

PRESS RELEASE

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ASX/TSX: CDV

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## CARDINAL GRADE CONTROL DRILL RESULTS RETURNED

Cardinal Resources Limited (ASX/TSX: CDV) (“Cardinal” or “the Company”) reports the completion of a close spaced drilling programme in a targeted starter pit area for its flagship Namdini project. This work constitutes an important phase for the Company’s forthcoming PEA, as it supports the grades and tonnages the Company expects for the proposed starter pit area.

### HIGHLIGHTS

- Excellent gold grades were returned in the upper benches of the targeted starter pit area
- Correlation of grades, ounces and tonnes between the Mineral Resource Model (September 2017) and the trial grade control model, has been completed with a very accurate reconciliation (Table 1 and Figure 3)

Selected drill hole intersection results are as follows:

- 42m @ 5.6 g/t Au *NMRC486*
- 42m @ 4.85 g/t Au *NMRC335*
- 42m @ 4.8 g/t Au *NMRC433*
- 42m @ 4.5 g/t Au *NMRC193*
- 42m @ 3.9 g/t Au *NMRC314*
- 42m @ 3.7 g/t Au *NMRC383*
- 42m @ 3.4 g/t Au *NMRC361*
- 42m @ 3.0 g/t Au *NMRC320*

The selected intersections reported above are for the entire length of each drill hole (0 to 42m), at >0.5 g/t Au cut off with no more than 3m of consecutive internal dilution at <0.5 g/t Au.

**Cardinal’s Chief Executive Officer / Managing Director, Archie Koimtsidis said:**

“The close spaced drill testing in this initial study area where Namdini gold mineralisation is exposed at surface, is located within our targeted starter pit area (Figure 1).

“Today’s results are consistent with the grades, ounces and tonnes of the Resource Model (Table 1 and Figure 3). While this confirms the modelling methods and estimation techniques applied in the Mineral Resource Model estimation, these results are also a key element underpinning the production of a robust engineering study which will provide more informed views of the “ramp up” phase for the expected production scenario which will also be integrated into our Preliminary Economic Assessment expected to be completed in Q1 2018.

“An added benefit of this study is that these results will assist Cardinal with financing options for the Namdini Project”.

Detailed results of the drill programme are included below and in the attached schedules.

**STUDY RESULTS**

Cardinal completed a 13,271m Reverse Circulation drilling programme at the northern end of the Namdini deposit for the purposes of a test grade control study which comprised 317 RC drill holes at a grid pattern of 10m (E) by 15m (N) and covering an area of 350m (E) by 200m (N) to approximately 40m vertical. They were drilled at -65° to the east in the Namdini local drilling grid, consistent with drilling undertaken for the resource models.

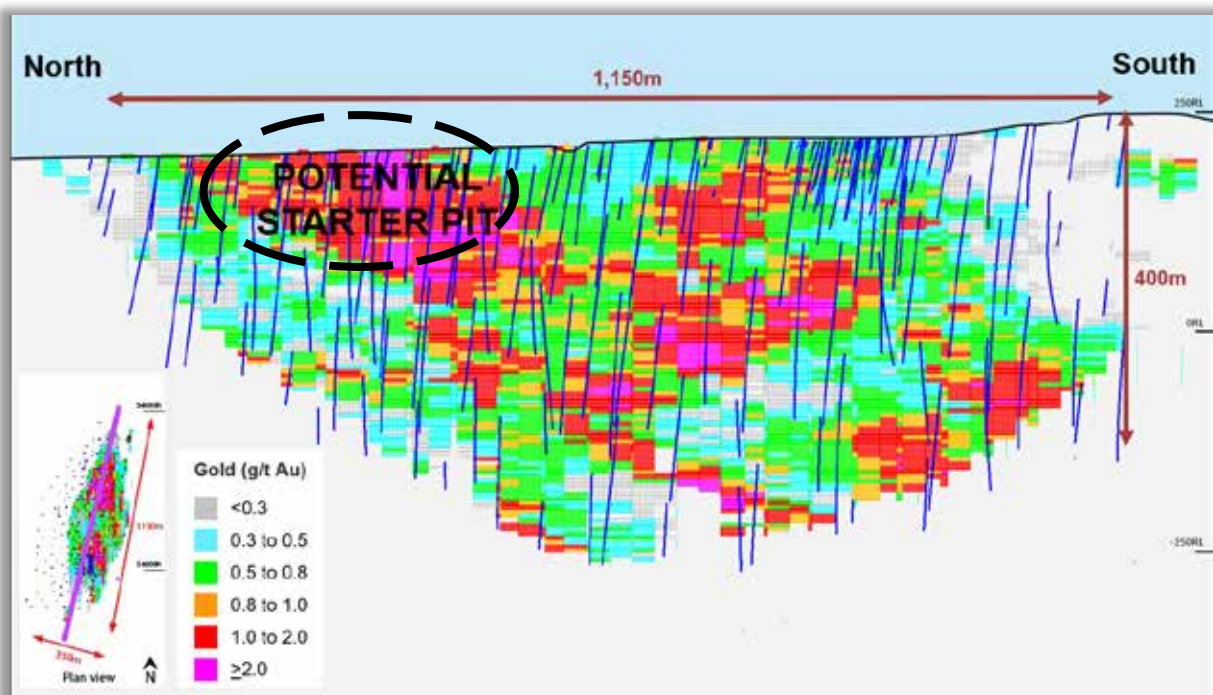
Grade control drilling targeted the near surface portion of the modelled mineralisation, as defined by the broad spaced resource definition drilling and subsequent Mineral Resource Model. The programme was designed to define the grade distribution of gold mineralisation at and near surface within the targeted starter pit area (Figures 1 and 2).

