

PRESS RELEASE

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ASX/TSX: CDV

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## NAMDINI DRILLING AND REGIONAL EXPLORATION UPDATE

Cardinal Resources Limited (ASX/TSX: CDV) (“Cardinal” or “the Company”) reports assay results from its continued infill drilling programme of the Namdini Gold Project and an update for its Exploration Licenses in Ghana.

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

“Our confidence in the Namdini gold resource is increasing with the return of our initial results from the 9,000m infill drilling programme which began following the release of our September 2017 Mineral Resource update.

“It is anticipated that when complete results from this current infill programme will lead to an upgrade in the current Mineral Resource in both size and category during Q1 2018. In conjunction with this infill programme, we have completed our initial potential “starter pit” study with strong correlation to the current Mineral Resource Model (see release dated 11<sup>th</sup> December 2017), hydrogeological drilling, pit geotechnical drilling and we are also continuing to advance the Preliminary Economic Assessment which is expected to be completed in Q1 2018.

“Furthermore, we have started mobilising drill rigs which will begin testing our regional Exploration Licenses. These licenses are approximately 900 km<sup>2</sup> in size and are strategically positioned on what Cardinal believes to be regional scale mineralized structural trends.”

### HIGHLIGHTS FROM NAMDINI 9,000m INFILL DRILLING RETURNED TO DATE

- 7m at 5.1 g/t Au from 206m - NMRC177
- 13m at 4.9 g/t Au from surface - NMDD125
- 9m at 4.1g/t from 414m - NMDD110
- 10m at 2.9g/t from 379m - NMDD110
- 10m at 2.7g/t Au from 429m - NMDD107
- 26m at 2.6 g/t Au from 111m - NMDD127
- 38m at 2.1 g/t Au from 291m - NMDD107
- 20m at 1.9g/t Au from 459m - NMDD107
- 10m at 1.5g/t from 228m - NMDD110
- 13m at 1.3 g/t Au from 370m - NMDD108
- 26m at 1.2 g/t Au from 180m - NMDD108

Individual gold intersections are >0.5 g/t Au with no more than 3m of consecutive internal dilution at <0.5 g/t Au. Detailed results of the drill programme are included below and in the attached schedules.

## DISCUSSION OF RESULTS

Infill drilling results have been returned from the comprehensive campaign to continue to add definition to the Namdini Mineral Resource. As infill drill results are returned, they continue to support strong mineralized zones. Further results are pending which will form the basis for a Mineral Resource upgrade expected in Q1 2018.

Figure 1 illustrates a plan view of the collar locations of drill holes and a typical interpretive section of the mineralization is displayed in Figure 2. Meta Data for significant intercepts are tabulated in Table 1, Schedule 1. Details of all significant intercepts are provided in Table 2, Schedule 1.

The listed intercepts within Table 2, Schedule 1 have a detailed explanation within the notes to describe how the mineralized intercepts were calculated. Significant mineralized intercepts are based upon using a 0.5 g/t Au cut-off, approximating the cut-off to be used for 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 the Canadian Institute of Mining ("CIM 2010") guidelines with no more than 3m of internal dilution at <0.5g/t Au.

Please refer to [www.sedar.com](http://www.sedar.com) for Cardinal's current technical report.

