# Cardinal Resources Ltd: 2016 Annual Report to Shareholders

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Perth - The Directors are pleased to present their report on Cardinal Resources Ltd. (ASX:CDV) (Cardinal or the Company) for the year ended 30 June 2016.

**REVIEW OF OPERATIONS**

**GHANA GOLD PROJECTS**

Cardinal Resources Ltd., through its wholly owned subsidiary, Cardinal Resources Ghana Limited, holds five tenements prospective for gold mineralisation in Ghana in two NE-SW trending Paleo-Proterozoic granitegreenstone belts: the Bolgatanga and Namdini Projects located within the Nangodi and Bole-Bolgatanga Greenstone Belts in NE Ghana and the Subranum Project located within the Sefwi Greenstone Belt in SW Ghana (Figure 1, see link below).

**BOLGATANGA PROJECT, GHANA**

During the year exploration activities were mainly comprised of RC and diamond drilling at the Namdini Project.

**NAMDINI PROJECT**

The Namdini tenement is located ~12 km SE from Cardinal's Ndongo East Prospect and ~6 km SE of the producing Shaanxi Gold Mine. The area around the original Namdini Licence has been considerably expanded, which is anticipated to add to the Namdini Licence gold inventory already identified (Figure 2, see link below).

**NAMDINI PROJECT DRILLING**

A total of 33 Diamond, 28 RC and 17 RC + Diamond drill holes were completed during the year totalling 17,016.80m. A total of 18,040 samples, including duplicates, blanks and standards, were submitted to SGS Laboratories in Burkina Faso and Ghana, for standard fire assay (Table 1, see link below). QAQC protocols were observed by the taking of duplicates (RC drilling), and inserting in-house blanks and commercial certified reference material (CRM) as standards.

Diamond Drilling

The drill rigs for the diamond drill holes were all aligned at -65DEG dip drilling east which allows for the shallowing of the drill hole with depth. The azimuth was set at 095DEG instead of 100DEG (normal to the strike of the formations) as the borehole trace usually deflects to the right with depth due to the clockwise rotation of the drill rods.

The diamond drill holes were cored from surface. The soft near surface materials were drilled with a Triple Tube core barrel to reduce core losses. Once harder rock was encountered, then HW steel casing was inserted for drill hole stability and HQ size core was drilled to their final depths.

The diamond drill holes were surveyed near the top of each drill hole, then every 30m down the hole to determine the dip and azimuth of the drill holes with depth.

RC Drilling

The general strike of the host rocks is 010DEG and dipping at approximately -60DEG W. The RC drilling was orientated normal (at 90DEG) to the strike of 100DEG azimuth with all drill holes inclined to the east as these drill holes were all planned to be relatively shallow and did not deviate very much from their intended planned

directions.

The soft near surface materials were drilled until harder formations were encountered, then PVC casings were inserted for drill hole stability. The transition and fresh rocks were drilled with button bits attached to the hammer and dry chips were recovered at 1m intervals through a cyclone.

Combination RC and Diamond Drilling

Where deeper drilling was planned, RC drilling was initially done until water was encountered, then HW steel casing was inserted for drill hole stability and HQ size core was drilled to the planned final depths.

The RC drill hole was surveyed only for dip at the end of the RC drilled portion of the drill hole as the azimuth could not be determined due to the proximity of the metal rods which affects the magnetic readings. The drill hole was surveyed for both azimuth and dip a short distance below the end of the HW casing, and then every 30m down the hole to determine the dip and azimuth of the drill hole until completed.

Diamond Drill Core

The core was orientated at each drill run using a digital instrument. The core was marked showing the base of the drill hole, then the core from each drill run was laid in a length of angle iron to fit the core together so that the orientation line could be drawn along the length of the core at the drill site. Initial geotechnical parameters were measured at the drill site, with more detailed parameters measured in the core shed using this orientation line as the datum line.

