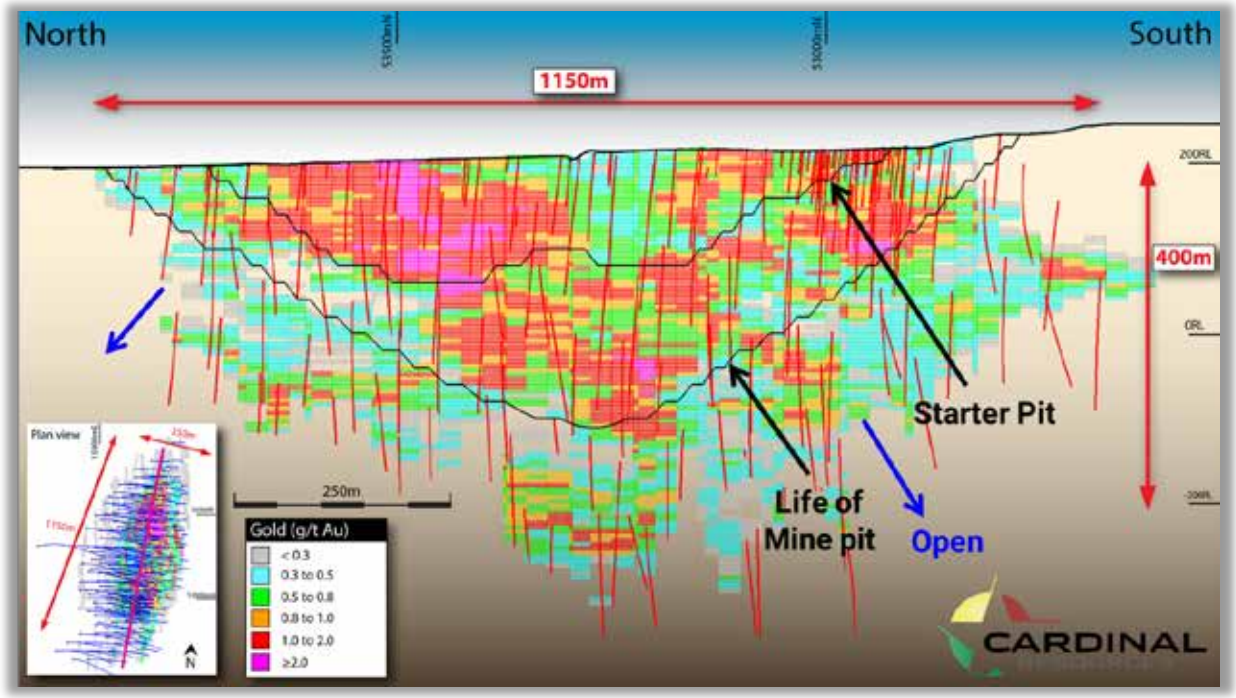

Figure 3: Typical Long section through the resource model showing gold grade distribution.

Figure 4 below, shows the distribution of Indicated and Inferred resources through a typical cross-sectional slice of the block model.

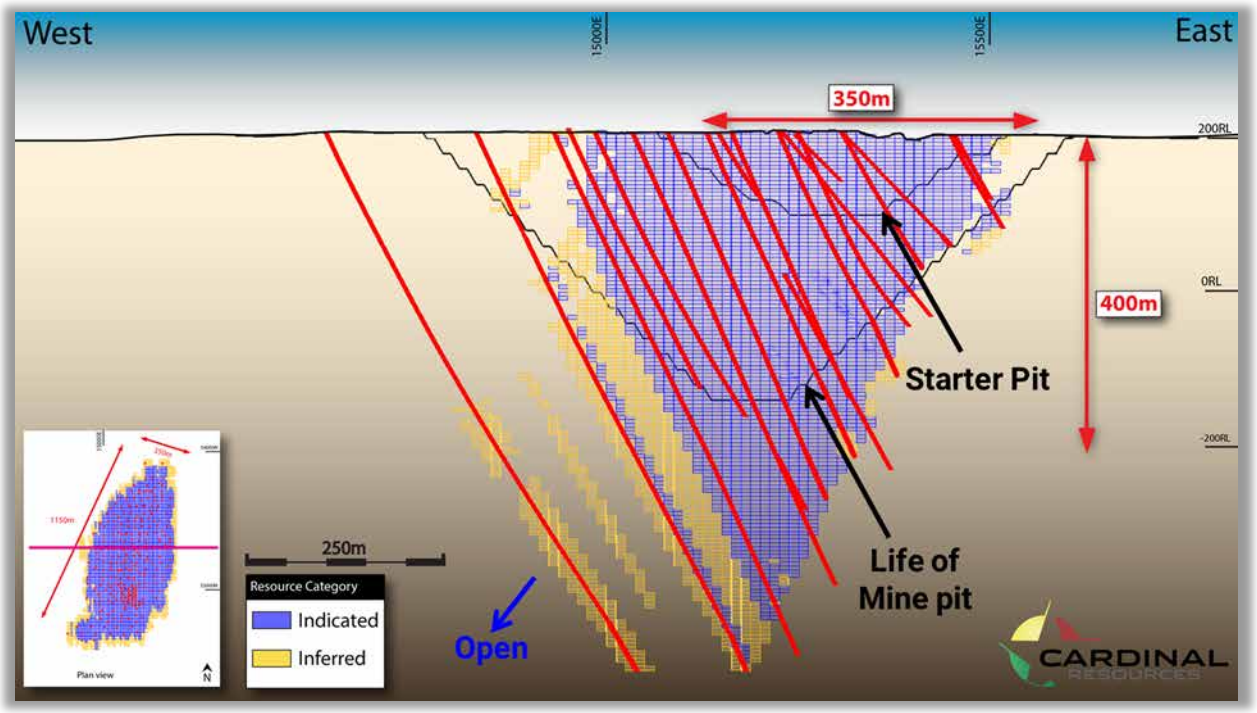

Figure 4: Typical cross section through the resource model showing Indicated and Inferred blocks.