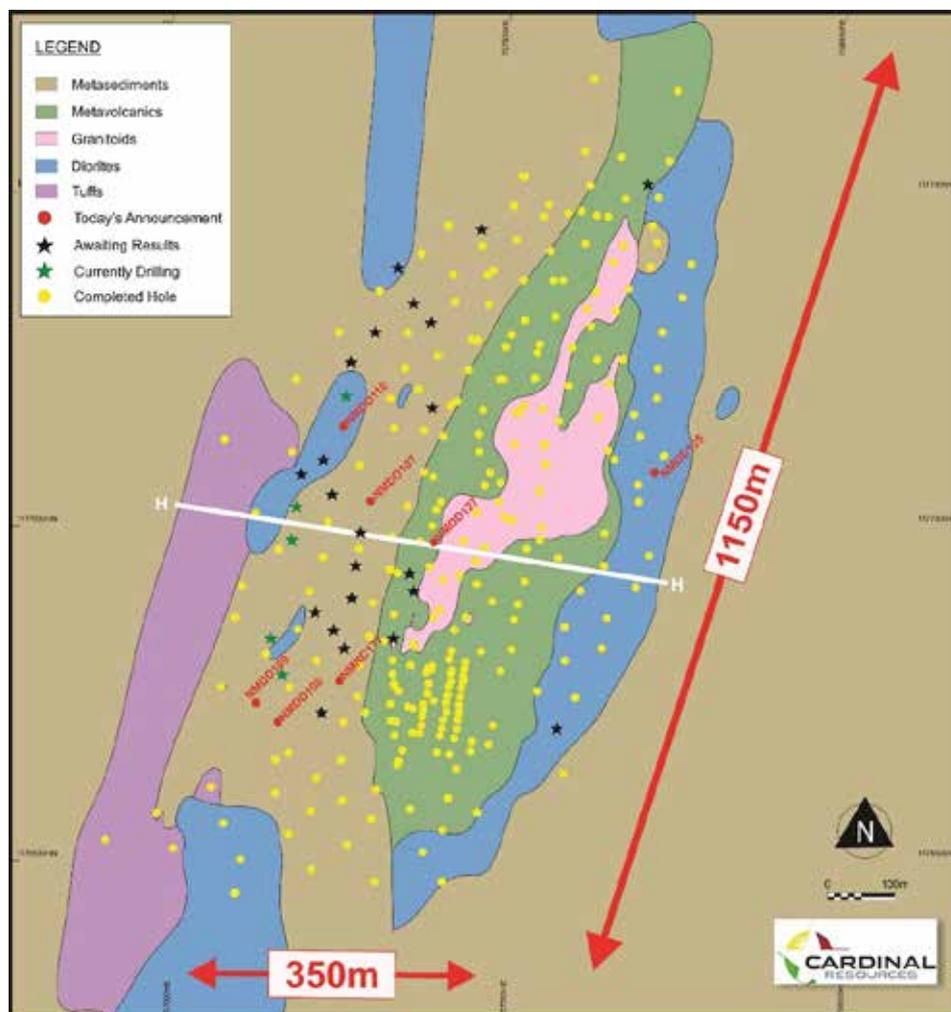


Figure 1: Plan View of Namdini deposit showing drill hole locations for the 9,000m infill programme and location of a typical section (H) shown in Figure 2

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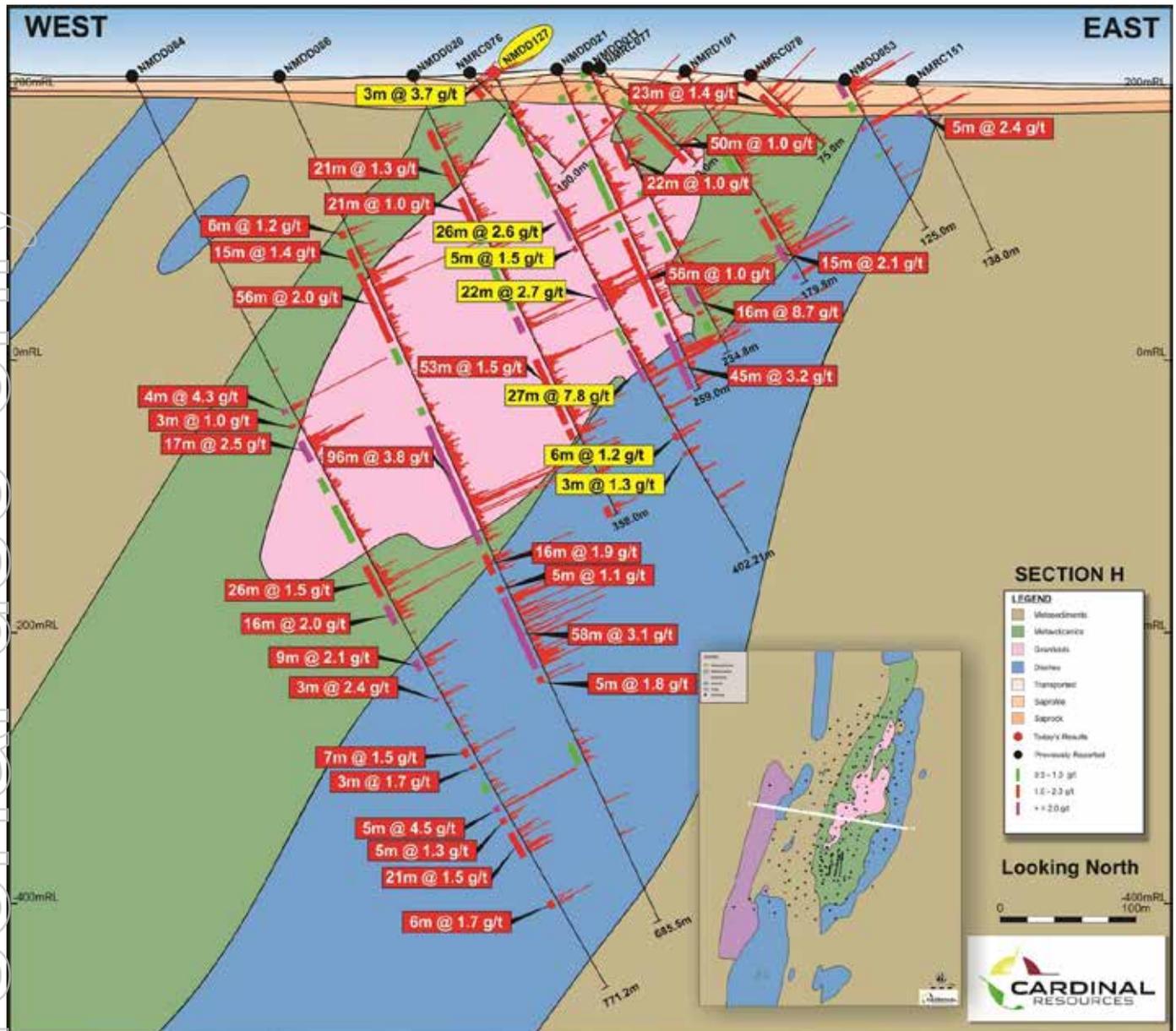


