

ASX Announcement

6th February 2014

Predictive Discovery re-commences drilling at high-grade Bongou Discovery

Highlights:

- 2,000m diamond drilling program, commencing 10th February, to follow up outstanding 2012-13 drill results* from Bongou Discovery, Burkina Faso, including:

68m (52m true width) at 3.2g/t Au from 99m, including:

- 7.8m at 10.2g/t Au

55m (47m true width) at 3.2 g/t Au from 215m, including:

- 24.5m at 4.9 g/t Au

49m (41m true width) at 2.8g/t Au from 144m including:

- 6m at 7.8g/t Au
- 8m at 4.5g/t Au

48m (39.6m true width) at 4.3g/t Au from 34m, including:

- 16m at 9.7g/t Au

64m (58m true width) at 2.0g/t Au from 14m including:

- 5m at 7.3g/t Au

37m (35.5m true width) at 5.0g/t Au from 111m, including:

- 16m at 8.9g/t Au

50m (42m true width) at 1.9g/t Au from 47m, including

- 8m at 9.2g/t Au

- Drilling will test for extensions to Bongou gold mineralised granite at depth and along strike.
- Trenching to follow up new Bongou-like mineralised zone, 500m north-west of Bongou deposit.
- Geophysical survey along strike to test for more concealed granite bodies.
- Metallurgical testwork planned to commence in March.
- Fully-funded to carry-out program following \$1.1m raising.

* Released to the ASX on 2nd December 2013 and 16th December 2013.

Predictive Discovery Limited is a gold exploration company with strong technical capabilities focused on its advanced gold exploration projects in West Africa.

ASX: PDI

Issued Capital: 362M shares

Share Price: 1.6 cents

Market Capitalisation:
\$5.8M

Cash (at 31st December 2013): \$1.2M (not including \$1.1M placement in late January 2014)