Figure 5 below, shows the grade distribution and continuity through a cross sectional slice of the block model.

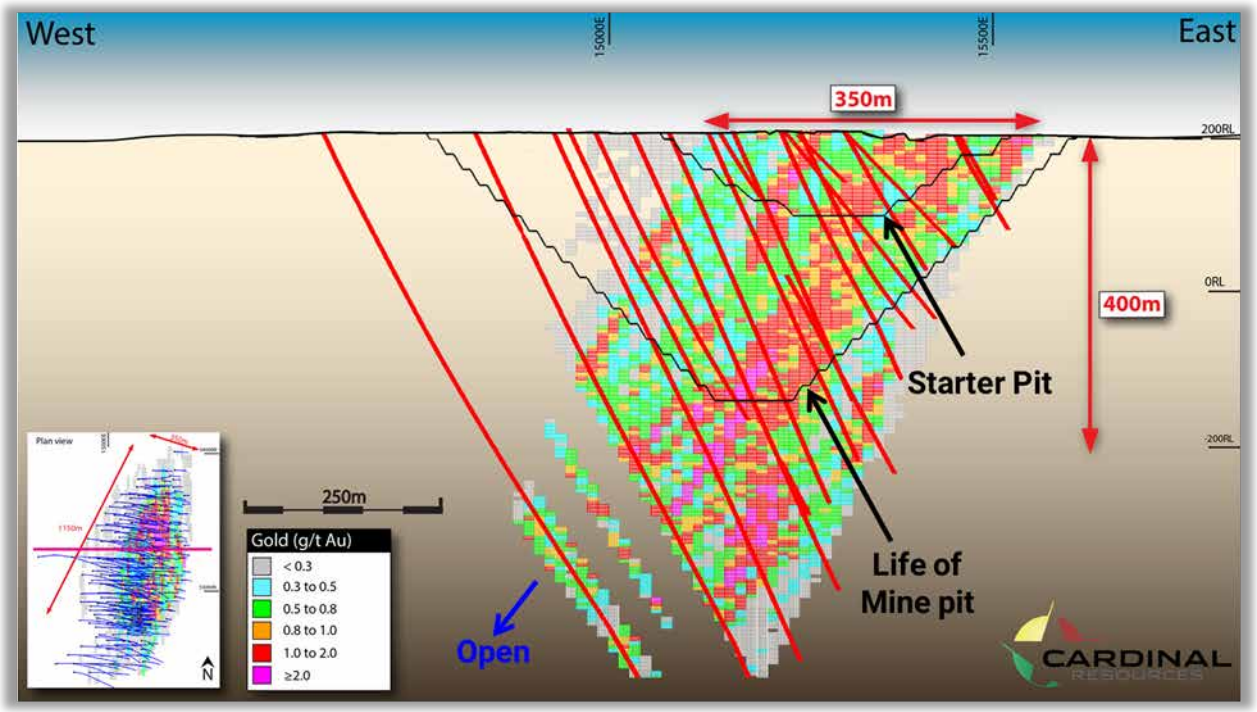

Figure 5: Typical cross section through the resource model showing gold grade distribution.

The Mineral Resource is prepared in accordance with both the Canadian Institute of Mining, Metallurgy and Petroleum "CIM Definition Standards for Mineral Resources and Mineral Reserves" (CIM, 2014) and the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code 2012). Refer to ***Sections 1, 2 and 3*** of the JORC Code 2012 Edition Table 1 criteria in Appendix 1.

A technical report in support of the mineral resource estimate described herein and prepared in accordance with NI 43-101 will be filed on SEDAR https://www.sedar.com within 45 days from the date hereof.

ABOUT CARDINAL

Cardinal Resources Limited (ASX/TSX: CDV) is a West African gold-focused exploration and development Company which holds interests in tenements within Ghana, West Africa.

The Company is focused on the development of the Namdini Project through advancing the Pre-Feasibility study, supported by additional multi-disciplinary engineering activities.

Exploration programmes are also underway at the Company's Bolgatanga (Northern Ghana) and Subranum (Southern Ghana) Projects.

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Competent Person / Qualified Person Statement

Mr Nicolas Johnson, MAIG, who is an employee of MPR Geological Consultants Pty Ltd, has compiled the information relating to the Mineral Resource in Resource Summary Table (Table 1) and the attachment in Appendix 1, Section 3 of JORC Code 2012 Edition Table 1 which relate to Mineral Resources of the Namdini Project. Mr Johnson has sufficient experience, which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person, as defined in the JORC Code and Qualified Person as defined by the NI43-101 instrument. Mr Johnson has no economic, financial or pecuniary interest in the company and consents to the inclusion in this report of the matters based on this information in the form and context in which it appears and has reviewed and approved the inclusion of technical and scientific information in this report.

