



7th May 2015

More Encouraging Power Auger Gold Results near Bongou

ASX Announcement

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: 651M shares

Share Price: 0.5 cents

Market Capitalisation: \$3.3M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

Phil Henty
Non-Executive Director

Tim Markwell
Non-Executive Director

HIGHLIGHTS

Infill power auger drill results from the new 3km long gold anomaly at Target 92 (10km from Bongou):

- T92-South Anomaly:
 - **Confirms continuity** with infill auger results, increasing potential for continuity in the underlying gold mineralisation.
 - Includes new **values of 1.5g/t Au, 0.8g/t Au, 0.7g/t Au and 0.5g/t Au.**
 - Other values from first phase drilling included **4.1g/t Au, 0.8g/t Au.**
 - An important focus of **this month's planned drill program.**
- 3.1g/t Gold Anomaly (north-west of Target 92):
 - Possible Bongou-like target – granite-like composition indicated by hand held XRF measurements.

Mr Paul Roberts, PDI's Managing Director said: *"These results represent another positive step as we work to identify and delineate large new gold deposits to add to our Bongou gold discovery¹. Our systematic approach this field season has identified multiple, good drill targets, including Target 92, which will be tested in this month's RC and air core drill program."*

The 3km long Target 92 gold anomaly, discovered last month², is a large new addition to PDI's prospect portfolio. Within it, we have delineated a series of large, plus-50ppb gold anomalies, the biggest being the 2km long T92-South anomaly. The infill results announced today show good continuity along this anomaly, strengthening our interpretation that it is controlled by an ENE oriented fault zone."

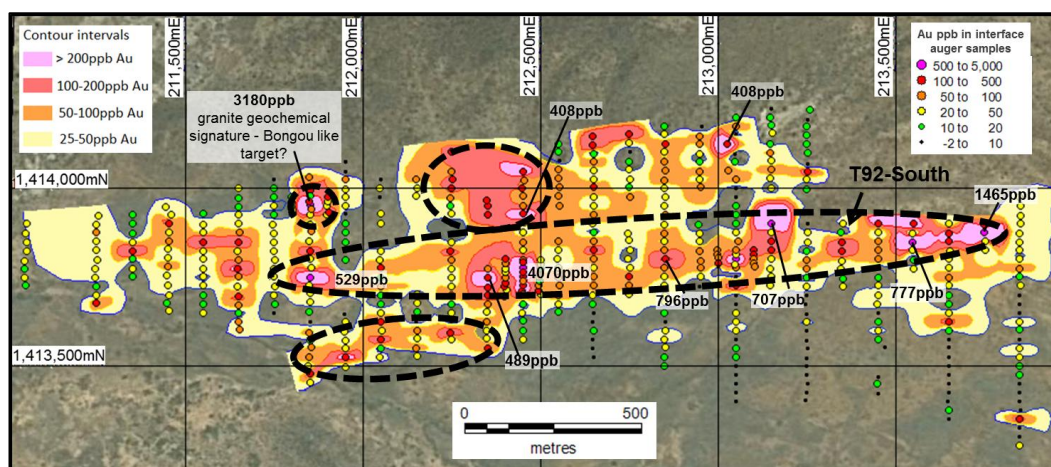


Figure1: Target 92 - gold geochemical anomaly contour plan on satellite imagery background, including new 100m and 50m infill lines.

¹184,000oz in the Inferred and Indicated Mineral Resource categories with an average grade of 2.6g/t Au including 136,000oz at 3.8g/t Au (ASX release dated 4 September, 2014)

²Reported to the ASX on 24th April 2015.

Introduction

PDI has identified nearly 100 exploration targets near the high grade Bongou gold discovery¹ (Figure 1) through a rigorous ranking process focused on prospects with Bongou-like geological and geophysical characteristics.

