



24th April 2015

New 3 km Long Gold Anomaly 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: 0.3 cents

Market Capitalisation: \$2.0M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

Phil Henty
Non-Executive Director

Tim Markwell
Non-Executive Director

HIGHLIGHTS

- Target 92 (10km from Bongou) power auger drilling results:
 - **Over 3km long gold anomaly.** Includes several separate parallel zones, the largest being **2km long and up to 200m wide.**
 - **Peak values of 4.1g/t Au and 3.2 g/t Au.**
 - Overlaps with large area of surficial artisanal gold workings but mostly under cover.
- Prospect 71 (9km from Bongou) power auger drilling results:
 - Two excellent drill targets with potential for Bongou-like gold mineralisation defined.
 - Peak values from earlier power drilling of southern target included **4.7g/t Au and 1.8g/t Au¹.**
 - Northern target includes a historic RC drill intercept of **24m at 2.1g/t Au** from 26m² with Bongou-like alteration.
- Part of an ongoing program testing high priority targets near Bongou.

Mr Paul Roberts, PDI's Managing Director said: *"This year's work program is aimed at building on the Bongou discovery³ by finding additional high quality gold mineralisation close to Bongou. We are systematically testing a series of targets with structural characteristics similar to Bongou.*

*These new power auger results have strongly vindicated our approach. The large Target 92 anomaly is a **major new prospect within the Bonsiega Project** which has never been drilled before. Many of the best auger results from there are from beneath thin alluvial cover without artisanal gold workings.*

*Previous PDI drilling at Prospect 71 revealed Bongou-like alteration including silicification and disseminated pyrite in a good intersection of **24m at 2.1g/t Au².** This hole tested beneath an auger anomaly with a peak value of just 0.02g/t Au¹. In contrast, power auger drilling 200m away has revealed a Bongou-sized target with peak values of 1.8g/t Au and 4.7g/t Au³ which has never been drilled.*

Once the current geophysical and infill power auger drilling program on our high priority targets is finished, we will carry out a combined RAB/air core/RC drill program, which is now expected to commence in early May 2015. Target 92, Prospect 71 and the mineralised granite targets within 2km of Bongou will all be tested in this program."

¹ Reported to the ASX on 20th February 2015.

² This drill result was first reported to the ASX on 23rd April 2012 and was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

³ 184,000oz 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)

Introduction

PDI has identified nearly 100 exploration targets near Bongou (Figure 1) through a rigorous ranking process focused on prospects with Bongou-like geological and geophysical characteristics (Figure 2). Of these, 16 have now been prioritised for testing in the current field season.