The core was photographed, cut in half, then quartered, with the same quarter sector consistently sampled to reduce sample bias. The remaining three quarters of core were stored in metal core trays and placed on metal racks under cover in the core shed at Bolgatanga (Figure 4, see link below). The quarter core samples were sent to the SGS Laboratories in both Burkina Faso and Tarkwa, Ghana for fire assay to speed up the receipt of results.

RC Drill Sampling

28 RC drill holes were completed which generated a total of 2,756 samples, including duplicates, blanks and standards (Table 1), submitted to the SGS Laboratories in Burkina Faso and Tarkwa, Ghana for assaying by standard fire assay methods. The addition of duplicates, blanks and standards into the sample stream were to observe the normal QAQC protocols to verify sample accuracy and repeatability by the two laboratories.

RC samples were weighed and split in the field to obtain two samples from each 1m drilled, with 1 sample for laboratory analysis and the other stored at the Bolgatanga core yard for repeat analyses if required. Chips selected from each 1m sample bag were washed, placed in chip trays, logged and photographed both dry and wet. Completed chip trays were stored at the Bolgatanga core shed.

**NDONGO PROSPECT**

Ndongo Far East Prospect

The airborne geophysical survey over the Ndongo Tenement identified a magnetic body intruded into the low pressure dilation zone around the southern and SE margins of the Pelungu Granite (Figure 5, see link below).

Previous geochemical sampling in this area delineated anomalous gold-in-soil values around the margins of this magnetic intrusive (Figure 6, see link below).

Gradient Array Induced Polarisation (GAIP) and Ground Magnetic (Gmag) surveys were completed over this target area during this review period. Southern Geoscience Consultants (SGC) of Perth, Western Australia have been contracted to process and interpret the acquired data which should indicate whether any gold-bearing sulphides are developed around the margins, or within, this magnetic intrusive. The results of these surveys are awaited.

**BONGO PROSPECT**

The airborne geophysical survey over the Bongo Prospect delineated six interpreted target areas containing ~40 km of possible mineralised structures (Figure 7, see link below).

Target areas C and D were field checked to assess their suitability for Gradient Array Induced Polarisation

(GAIP) surveys over them. Target C has the potential to contain base metal sulphides while Target D has the potential to contain gold-bearing sulphides.

**KUNGONGO PROSPECT**

The airborne geophysical survey over the Kungongo Prospect delineated two interpreted target areas ("A" and "B") containing possible mineralised structures (Figure 8, see link below).

Target A occurs over a ~6-6.5 km long portion of the SW extension of the regional Bole-Bolgatanga Fault (Shear) Zone which extends over northern Ghana. Target B occurs over a ~7 km long area underlain by Birimian greenstones and granitoids.

Target A: Gradient Array Induced Polarisation (GAIP) and Ground Magnetic (Gmag) surveys were completed over this target area during this review period (Figure 9, see link below). Southern Geoscience Consultants (SGC) of Perth, Western Australia have been contracted to process and interpret the acquired data which should indicate whether any gold-bearing sulphides are developed along this shear zone.

A soil auger program is planned over this target area to identify anomalous zones, followed by RC and diamond drill programs to assess these anomalies.

Target B: A soil sampling program over Target B is planned to identify anomalous zones, followed by a RC drill program to assess these anomalies.

**SUBRANUM PROJECT**

Previous exploration at Subranum has established that the significant anomalous zone has a 5.2km strike length. Previous drilling, however, had been on 11 fences of varying distances between 200m to >500m apart (Figure 10, see link below).

To properly evaluate the gold mineralisation contained within these anomalous zones, Cardinal has planned a systematic diamond drilling program at regular intervals across the strike length of these anomalies. This planned program will then determine whether the gold mineralisation is continuous or not, and whether there is a plunge to the mineralisation.

This drill program is being planned subject to seasonal conditions.