A test block model was constructed for the study area utilising Conditional Simulation technique. Figure 3 shows the grade control drilling relative to the Mineral Resource Model and Figure 4 shows the grade control model blocks for a typical level. A comparison between the Mineral Resource Model (Announced in September 2017) and the constructed grade control model is tabulated in Table 1.

Resource Model (September 2017)				Grade Control Model			Delta
Cut off (g/t Au)	Tonnes (Mt)	Grade (g/t Au)	Metal (Koz Au)	Tonnes (Mt)	Grade (g/t Au)	Metal (Koz Au)	Metal (Koz Au)
0.3	4.05	1.4	183	4.04	1.4	183	0
0.5	3.44	1.6	176	3.43	1.6	175	1
0.7	3.00	1.7	168	2.89	1.8	165	3

**Table 1: Comparison between Mineral Resource Model and Grade Control Model**

This test area represents approximately 4% of the Indicated Resource ounces and the close spaced drill pattern demonstrates consistent mineralised zones at surface in this area. The results provide another layer of confidence that the spatial distribution and tenor of gold in this test area is in line with Namdini Mineral Resource expectations.



**Figure 1: Long Section showing targeted starter pit area**

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Figure 2: Plan View of Namdini deposit showing drill hole locations and interpreted geology

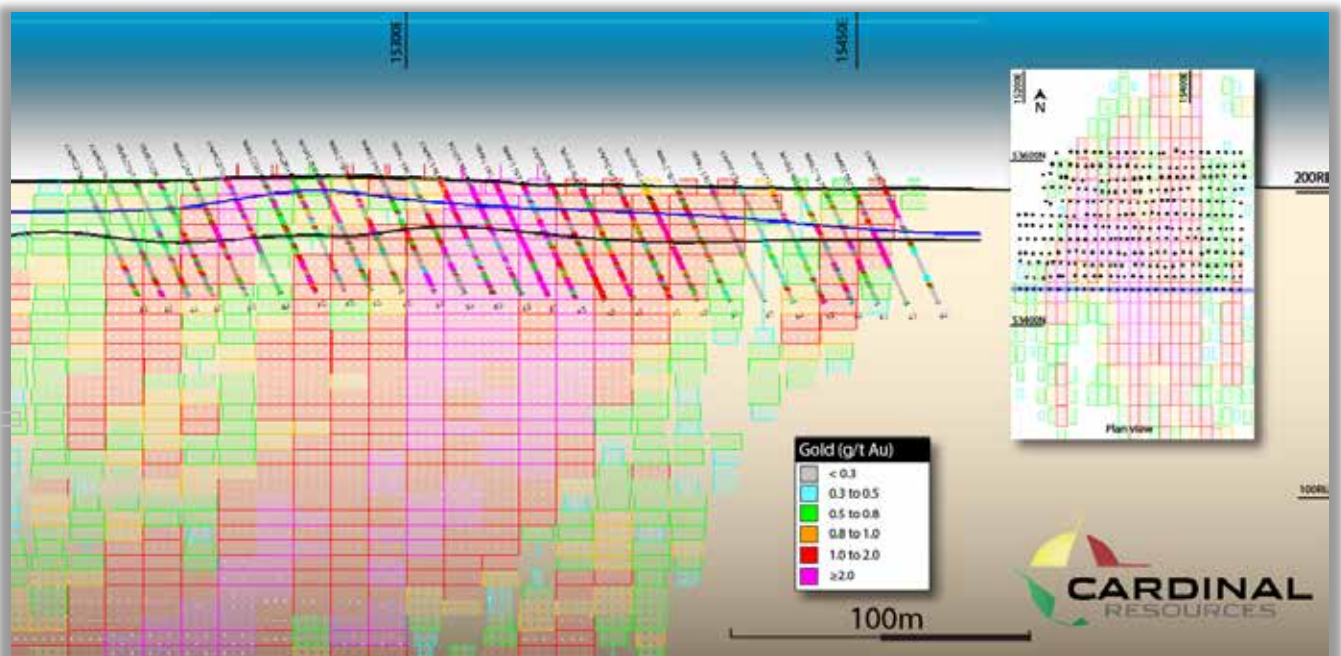


Figure 3: Cross Section showing down hole mineralised intersections of grade control holes (Blue line – Base of Oxide. Black line – Base of Transitional rock units)

