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: 301M shares
Share Price: 2.5 cents
Market Capitalisation: $7M

Cash (at 30 September 2013): $1.5M
(not including $525,000 of the placement approved at the EGM of 18th October, 2013)

Directors
Phillip Harman
Non-Exec Chairman
Paul Roberts
Managing Director
Phil Henty
Non-Executive Director
Tim Markwell
Non-Executive Director

ASX Announcement 30th October 2013

Quarterly Report for the Period Ended 30th September 2013

Highlights:

EXPLORATION

□ Bongou, Burkina Faso:
  o Drilling program at the high grade Bongou Prospect planned to start on 1st November. Reverse circulation drill results announced during the previous quarter returned the following high grade intercepts:
    ▪ 48m at 4.3 g/t Au from 34m
    ▪ 26m at 6.9 g/t Au from 111m
    ▪ 10m at 7.4 g/t Au from 47m

□ Cote D’Ivoire New Projects:
  o Field work commenced.

□ Planned December Quarter Exploration Program:
  o Reverse circulation and diamond drilling program at Bongou, totalling 1500m.
  o Reconnaissance work programs on new ground in Cote D’Ivoire.

CORPORATE

□ Successful raising - $1.2m completed October 2013.

□ Tim Markwell, a fund manager with the African Lion 3 Fund in Melbourne, joined the PDI Board.

□ $1.5M in cash at 30th September 2013 and no debt.
INTRODUCTION

PDI’s major country focus is Burkina Faso, West Africa where it has established a well-qualified Burkina-based exploration team and a large regional tenement package mainly in the north east of the country covering 1,605km² (Figure 1).

The Company’s tenement holding covers approximately 100 km of strike length in the Samira Hill greenstone belt in eastern Burkina Faso (the Bonsiega permit group, Figure 1). This belt hosts the 2.5 million ounce Samira Hill gold deposit across the border in Niger and contains numerous active artisanal gold mine sites along its length. The Bangaba permit covers 10km of strike of the nearby Sebba Belt, including the largest known artisanal workings in that belt. PDI now owns 100% or rights to earn 95 to 100% of all its permits in Burkina Faso.

![Figure 1: Locality of PDI permits, showing location of PDI’s principal prospects in Eastern Burkina Faso. Larger yellow dots locate exploration prospects explored during the 2012-13 field season. Smaller yellow dots are additional prospects which have yielded ore grade and width gold intercepts in RC drill holes.](image)

PDI has discovered gold mineralisation on multiple prospects in its Eastern Burkina Faso project area during the past two years (e.g. Bongou, Dave, Laterite Hill, Solna, Tambiri and Foulii), all of which may contribute to a potential future major gold mining operation. In particular, PDI’s discovery of **high grade gold mineralisation at Bongou** has opened up a significant new exploration opportunity for the Company, both at Bongou itself and along the additional **43km of unexplored Bongou Structure** within PDI’s permits (Figure 4).

In the 2012-13 field season, PDI focused its attention on prospects which offered the best combination of grade, continuity, size potential and width. Bongou meets all these criteria. In addition, the Company has continued to carry out low cost assessments of other project areas in order to continue to build its prospect pipeline.
PROJECTS

Burkina Faso

Bonsiega Permit Group

Bongou Prospect (PDI 100%)

The high grade Bongou gold discovery is located in the south-western portion of the Bonsiega Project tenements in Eastern Burkina Faso (Figure 1). It 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 completion of 14 RC holes in 2012 and 2013 which obtained very encouraging drill intersections (Figures 2-3) including:

- 48m at 4.3g/t Au from 34m
- 26m at 6.9g/t Au from 111m
- 20m at 4.8g/t Au from 70m
- 10m at 7.4g/t Au from 47m

Gold mineralisation is contained within an intensely silicified and quartz veined, pyrite-bearing microgranite intrusion. The higher grades are located in a single steeply dipping zone located against the granite’s contact with a gabbro (Figures 3a and 3b). Geochemical drilling close to Bongou has also identified two additional gold anomalous areas, one of which is 300m long and up to 100m wide with a peak value of 4.8g/t Au. The mineralisation is located close to the very large Bongou Structure which is probably related to the gold mineralised system. Other targets are located along this structure within PDI’s tenements (Figure 4).
Figure 3(a) and 3(b): Bongou Cross Sections (a) Top - through RC drill hole BNGRC010, (b) Bottom - through RC drill holes BNGRC002 and BNGRC014. No vertical exaggeration.
**Figure 4**: 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.

