

**ASX ANNOUNCEMENT AND MEDIA RELEASE**

16 September 2014

**HIGH GRADE DISCOVERY OF THIRD GOLD ZONE AT NAMDINI**

**Cardinal Resources Limited** (ASX: CDV) ("**Cardinal**" or "**the Company**") is pleased to announce the discovery of a third sub-parallel zone of high grade gold mineralisation at the Namdini Mining Licence. The third sub-parallel zone has been confirmed during the continuing Phase II RC drilling program at the Namdini gold bearing mining licence located within Cardinal's promising Bolgatanga Project in Ghana.

**HIGHLIGHTS**

- **Third sub-parallel high grade gold zone confirmed by latest RC drilling at Namdini Mining Licence**
- **Further results received from recently completed 4 RC drill holes**
- **Results include:**
  - **2m @ 4.10 g/t from 4m vertical**
  - **2m @ 3.48 g/t from 17m vertical**
  - **5m @ 3.25 g/t from 61m vertical**
  - **4m @ 3.22 g/t from 78m vertical**
  - **7m @ 2.78 g/t from 8m vertical**
  - **17m @ 2.77 g/t from 56m vertical**
  - **7m @ 2.01 g/t from 23m vertical**
  - **12m @ 1.98 g/t from 67m vertical**
  - **17m @ 1.75 g/t from 21m vertical**
- **Further RC drill holes are planned to expand the Namdini gold project.**

Commenting on today's results, Cardinal Resources Managing Director Archie Koimtsidis said:

"We are very encouraged with the confirmation that a third sub-parallel zone of mineralisation has been intersected at Namdini.

"Whilst drilling through the second sub-parallel mineralised zone, the third sub-parallel mineralised zone was intersected ~10m beyond it.

"These very encouraging results will assist with further drill planning which we anticipate will further expand the gold potential with these new sub parallel discoveries at Namdini".