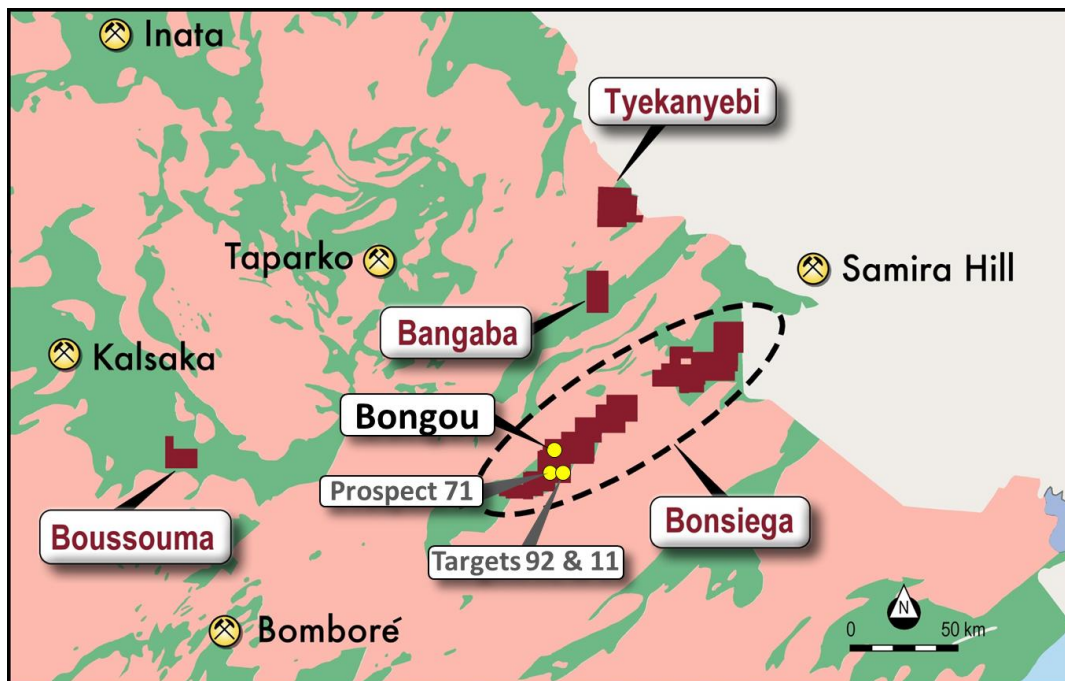


Figure 1: Locality map of PDI permits in eastern Burkina Faso, showing location of Bongou, Prospect 71 and Targets 11 and 92.

Since December 2014, the Company has completed six ground magnetic surveys and completed power auger and soil geochemical programs on eight targets. Power auger drill results from three of these targets are reported here: Target 92, Prospect 71 and Target 11 (Figure 2).

Power Auger Drill Program

Power auger drilling totalling 472 holes for 1,735m obtained “interface”¹ samples from the three locations shown on Figure 2 during March 2015. The three areas are largely covered by superficial materials (soil and/or alluvium). The samples were assayed at the SGS laboratory in Ouagadougou.

Encouraging gold values were recorded at all three locations. Peak values of 4.1 g/t Au, 0.7g/t Au and 0.5 g/t Au were obtained from Target 92, Prospect 71 and Target 11 respectively. Previous auger drilling at Prospect 71 had obtained values of up to 4.7g/t Au².

¹ Drill samples collected from the interface between the superficial cover and weathered bedrock.