The information in this press release has been compiled and reviewed by **Mr. Richard Bray**, a Registered Professional Geologist with the Australian Institute of Geoscientists and **Mr. Ekow Taylor**, a Chartered Professional Geologist with the Australasian Institute of Mining and Metallurgy. Mr. Bray and Mr. Taylor have more than five years' experience relevant to the styles of mineralization and type of deposits under consideration and to the activity which is being undertaken 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" and as a Qualified Person as defined by the NI43-101 instrument. Mr. Bray and Mr. Taylor are full-time employees of Cardinal and hold equity securities in the Company. Mr. Bray and Mr. Taylor have consented to the inclusion of the matters in this report based on the information in the form and context in which it appears.

Disclaimer

This ASX / TSX press release has been prepared by Cardinal Resources Limited (ABN: 56 147 325 620) ("Cardinal" or "the Company"). Neither the ASX or the TSX, nor their regulation service providers accept responsibility for the adequacy or accuracy of this press release.

This press release contains summary information about Cardinal, its subsidiaries and their activities, which is current as at the date of this press release. The information in this press release is of a general nature and does not purport to be complete nor does it contain all the information, which a prospective investor may require in evaluating a possible investment in Cardinal.

By its very nature exploration for minerals is a high-risk business and is not suitable for certain investors. Cardinal's securities are speculative. Potential investors should consult their stockbroker or financial advisor. There are a number of risks, both specific to Cardinal and of a general nature which may affect the future operating and financial performance of Cardinal and the value of an investment in Cardinal including but not limited to economic conditions, stock market fluctuations, gold price movements, regional infrastructure constraints, timing of approvals from relevant authorities, regulatory risks, operational risks and reliance on key personnel and foreign currency fluctuations.

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Forward-looking statements

Certain statements contained in this press release, including information as to the future financial or operating performance of Cardinal and its projects may also include statements which are 'forward-looking statements' that may include, amongst other things, statements regarding targets, estimates and assumptions in respect of mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These 'forward – looking statements' are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Cardinal, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies and involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.

Cardinal disclaims any intent or obligation to update publicly or release any revisions to any forward-looking statements, whether as a result of new information, future events, circumstances or results or otherwise after today's date or to reflect the occurrence of unanticipated events, other than required by the Corporations Act and ASX and TSX Listing Rules. The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and similar expressions identify forward-looking statements.

All forward-looking statements made in this press release are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

APPENDIX 1
JORC CODE 2012 EDITION – TABLE 1

Section 1 – Sampling Technique and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Sampling is by a combination of diamond drill and reverse circulation holes. Nature and quality of sampling is carried out under QAQC procedures as per industry standards. Diamond sampling include both half-core and quarter-core samples of HQ core size and RC samples are collected by a three-tier riffle splitter using downhole sampling hammers with nominal 127 to 140mm holes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sampling is guided by Cardinal Namdini protocols and Quality Control procedures as per industry standard. To ensure representative sampling: 1m RC samples are collected from a cyclone, passing them through a 3-tier riffle splitter, and taking duplicate samples every 20th sample. 1m length HQ core sampling is taken through the various lithological units. The original system used was to sample each unit separately, but after statistical analyses of the results found there was no material grade variation between the units, the half core was sampled at 1m intervals throughout the drill hole.
	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.	Diamond drill samples are firstly crushed using a Jaw Crusher and thereafter crushed to -2mm using a RSD Boyd crusher. A less than 1kg split sample is then pulverised via LM2 to a nominal 85% passing -75µm. Reverse circulation drill samples are only crushed through a RSD Boyd crusher to -2mm and pulverised via LM2 to a nominal 85% passing -75µm. A 200g sub-sample is taken for analysis. A 50g charge weight is fused with litharge-based flux, cupelled and the prill dissolved in aqua regia and gold tenor is determined by AAS.
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.).	Diamond core drilling is completed with core size of HQ with a standard tube. Triple tube is used in saprolite at the tops of the hole. Core is orientated using digital Reflex ACT II RD orientation tool. Reverse circulation drilling uses sampling hammer of nominal 127 to 140mm holes.