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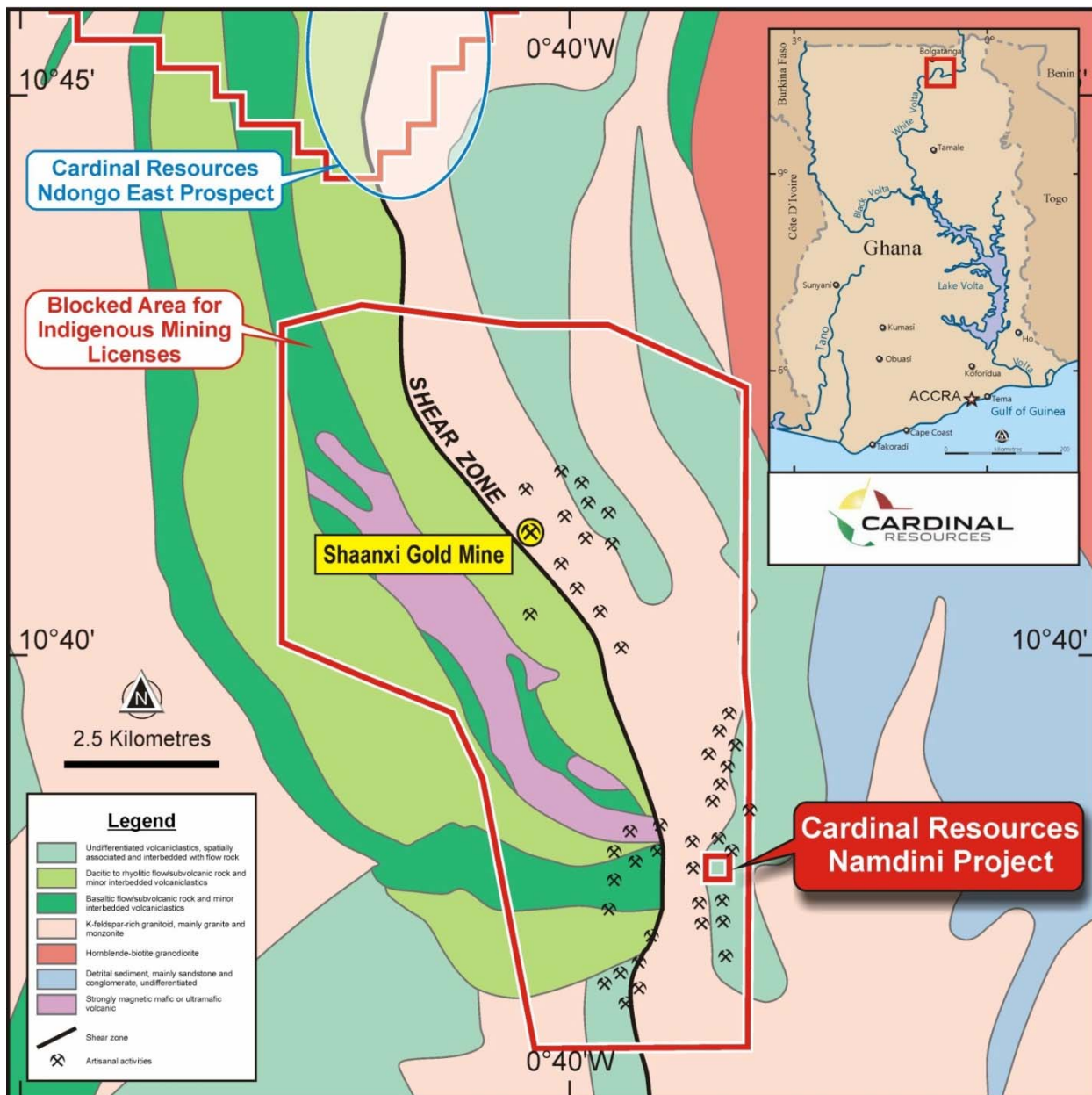
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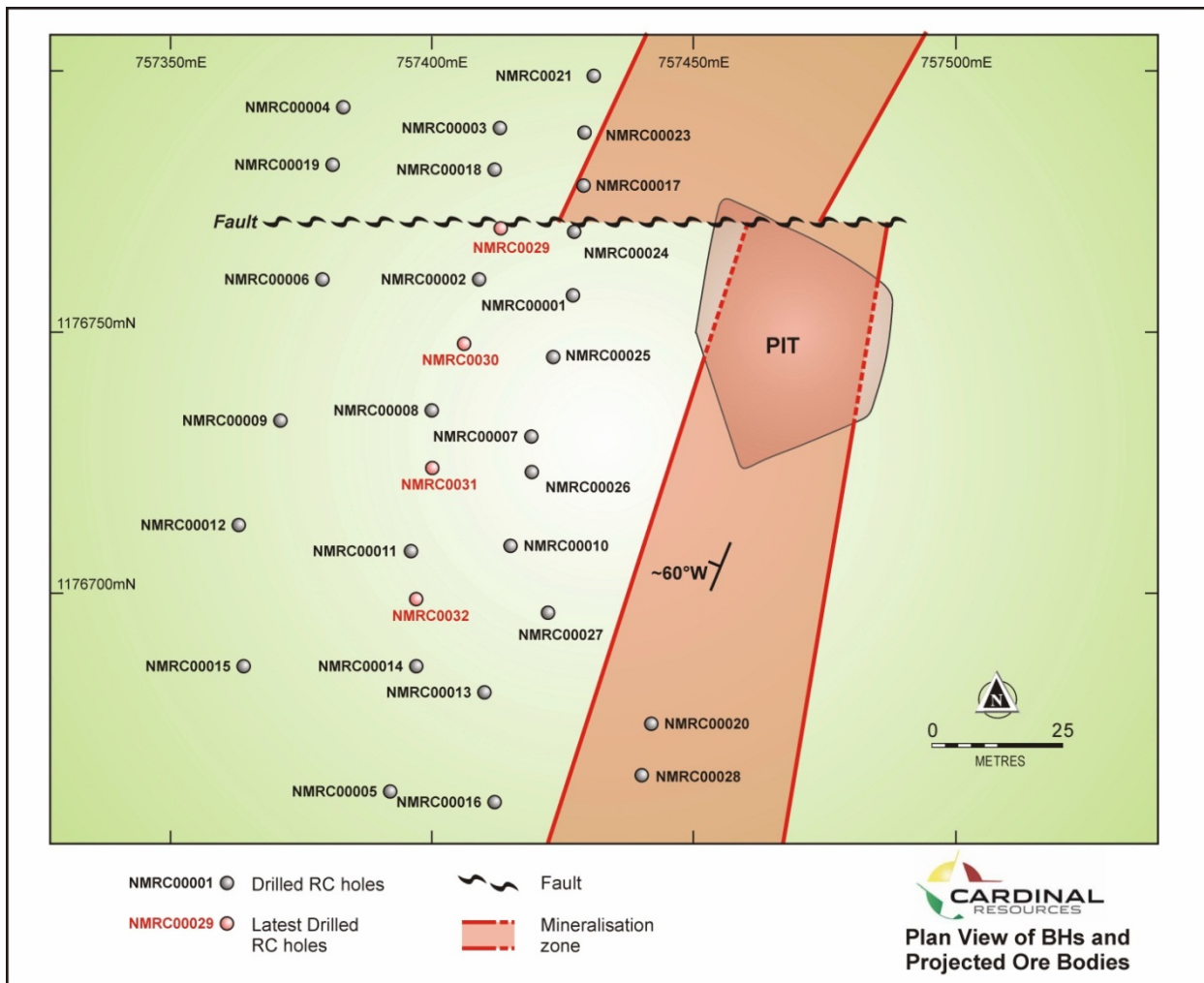
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## FURTHER RC DRILLING PLANNED AT NAMDINI