Figure 2: Typical Cross Section

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## REGIONAL EXPLORATION UPDATE

The Company also provides an update of drill programmes over three Exploration Licenses (“Kungongo”), (“Ndongo”), (“Bongo”) all within the Company’s Bolgatanga Project, located in the Upper East Region of Ghana and a fourth license (“Subranum”) located in the Ashanti Region of Southwest Ghana (Figures 3 and 4).

### KUNGONGO

- Regional “Bole-Bolgatanga Shear Zone” occurs over a length of 5 km within the northwest corner of the tenement (122 km<sup>2</sup>)
- Reconnaissance RC drilling across strike is planned

### NDONGO

- Tenement has now been expanded to 296 km<sup>2</sup> with the recently purchased Kinross ground
- Core and rejects from more than 120 diamond and RC historic drill holes within landpackage are currently being moved to Cardinal’s Bolgatanga operational office for relogging
- Auger soil drilling has been completed at 200m x 50m over prospective areas
- Detailed ground geophysics is underway to further assist with drill target generation
- Reconnaissance drilling will test anomalous gold targets

### BONGO

- The prospect covers an area of 453 km<sup>2</sup>
- Dominated by three major intrusive complexes, predominantly intermediate and foliated felsic basin type granitoids
- 545 auger soil drill holes completed totalling 1,883m – drill targets being generated

### SUBRANUM

- Regional Shear Zone occurs over a length of 9 km within the tenement (63 km<sup>2</sup>)
- Newmont drilled 31 historic holes, along with soils and trench sampling within landpackage
- Operating mines are located nearby – Newmont, Kinross Gold and Resolute Mining
- Diamond drilling to commence with twin and scout holes along a 5 km anomalous zone previously identified by Newmont