Directors

Phillip Harman
Non-Executive Chairman

Paul Roberts
Managing Director

Phil Henty
Non-Executive Director

Tim Markwell
Non-Executive Director

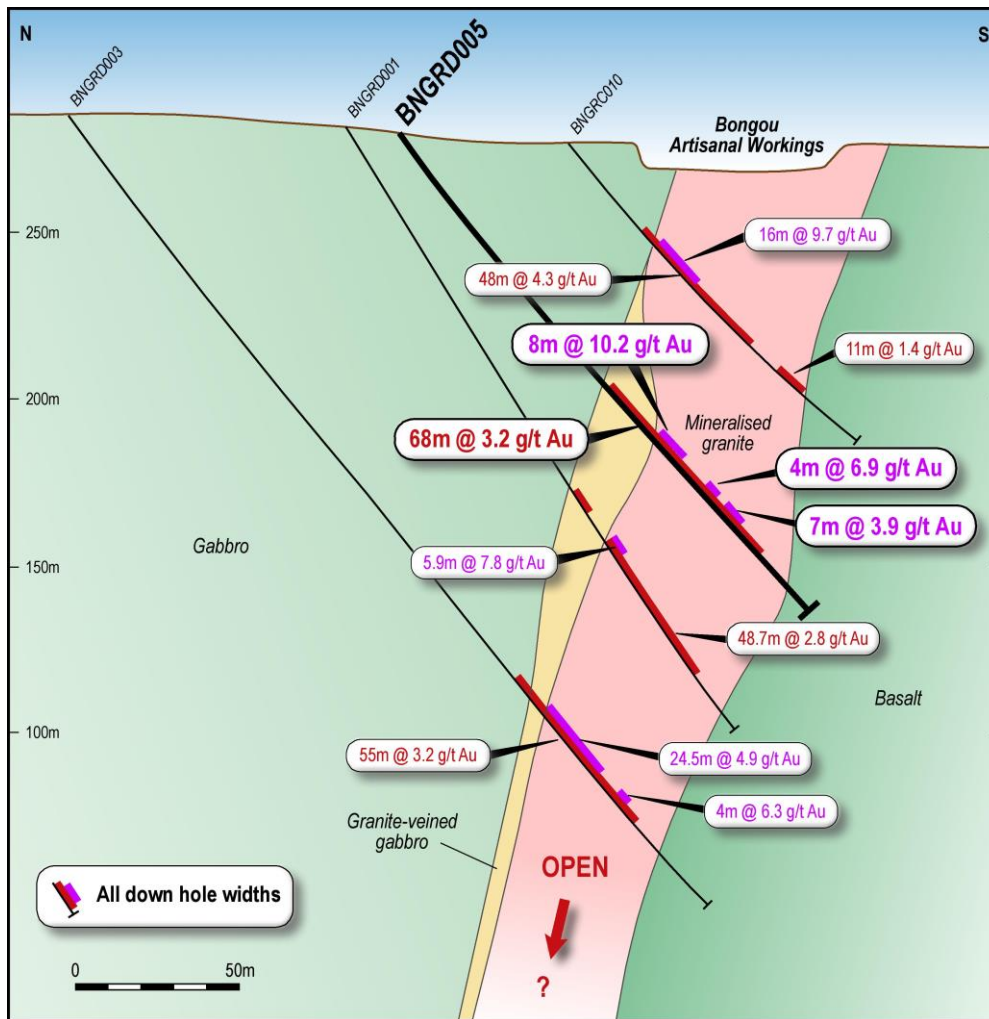


Figure 1: Cross Section through drill holes BNGRC010, BNGRD001, BNGRD003 and BNGRD005. No vertical exaggeration. Only down-hole widths are shown on this cross-section; estimated true widths are provided in Figure 2. Data for these drill results were released to the ASX on 2nd December 2013 and 16th December 2013.

Mr Paul Roberts, the Company's Managing Director said: "The next exciting phase at Bongou is about to begin, supported by many of our larger shareholders through the recent \$1.1M placement.

"The strength of the gold mineralised system at Bongou is indicated by a consistent combination of large widths, excellent continuity and high gold grades. The mineralisation is open to depth and, most importantly, along strike, and preliminary metallurgical results have been excellent.

"We believe that a substantial gold deposit at Bongou with a large high grade component is becoming increasingly clear. Our immediate task is to expand the potential volume of high grade gold mineralisation and identify new deposits of the same type along strike. This program is designed to address both these objectives as cost effectively as possible."