² ASX release dated 20th February 2015

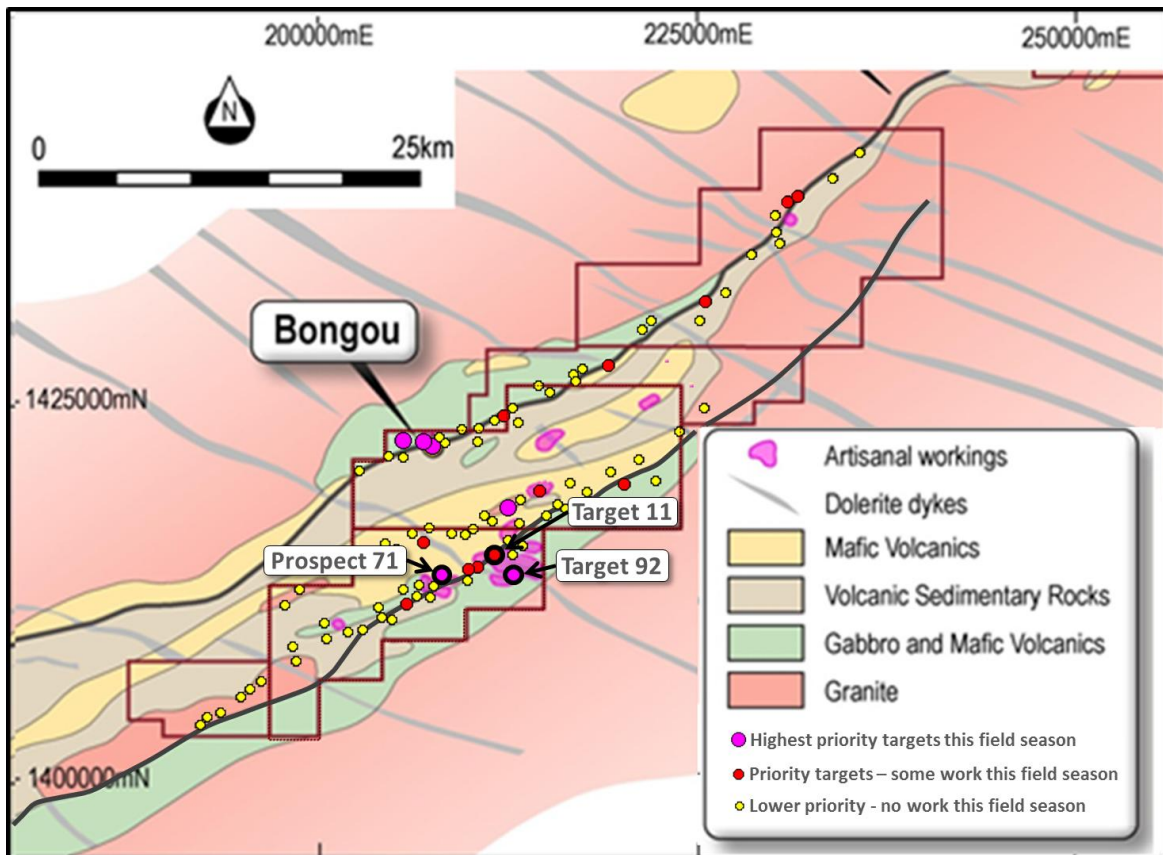


Figure 2: Target locality map – SW Bonsiega permit group, Eastern Burkina Faso. The ongoing work program is assessing the targets shown as red and magenta dots.

Target 92

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. In addition, new geological mapping in 2014 identified east-west geological features within the new grid area that were not known previously, further enhancing the target’s prospectivity.

Power auger drilling was carried out on 100m and 200m spaced lines, with holes located 25m apart along each line. This drilling revealed a large gold anomalous area at a 20ppb Au cut-off extending **the full 2.8km length of the grid** over a **width of between 200m and 600m** (Figure 3). Within this zone, there are multiple areas with values above 50ppb Au. Of these the largest (Target 92-South, Figure 3) is **2km long and up to 200m wide** with **peak values of 4070ppb, 796ppb and 529ppb Au**. This area alone is large enough to contain a substantial gold deposit in its own right.

Infill power auger drilling is now in progress on the high priority areas within the Target 92 grid to identify the highest priority locations for air core/RAB drilling in May 2015.