**Planned drilling Program**

Assessment of the prospect during the September Quarter has led to the design of a 1,500m RC/diamond drilling program to test for extensions of the known mineralisation. The drill contract was signed during September and drilling is scheduled to commence on 1st November, weather permitting. Site preparation is currently in progress.

**Dave Prospect (PDI 100%)**

The Dave Prospect is located approximately 8km from Bongou (see Figures 1 and 4). Widespread, moderate grade gold mineralisation has been intersected there in multiple lodes over a strike length of approximately 5km. The depth of weathering averages approximately 50m and PDI’s focus to date has been on the oxidised gold mineralisation there. Preliminary metallurgical testwork on that mineralisation type obtained an 89% gold recovery from a bottle roll cyanidation test of a RC drill chip composite sample.

**Geological Study**

Re-logging of the Dave Prospect RC drill chips, which began in the June Quarter was completed by two of PDI’s Burkina-based geologists during the September Quarter. The geologists followed the logging methods of Toby Byers, an MSc student at the Camborne School of Mines in the United Kingdom. Toby carried out additional laboratory and 3D modelling studies in the September
Quarter before submitting his MSc thesis last month. Toby’s study has shown that the gold mineralisation at Dave is controlled by a number of geological factors. The new understanding that this study has obtained should be helpful in future resource calculation studies.

**Bangabba Permit (PDI earning 95%)**

The Bangabba project in Eastern Burkina Faso (Figure 1) covers areas of extensive artisanal mining. PDI is earning a 95% interest in the 128 km² Bangabba exploration permit by making a series of staged payments in cash and shares. It is estimated that artisanal miners have produced several tonnes of gold at Bangabba over 27 years. Previous RC and diamond drilling programs at the two major sites of artisanal mining, Solna and Tambiri, have generated a series of high grade intercepts, including: 6m at 20g/t Au, 2m at 56g/t Au, 5m at 17g/t Au, 7m at 13g/t Au, 9.3m at 4.9g/t Au and 5.6m at 16g/t Au.

PDI signed an agreement with SOMIKA, the Company’s partner at Bangabba to issue 1.5 million shares in PDI stock in exchange for an USD80,000 option payment. With this share issue, PDI’s ownership of the permit rises from **68% to 84%**. Given PDI’s current share price, this represents very good value for the Company and its shareholders. This was one of a series of measures that PDI has taken over the past 12 months to reduce non-exploration related expenditure to the maximum possible extent.

**Planned Exploration Activities December 2013 Quarter – Burkina Faso**

The principal activity planned in Burkina Faso will be the RC/diamond drilling program planned to commence on the Bongou Prospect at the beginning of November 2013. This program, totalling approximately 1,500m, is planned to test for extensions to the Bongou gold mineralisation. The objective is to find more of the high grade gold mineralisation close to the microgranite-gabbro contact shown in Figures 3a and 3b (e.g. 16m at 9.7g/t Au and 16m at 8.9g/t Au).

Initial assay results for at least some of this drilling are expected in the first half of December.

**Cote D’Ivoire**

**Background**

Detailed work on Cote D’Ivoire data sets over the past two to three years has led PDI to identify a portfolio of high priority prospects and targets in Cote D’Ivoire. As a result, the Company has been working on securing of up to five exploration permits in the country, covering a total area of 1,700 km². Of these two permits, Kokumbo and Ferkessedougou, have now been granted (Figure 5). Grant of the three other applications to PDI is not guaranteed.
Figure 5: Locality map of PDI’s interests in Cote D’Ivoire. **Notes:** (1) Granted exploration permits are in brown and the permit applications are in blue, (2) Green areas signify volcanic and sedimentary rocks and pink areas are mainly granite, (3) the Boundiali application is along strike from Resolute’s Syama operating mine in Mali and Perseus’s Sissingue (Tengrela) gold deposit just west of the Mali border in Cote D’Ivoire.