Criteria	JORC Code Explanation	Commentary
		All holes are inclined at varying angles for optimal zone intersection. All drill collars are surveyed using Trimble R8 RTK GPS with downhole surveying every 30m.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Diamond core recovery is logged and captured into the database. The Method of recording chip and core sample recoveries was to enter the relevant data on a hand-held Motion F5te Tablet PC using a set of standard templates supplied by Maxwell Geoservices, Perth (Maxwell). Reverse circulation sampling is good. Chips are logged and weighed and captured to the database. RC sample recoveries are assessed by weighing 1m samples from the cyclone on a scale in the field and comparing with the theoretical volume contained in a 1m x 140mm diameter hole to calculate an estimated percentage sample recovery. For RC drilling, average recoveries are in the order of 76% and considered acceptable. Core recovered from each drill run is measured and compared with the drill run length drilled to calculate an estimated percentage core recovery. For core drilling overall recoveries are excellent, weighted average recovery greater than 98%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Measures taken include the use of bigger HQ core size diamond drilling to maximise recovery, having a geologist onsite to examine core and core metres marked and orientated to check against the driller's blocks and ensuring that all core loss is taken into account. At the reverse circulation rig, sampling systems are routinely cleaned to minimise the opportunity for contamination and drilling methods are focused on sample quality. The measures taken to maximize RC sample recovery are through a cyclone and a 3-tier riffle splitter. Each 1m sample is passed twice through the splitter before sampling to ensure maximum homogenisation of each sample and to collect an unbiased representative sample to be assayed. Most of the reverse circulation rigs have auxiliary compressors and boosters to help maintain dry samples. Where wet samples are encountered, the reverse circulation drilling is discontinued and is progressed with diamond core drilling.
	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.	No relationship is seen to exist between sample recovery and grade, and no sample bias is due to preferential loss/gain of any fine/coarse material due to the acceptable sample recoveries obtained by both drilling methods employed.

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 drill holes are fully logged. The lithology, alteration and geotechnical characteristics of core are logged directly to a digital format on a Field Toughbook laptop logging system following procedures and using Cardinal geologic codes. Data is imported into Cardinal's central database after validation in LogChief™. All geological logging is to a level of detail to support Mineral Resource estimation.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is both qualitative and quantitative depending on the field being logged. Both RC chips in trays and HQ core are photographed both in dry and wet form.
	The total length and percentage of the relevant intersections logged.	All holes are logged in full and to the total length of each drill hole. 100% of each relevant intersection is logged in detail.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Core orientation is completed for all diamond holes and all are marked prior to sampling. Longitudinally cut half core samples are produced using a Core Saw. Samples are weighed and recorded. Some quarter core samples have been used and statistical test-work has shown them to be as equally representative as half core.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC samples are split using a three-tier riffle splitter. The majority of RC samples are dry. On occasions that wet samples are encountered, they are dried prior to splitting with a riffle splitter.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Drill core samples are sorted, dried at 105°C for 4 hours and weighed. Samples are firstly Jaw Crushed and a second stage crushing is effected through RSD Jaques crusher to a nominal -2mm and then split to <1.0kg. The reject sample is retained in the original bag and stored. The split is pulverised in a LM2 to a nominal 85% passing 75%µm and approximately 200g sub-sample of the pulverised material is used for assay. Chip samples are sorted and dried in an oven for eight hours and weighed. They are then crushed to -2mm using a RSD Boyd crusher and a <1.0kg split is taken. The reject sample is retained in the original bag and stored. The split is pulverised in a LM2 to a nominal 85% passing 75µm and a 200g sub-sample is used for analysis. All preparation equipment is flushed with barren material prior to commencement of the job.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Cardinal Resources has protocols that cover the sample preparation at the laboratories and the collection and assessment of data to ensure that accurate steps are used in producing representative samples for the analytical process. Key performance indices include: · Contamination index of 95% (that is at least 95% of blanks pass); failures can only be attributed to probable minor laboratory contamination. · Crushed Size index of 95% passing 2mm (1:50 sample screened).

Criteria	JORC Code Explanation	Commentary
		· Grind Size index of 85% passing 75 microns (1:50 sample screened). · Check Samples returning at worst 20% precision at 90th percentile and bias of 5% or better. Crusher and pulveriser are flushed with barren material at the start of every batch.
	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.	Sampling is carried out in accordance with Cardinal protocols as per industry best practice. Quality control procedures adopted for all sub-sampling stages to maximize representativeness of samples is to insert commercial certified reference material (CRM) for standards and blanks every 20 samples. The Laboratory assays duplicate samples of each sample batch (20%) so that representation of the samples can be checked. Field duplicates have been taken and analysis of results have shown the sampling to be representative.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Measures taken to ensure that the RC sampling is representative of the in-situ material collected are to take field duplicate samples every 20th sample. Approximately 3kg samples from the splitter are retained from each sample and stored at the company's secured premises for possible re-assay. Measures taken to ensure that the core sampling is representative is to sample half core at 1m intervals irrespective of lithologies due to the similarities in grade of the main lithologies. Results of field duplicates, standards and blanks are all evaluated to ensure that the results of each assay batch are acceptable.
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.	Samples are analysed for gold by lead collection fire assay of a 50g charge with AAS finish; the assay charge is fused with the litharge-based flux, cupelled and prill dissolved in aqua regia and gold tenor determined by flame AAS. The analytical method is considered appropriate for this mineralization style and is of industry standards. The quality of the Fire Assaying and laboratory procedures are considered to be entirely appropriate for this deposit type.
	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 hand held geophysical tools are used.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable	Sample preparation checks for pulp fineness are carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing 75µm is being attained. Laboratories' QAQC involves the use of internal lab standards using certified reference material (CRM) and

