Cardinal Resources Ltd: Starter Pit Infill Drilling Results

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Perth, Australia - Cardinal Resources Ltd. (ASX:CDV) (TSE:CDV) (OTCMKTS:CRDNF) ("Cardinal" or "the Company") is pleased to report positive results from a selected area within the proposed starter pit that encompasses the first 2 to 3 years of production at its flagship Namdini Gold Project in Ghana. The infill drill programme results highlight the robustness of the Company's current Mineral Resource and further supports the Company's Project Finance plans.

HIGHLIGHTS

Infill drilling tested down to the base of the proposed starter pit to a vertical depth of 140m

Selected in fill drill hole intersections:

89m @ 2.3 g/t Au from surface in NMRC794
83m @ 3.5 g/t Au from surface in NMRC745
78m @ 4.1 g/t Au from surface in NMRC738
74m @ 2.6 g/t Au from surface in NMRC743
69m @ 3.9 g/t Au from 99m in NMRC762
60m @ 2.1 g/t Au from surface in NMRC766
42m @ 3.2 g/t Au from 138m in NMRC771
40m @ 3.7 g/t Au from 10m in NMRC767
14m @ 4.1 g/t Au from 146m in NMDD172

Intersections are reported above 0.5 g/t Au using a minimum width of 3m, with no more than 3m of internal dilution of less than 0.5 g/t Au.

Cardinal's Chief Executive Officer / Managing Director, Archie Koimtsidis said: "This close spaced infill drill programme, along with the previous Grade Control programme within our proposed starter pit, confirms the robustness of our Mineral Resource, thereby providing higher confidence in predicting operational outcomes.

"The infill results are also key to underpinning the delivery of a high-quality engineering study which will provide more informed economic data during the critical project finance payback period.

"An added benefit of these infill drill results is enhancing confidence in the first 2 to 3 years production from the proposed starter pit. This will assist Cardinal with project financing options for the Namdini Project with a declared open pit Ore Reserve of 5.1Moz (138.6 Mt @ 1.13 g/t Au; 0.5 g/t cut-off) inclusive of 0.4Moz Proved (7.4 Mt @ 1.31 g/t Au; 0.5 g/t cut-off) and 4.7Moz Probable (131.2 Mt @ 1.12 g/t Au; 0.5 g/t cut-off)."

Infill Drilling

Cardinal completed a 3,640m Reverse Circulation percussion and Diamond core test infill drill programme which comprised 30 drill holes infilling earlier drilling to a grid pattern of approximately 25m (E) by 25m (N), within the proposed starter pit. The drill programme comprised three 25 metre spaced traverses with an area of approximately 300m (E) by 75m (N) to approximately 140m vertical (Figure 1). Drilling was inclined at around -65deg to the east in the Namdini local grid, consistent with drilling undertaken for previous mineral resource (Figures 2, 3 and 4). Detailed results of the drill programme are provided in Schedule 1 to this announcement.

The close spaced infill drill pattern has demonstrated continuity of mineralised zones within this infill drilling area. The results provide another layer of confidence that the spatial distribution and tenor of gold within this test area are in line with the Namdini Mineral Resource expectations.

Drilling, Sampling, Sub-sampling, and Sample Analysis methods:

Reverse circulation percussion drilling (nominally 130mm i.e. 51/4 inch diameter) was usually 200m or less in depth. All reverse circulation holes were down-hole surveyed at 30m intervals. Diamond core drilling was HQ in size in both weathered and fresh rock. All diamond holes were surveyed down-hole at 30m intervals. All

HQ core was orientated.

The infill drilling comprised east-west trending traverses of easterly inclined holes. Hole spacing was approximately 25m by 25m. All reverse circulation samples were collected at the drill site over 1m intervals and split using a multi-stage riffle splitter. Diamond core was generally longitudinally sawn in half; with half sent for assaying, and half retained in core trays for future reference. One metre samples were taken and submitted to an independent laboratory for assaying. At the laboratory, both core and reverse circulation samples followed a standard procedure of drying, jaw crushing and pulverising by ring mill. The pulverised samples were thoroughly mixed ('mat-rolled') and then 200g of sub-sample was collected. Internal laboratory checks required at least 90% of the pulp passing 75µm. A 50g charge was produced for subsequent fire assay.

Very good recovery of both core and reverse circulation samples (>95%) were recorded and they are considered to be representative of the mineralisation defined by the drilling.

Cardinal used two laboratories for its sample submissions, SGS Ouagadougou Laboratory in Burkina Faso and SGS Tarkwa Laboratory in Ghana. The independent SGS commercial geochemical analytical laboratories are officially recognized by the South African National Accreditation System (SANAS) as meeting the requirements of the ISO/IEC 17025 standard for specific registered tests for the Minerals Industry.