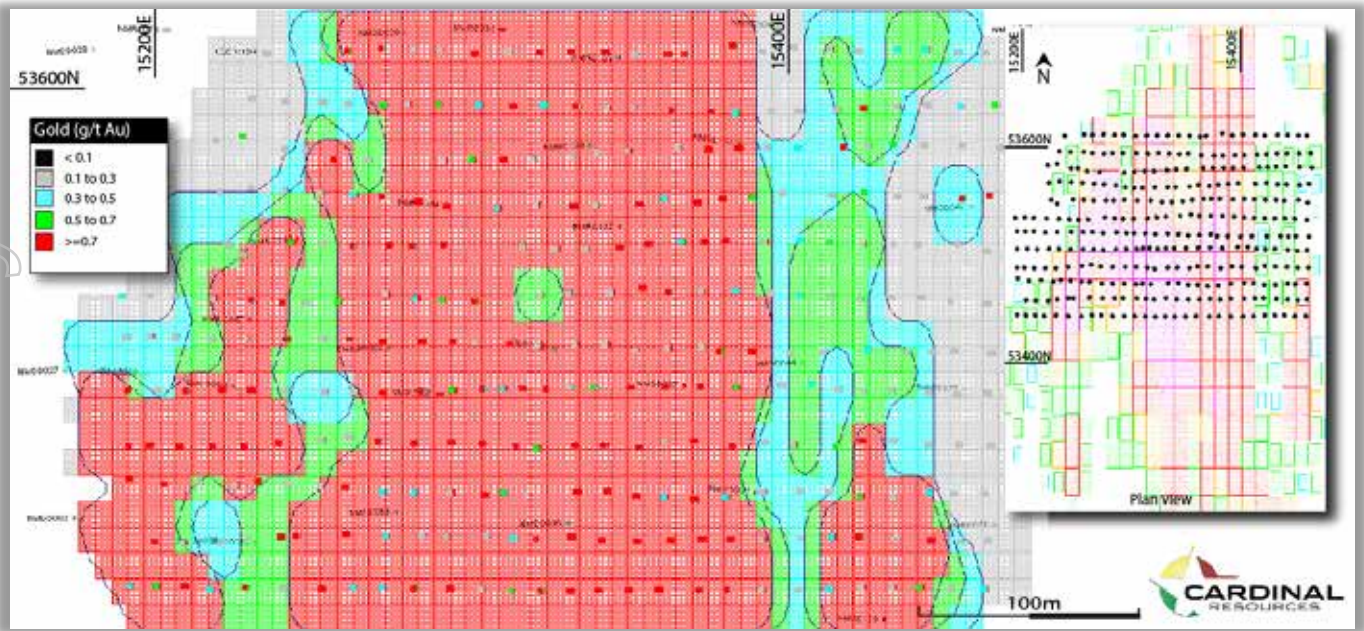


Figure 4: Plan view of Grade Control Model showing 3 typical mining cut-offs and dig lines generated for those cut-offs