A combination of owning the drill rig and having an express service with the assay results, has enabled the company to implement a drill plan strategy of completing selective drill holes, submitting the samples and immediately placing the drill rig contract staff on standby until assay results have been received and assessed.

Using this approach Cardinal intends to RC drill a further 2,000m over the next 30 days with all results and analysis expected to be completed by late October 2014.





**Figure 2: Namdini Plan View of pits, drill holes and projected mineralised ore body**

Hole ID	Easting UTM	Northing UTM	Dip (°)	Azim (°)	RL (m)	Length (m)	From (m)	To (m)	Width (m)	Au (g/t)
NMRC00029	757413	1176770	-45	100	214	135.00	6	8	2	4.10
and							95	107	12	1.98
NMRC00030	757406	1176748	-45	100	214	150.00	33	40	7	2.01
and							79	96	17	2.77
and							111	115	4	3.22
NMRC00031	757400	1176724	-45	100	214	143.00	24	26	2	3.48
and							29	46	17	1.75
NMRC00032	757397	1176699	-45	100	214	108.00	11	18	7	2.78
and							87	92	5	3.25

**Table 1: Namdini RC Drill Results**

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### **Competent Person's Statement**

Information in this report that relates to the Namdini Project is based on information compiled by **Mr Paul Abbott**, a full time employee of Cardinal Resources Limited, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Geological Society of South Africa. Mr Abbott has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Abbott consents to the inclusion in this report of the statements based on his information in the form and context in which it appears.

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This Announcement contains summary information about Cardinal, its subsidiaries and their activities which is current as at the date of this Announcement. The information in this Announcement 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.

Certain statements contained in this announcement, including information as to the future financial or operating performance of Cardinal Resources and its projects, are forward-looking statements that:

- may include, among other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and 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;
- are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Cardinal Resources, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; and,

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- 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 Resources disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. 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 announcement 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.

No verification: Although all reasonable care has been undertaken to ensure that the facts and opinions given in this Announcement are accurate, the information provided in this Announcement has not been independently verified.