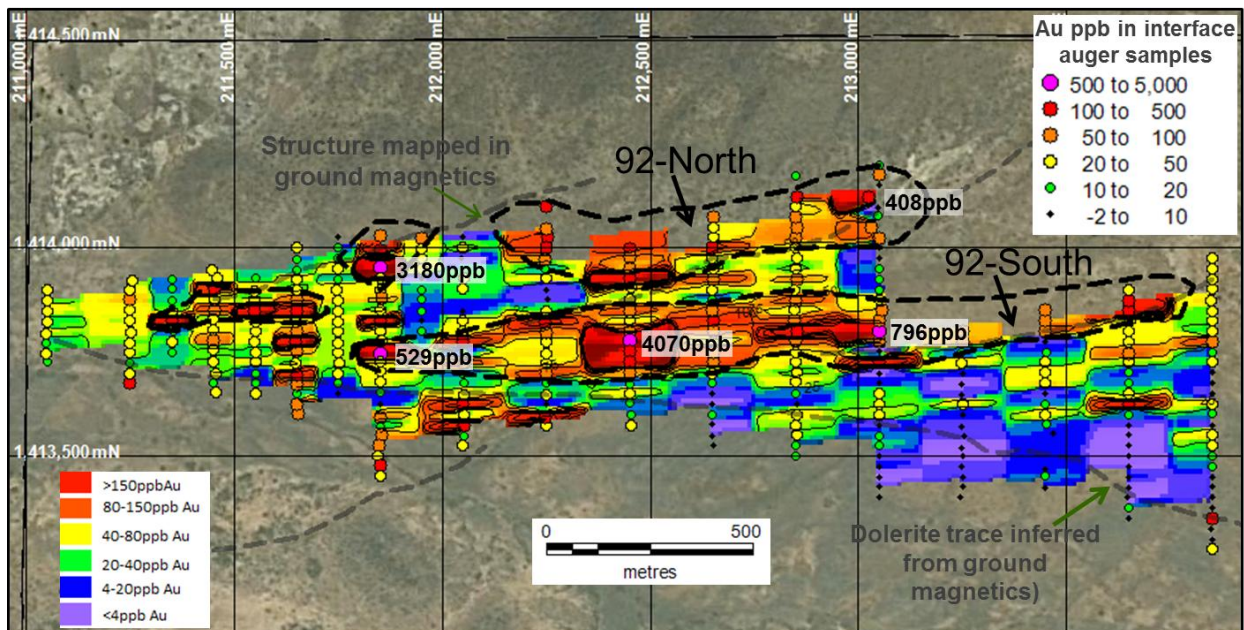


Figure 3: Target 92 contoured gold geochemical data plot on satellite imagery background. Contour intervals are 25ppb Au up to a maximum value of 200ppb Au. Individual auger locations are colour coded by grade interval. The black dashed line shapes encompass targets which are currently being followed up with infill auger drilling. The paler grey dashed lines are structures interpreted from a ground magnetic survey of the prospect; a series of ENE oriented structures (possible shear zones) may control the distribution of gold values in the larger anomalies.

Prospect 71

Drilling completed in 2012 intersected **24m at 2.1 g/t Au from 26m³** in RC drill hole PSORC041, which lies within the weaker, northern gold anomaly in Figure 4. At the time of drilling, the interpreted strike direction of the drill targets was NNE, based on nearby artisanal mine workings. PDI's new ground magnetic survey has changed this interpretation by indicating the presence of a NW oriented structure through the target and thereby provided guidance for the next phase of drilling

The southern anomaly (Figure 4) consists of two zones which are inferred to be oriented north-west along two structures identified by an earlier ground magnetic survey (ASX release dated 20 February 2015). The recent infill auger drill holes further constrained the location of these anomalies and obtained a peak value of 729ppb Au.

These targets are now ready to be tested by the planned air core/RAB drill program in May 2015.

³ This drill result was reported to the ASX in the March 2012 Quarterly Report and was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported

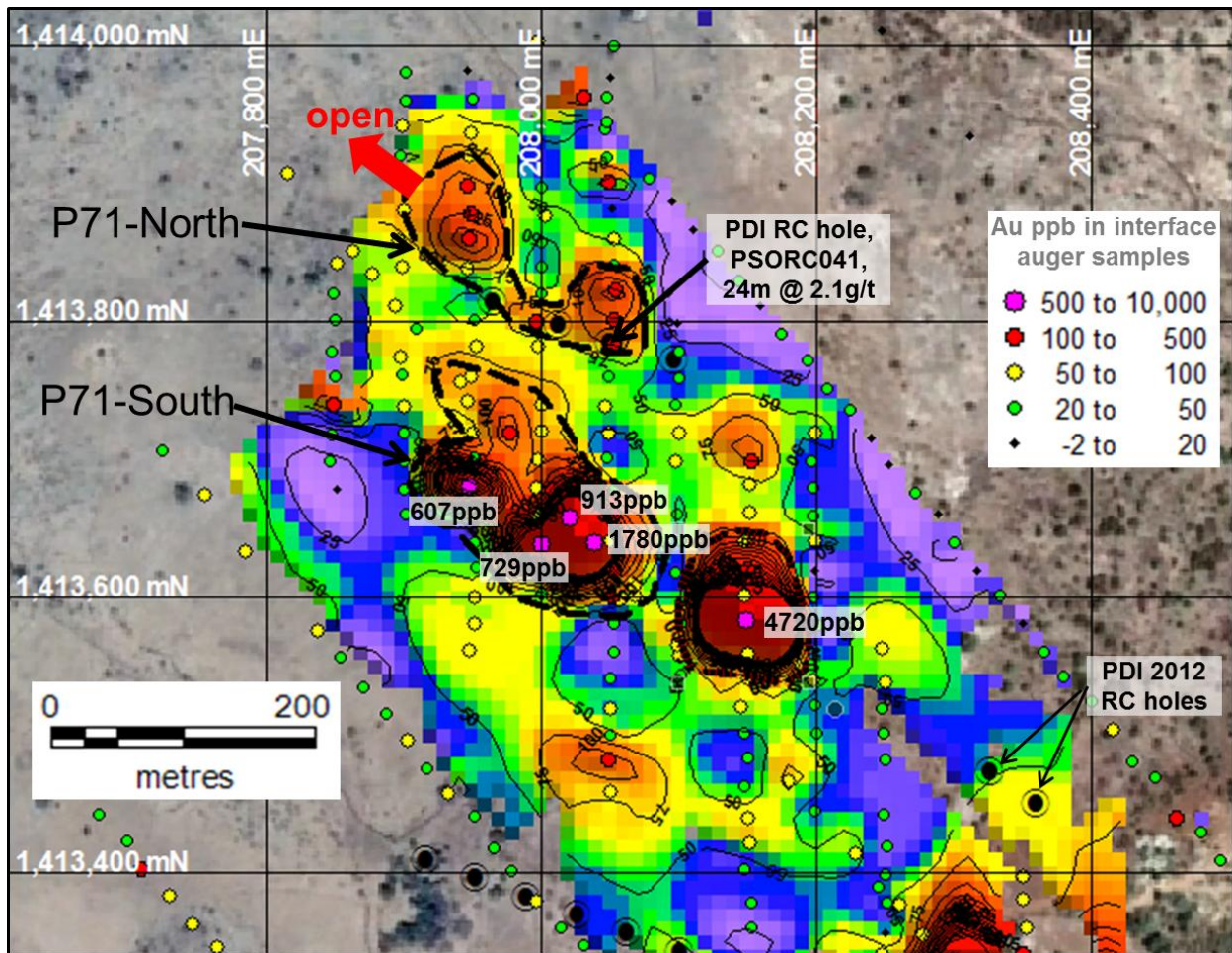


Figure 4: Prospect 71 contoured gold geochemical data plot on satellite imagery background. Contour intervals are 25ppb Au up to a maximum value of 400ppb Au. Individual auger locations are colour coded by grade interval. The black dashed line shapes encompass targets which will be tested by air core or RAB drilling.

Target 11

Anomalous gold results reported on 20 February 2015 were considered sufficiently encouraging to warrant follow up auger drilling on a 100 x 20m pattern over a 400m long area coinciding with an east-west structure interpreted from aeromagnetic data. Additional anomalous gold values were obtained from this program peaking at 506ppb Au (Figure 5).

Planned follow-up work

Infill power auger program on Targets 92, Prospect 71 and Target 11 are currently in progress along with power auger drilling and ground magnetic surveys on several other priority targets. All of this work should be completed in the next fortnight, following which a combined RC and air core/RAB program testing the best targets will commence. Previously identified gold mineralised granite targets near Bongou along with Prospect 71 and Target 92 will be included in this program. Also, depending geophysical and power auger results which are yet to be received, several other targets may be drilled in this program.