Figure 3: Cardinal Licenses location map

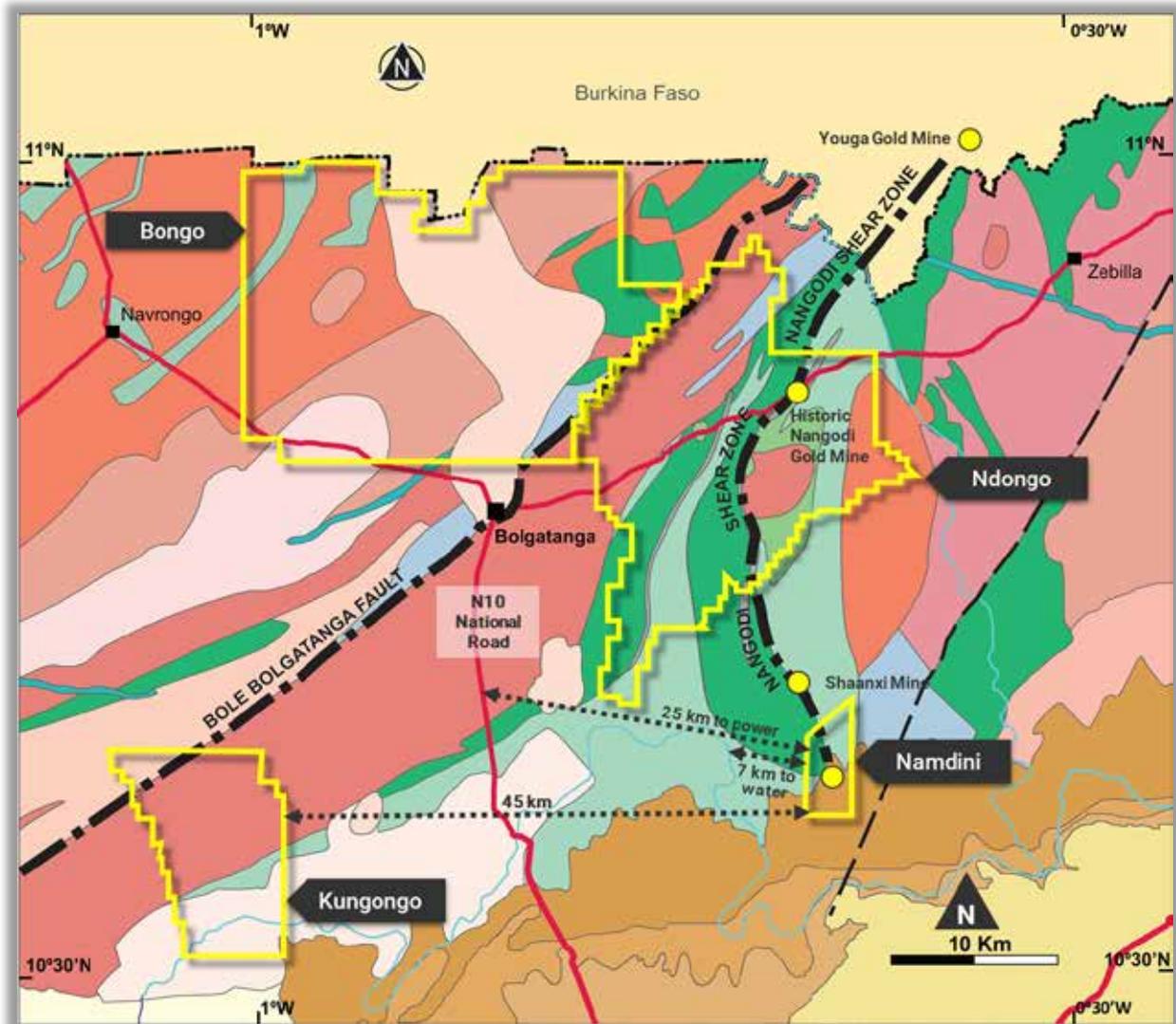


Figure 4: Bolgatanga Project Licenses

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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 supported by additional multi-disciplinary engineering activities. Exploration activity is also underway on its large portfolio of regional exploration Licenses.

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## 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

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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, anticipated timing of the PEA on the Namdini project, 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 intercepts were calculated, using a 0.5 g/t cut-off, which approximates the cut-off for 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 the 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
NMDD107	604.94	-66.64°	92.61°	WGS84_30N	757291.929	1177038.093	208.904
NMDD108	489.27	-65.33°	94.71°	WGS84_30N	757154.297	1176707.752	223.012
NMDD109	507.78	-65.29°	94.10°	WGS84_30N	757121.531	1176736.465	220.721
NMDD110	556.25	-63.84°	95.19°	WGS84_30N	757252.087	1177149.946	208.411
NMDD112	441.08	-60.16°	95.12°	WGS84_30N	757084.138	1176453.235	226.162
NMDD125	70.25	-65.04°	98.44°	WGS84_30N	757719.768	1177082.888	202.972
NMDD127	402.21	-64.85°	100.08°	WGS84_30N	757382.802	1176976.224	212.335
NMRC177	330.00	-66.60°	95.94°	WGS84_30N	757245.466	1176769.109	219.441

Table 1: Meta-Data listing drill holes

Hole_ID	mFrom	mTo	mWidth	Au g/t
NMDD107	78	82	4	1.7
NMDD107	104	107	3	0.6
NMDD107	121	142	21	0.8
NMDD107	148	158	10	0.5
NMDD107	162	171	9	0.8
NMDD107	181	201	20	0.9
NMDD107	211	214	3	1.0
NMDD107	222	242	20	1.1
NMDD107	269	280	11	0.7
NMDD107	291	329	38	2.1
NMDD107	333	352	19	0.8
NMDD107	365	373	8	0.9
NMDD107	378	384	6	1.3
NMDD107	389	393	4	1.9
NMDD107	429	439	10	2.7
NMDD107	443	449	6	0.8
NMDD107	459	479	20	1.9
NMDD108	163	169	6	0.7
NMDD108	180	206	26	1.2
NMDD108	210	213	3	0.7
NMDD108	248	253	5	0.9
NMDD108	259	267	8	0.6
NMDD108	273	276	3	0.6
NMDD108	343	349	6	0.8
NMDD108	370	383	13	1.3
Hole_ID	mFrom	mTo	mWidth	Au g/t