Criteria	JORC Code Explanation	Commentary
	levels of accuracy (i.e. lack of bias) and precision have been established.	blanks. Cardinal's QAQC protocol is considered industry standard with CRMs submitted on a regular basis with routine samples. The CRMs having a range of values and blanks are inserted in the ratio of 1:20. Duplicates are taken at the riffle splitter every 20th sample. No duplicate samples are taken from core samples. Pulps are submitted to a secondary laboratory for checks on accuracy and precision of the primary laboratory. Coarse rejects are submitted back to the primary laboratory to assess the adequacy of the sub-sampling process.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections have been verified by alternative company personnel.
	The use of twinned holes.	None of the drill holes in this report are twinned.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data are captured on field tough book laptops using LogChief™ Software. The software has validation routines and data is then imported onto a secure central database.
	Discuss any adjustment to assay data.	The primary data is always kept and is never replaced by adjusted or interpreted 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 drill hole collar coordinates are surveyed using handheld Garmin GPSmap 62s GPS within ±3m accuracy. All drill collars are accurately surveyed using Trimble R8 RTK GPS system within ±10mm of accuracy (X, Y, Z). Coordinates are based on 12 control stations established on the Namdini site by Sahara Mining Services. Downhole survey is completed by using Reflex Ez-Shot survey instrument at regular intervals. Gyroscopic downhole surveys were completed on selected drill holes for the recent drilling using a Reflex Ez-Gyro (North Seeking) instrument as part of the quality checks on the downhole surveys.
	Specification of the grid system used.	Coordinate and azimuth are reported in UTM WGS84 Zone 30 North.
	Quality and adequacy of topographic control.	Topographic control was established from aerial photography using a series of 12 surveyed control points. A 1m ground resolution DTM was produced by Sahara Mining Services from the survey completed in 24 flights using the DJI Inspire 1 UAV at an altitude of 100m with an overlap of 70%.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill spacing is at 50m x 100m line spacing with infill to 50m x 50m and 10m x 15m in areas to establish mineralization continuity and upgrade the Mineral Resource.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the	Drill data spacing and distribution are sufficient to establish the geological and grade continuity appropriate for reporting Mineral Resource and Ore Reserve and classifications applied.

Criteria	JORC Code Explanation	Commentary
	Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	
Orientation of data in relation to geological structure	Whether sample compositing has been applied.	No sample compositing has been applied.
	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 drill holes are orientated to achieve intersection angles as close to perpendicular to the mineralization as practicable. This achieves unbiased sampling of possible structures as drilling is orientated normal to the dip and foliation of the deposit. Structural measurements confirm that the foliation of the entire deposit dips -60°W so that the sampling achieves unbiased sampling of the lithologies.
	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 significant orientation-based sampling bias is known at this time.
Sample security	The measures taken to ensure sample security.	An independent Ghanaian security contractor is used to ensure sample security. The drilling contractor is accountable for drill core and RC chip production at the drill site. Final delivery from the drill site to the laydown area within the core yard is managed by Cardinal. The core yard technicians, field technicians and Geologists ensure the core and chips are logged, prepared and stored under security until collected by SGS for delivery to the laboratories. At the time of sample collection, a sign-off process between Cardinal and the SGS delivery truck driver ensures that samples and paperwork correspond. The samples are then transported to the SGS Tarkwa (Ghana) or SGS Ouagadougou (Burkina Faso) laboratory where they are receipted against the dispatch documents. The assay laboratories are responsible for the samples from the time of collection from Namdini Project site until final results are returned and checked by Cardinal Geologists. Sample pulps and coarse rejects are retained by the laboratories and are shipped back to Namdini after final results are returned where they are stored under security.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques are of industry standards. Data is audited by Maxwell Geoservices (Perth), who have not made any other recommendations.

Section 2 – Reporting of Exploration Results
(Criteria listed in section 1 will also apply to this section where relevant)

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Status	Type, name/reference number, location and ownership including agreements or material issues with third parties including joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Mining Licence covering Cardinal's Namdini Project over an area of approximately 19.54 sq. Km is located in the Northeast region of Ghana. The previous holder of the Mining Licence, Savannah Mining Ghana Limited (Savanah) completed an initial Environmental Impact Statement (EIS) and lodged the EIS with the Environmental Protection Agency of Ghana. The application by Savannah for a Large-Scale Mining Licence over an area of approximately 19.54 Sq. Km in the Upper East Region of Ghana covering Cardinal's Namdini Project has been granted by the Minister of Lands and Natural Resources of Ghana. Savannah applied for the assignment of this Large-Scale Mining Licence to Cardinal Namdini Mining Limited (Namdini), a wholly owned Subsidiary of Cardinal. The assignment has been granted by the Minister of Lands and Natural Resources of Ghana.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	All tenements are current and in good standing.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	Aside from Cardinal there has been no recent systematic exploration undertaken on the Namdini Project.
Geology	Deposit type, geological setting and style of mineralisation	The deposit type comprises gold mineralization within sheared and highly altered rocks containing sulphides; mainly pyrite with minor arsenopyrite. The geological setting is a Paleoproterozoic Greenstone Belt comprising Birimian metavolcanics, volcaniclastics and metasediments located in close proximity to a major 30 km ~N-S regional shear zone with splays. The style of mineralization is hydrothermal alteration containing disseminated gold-bearing sulphides.
Drill hole information	A summary of all information material to the understanding of the exploration results including 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 meters) of the drill hole collar • Dip and azimuth of the hole • Down hole length and interception depth • Hole length	Further information referring to the drill hole results can be found on Cardinal website or SEDAR http://www.cardinalresources.com.au/asx-announcements/2018-2/ or from http://www.sedar.com