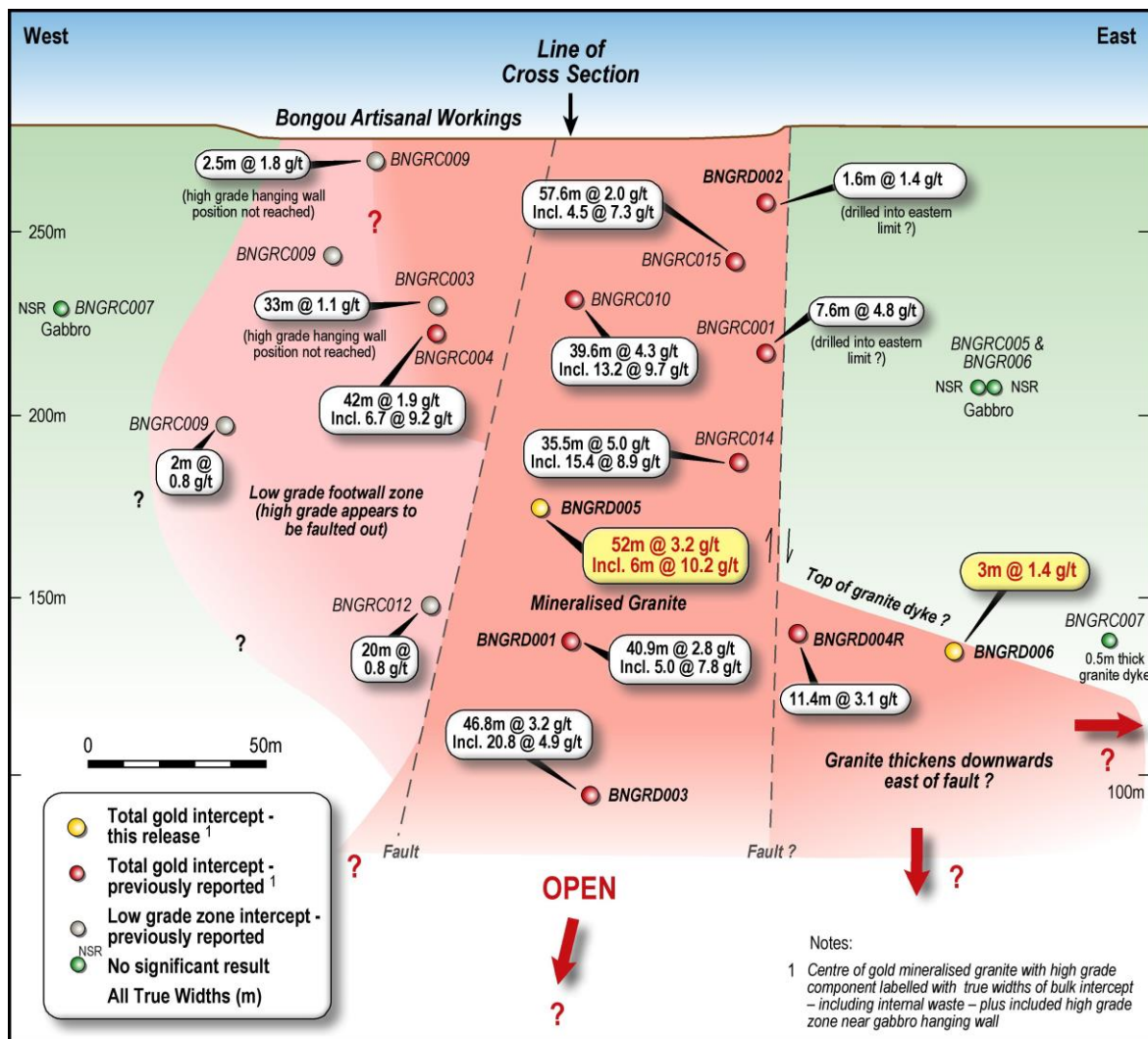


Figure 2: Long Section through the mineralised body oriented at 065 degrees, showing true width drill intercepts of both the total gold mineralised body at a 0.5g/t Au cut-off and true widths of the higher grade hanging wall mineralisation calculated at a cut-off grade of 3g/t Au. Data for these drill results were released to the ASX on 2nd December 2013 and 16th December 2013.

BACKGROUND

The high-grade Bongou gold discovery is located in eastern Burkina Faso, West Africa where PDI has established a large regional tenement package covering 1,605km² (Figure 3).

The deposit underlies artisanal workings forming an irregular open pit approximately 150m long and 50m wide. Exploration by PDI has included rock-chip sampling, trenching, ground geophysical surveys, and RC and diamond drilling, which has produced a series of very encouraging drill results¹, including:

- **BNGRC001 : 20m (7.6m true width) at 4.8g/t Au from 70m**

¹ See ASX releases dated 2nd December 2013 (“Thick, high-grade gold intercepts at Bongou Prospect”) and 16th December 2013 (“68m at 3.2g/t Au incl. 8m at 10g/t Au at Bongou”).

- **BNGRC004 : 50m (42m true width) at 1.9g/t Au** from 47m, including **8m (6.7m true width) at 9.2g/t Au**.
- **BNGRC010: 48m (39.6m true width) at 4.3g/t Au** from 34m, including **16m (13.2m true width) at 9.7g/t Au**
- **BNGRC014 : 37m (35.5m true width) at 5.0g/t Au** from 111m, including **16m (15.4m true width) at 8.9g/t Au**
- **BNGRC015: 64m (57.6m true width) at 2.0g/t Au** from 14m including:
 - **5m (4.5m true width) at 7.3g/t Au** from 14m
- **BNGRD001: 48.7m (40.9m true width) at 2.8g/t Au** from 144.3m including:
 - **5.9m (5.0m true width) at 7.8g/t Au** from 144.3m
 - **7.9m (6.6m true width) at 4.5g/t Au** from 169.1m
- **BNGRD003: 55.0m (46.8m true width) at 3.2 g/t Au** from 215m, including:
 - **24.5m (20.8m true width) at 4.9 g/t Au**
- **BNGRD005: 68m (52m true width) at 3.2g/t Au** from 99m, including:
 - **7.8m (6m true width) at 10.2g/t Au**