NMDD108	389	395	6	0.7
NMDD108	402	408	6	2.7
NMDD108	412	425	13	0.7
NMDD108	432	439	7	0.7
NMDD108	446	451	5	2.4
NMDD109	194	202	8	0.7
NMDD109	215	230	15	0.9
NMDD109	236	244	8	0.6
NMDD109	269	272	3	1.3
NMDD109	306	309	3	2.6
NMDD109	313	318	5	0.8
NMDD109	392	396	4	0.9
NMDD109	408	412	4	2.7
NMDD109	424	427	3	2.1
NMDD109	435	461	26	1.0
NMDD110	212	216	4	1.1
NMDD110	228	238	10	1.5
NMDD110	257	280	23	1.1
NMDD110	312	320	8	0.9
NMDD110	337	343	6	1.8
NMDD110	347	353	6	2.1
NMDD110	367	373	6	1.0
NMDD110	379	389	10	2.9
NMDD110	414	423	9	4.1
NMDD110	451	457	6	1.5
NMDD110	465	474	9	1.7
NMDD112	87	90	3	1.2
NMDD112	173	178	5	1.1
NMDD112	291	305	14	1.0
NMDD125	0	13	13	4.9
NMDD127	0	3	3	3.7
NMDD127	27	39	12	0.9
NMDD127	50	59	9	0.8
NMDD127	80	101	21	0.6
NMDD127	111	137	26	2.6
NMDD127	141	146	5	1.5
NMDD127	173	195	22	2.7
NMDD127	210	224	14	0.7
NMDD127	228	255	27	7.8
NMDD127	285	288	3	0.6
NMDD127	298	304	6	1.2
NMDD127	314	317	3	1.3
NMRC177	67	70	3	0.6
NMRC177	73	78	5	1.5
NMRC177	91	101	10	0.9
NMRC177	108	138	30	0.9
NMRC177	169	174	5	0.5

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Hole_ID	mFrom	mTo	mWidth	Au g/t
NMRC177	194	198	4	0.8
NMRC177	206	213	7	5.1
NMRC177	221	228	7	0.9
NMRC177	233	240	7	0.6
NMRC177	306	309	3	1.7

Table 2 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 of consecutive internal dilution included within the intercept; only intercepts  $\geq 3$ m are reported.
- Intervals are HQ diamond core or RC 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

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**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.

Criteria	JORC Code Explanation	Commentary
<b>Drilling techniques</b>	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 orientated and if so, by what method, etc.).	<p>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.</p> <p>Reverse circulation drilling uses sampling hammer of nominal 127 to 140mm holes.</p> <p>All holes are inclined at varying angles for optimal zone intersection.</p> <p>All drill collars are surveyed using Trimble R8 RTK GPS with downhole surveying every 30m.</p>
<b>Drill sample recovery</b>	Method of recording and assessing core and chip sample recoveries and results assessed.	<p>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).</p> <p>Reverse circulation sampling is good. Chips are logged and weighed and captured to the database.</p> <p>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.</p> <p>For RC drilling, average recoveries are in the order of 76% and considered acceptable.</p> <p>Core recovered from each drill run is measured and compared with the drill run length drilled to calculate an estimated percentage core recovery.</p> <p>For core drilling overall recoveries are excellent, weighted average recovery greater than 98%.</p>
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	<p>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.</p> <p>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.</p> <p>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.</p>

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Criteria	JORC Code Explanation	Commentary
	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.
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 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 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.

Criteria	JORC Code Explanation	Commentary
Quality of Assay data and laboratory tests	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-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 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.
	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 mineralization 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	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.	

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Criteria	JORC Code Explanation	Commentary
	accuracy (i.e. lack of bias) and precision have been established.	Cardinal's QAQC protocol is considered industry standard with standard reference material (SRM) submitted on a regular basis with routine samples. The 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 ±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.
	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 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 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 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.
<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 mineralization 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 mineralization 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.
	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 mineralization 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 mineralization 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 mineralization is unknown; only downhole length is reported (no true width of mineralization 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.

Criteria	JORC Code Explanation	Commentary
<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.	Infill drilling continues to increase the confidence in the Namdini Mineral Resource.  Reconnaissance RC drilling will start at Kungongo across the “Bole-Bolgatanga Shear Zone”.  Reconnaissance drilling to test anomalous gold targets and to continue with ground geophysics at Ndongo to further assist with drill target generation.  Follow up drilling on a 5km anomalous zone at Subranum by twin drilling and scout holes.

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