**JORC CODE 2012 EDITION – TABLE 1**
**HIGH GRADE DISCOVERY OF THIRD GOLD ZONE AT NAMDINI**
**Section 1 – Sampling Technique and Data**

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	Nature and quality of sampling (eg 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.	Nature and quality of sampling is carried out under QAQC procedures as per industry standards, with duplicates taken every 22nd sample, while standards and blanks are inserted in the ratio of 1:44.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sample representivity is ensured through a 3 tier riffle splitter, as it provides an unbiased sample.
	Aspects of the determination of mineralisation that are Material to the Public Report.	The determination of mineralisation is not yet known.
	In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.	Industry standard reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 50 g charge for fire assay.
<b>Drilling techniques</b>	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Reverse Circulation drilling with a standard tube, Remet 5 ½ inch Hard Face (face-sampling) button drilling bit.
<b>Drill sample recovery</b>	Method of recording and assessing core and chip sample recoveries and results assessed.	Method of recording and assessing chip samples was on a hand held Motion F5te Tablet PC using a set of standard templates supplied by Maxwell Geoservices, Perth (Maxwell).
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The measures taken to maximize sample recovery are through a cyclone and a 3 tier riffle splitter. This method ensures maximum sample recovery and an unbiased representative sample to be assayed.
	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 known to exist between sample recovery and grade, and no sample bias may have occurred due to preferential loss/gain of any fine/coarse material.
<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.	Chip samples have been geologically logged to a level of detail to support appropriate future Mineral Resource estimations.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging is quantitative. Chip samples are photographed in dry form.

Criteria	JORC Code Explanation	Commentary
	The total length and percentage of the relevant intersections logged.	All holes are logged in full.
<b>Sub-sampling techniques and sample preparation</b>	If core, whether cut or sawn and whether quarter, half or all core taken.	No core has been drilled.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	The sub-sampling technique is with a 3 tier riffle splitter, and sampled dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation is completed at SGS Laboratories, Ouagadougou, Burkina Faso. All preparation equipment is flushed with barren material prior to the commencement of sample preparation. The entire sample is dried, crushed to a nominal 2mm using a Jaw Crusher, and pulverised (85- 90% passing 75 micron size fraction) using LM5 grinding mills. A 250 gram split is retained for fire assay with AAS finish to 10 ppb detection limit. The remainder is returned and stored at Cardinal's Bolgatanga premises.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples uses commercial certified reference material (CRM) for standards.
	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.	Measures taken to ensure that the sampling is representative of the in situ material collected are to insert duplicates at 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.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate to give an accurate indication of gold mineralization.
<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.	The pulverized rock sample is weighed and mixed with flux and fused using lead oxide at 1100°C, followed by cupellation of the resulting lead button (Dore bead). The bead is digested using 1:1 HNO <sub>3</sub> and HCl and the resulting solution is submitted for analysis.
		The digested sample solution is aspirated into the Flame Atomic Absorption Spectrometer (AAS), aerosolised, and mixed with the combustible gas, acetylene and air. The mixture is ignited in a flame whose temperature ranges from 2,100 to 2,800°C. During combustion, atoms of the gold in the sample are reduced to free, unexcited ground state atoms, which absorb light. Light of the appropriate wavelength is supplied and the amount of light absorbed can be measured against a standard curve.
		Results have a lower gold detection limit of 10 ppb. The AAS equipment is calibrated with each job.  The analytical technique is industry standard fire assay which is considered to be a total digest of gold.

Criteria	JORC Code Explanation	Commentary
	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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	<p>Sample preparation checks for fineness are carried out by the laboratory as part of their internal procedures to ensure the grind size of 85-90% passing 75 micron is being attained. Each batch of 100 samples has 5 checks (20%), with the grind size varying between 87-99% passing 75 micron, which is acceptable. Laboratory QAQC involves the use of internal lab standards using certified reference material and blanks.</p> <p>Certified reference materials, having a range of values, and in-house blanks are inserted in the ratio of 1:44. Duplicate samples are taken every 22nd sample.</p> <p>External laboratory checks are done on a three monthly basis through Laboratories Quality Services International (LQSI). Recent LQSI checks of Fire Assay analyses on Low Grade Oxide Material produced acceptable levels of accuracy and precision.</p>
<b>Verification of sampling and assaying</b>	The verification of significant intersections by either independent or alternative company personnel.	The verification of significant intersections by either independent or alternative company personnel has not occurred.
	The use of twinned holes.	There has been no use of twinned holes.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data was collected on a hand held Motion F5te Tablet PC using a set of standard templates supplied by Maxwell Geoservices, Perth (Maxwell). Daily data was synchronised and digitally captured by Maxwell for validation and compilation into Excel and Access spreadsheets and stored on the Cardinal servers located in Bolgatanga, Ghana, West Africa.
	Discuss any adjustment to assay data.	No adjustments were made to assay 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.	Accuracy of drill hole collar surveys is +/- 3m using a hand held Garmin GPSmap 62s GPS.
	Specification of the grid system used.	No down hole surveys were performed.
		WGS84 Sector 30N, with local grid baseline at 010° True North and lines at 20m to 30m intervals and stations at 25m along lines.
	Quality and adequacy of topographic control.	The quality and adequacy of topographic control is +/- 3m using a hand held Garmin GPSmap 62s GPS.
<b>Data spacing and distribution</b>	Data spacing for reporting of Exploration Results.	Data spacing is 25m (northing) and 20-30m (easting).