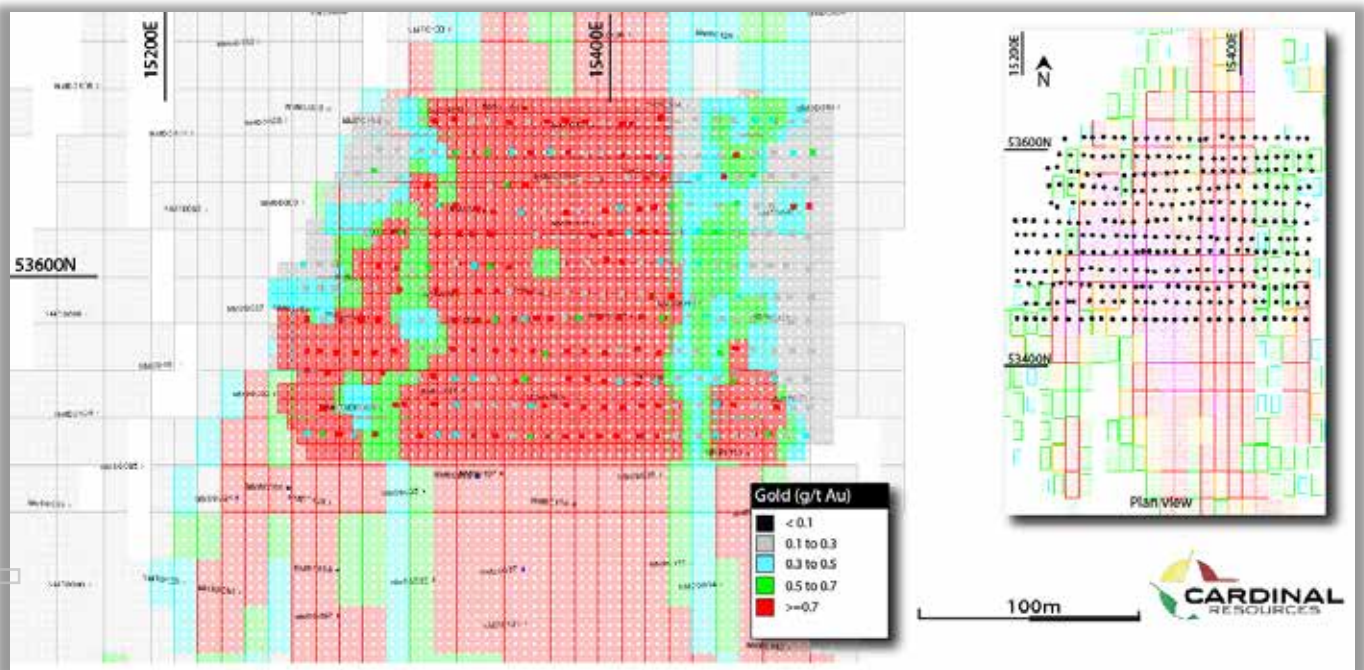


Figure 5: Plan view of the Grade Control Model on the Resource Model

Please refer to [www.sedar.com](http://www.sedar.com) for Cardinal's prospectus and NI43-101 reports.

Meta Data for the significant intercepts are tabulated below in Tables 2 and 3 in Schedule 1.

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## 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's Namdini Project has a declared Indicated Mineral Resource of 120 Mt @ 1.1 g/t for **4.3 Moz Au** and an Inferred Mineral Resource of 84 Mt @ 1.2 g/t for **3.1 Moz** (refer to Cardinal "Technical Report on Namdini" dated 11 September 2017). The Company is focused on the development of the Namdini Project through a resource expansion drilling programme and continues to advance the PEA / Scoping Study which is now due for release in Q1 2018. In parallel, a pre-feasibility study is progressing and is supported by additional multi-disciplinary engineering activities. Exploration activity is also underway on its large portfolio of regional exploration Licenses.

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This report contains information extracted from the following reports which are available for viewing on the Company's website [www.cardinalresources.com.au](http://www.cardinalresources.com.au) and on [www.sedar.com](http://www.sedar.com)

- o 18 Sep 2017 Cardinal's Namdini Deposit Mineral Resource Update
- o 19 Oct 2017 Technical report (NI43-101) - English

The Company confirms it is not aware of any new information or data that materially affects the information extracted from the above reports and included in this report relating to exploration activities and all material assumptions and technical parameters underpinning the exploration activities in those market announcements continue to apply and have not been changed. The Company confirms that the form and context in which the Competent Person's findings presented have not been materially modified from the original market reports listed above.

### Competent Person's / Qualified Person's Statement

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 mineralisation 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.

**SCHEDULE 1  
DRILL RESULTS**

The listed intercepts within the tables in Schedule 1, have a detailed explanation within the notes, to describe how the intercepts were calculated, using 0.5 g/t cut-off, which approximates the cut-off of Reasonable Prospects of Eventual Economic Extraction ("RPEEE") as per The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code") 2012 and Canadian Institute of Mining ("CIM") 2010 guidelines and internal dilution of no more than 3m at <0.5g/t Au.