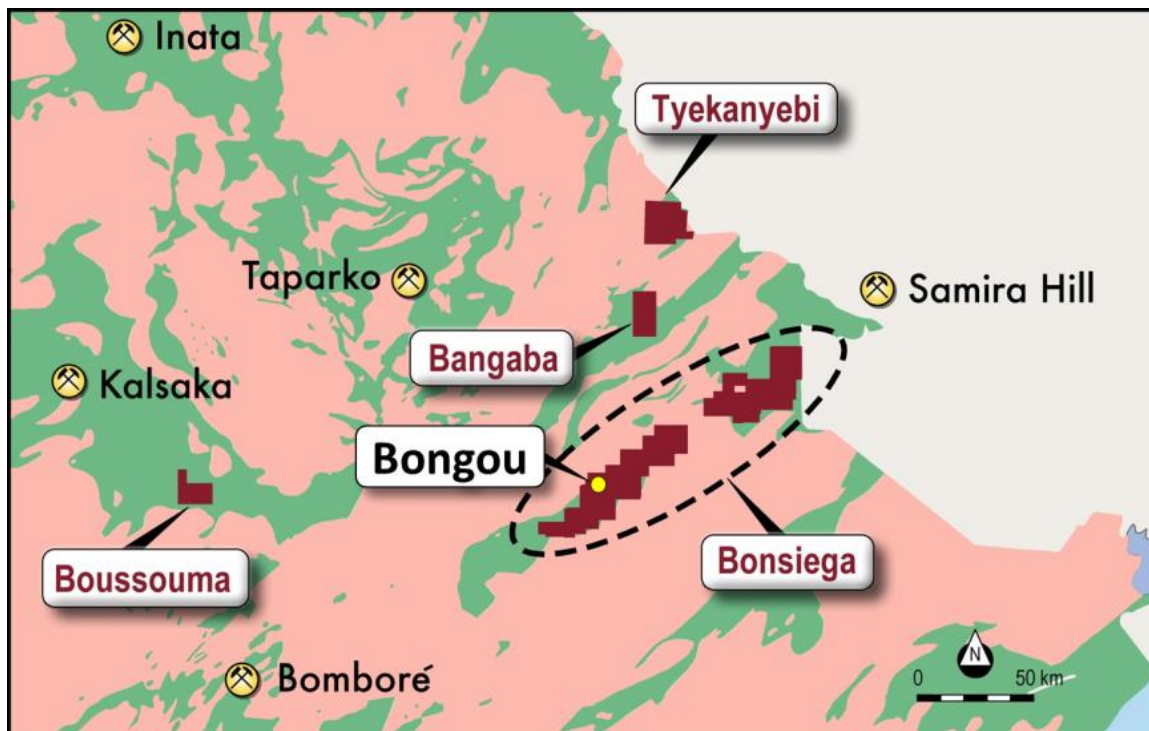


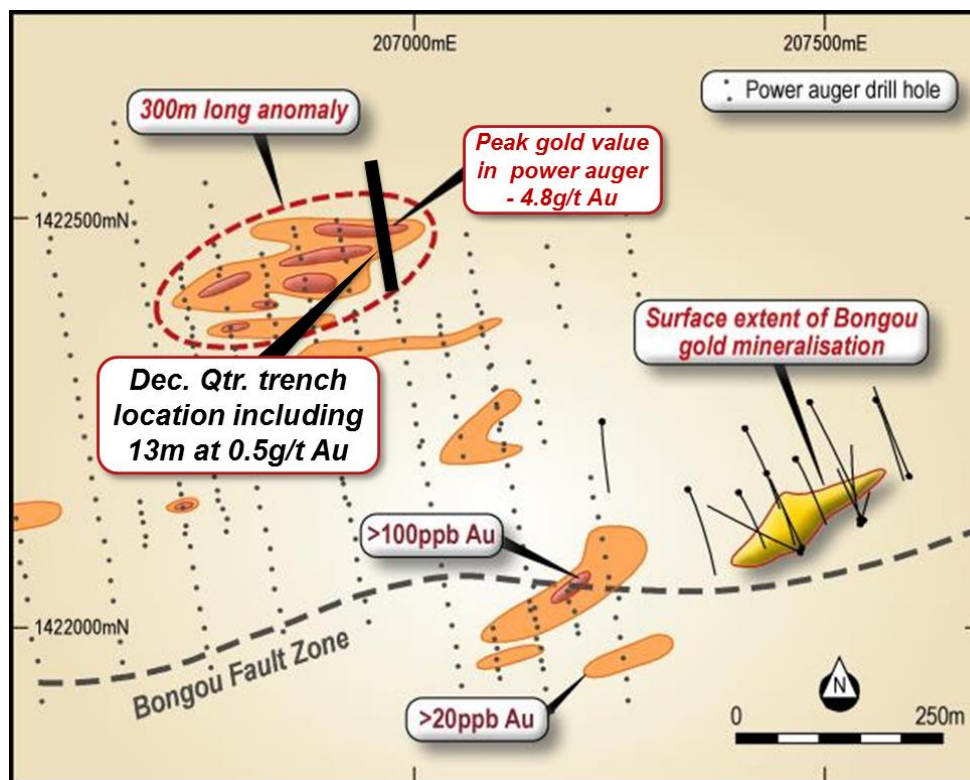
Figure 3: Locality map of PDI permits in eastern Burkina Faso, showing location of Bongou Prospect.

Gold mineralisation is contained within an intensely altered and quartz veined, pyrite-bearing granite intrusion. The higher grades are located in a single steeply dipping zone located against the granite's contact with a sheared gabbro (Figure 1). At surface, the gold mineralised zone is about 150m long

but it appears to be faulted downwards at the eastern end and is therefore potentially much longer at depth (Figure 2).

Geochemical drilling close to Bongou has identified additional gold anomalous areas (Figure 4), one of which is 300m long and up to 100m wide with a peak value of **4.8g/t Au**².

Channel sampling of altered granite in a trench over the 4.8 g/t Au location included a **12.5m long section averaging 0.5g/t Au** with a peak value of 15g/t Au over 0.1m³. The trench will be extended southwards to test for the southern extension of the altered granite. This significant result is a new discovery of Bongou-style mineralisation physically separated from, but in close proximity to, the Bongou deposit. Importantly, **the average grade of the altered granite may be significantly higher at shallow depths below the trench**. At Bongou itself channel sampling of altered granite in the artisanal workings only averaged 1g/t Au while much higher grades are present at shallow depths below the workings.



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Figure 5: Location of the trench dug during the December Quarter on a map of power auger results released to the ASX on 26th July 2013 (“Gold Target Expanded at Bongou Prospect”).

The mineralisation is located close to an extensive structure which is probably related to the gold mineralised system. There are other targets located along this structure within PDI’s tenements (Figure 5) which require further exploration.

² These power auger results were reported to the ASX on 26th July, 2013 (“Gold Target Expanded at Bongou Prospect”)

³ These trenching results were reported to the ASX 31st January, 2014 in PDI’s December Quarterly Report.