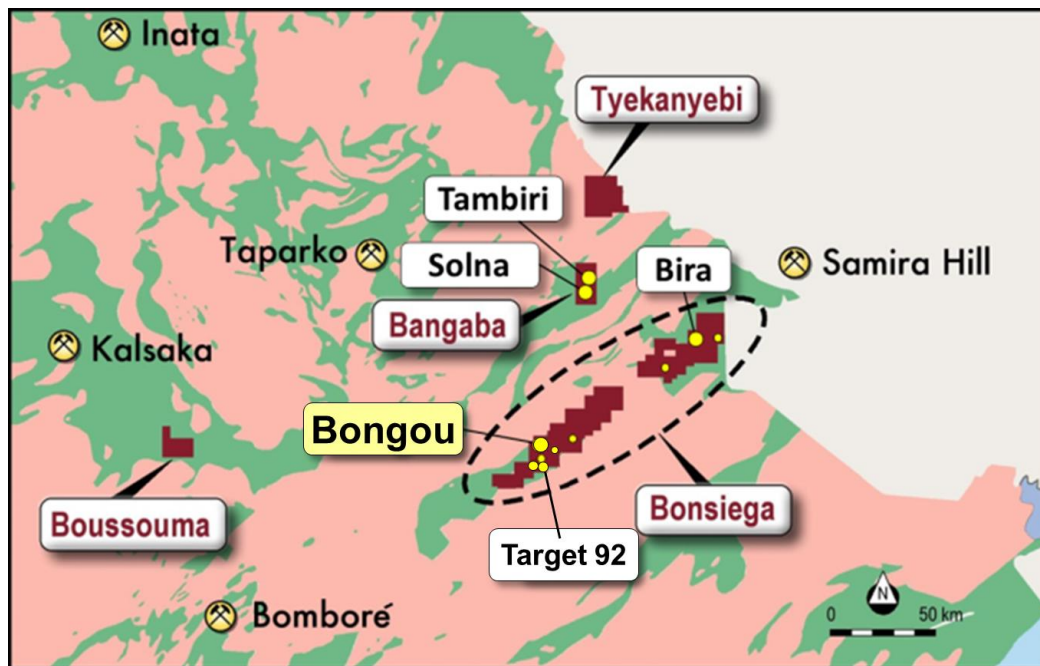


Figure 2: Locality map of PDI permits in eastern Burkina Faso, showing location of Bongou and Target 92 along with other important gold mineralised prospects (yellow dots).

Target 92 Power Auger Drilling

Target 92 was identified as a high priority location in PDI's Bonsiega rainy season project review in 2014. The target area overlaps a large area of surficial artisanal gold workings and coincides with a large east-west structure. PDI's exploration around Bongou in 2014 showed that large east-west structures may control the location of gold mineralisation in this area.

Power auger drilling was carried out in March on 100m and 200m spaced lines and revealed a large gold anomalous area at a 25ppb Au cut-off extending **the full 2.8km length of the grid** over a **width of between 200m and 600m** (Figure 1). Within this zone, there are multiple areas with values above 50ppb Au. Of these the largest (Target 92-South, Figure 1) is **2km long and up to 200m wide**. This area alone is large enough to contain a substantial gold deposit in its own right.

¹184,000oz in the Inferred and Indicated Mineral Resource categories with an average grade of 2.6g/t Au including 136,000oz at 3.8g/t Au (ASX release dated 4 September, 2014)

Infill Power Auger Drill Program

Power auger drilling totalling 188 holes for 539m obtained “interface”² samples from infill lines either 100m or 50m apart during April 2015 (Figure 1). The infill lines were tested around areas with particularly elevated gold values discovered in the March drilling program. The samples were assayed at the SGS laboratory in Ouagadougou.

Encouraging gold values were recorded on most of the infill lines including **1465ppb Au, 777ppb Au, 707ppb Au** and **489ppb Au** (Figure 1). The infill results also confirmed line to line continuity at the 50ppb Au level, especially on the T92-South anomaly (Figure 1). This coincides partly with a magnetic feature identified in February and is interpreted to indicate a mineralised structure, possibly a shear zone.

Infill drilling elsewhere on the Target 92 grid strengthened several other anomalies defined by the plus 50ppb Au contour (Figure 1). In addition, readings with a hand-held XRF machine of a weathered bedrock sample from beneath an interface sample carrying 3,180ppb Au (see Figure 1) recorded a major element geochemical signature similar to granite samples near Bongou (Ti/Zr ratio < 15 and Si >30%). This result, combined with the short strike strength of the anomaly is suggestive of a new Bongou-like target.