**Kokumbo Permit (PDI earning 90%)**

**Introduction**

The permit is held by a Cote D’Ivoire company, Ivoir Negoce, and covers an area of 400 km² in southern Cote D’Ivoire (Figure 5). Located 30km south of the country’s administrative capital, Yamoussoukro, and about 40km north of Newcrest’s operating Bonikro Gold Mine, it is serviced by a bitumen road and a power line. The area is covered by forested rolling hills and extensive lateritic cover.

Kokumbo has a long history of artisanal mining dating back to before colonial times in the late 19th century. Commercial scale mining was carried out by various parties in from early in the twentieth century until 1953. Since then all mining in the area has been by artisanal miners.
The town of Kokumbo, near the centre of the permit, services a substantial population of artisanal miners who are working on numerous prospects throughout the area. These prospects consist of both quartz vein mine operations and processing of gold mineralised laterite.

Initial Reconnaissance Program

PDI commenced a reconnaissance program on the Kokumbo permit late in the Quarter. A large amount of historical data has been assembled and a data compilation exercise will commence in the December Quarter. PDI geologists also arrived on site at the end of September to commence geological mapping and rock chip sampling at active artisanal mine sites.

Ferkessedougou Permit (PDI 100%)

The Ferkessedougou Permit was among the highest priority areas highlighted by PDI’s Predictore® analysis of the country and is reported to contain a series of gold occurrences. It covers an area of 390 km² in northern Cote D’Ivoire.

A reconnaissance visit to the permit was carried out in early October in preparation for a geochemical survey which is planned for the March Quarter.

Planned Exploration Activities December 2013 Quarter – Cote D’Ivoire

Work in the December Quarter will be confined to the Kokumbo permit, and will consist of:

- data acquisition and compilation, and
- geological mapping and rock chip sampling on active artisanal mine sites.

PDI’s exploration in Cote D’Ivoire during the 2013-14 field season will be conducted on a campaign basis. Given the impending drilling program on the Bongou Prospect in Burkina Faso, most of PDI’s team will be deployed in Burkina during November and December, returning to Cote D’Ivoire to carry out reconnaissance geological, geophysical and geochemical surveys in January 2014.
Australia

Victoria - Gold (PDI 100%)

The Cape Clear Exploration Licence (EL5423), which was applied for in 2012, was granted during the September Quarter. This EL covers 160 km² and is located west of Ballarat. The exploration target is a Stawell-type gold deposit located adjacent to a basalt “dome”. The type deposit at Stawell contained more than 5 million ounces of gold.

A second smaller Exploration Licence (EL 5314), covering 2 km² was surrendered during the Quarter.

No field programs were carried out in Victoria during the September Quarter.

CORPORATE

At 30th September 2013, PDI held cash and term deposits of $1.5 million and no debt. A further $525,000 was received in October as the second tranche of a $1.2 million placement (see below).

Placement

PDI undertook a $1.2 million share placement to sophisticated investors in September 2013, priced at 1.9 cents, which was the current share price when the Company went into trading halt. This placement was supported by many of PDI’s largest shareholders. The African Lion 3 Fund, in particular, contributed $500,000 towards the placement.

The placement was undertaken in two tranches: of $675,000 and $525,000. The second tranche was approved at an Extraordinary General Meeting on 18th October 2013

New Director

Mr Tim Markwell was appointed to PDI’s Board during the September Quarter. Mr Markwell is a geologist and has worked for 20 years in the resources and finance industries. He is currently the African Lion 3 Fund’s manager based in Melbourne. Previously Mr Markwell worked for the LinQ Resources Fund as an investment manager and as a resource analyst for Perth broker DJ Carmichael. He has also worked as a geologist for BHP-Billiton, Golder Associates, Anaconda Nickel, Great Central Mines and Reynolds.
Predictive Discovery Limited (PDI) was established in late 2007. 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 drill 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 and tenement applications in Cote D’Ivoire.

**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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