Criteria	JORC Code Explanation	Commentary
	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.	There has been no exclusion of information.
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.	Not applicable in this document as no exploration results are announced.
	Where aggregated 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.	Not applicable in this document as no exploration results are announced.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable in this document as no exploration results are announced.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of exploration results.	Not applicable in this document as no exploration results are announced.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Not applicable in this document as no exploration results are announced.
	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 in this document as no exploration results are announced.
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.	Not applicable in this document as no exploration results are announced.
Balanced Reporting	Where comprehensive reporting of all Exploration Results is not practical, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The accompanying document is considered to represent a balanced report.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; geophysical survey results; geochemical survey	Other exploration data collected is not considered material to this document at this stage. Further data collection will be reviewed and reported when considered material.

Criteria	JORC Code Explanation	Commentary
	results; bulk 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). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Exploration drilling will continue to target projected lateral and depth extensions of the mineralization and infill drilling to increase the confidence in the Mineral Resource.

Section 3 – Estimation and Reporting of Mineral Resources

Criteria	JORC Code Explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	The Data is managed using DataShed© drill hole management software (Maxwell Geoservices) using SQL database techniques. Validation checks were conducted using SQL and DataShed relational database standards. All geological and field data is entered using data-loggers and software developed by Maxwell GeoServices, that includes lookup tables and fixed formatting (and protected from modification) thus only allowing data to be entered using the Cardinal geological code system and sample protocol. Data is then loaded to the DataShed database, which was managed by consultants Maxwell GeoServices. Cardinal technical personnel validated the database using Micromine software. The DataShed database is then reviewed against the original logging spreadsheets and the assay data checked against the supplied assay certificates. The Competent Person's independent checks of database validity included checking for internal consistency between, and within database tables and comparing 97% of database assay entries with laboratory source files supplied by Cardinal. These checks showed no significant discrepancies in the database used for resource estimation.
	Data validation procedures used.	Following importation, the data goes through a series of digital checks for duplication and non-conformity, followed by manual validation by the relevant project geologist who manually checks the collar, survey, assay and geology for errors against the original field data and final paper copies of the assays. The process is documented, including the recording of holes checked, errors found, corrections made and the date of database update. Basic validation checks were carried out to confirm the data is valid and acceptable to support resource estimation work. MPR Geological Consultants Pty Ltd ("MPR") reviewed the QA/QC results.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Mr. Nicolas Johnson of MPR Geological Consultants Pty Ltd who completed the Mineral Resource estimate has visited the Namdini Gold Project in January 2017 to review the operation as part of the 2018 Mineral Resource update. Cardinal Competent Persons, Messrs. Richard Bray and Ekow Taylor undertake regular site visits.
	If no site visits have been undertaken indicate why this is the case.	Sites visits were undertaken.

Criteria	JORC Code Explanation	Commentary
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	Gold mineralization above the cut-off of grade is widespread within the meta-volcanic, granite and diorite rocks which can be interpreted and modelled with a high degree of confidence. There is a sharp mineralization boundary with the meta-sediments in the footwall while the hanging wall contact exhibits a more diffuse mineralization boundary. Higher grade mineralization (>0.5 g/t Au) can be traced along structural corridors related to a pervasive NW-SE foliation which has been warped around the more competent granite. There is abundant structural information from oriented core which confirms this assumption. Based on these observations, statistical evaluation and geological interpretations, a broad mineralization package was developed based on gold grade greater than 0.1 g/t. The mineralization constraint was traceable at low grades for overall 1,300m and is up to 350m wide. The mineralization dips approximately 55° to 60° towards the west. The interpretation is considered geologically and volumetrically realistic and is fit for the purpose of estimating Mineral Resource in both the Indicated and Inferred categories.
	Nature of the data used and of any assumptions made.	The drill hole database used for resource estimation consists of DD core and RC samples. Numerous validation steps have been taken by MPR and Cardinal Competent Persons and various consultants. MPR is of the opinion that the drill hole database is of sufficient quality to support the estimation of Mineral Resources. The geological data used to construct the geological model includes regional and surface mapping and logging of RC and diamond core drilling. A nominal 0.1g/t Au lower cut-off grade which approximates the boundary between gold mineralization assays and background assays, was applied to the mineralization model. Oxidation codes and densities were assigned to model estimates from triangulated surfaces representing the base of oxidation, and base of transitional material (top of fresh rock) respectively, which were interpreted from geological logging.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The geology of the deposit is relatively simple, and the interpretation is considered robust. There is no apparent alternative to the interpretation that will have material impact on this Mineral Resource estimate.