Hole ID	Depth (m)	Dip	Azimuth	Grid_ID	mEast	mNorth	mRL
NMRC163	42	--65.0°	98.0°	WGS84_30N	757716.029	1177172.721	201.773
NMRC165	42	--65.0°	98.0°	WGS84_30N	757705.838	1177174.084	201.265
NMRC167	42	--65.0°	98.0°	WGS84_30N	757696.276	1177175.785	201.415
NMRC169	42	--65.0°	98.0°	WGS84_30N	757687.895	1177177.02	201.532
NMRC171	42	--65.0°	98.0°	WGS84_30N	757678.546	1177178.117	201.643
NMRC174	42	--65.0°	98.0°	WGS84_30N	757668.362	1177179.112	201.818
NMRC176	42	--65.0°	98.0°	WGS84_30N	757658.638	1177180.263	202.158
NMRC180	42	--65.0°	98.0°	WGS84_30N	757647.276	1177181.818	202.239
NMRC181	42	--65.0°	98.0°	WGS84_30N	757636.821	1177183.423	202.549
NMRC182	42	--65.0°	98.0°	WGS84_30N	757627.899	1177184.582	202.745
NMRC184	42	--65.0°	98.0°	WGS84_30N	757615.596	1177186.631	202.684
NMRC185	42	--65.0°	98.0°	WGS84_30N	757606.226	1177187.671	202.744
NMRC187	42	--65.0°	98.0°	WGS84_30N	757596.522	1177188.808	203.369
NMRC193	42	--65.0°	98.0°	WGS84_30N	757587.389	1177189.878	204.109
NMRC194	42	--65.0°	98.0°	WGS84_30N	757578.607	1177191.094	204.536
NMRC195	42	--65.0°	98.0°	WGS84_30N	757569.256	1177192.545	204.85
NMRC196	42	--65.0°	98.0°	WGS84_30N	757559.886	1177194.389	205.06
NMRC197	42	--65.0°	98.0°	WGS84_30N	757550.077	1177195.899	205.397
NMRC198	42	--65.0°	98.0°	WGS84_30N	757539.365	1177197.587	205.46
NMRC200	42	--65.0°	98.0°	WGS84_30N	757529.399	1177199.081	205.603
NMRC201	42	--65.0°	98.0°	WGS84_30N	757520.534	1177200.406	205.692
NMRC202	42	--65.0°	98.0°	WGS84_30N	757510.965	1177201.565	205.333
NMRC203	42	--65.0°	98.0°	WGS84_30N	757499.318	1177203.046	204.847
NMRC205	42	--65.0°	98.0°	WGS84_30N	757488.062	1177204.973	204.339
NMRC206	42	--65.0°	98.0°	WGS84_30N	757476.977	1177206.098	204.09
NMRC207	42	--65.0°	98.0°	WGS84_30N	757469.192	1177207.812	204.009
NMRC208	42	--65.0°	98.0°	WGS84_30N	757460.645	1177209.181	203.958
NMRC209	42	--65.0°	98.0°	WGS84_30N	757452.544	1177210.59	203.973
NMRC314	42.0	--65.0°	98.0°	WGS84_30N	757599.927	1177204.271	203.017
NMRC320	42.0	--65.0°	98.0°	WGS84_30N	757632.806	1177230.537	202.664
NMRC335	42.0	--65.0°	98.0°	WGS84_30N	757535.056	1177244.192	203.978
NMRC361	42.0	--65.0°	98.0°	WGS84_30N	757604.451	1177251.275	202.777
NMRC383	42.0	--65.0°	98.0°	WGS84_30N	757541.343	1177274.615	202.351
NMRC433	42.0	--65.0°	98.0°	WGS84_30N	757652.633	1177274.770	201.241
NMRC486	42.0	--65.0°	98.0°	WGS84_30N	757584.03	1177235.04	203.54

Table 2: Meta-Data listing drill holes

Hole_ID	mFrom	mTo	mLength	Au_ppm
NMRC163	0	22	22	4.9
NMRC163	34	37	3	0.9
NMRC165	0	29	29	3.2
NMRC167	0	7	7	0.9
NMRC167	18	22	4	5.5
NMRC167	26	36	10	2.9
NMRC169	0	3	3	1.0
NMRC169	8	17	9	1.3
NMRC169	27	41	14	1.7
NMRC171	0	12	12	0.9
NMRC171	28	42	14	1.4
NMRC174	21	29	8	0.5
NMRC176	0	4	4	2.2
NMRC180	0	36	36	0.9
NMRC181	0	4	4	0.9
NMRC181	5	39	34	2.3
NMRC182	0	20	20	3.2
NMRC182	24	42	18	1.3
NMRC184	1	42	41	2.4
NMRC185	0	42	42	1.5
NMRC187	0	42	42	2.5
NMRC193	0	42	42	4.5
NMRC194	0	20	20	4.4
NMRC194	25	42	17	1.1
NMRC195	0	42	42	2.9
NMRC196	13	41	28	1.4
NMRC197	6	27	21	1.0
NMRC197	35	42	7	2.2
NMRC198	6	11	5	1.2
NMRC198	15	27	12	1.3
NMRC198	35	38	3	0.9
NMRC200	0	17	17	10.4
NMRC200	24	27	3	0.6
NMRC200	34	40	6	0.6
NMRC201	0	19	19	1.5
NMRC201	32	35	3	1.0
NMRC202	0	42	42	2.7
NMRC203	0	27	27	5.2
NMRC203	39	42	3	0.5
NMRC205	0	4	4	1.4
NMRC205	8	29	21	3.1
NMRC205	35	40	5	0.9
NMRC206	0	3	3	14.1
NMRC206	9	35	26	0.9

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Hole_ID	mFrom	mTo	mLength	Au_ppm
NMRC207	0	3	3	2.4
NMRC207	18	24	6	3.0
NMRC207	28	39	11	1.3
NMRC208	25	29	4	4.0
NMRC208	35	42	7	1.2
NMRC209	30	33	3	3.6
NMRC209	37	42	5	0.7
NMRC486	0	42	42	5.565
NMRC335	0	42	42	4.854
NMRC433	0	42	42	4.805
NMRC193	0	42	42	4.5
NMRC314	0	42	42	3.9
NMRC383	0	42	42	3.714
NMRC361	0	42	42	3.398
NMRC320	0	42	42	3.0

**Table 3: Summary of individual intercepts.**

**Notes:**

- Cut-off grade for reporting of each individual intercept is  $\geq 0.5$  g/t Au with a maximum of 3m consecutive internal dilution included within the intercept; only intercepts  $\geq 3$ m are reported.
- Intervals are Reverse Circulation drill cuttings which are sampled every 1m
- Samples are analyzed for Au (SGS Lab FAA505 method) which is a 50g fire assay fusion with AAS instrument finish.
- Grid coordinates are in WWGS84 Zone 30 North.