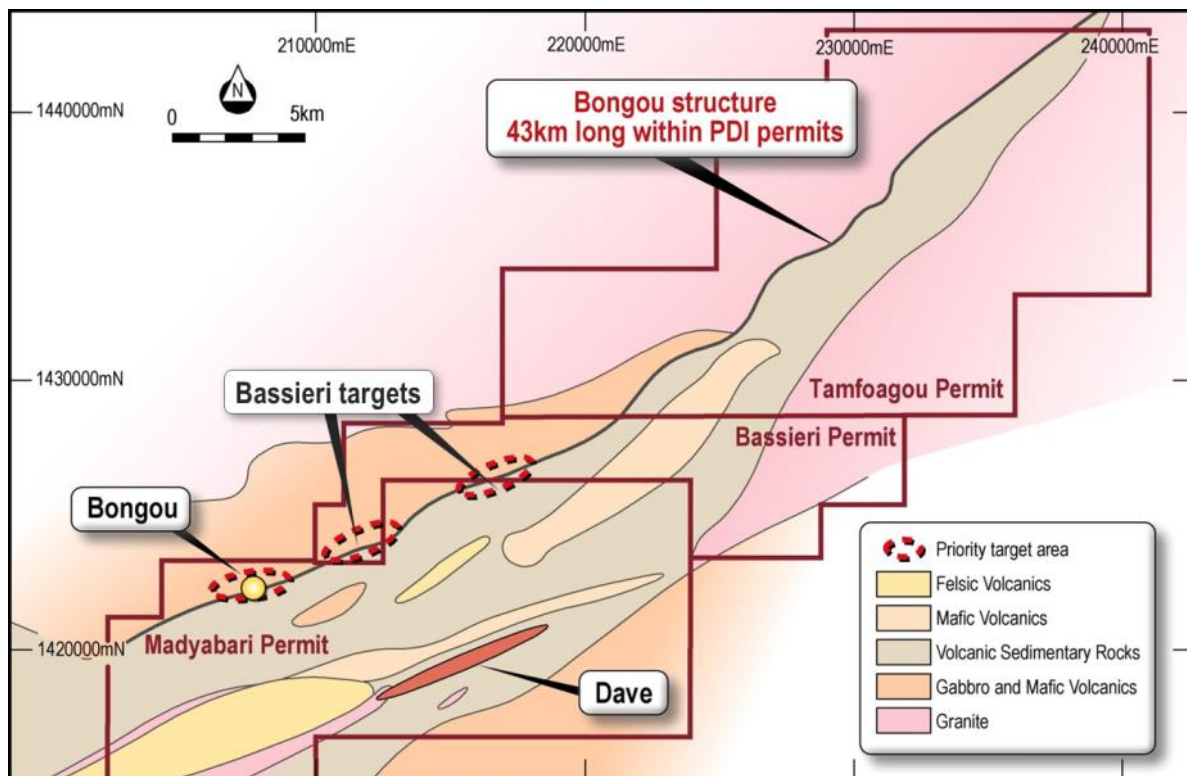


Figure 6: Regional geological map of the area near Bongou, showing location of Bongou itself, two target zones (red dashed line ellipses) 4km and 10km north-east of Bongou and the Dave Prospect.

EXPLORATION PROGRAM

Exploration planned in Burkina Faso during the next two months will consist of the following:

- At Bongou, a diamond drilling program with RC pre-collars, totalling approximately 2,000m. to test for extensions to the gold mineralisation at depth and along strike. Drilling will commence on Monday, 10th February 2014.
- Further trenching along strike from the new mineralised body north-west of Bongou, and trenching over other power auger gold anomalies from the 2013 exploration.
- A ground gravity survey along strike from Bongou targeting further altered granite beneath thin soil cover.
- Metallurgical testwork on diamond drill core from the Bongou Prospect to commence. It will focus on ore hardness and ways to reduce grinding costs while maximising gold recoveries⁴.

Assay results from the early diamond drilling are expected in the first half of March 2014.

In Cote D'Ivoire, PDI is undertaking reconnaissance exploration programs consisting of geological, ground geophysical and geochemical surveys. The work during the current field season will be

⁴ Preliminary cyanidation testwork on an RC drill composite sample composed of primary mineralisation using a standard 75 micron grind reported a 94% gold recovery (ASX release entitled "Excellent Gold Recoveries from Metallurgical Testwork" dated 14th May 2013).

budgeted and scheduled for periods when there is less activity in Burkina Faso. The principal focus is on advancing Bongou as quickly as possible.

Predictive Discovery Limited (PDI) was established in late 2007 and listed on the ASX in December 2010. The Company is focused on exploration for gold in West Africa. PDI has a distinctive technological capability, known as Predictore™, which is designed to increase targeting efficiency thereby reducing ore discovery cost. The Company's major focus is in Burkina Faso, West Africa where it has assembled a substantial regional ground position totalling 1,605km² and is exploring for large open-pittable gold deposits. Exploration in eastern Burkina Faso has yielded a large portfolio of exciting gold prospects, including the Bongou trend where a series of high grade gold drill intercepts have been obtained recently. PDI also has interests in a strategic portfolio of tenements in Cote D'Ivoire covering a total area of 1534 km².

Competent Persons Statement

The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr Paul Roberts (Fellow of the Australian Institute of Geoscientists). Mr Roberts is a full time employee of the company and has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Roberts consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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