Criteria	JORC Code Explanation	Commentary
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The data spacing and distribution is considered to be sufficient to establish a degree of geological continuity for this reverse circulation drilling program.
<b>Orientation of data in relation to geological structure</b>	Whether sample compositing has been applied.	No sample compositing has been applied.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The orientation of sampling achieves unbiased sampling of possible structures as drilling is orientated normal to the dip and foliation of the deposit.
	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 orientation based sampling bias has been identified in the data to date.
<b>Sample security</b>	The measures taken to ensure sample security.	The measures taken to ensure sample security are through an independent Ghanaian security contractor. Samples are stored at Cardinal's base camp located at Bolgatanga, Ghana, West Africa under security until collected by SGS Laboratories and transported to their Ouagadougou laboratory in Burkina Faso.
<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.	The Namdini Mining Licence is located in NE Ghana. Namdini Mining Limited (NML) holds the mining licence. NML signed a Heads of Agreement with Savannah Mining Ltd (Savannah) to provide "Mining Support" services to NML. Savannah has signed a Heads of Agreement with Cardinal Mining Services Ltd (CMS) to provide "Mining Support" services in relation to the Namdini Mining Licence.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	There are no known impediments to offer "Mining Support" services to Namdini Mining Limited within the Namdini Mining licence area.
<b>Exploration Done by Other Parties</b>	Acknowledgment and appraisal of exploration by other parties.	No previous systematic exploration has been undertaken.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation	The geological setting is a Paleoproterozoic Greenstone Belt comprising Birimian metavolcanics, volcanoclastics & metasediments located in close proximity to a major 30 km ~N-S regional shear zone

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Criteria	JORC Code Explanation	Commentary
		with splays.  The gold mineralisation occurs within sheared and highly altered rocks containing sulphides (pyrite & arsenopyrite).
<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> <li>• Dip and azimuth of the hole</li> <li>• Down hole length and interception depth</li> <li>• Hole length</li> </ul>	A summary of all information is contained within this announcement.
	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 will be calculated and will include no more than intervals of 2m below cut-off grades of 0.5 g/t Au.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values were used for this report.
<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 lengths 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').	Only down hole lengths are reported and true widths of mineralisation are not yet known.
<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	Appropriate maps and plan view are included in this announcement.

Criteria	JORC Code Explanation	Commentary
	of drill hole collar locations and appropriate sectional views.	
<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.	A representative summary of low and high grade results is contained within this announcement.
<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.	<p>Geophysical results are included as an image (Figure 1). The interpretation shown is subject to possible change as new information is gathered. Interpretation of geophysical data is by its nature, subject to ambiguity.</p> <p>No geochemical surveys, bulk sampling, metallurgical, mineralogical or geotechnical assessments were undertaken.</p>
<b>Further Work</b>	<p>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large – scale step – out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	<p>A combination of reverse circulation and diamond drilling is planned, followed by possible additional ground geophysical surveys depending on the results of the drilling.</p> <p>The plan included shows the possible extent of mineralisation based on geological observations and previous assay results. Future drilling is planned west of the pit to obtain down dip extensions to the ore body.</p>