## 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. HQ core and RC sampling quality is ensured through inserting CRM standards and blanks every 22 samples.
	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. Sample representivity is ensured for: RC samples by collecting 1m samples from a cyclone, passing them through a 3-tier riffle splitter, and taking duplicate samplers every 22nd sample. HQ core through sampling the various lithological units at 1m intervals. 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 quarter core was sampled at 1m intervals throughout the drill hole. Recent HQ core sampling has been conducted by half core.
	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 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 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	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.

Criteria	JORC Code Explanation	Commentary
	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.).	Reverse circulation drilling uses sampling hammer of nominal 127 to 140mm holes. 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. 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. The majority 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 due to preferential loss/gain of any fine/coarse material due to the acceptable sample recoveries obtained by both drilling methods employed.

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Criteria	JORC Code Explanation	Commentary
<b>Logging</b>	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 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.
<b>Sub-sampling techniques and sample preparation</b>	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 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 75µm and approximately 200g sub-sample of the pulverised material is used for assay. Chip samples are sorted and dried in an oven for 8 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.	1:50 sample is screened to confirm percentage passing 2mm (crushed) and 75µm (pulverised). 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-	Sampling is carried out in accordance with Cardinal protocols as per industry best practice. Quality control

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Criteria	JORC Code Explanation	Commentary
	situ material collected, including for instance results for field duplicate/second-half sampling.	procedures adopted for all sub-sampling stages to maximize representivity of samples is to insert commercial certified reference material (CRM) for standards and in-house blanks every 22 samples. SGS Laboratory assays duplicate samples of each sample batch (20%) so that representivity 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 22nd sample. Approximately 3kg samples from the splitter are retained from each sample and stored on the company's 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 plotted graphically to ensure that the results of each assay batch are acceptable.
<b>Quality of Assay data and laboratory tests</b>	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 Au 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 determined by flame AAS. The quality of the Fire Assaying and laboratory procedures are considered to be entirely appropriate for this deposit type. The analytical method is considered appropriate for this mineralisation style and of industry standards.
	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 levels of accuracy (i.e. lack of bias) and precision have been established.	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. Laboratory QAQC involves the use of internal lab standards using certified reference material and blanks. Cardinal's QAQC protocol is considered industry standard with standard reference material (SRM) submitted on a regular basis with routine samples. The

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Criteria	JORC Code Explanation	Commentary
		SRMs having a range of values and blanks are inserted in the ratio of 1:22. Duplicates are taken at the riffle splitter at a ratio of 1:20 samples. 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.
<b>Verification of sampling and assaying</b>	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.
<b>Location of data points</b>	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 $\pm 3\text{m}$ accuracy. All drill collars are accurately surveyed using Trimble R8 RTK GPS system within $\pm 10\text{mm}$ 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.
	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%.
<b>Data spacing and distribution</b>	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 mineralisation continuity, grade control testing 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 Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	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.
<b>Orientation of data in relation</b>	Whether sample compositing has been applied.	No sample compositing has been applied.

Criteria	JORC Code Explanation	Commentary
<b>to geological structure</b>	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 mineralisation 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.
<b>Sample security</b>	The measures taken to ensure sample security.	<p>An independent Ghanaian security contractor is used to ensure sample security.</p> <p>The drilling contractor is accountable for drill core and RC chips production at the drill site. Final delivery from the drill site to the laydown 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.</p> <p>At the time of sample collection, a sign-off process between Cardinal and the SGS delivery truck driver ensures the samples and paper work corresponds. 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.</p> <p>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.</p>
<b>Audits or reviews</b>	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
<b>Mineral Tenement and Land Status</b>	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.	<p>The Mining Licence covering Cardinal's Namdini Project over an area of approximately 19.54 sq. Km is located in the North-East region of Ghana.</p> <p>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.</p> <p>Cardinal and Savannah have both signed the necessary documents to assign the Namdini Mining Licence to Cardinal Namdini Mining Limited (Cardinal Namdini), a wholly owned subsidiary of Cardinal Resources, for US\$1.00 as per the Savannah agreement. After the completion of the upcoming Preliminary Economic Assessment, Cardinal Namdini will submit to the Minerals Commission an updated EIS and an application for an Operating Permit, bringing all permitting for the Namdini Project on track for development.</p>
	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.
<b>Exploration Done by Other Parties</b>	Acknowledgment and appraisal of exploration by other parties.	Aside from Cardinal there has been no recent systematic exploration undertaken on the Namdini Project.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation	<p>The deposit type comprises gold mineralisation within sheared and highly altered rocks containing sulphides; mainly pyrite with minor arsenopyrite.</p> <p>The geological setting is a Paleoproterozoic Greenstone Belt comprising Birimian metavolcanics, volcanoclastics and metasediments located in close proximity to a major 30 km -N-S regional shear zone with splays.</p> <p>The style of mineralisation is hydrothermal alteration containing disseminated gold-bearing sulphides.</p>
<b>Drill hole information</b>	<p>A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes:</p> <ul style="list-style-type: none"> <li>• Easting and northing of the drill hole collar</li> <li>• Elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar</li> </ul>	A summary of drill hole information is provided in this document.



Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul>	
	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.
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No weighting averaging techniques nor cutting of high grades have yet been undertaken.
	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.	Aggregated intercepts incorporating short lengths of high grade results within the lithological units are calculated to include no more than intervals of 3m below grades of <0.5 g/t Au when assay results are reported. No top cut of individual assays prior to length weighted intersection calculation of the reported intercept has been applied.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are used in the intersection calculation.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the reporting of exploration results.	The relationship between mineralisation widths and intercept length is not yet known.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The geometry of the mineralisation with respect to the drill hole angle is not yet known.
	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').	The geometry of the mineralisation is unknown; only downhole length is reported (no true width of mineralisation is reported).
<b>Diagrams</b>	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 plane view of drill hole collar locations and appropriate sectional views.	Appropriate maps and cross-sections with scale are included within the body of the accompanying document.

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<b>Balanced Reporting</b>	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.
<b>Other substantive exploration data</b>	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; 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.	Other exploration data collected is not considered material to this document at this stage. The interpretation of the geological observations shown in the cross and long sections are subject to possible change as new information is gathered.  Further data collection will be reviewed and reported when considered material.
<b>Further Work</b>	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 mineralisation and infill drilling to increase the confidence in the Mineral Resource.

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## 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.	<p>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.</p> <p>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.</p> <p>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 grade control model estimation.</p>
	Data validation procedures used.	<p>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.</p> <p>Basic validation checks were carried out to confirm the data is valid and acceptable to support resource estimation work.</p>
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Richard Bray and Ekow Taylor have both visited site on numerous occasions and deemed data collection is of industry standard.
	If no site visits have been undertaken indicate why this is the case.	Site visits have been undertaken by the Competent Persons.

Criteria	JORC Code Explanation	Commentary
<b>Geological interpretation</b>	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	<p>Gold mineralisation 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 mineralisation boundary with the meta-sediments in the footwall while the hanging wall contact exhibits a more diffuse mineralisation boundary. Higher grade mineralisation (&gt;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.</p> <p>Based on these observations, and geological interpretations, a broad (0.1gt Au) low grade mineralisation package was developed. The mineralisation constraint was traceable at low grades for overall 1300m and is up to 300m wide. The mineralisation dips approximately 55° to 60° towards the west.</p>
	Nature of the data used and of any assumptions made.	<p>The drill hole database used for the grade control trial test and estimation consists of RC samples. Numerous validation steps have been taken by Cardinal Competent persons. Cardinal is of the opinion that the drill hole database is of sufficient quality to support a grade control estimate.</p> <p>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 was applied to the mineralisation model.</p> <p>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.</p>
	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 in the company's opinion at this point.
	The use of geology in guiding and controlling Mineral Resource estimation.	<p>The grade control trial estimate uses, lithological and structural information collected to guide the interpretation.</p> <p>The mineralisation geometry has a strong relationship with the interpreted alteration and structure. The lithology contacts and the weathering changes do not appear to materially control the mineralisation although the metavolcanics and the tonalite (granite) mineralisation is on average higher grade than the</p>

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		<p>diorite and metasediment mineralisation. Little grade variation is noted between the different weathering groupings.</p> <p>The grade control estimate is based on all gold grades and the mineralisation package defined by the close spaced RC drilling.</p>
	The factors affecting continuity both of grade and geology.	<p>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.</p> <p>A broad zone of anomalous mineralisation 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.</p> <p>Geological setting and mineralisation controls have been established with sufficient confidence for the current estimates.</p>
<b>Dimensions</b>	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.	<p>The mineralisation 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.</p> <p>Mineralisation generally dips at 55° towards the NW with local changes in dip corresponding to lithological contacts and foliation directions.</p> <p>The grade control trial test only covers an area of 350m (E) by 200m (N) in the northern part of the deposit where the mineralisation is at surface.</p>
<b>Estimation and modelling techniques</b>	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.	<p>The trial grade control model estimated gold resources into blocks with dimensions of 5 m (east) by 8 m (north) by 2.5m (elevation). Conditional Simulation techniques were applied where variography and univariate statistics based on the sample grades are utilised. The method generates a number of detailed simulations that honours all of the known sampling information, is consistent with geological interpretation and univariate and spatial statistics. Gold grade continuity was characterised by variograms spanning the global range of grades. Conditional simulation was used as the preferred method for estimation of gold resources for the trial grade control model at Namdini, as the approach has been demonstrated to work well in a large number of deposits. The grade control system uses geostatistical methods to determine optimal mining ore outlines at various cut-off grades. The gold mineralisation seen at Namdini is typical of that seen in most structurally controlled gold deposits where the Conditional Simulation method has been found to be of most benefit.</p>