Criteria	JORC Code Explanation	Commentary
		As the project advances towards the declaration of Ore Reserves, the characterization and treatment of higher grade mineralization and the application of a litho-structural model including mineralization wireframes may become necessary.
	The use of geology in guiding and controlling Mineral Resource estimation.	The Mineral Resource Estimate uses lithological and structural information collected to guide the interpretation. The mineralization geometry has a strong relationship with interpreted alteration and structure. The lithology contacts and the weathering changes do not appear to materially control the mineralization although the metavolcanic and the tonalite (granite) mineralization is on average higher grade than the diorite and metasediment mineralization. Little grade variation is noted between the different weathering groupings. The grade estimate is based on a gold grades and the mineralization package defined above a 0.1gt Au lower cut-off grade.
	The factors affecting continuity both of grade and geology.	The continuity of grade is associated with a pervasive foliation, alteration, sulphides and the spatial distribution of lithologies including the interaction between structure and lithological competency contrasts. A broad zone of anomalous mineralization is interpreted. A broad zone of anomalous mineralization is interpreted. The grade continuity at lower cut-off grades is good, however this grade continuity is materially reduced at higher cut-off grades as expected in a gold deposit. Geological setting and mineralization controls have been established with sufficient confidence for the current estimates.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The Mineral Resource is widespread, extending over an area 350 m wide (horizontal thickness), 1.2 km along strike and to a depth of 600 m below surface. Mineralization generally dips at 55° towards the northwest with local changes in dip corresponding to lithological contacts and foliation 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	Data interrogation, compositing and wire-framing have been performed using Micromine software. Exploratory data analysis, variogram calculation and modelling, and Mineral Resource estimation have been performed using FSSI Consultants (Australia) Pty Ltd ("FSSI") GS3M™ software. GS3M™ is designed specifically for estimation of recoverable resources using MIK. Multiple Indicator Kriging ("MIK") was used as the preferred method for estimation of gold resources at Namdini as the

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	description of computer software and parameters used.	approach has been demonstrated to work well in a large number of deposits of diverse geological styles. The gold mineralization seen at Namdini is typical of that seen in most structurally controlled gold deposits where the MIK method has been found to be of most benefit. The sample data set containing all available assaying were composited to two metre intervals each located by their mid-point co-ordinates and assigned a length weighted average gold grade. The composite length of two metres was chosen because it is a multiple of the most common sampling interval (1.0 metre) and is also an appropriate choice for the kriging of gold into the model blocks where open pit mining is undertaken on 2.5 metre benches. Gold grade continuity was characterised by indicator variograms at 14 indicator thresholds spanning the global range of grades. The Mineral Resource estimate was completed into blocks with dimensions of 12.5 m (east) by 25 m (north) by 5m (elevation) using the two metre composite sample grades. The gold grade distribution approximates lognormal and a support adjustment using the direct lognormal correction method taken into consideration an additional adjustment for the "Information Effect" has been applied to arrive at the final Mineral Resource.
	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 using Ordinary Kriging ("OK") were compared with the estimate completed by MPR. For the same area covered, the estimated ounces are within 3% at the 0.5 g/t cut-off grade. No production data is available.
	The assumptions made regarding recovery of by-products.	There is no assumption made regarding the recovery of any by-product.
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	No block models for potentially deleterious or other non-grade variables have been built.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block dimensions used were 12.5 mE by 25mN by 5 mRL and chosen due to this dimension approximating the average drill spacing in the modelled Mineral Resource areas and is consistent with the north-northwest mineralized strike. A three-pass octant search strategy was used to define the local neighbourhood data used in the kriging to produce the three modelled Mineral Resource confidence categories. The highest confidence blocks are estimated using search radii of 65 mE by 65 mN by 15mRL and a minimum of 16

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		data coming from a minimum of 4 octants. The second and third pass estimates were estimated using an expanded search of 50% with 8 and 4 minimum data and 4 and 2 minimum octants, respectively. All estimation passes use a maximum of 48 data.
	Any assumptions behind modelling of selective mining units.	The selective mining unit at Namdini is expected to be in the order of 5 mE by 10 mN by 2.5 mRL
	Any assumptions about correlation between variables.	The modelling did not include any specific assumptions about correlation between attributes.
	Description of how the geological interpretation was used to control the resource estimates.	The mineralized domain used for the current study was interpreted by MPR and Cardinal geologists on the basis of two metre down-hole composited gold grades and captures zones of continuous mineralization with composite grades of greater than nominally 0.1 g/t Au. The geological model was used to assign average densities to the various lithological units.
	Discussion of basis for using or not using grade cutting or capping.	Statistical analysis showed the gold population in the mineralized domains to be highly skewed and generally having moderate to high coefficient of variation. A disproportionate amount of metal is located within the upper tails of the gold distributions. Histograms, log probability plots and decile analyses were used to evaluate the proportions of metal at risk and to establish appropriate capping levels. All indicator class grades were determined from class mean grades, with the exception of upper bin, which were derived after exclusion of a few extreme grades by selecting the class median as the average grade of the highest indicator bin.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Standard validation procedures were performed on the block model including: visual inspection of composite versus block grades on plan and vertical sections. Geological elements coded to the block model include the weathering surfaces, geology model for the granite, metavolcanics, diorite and the metasediments. Assessment of swath plots of the estimated block grades and composite mean grades by eastings, northings and elevations. The Mineral Resource estimate was compared with an alternate Ordinary Kriged estimate and the variance was within estimation accuracy. There is no production data currently available to check against the current Mineral Resource estimate.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of	Tonnages are estimated on a dry basis.