Planned follow-up work

Additional infill and extension power auger drilling results are awaited.

Air core drilling is planned to test along lines with the stronger gold values, focusing especially on the T92-South anomaly. The Bongou-like anomaly in the north-western part of the grid (3180ppb Au) will also be tested.

Air core and RC drilling is planned to take place this month at Target 92, Bongou, Prospect 71 and several other targets for which power auger results are still awaited.

TABLE 1 – POWER AUGER RESULTS

Power Auger Drillholes – Interface Sample Results									
Power auger hole Numbers	Northing (WGS84-31N)	Easting (WGS84 – 31N)	RL	Hole dips	Azimuth	Hole Depth	From	Interval	Au (ppb)
SIRAU 4374 to 4562	Refer to Figure 1 for map location of auger collars	Refer to Figure 1 for map location of auger collars	See notes	All holes were drilled vertically	All holes were drilled vertically	Average hole depth was 2.9m. Minimum hole depth was 1m, maximum hole depth was 7m	See notes	See notes	See notes and Figure 1.
Notes: Power auger drilling is a reconnaissance exploration technique. Typically the last metre of each auger hole represents in situ material. PDI’s practice is to collect an interface sample over approximately 1m which is therefore generally the second									

² Drill samples collected from the interface between the superficial cover and weathered bedrock.

last metre of each drill hole. Consequently, results are presented in Figure 1 of this announcement are mostly for the second last metre drilled for each auger hole. Individual drill hole intersections are not reported in this announcement. The average RL over the grid is 282m. The area is mostly a flat plain with very little variation between adjacent holes; individual RLs are not reported in this announcement because they are not relevant to interpreting geochemical data of this type.

Section 1: Sampling Techniques and Data		
Criteria	JORC Code Explanation	Commentary
Sampling Technique	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 downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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.	The sampling described in this report refers to power auger drill samples. In all the power auger drill holes reported here, 1-2kg samples were collected at the interface between soil and weathered bedrock. Results from holes where the drill hole did not penetrate through to weathered bedrock are not reported here as they are not considered an effective geochemical test of these locations because of the abundance of transported material overlying the bedrock. The samples were collected for gold assaying at the SGS laboratory in Ouagadougou using an aqua regia method with a 1ppb detection limit.
Drilling	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).	The power drilling was carried out using a 4WD-mounted power auger rig.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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.	Sample recovery is not assessed for power auger drilling as it is a geochemical method. In general, however, recoveries are good because the hole has to be cleared by the screw-type rods in order for the drill rods to advance downwards.

Logging	Whether core and chip samples have been geologically and geotechnical logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean/Trench, channel, etc) photography. The total length and percentage of the relevant intersections logged.	None of these samples will be used in a Mineral Resource estimation. Nonetheless, all power auger holes were geologically logged in a qualitative fashion.
Sub-Sampling Technique and Sample Preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled.	All of the sample is submitted for assay so no sub-sampling is required and the sample is representative of what is in the hole.
Quality of Assay Data and Laboratory Tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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.	The analytical method used was an SGS aqua regia method with a low detection limit (1ppb) which is appropriate for a geochemical drilling program. A limited number of external standards and blanks were included with the submitted samples. Based on these results and SGS's own repeat results, the analytical results are judged to be suitable for distinguishing gold anomalous samples from barren samples.
Verification of Sampling and Assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes The verification of significant intersections by either independent or alternative company personnel. Discuss any adjustment to assay data	Hole twinning is not normally practised with power auger drilling.
Location of Data points	Accuracy and quality of surveys used to locate drill	Collar locations were located using a hand held GPS with a location error of +/- 3m. Collar coordinates referenced in the table are for Universal Transverse

	holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used Quality and adequacy of topographic control	Mercator (UTM), Datum WGS 84, Zone 31 - Northern Hemisphere.
Data Spacing and Distribution	Data spacing for reporting of Exploration Results 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. Whether sample compositing has been applied	Power auger holes were spaced either 12.5m or 25m apart. Line spacings were either 50m or 100m. This type of drilling is not appropriate for the calculation of any Mineral Resource estimate.
Orientation of Data in Relation to Geological Structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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.	North-south line orientations were employed. At Target 92, the known geophysical and geological features are oriented ENE and ESE respectively.
Sample Security	The measures taken to ensure sample security	Reference samples are stored at PDI's sample store in Ouagadougou, Burkina Faso.
Section 2 Reporting of Exploration Results		
Mineral Tenement and Land Tenure Status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. 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.	Target 92 lies within the Sirba Permit (Arrêté N°2014/14/296/MCE/SG/DGMGC) which covers an area of 137 sq km. There are no overriding reserves or national parks over this permit. In a future mining operation, the Government of Burkina Faso is entitled to a 10% share of any mine along with a 3-5% ad valorem royalty, the percentage of which is determined by the gold price prevailing at the time. The company believes that (a) the permit is securely held as it has complied with all the necessary government requirements and (b) the permit can be replaced in due course by a mining licence as long as a feasibility study shows that a future mine would be viable and that company completes meets the Government's legal requirements, which it fully intends to do.. The Sirba permit was initially acquired, along with three other nearby permits (Madyabari, Fouli and Tantiabongou), by Birrimian Pty Ltd (Birrimian), which is a British Virgin Islands-registered company now 100% owned by PDI. The original owners of Birrimian subsequently entered into an agreement with Eldore Mining Corporation Limited (Eldore) through which Eldore could acquire the Birrimian permits through a series of payments and a commitment to issue US\$2 million worth of Eldore stock on completion of a Bankable Feasibility Study on one or more ore deposits within the Birrimian permits. PDI initially acquired an interest in Sirba along with the three other Birrimian permits via a joint venture with Eldore which commenced in January 2010. In 2012, Eldore changed its name to Stratos Resources Limited (ASX: SAT) after which PDI bought out SAT's residual interest (in late 2012). In acquiring Birrimian, PDI also inherited the one unfulfilled commitment in the original Eldore agreement with the original Birrimian shareholders. This commitment has now been agreed to mean that PDI will issue US\$2 million worth of PDI shares after PDI accepts an offer of finance for development of a mine on the Birrimian permits at its sole discretion) following completion of a Bankable Feasibility Study.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	Past exploration over target areas consisted of wide spaced soil sampling and an aeromagnetic survey.

Geology	Deposit type, geological setting and style of mineralisation.	Known mineralisation in the target areas consists of shear hosted mineralisation in a variety of rock types – mafic volcanics, metasedimentary rocks and mafic/intermediate intrusives. The mineralisation is interpreted as a variant of the orogenic gold mineralisation style, which is known throughout the Birimian Belt of West Africa.
Drill Hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length • 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.	See Table 1 and the notes that accompany it. Individual power auger hole results from the 188 holes described herein are not reported as the Material information required for understanding and interpreting geochemical results of this type is contained in a map showing drill hole locations and assay results in representative value ranges, both of which are provided in Figure 1.
Data Aggregation Methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate 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. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No weighted averaging or truncation methods were used for the power auger results.
Relationship Between Mineralisation Widths and Intercept Lengths	These relationships are particularly important in the reporting of Exploration Results If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	True widths cannot be estimated for the power auger drill results as both "flat-dipping" soils and steeply dipping underlying weathered bedrock is sampled.
Diagrams	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	An appropriate map is provided in Figure 1.

	plan view of drill hole collar locations and appropriate sectional views.	
Balanced Reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The ranges of power auger gold assays shown on Figure 1 meet this requirement.
Other Substantive Exploration Data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; 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.	The previous power auger results along structures interpreted from ground magnetic data were reported to the ASX on April 24th 2015. Apart from those, there are no other exploration data which are relevant to the results reported in this release.
Further Work	The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling. Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Air core drilling is planned to test higher tenor anomalies on the Target 92 grid in May 2015.

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. 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-pitiable gold deposits. Exploration in eastern Burkina Faso has yielded a large portfolio of exciting gold prospects, including the high grade Bongou gold deposit on which a resource estimate was calculated in September 2014. PDI also has interests in a strategic portfolio of tenements in Côte D'Ivoire covering a total area of 1,533 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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