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		<p>In the trial grade control study, data viewing, compositing and wire-framing have been performed using Micromine software. Exploratory data analysis, variogram calculation and modelling, have been performed using FSSI Consultants (Australia) Pty Ltd (FSSI) MP© software. MP is designed specifically for optimising estimation of grade control estimates using Conditional Simulation.</p> <p>The sample data set contained all available assaying intervals, each located by their mid-point co-ordinates. A search radius of 15 mE by 22 mN by 4 mRL and a minimum of 16 data points coming from a minimum of 4 octants. A maximum of 32 data points is applied.</p>
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Resulting estimates were compared with the previous Mineral Resource estimate performed by MPR (Sept 2017). For the same area covered, the trial grade control model estimates resulted within 1% for grade, tonnes and ounces at the 0.5 g/t cut-off grade.
	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 5 mE by 8mN by 2.5 mRL and chosen due to this dimension approximating the variance adjustment SMU applied to the MIK Resource Model. The block spacing is also consistent with the north-northwest mineralized strike. 100 simulations are run and the average of those resultant simulations is chosen as the value assigned to the grade control model cells.
	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 8 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 weathering profiles of Oxide, Transition and Fresh were applied to the grade control estimate in the same way as the Resource Model.
	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

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		evaluate the proportions of metal at risk and to establish appropriate capping levels.
	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 grade control block model including: visual inspection of downhole grades 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.
<b>Moisture</b>	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.
<b>Cut-off parameters</b>	The basis of the adopted cut-off grade(s) or quality parameters applied.	The cut-off grades used for grade comparison 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 comparisons were reported using a 0.3, 0.5 and 0.7 g/t Au cut-off grade.
<b>Mining factors or assumptions</b>	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, with grade control RC drilling and sampling playing a key role in mining selectivity. Grade control of ore blocking will be based on sampling from high quality reverse circulation drilling spaced at approximately 10mE by 15mN with samples taken at 1.0 metre intervals down-hole.
<b>Metallurgical factors or assumptions</b>	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	Conventional milling of mineralized material, followed by flotation, regrind 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 resource model is updated and depending upon the cut-off grade.

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	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.	
<b>Environmental factors or assumptions</b>	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.	<p>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.</p> <p>NEMAS Consult Ltd (NEMAS), of Accra, Ghana, has been contracted by Cardinal to undertake the Environmental Impact Assessment study for the Project. 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).</p> <p>Cardinal believes that there are unlikely to be any specific environmental issues that would preclude potential eventual economic extraction.</p>
<b>Bulk density</b>	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.	<p>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.</p> <ul style="list-style-type: none"> <li>Ø Oxide – 2.06</li> <li>Ø Transition Meta Volcanics – 2.54</li> <li>Ø Transition Granite – 2.54</li> <li>Ø Transition Diorite – 2.58</li> <li>Ø Transition Meta Sediments – 2.58</li> <li>Ø Fresh Meta Volcanics – 2.81</li> <li>Ø Fresh Granite – 2.73</li> <li>Ø Fresh Diorite – 2.82</li> <li>Ø Fresh Meta Sediments - 2.82</li> </ul>
	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.	Weathered samples are wrapped in foil and dried out before being wax coated.



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	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 <sup>3</sup> was assigned to the strongly oxidised horizon since the average measured density appears too high.
<b>Classification</b>	The basis for the classification of the Mineral Resources into varying confidence categories.	Resources estimates from the trial grade control area are not classified into resource categories. The estimates from the grade control trial are compared with all the material categories within the Resource Model. The Resource Model is classified as Indicated Resource in this test area.
	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 a relatively low risk for tonnes above the cut-off grade due to the pervasive gold mineralisation 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.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The resulting classification reflects the Competent Person's view of the deposit and the trial GC model.
<b>Audits reviews</b> or	The results of any audits or reviews of Mineral Resource estimates.	Mineral Resource estimates have been previously undertaken by independent external consultants. However, this grade control study has been conducted internally.
<b>Discussion of relative accuracy/ confidence</b>	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	The comparisons of the trial grade control model with the trial grade control model show good correlation.  The results indicate that the gold tenor in this test area is both quantitatively and qualitatively in line with the Namdini Mineral Resource expectations.  The methods applied for this trial grade control study are deemed appropriate and give confidence in the accuracy of the estimations of the Namdini Mineral 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	No new Mineral Resources have been classified with the trail grade control model, nor in the text of this announcement. The relative accuracy of the Mineral Resource is reflected in the reporting of the

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	evaluation. Documentation should include assumptions made and the procedures used.	comparisons with the trial grade control model over the same area. The estimations' relative accuracy is based on data quality, data quantity, geological confidence and the estimation accuracy.
	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 within this trial grade control area are deemed appropriate for the anticipated bulk mining method proposed.

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