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	determination of the moisture content.	
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The cut-off grades used for Mineral Resource reporting reflect Cardinal's interpretation of the potential project range of gold prices, and process plant recoveries and operating costs for a potential operation. The Mineral Resource estimate was reported using a 0.5 g/t Au cut-off grade and is constrained by an optimal pit shell based on a long-term gold price of US$1,500 /oz using factors relevant to location and proposed mining method.
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.	Conventional open pit operation with drill, blast, load and haul unit operations. It is anticipated that large scale open pit mining methods will be applied for the Namdini Project resources. Grade control of ore blocks will be based on sampling from high quality reverse circulation drilling spaced at approximately 10mE by 12mN with samples taken at 1.25 metre intervals downhole.
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.	Conventional milling of mineralized material, followed by flotation, regrinding and cyanide leaching of the concentrate. Utilizing standard gold recovery techniques has demonstrated an overall gold recovery rate of 86%. A conventional grind-flotation-regrind-CIL flowsheet continues to be the preferred process option. Recovery appears to be dependent upon the ratio of the different lithologies, which change as the Mineral Resource model is updated and depending upon the cut-off grade.
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	Cardinal's exploration activities are undertaken such that any potential emissions and effects associated exploration activities, which could include habitat modification and associated visual effects, are kept to a minimum. NEMAS Consult Ltd (NEMAS), of Accra, Ghana, has been contracted by Cardinal to undertake the Environmental Impact Assessment study for the Project.

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	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.	NEMAS has undertaken a site reconnaissance visit and completed the Scoping stage of the process in accordance with the Ghanaian Environmental Protection Agency procedures for the EIA. The scoping study has been submitted to commence the process of Environmental Impact Statement (EIS) in accordance with Regulations 15(1b) and (1c) of the Environmental Assessment Regulations, 1999 (LI 1652) and Ghana's Environmental Impact Assessment (EIA) Procedures, the Environmental Protection Agency (EPA). Cardinal believes that there are unlikely to be any specific environmental issues that would preclude potential eventual economic extraction.
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 substantial body of rock density (SG) measurements for the Namdini deposits were collected. Bulk density is determined using Archimedes principal on DD core samples. Ø Oxide – 2.06 Ø Transition Meta Volcanics – 2.54 Ø Transition Granite – 2.54 Ø Transition Diorite – 2.58 Ø Transition Meta Sediments – 2.58 Ø Fresh Meta Volcanics – 2.81 Ø Fresh Granite – 2.73 Ø Fresh Diorite – 2.82 Ø Fresh Meta Sediments - 2.82 991 samples were submitted to an independent laboratory for check measurements. The results of the independent measurements are consistent with the Cardinal density estimates.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	The density measurements have accounted for void spaces, moisture and differences between weathering profiles and lithology. Weathered samples are wrapped in foil and dried out before being wax coated.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Assigned bulk density values were determined for lithological and weathering domains. Density outliers were removed using Rosner outlier detections applying a 95% confidence interval. A density of 1.8 t/m^3 was assigned to the strongly oxidised horizon since the average measured density appears too high.

Criteria	JORC Code Explanation	Commentary
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The Mineral Resources have been classified into Indicated and Inferred categories following the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves (JORC Code 2012) and the Canadian Institute of Mining, Metallurgy and Petroleum "CIM Definition Standards for Mineral Resources and Mineral Reserves" (CIM, 2014). Mineral Resources were classified on the basis of estimation search passes. A progressively less stringent three pass search strategy produced the three categories of confidence. The highest confident estimate uses a search ellipse of approximately the same dimension of the dominant drill spacing and a significant number of resource composites selected from within an octant constraint. The search radii are expanded and sample criteria relaxed for the second and third categories. The current drill hole spacing does not support Measured Mineral Resources, only Indicated (search pass 1) and Inferred (combined search pass 2 and 3) is reported. The Mineral Resource classification accounts for all relevant factors and reflect the competent persons' view of the deposit.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	There is an acceptable degree of confidence for tonnes above the cut-off grade due to the pervasive gold mineralization exceeding the cut-off grade. The average grade of the deposit above the cut-off grade is sensitive to the treatment and volumes applied to high grades. The majority of the Mineral Resources require additional drilling to facilitate conversion to Measured category and the current classification designation support this.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resulting classification reflects the Competent Persons view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Mineral Resource estimation process has been reviewed by independent external consultants and found to be of industry standard.
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	The relative accuracy of the Mineral Resource is reflected in the reporting of Indicated and Inferred. For the assessment of reasonable prospects of economic extraction, mineral resources have been assessed using pit optimisation based on a gold price of US$1,500/oz, and the following key input parameters: mill-flotation-concentrate regrind-CIL process route with metallurgical recovery of 90% for oxidized mineralization, 86% for transitional mineralization, 86% for fresh mineralization; assuming a

Criteria	JORC Code Explanation	Commentary
	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.	bulk mining, low to moderate mining selectivity open pit operation with operating costs appropriate for Ghana, dependent on key parameters, such as gold price, annual throughput, process plant recoveries and operating costs.
	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 Mineral Resource has been classified as Indicated and Inferred with the Indicated category considered to be of a sufficient local confidence to allow for mine planning studies to be completed. Additional drilling will be undertaken to improve on the Mineral Resource classification to Measured.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The precision of the estimation is globally acceptable with the assumption that at a mining level more detailed grade control drilling will be undertaken. The geostatistical techniques applied to estimate the Namdini deposit are deemed appropriate for the anticipated bulk mining method proposed.