As part of the Cardinal QAQC program, a suite of internationally accredited and certified reference materials ('standards') and locally sourced blanks were included in the sample submission sequence. The standards covered gold grade ranges expected at Namdini. Interlaboratory umpire analyses were also conducted. The sampling, sample preparation and analysis processes were found to be appropriate and acceptable for Mineral Resource estimation Certified reference material (blanks and standards) were submitted into the sample stream at a rate of 1 in 20 samples.

Duplicate samples of reverse circulation chips were taken at a rate of 1 in 22. No employee, officer, director, or associate of Cardinal carried out any sample preparation on samples from the Namdini Project exploration programme. Drill core was transported from the drill site by a Cardinal vehicle to the secure core yard facility at the Bolgatanga Field Exploration Office.

All samples collected for assaying were retained in a locked, secure storage facility until collected and transported by the SGS laboratory personnel. Retained drill core was securely stored in the core storage facility and pulps and coarse rejects returned from the laboratories were securely stored in the exploration core logging area and at a nearby secure location in Bolgatanga, Ghana.

Drill hole collars were surveyed using differential GPS (DGPS), with most diamond holes and deeper RC holes down hole surveyed at intervals of generally around 30m using electronic multi-shot and gyroscopic equipment. The drilling at Namdini is considered to have been surveyed with sufficient accuracy for current estimates.

Cut-off grade(s) including the basis for the selected cut-off grade:

An estimated marginal cut-off grade was established at 0.5 g/t Au using an assumed long-term gold price of US$1,300/oz. The provided Mineral Resource was validated and used to develop a mining model, as the basis for a LOM plan and economic assessment.

Gold royalties were assumed at 5% of gold price, with payable gold estimated at 99.8% of doré exported. The net gold price was thus US$39.67 /g. The input processing cost provided in the ASX and TSX announcement on 18 April 2019 was US$14.30/t plus an additional US$1.50 /t allowed for stockpile reclaim giving a total of US$15.80 /t of mill feed (as dry tonnes). The tested overall process recovery utilised was 82%. Thus, the marginal cut-off grade ('COG') is estimated as: process cost / (net gold price * process recovery) giving 0.5 g/t Au (to one significant figure).

Using this marginal COG, the proportion of ore and the gold grade above the COG were defined in the mining model. The parcelled proportions of ore above COG within the blocks were then exported for open pit optimisation. The 0.5 g/t Au COG approximates an operational parameter that the Company believes to be applicable. This is in accordance with the guidelines of Reasonable Prospects for Eventual Economic Extraction in CIM and the JORC Code.

Mining and Metallurgical Methods and Parameters and other modifying factors considered to date:

Metallurgical testwork continued to focus on development of on the same flowsheet as presented in Cardinal's PFS study (ASX/TSX 18 September 2019). The flowsheet is described as a conventional primary

crush, SABC, flotation, regrind and carbon-in-leach circuit.

The metallurgical testwork on fresh material was carried out by ALS Laboratory in Perth, Australia and at the Maelgwyn Laboratory in Johannesburg, South Africa. Positive leach results were returned from the Maelgwyn Mineral Services Africa (MMSA) metallurgical Laboratories in South Africa from pilot scale testwork utilising the AachenTM Shear Reactor (ASX/TSX Press Release dated 4 June 2019). AachenTM is a relatively simple, proven process being used several global gold producers and specifically in Africa. These operations have consistently demonstrated an uplift in gold recovery with AachenTM.

Mining costs were developed from first principles and a profit factor applied to estimate contract mining cost. The estimated base mining cost has an applied incremental cost with depth, to account for increased haulage costs and the depth of mining increases in line with standard mining cost principles. All costs have been determined on a US dollar ("US$") basis. Mining will be conducted by a mining contractor which would bear the total mining capital cost under an outsourced mining arrangement, with the costs recovered by the mining contractor on a cost per tonne mined basis.

To view tables and figures, please visit:
http://abnnewswire.net/lnk/B2X6O51Q

About Cardinal Resources Ltd:

Cardinal Resources Ltd. (ASX:CDV) (TSE:CDV) (OTCMKTS:CRDNF) is a West African gold exploration and development Company that holds interests in tenements within Ghana, West Africa.

The Company is focused on the development of the Namdini Project with a gold Ore Reserve of 5.1Moz (0.4 Moz Proved and 4.7 Moz Probable) and a soon to be completed Feasibility Study.

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

Cardinal confirms that it is not aware of any new information or data that materially affects the information included in its announcement of the Ore Reserve of 3 April 2019. All material assumptions and technical parameters underpinning this estimate continue to apply and have not materially changed.

Source:

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