**JORC 2012**

The information in this operations report contains information extracted from the following ASX announcements which are available for viewing on the Company's website www.cardinalresources.com.au:

- 28 June 2016 310m Wide Gold Zone Intersected at Namdini Project

- 17 June 2016 190m Wide Gold Zone with Infill Drilling at Namdini

- 31 May 2016 220m Wide Gold Zone with Infill Drilling at Namdini

- 25 May 2016 Wide Gold Zones Continues with Infill Drilling at Namdini

- 10 May 2016 Wide Gold Zones Continue at Namdini Project

- 29 April 2016 Visible Gold in Diamond Drill Hole

- 13 April 2016 Strike Extension Ground Geophysics Begins at Namdini

- 12 April 2016 Additional Drill Rigs on Site to Expedite Program

- 7 April 2016 Additional Near Surface Gold Mineralisation at Namdini

- 03 December 2015 133m Gold Intersection within Diamond Drill Hole

- 18 August 2015 67m High Grade Gold Zone at Namdini Extension

- 29 July 2015 83m Mineralised Zone Further Along Strike at Namdini

No New Information

The Company confirms that it is not aware of any new information or data that materially affects the information included in any original ASX market announcements relating to exploration activities (including exploration results) carried out at Bolgatanga, Namdini and Subranum and that all material assumptions and technical parameters underpinning the exploration activities (including exploration results) and estimates of mineral resources or ore reserves in the relevant market announcements continue to apply and have not been materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

**CORPORATE UPDATE**

The Company completed a number of successful capital raising initiative during the year.

On 21 September 2015 the Company confirmed it had successfully completed a capital raising to sophisticated and institutional investors to issue 52,215,000 fully paid ordinary shares at $0.10 per share, together with one free attaching listed option ("Listed Option") for every two shared subscribed for, exercisable at $0.15 on or before 30 September 2019, ('September 2015 Placement"). 26,107,500 fully paid ordinary shares and all the options were issued on 19 November 2015 after being approved at the Company's shareholder meeting held on 3 November 2014.

Further on 27 November 2015 the Directors of the Company (namely, Messrs Alec Pismiris, Archie Koimtsidis, Malik Easah, Simon Jackson and Mark Thomas) were allotted 8,117,116 fully paid ordinary shares and 4,058,558 Listed Option, on the same terms and conditions as the September 2015 Placement.

On 8 March 2016 the Company confirmed it had successfully completed a capital raising to sophisticated and institutional investors to issue 47,333,300 fully paid ordinary shares at $0.12 per share ("March 2016 Placement"). 4,666,668 fully paid ordinary shares were issued on 9 May 2016 after being approved at the Company's shareholder meeting held on 27 April 2016.

Further on 9 May 2016 the Directors of the Company (namely, Messrs Archie Koimtsidis, Malik Easah and Mark Thomas) were allotted 1,750,002 fully paid ordinary shares, on the same terms and conditions as the March 2016 Placement.

**Appointment of Chairman**

On 19 November 2015 the Company announced that Mark Connelly had been appointed as the Non-Executive Chairman of the Company.

Mr Connelly has more than 27 years of experience in the mining industry, and has held senior executive positions with Newmont Mining Corp. and Inmet Mining Corp.. He has extensive experience in financing, development, construction and operation of mining projects in a variety of commodities including gold, base metals and other resources in West Africa, Australia, North America and Europe.

Mr Connelly replaces Mr Alec Pismiris, who resigned from the Board.

To view the full report, please visit:
http://abnnewswire.net/lnk/J9SMA433

**About Cardinal Resources Ltd:**

Cardinal Resources Ltd. (ASX:CDV) is a focused gold exploration and development company with its key assets located in the mineral-rich country of Ghana, West Africa. Cardinal owns and operates 2 drill rigs and has in country infrastructure which allows it to be a low cost exploration and development company.

**Contact:**

Archie Koimtsidis Managing Director
Cardinal Resources Ltd.
P: +233-26-190-5220
Skype: cardinal.archie