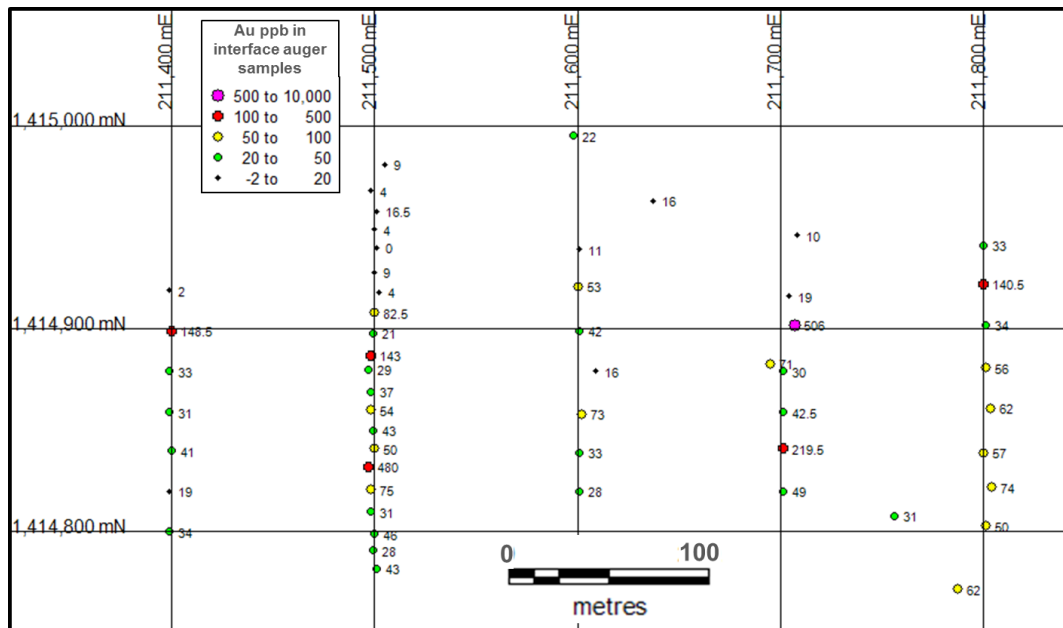


Figure 5: Target 11 gold geochemical data plot Individual auger hole locations are colour coded by grade interval.

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 3902 to 4373	Refer to Figures 3, 4 and 5 for map location of auger collars	Refer to Figures 3, 4 and 5 for map location of auger collars	See notes	All holes were drilled vertically	All holes were drilled vertically	Average hole depth was 3.7m. Minimum hole depth was 1m, maximum hole depth was 10m	See notes	See notes	See notes and Figures 3, 4 and 5

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 last metre of each drill hole. Consequently, results are presented in Figures 3, 4 and 5 of this announcement are 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 three areas (which are all near each other) is 279m. 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	The sampling described in this report refers to power auger drill samples 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

	<p>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.</p> <p>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.</p>	<p>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.</p>
Drilling	<p>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).</p>	<p>The power drilling was carried out using a 4WD-mounted power auger rig.</p>
Drill Sample Recovery	<p>Method of recording and assessing core and chip sample recoveries and results assessed.</p> <p>Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p>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.</p>	<p>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.</p>
Logging	<p>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.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean/Trench, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	<p>None of these samples will be used in a Mineral Resource estimation. Nonetheless, all power auger holes were geologically logged in a qualitative fashion.</p>
Sub-Sampling Technique and Sample Preparation	<p>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</p>	<p>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.</p>

	<p>sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p>	
Quality of Assay Data and Laboratory Tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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.</p>	<p>The analytical method used was an SGS aqua regia method with a low detection limit (1ppb) which is appropriate for a geochemical drilling program.</p> <p>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.</p>
Verification of Sampling and Assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes The verification of significant intersections by either independent or alternative company personnel. Discuss any adjustment to assay data</p>	<p>Hole twinning is not normally practised with power auger drilling.</p>
Location of Data points	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used Quality and adequacy of topographic control</p>	<p>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 Mercator (UTM), Datum WGS 84, Zone 31 - Northern Hemisphere.</p>
Data Spacing and Distribution	<p>Data spacing for reporting of Exploration Results</p> <p>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.</p> <p>Whether sample compositing has been applied</p>	<p>Power auger holes were spaced 10m (Prospect 71), 20m (Target 11) and 25m (Target 92) apart. Line spacings were 50m (at Prospect 71), 100m at Target 11 and 100m and 200m at Target 92. 10m spaced infill drill holes were employed on Prospect 71.</p> <p>This type of drilling is not appropriate for the calculation of any Mineral Resource estimate.</p>

<p>Orientation of Data in Relation to Geological Structure</p>	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	<p>North-south line orientations were employed at all three locations. At Targets 11 and 92, the geophysical features are approximately east-west. At Prospect 71, there are both NE and NW oriented features and the whole area is under cover, so a north-south orientation was chosen to establish what the most likely target orientation would be.</p>
<p>Sample Security</p>	<p>The measures taken to ensure sample security</p>	<p>Reference samples are stored at PDI's sample store in Ouagadougou, Burkina Faso.</p>
<p>Section 2 Reporting of Exploration Results</p>		
<p>Mineral Tenement and Land Tenure Status</p>	<p>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.</p> <p>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.</p>	<p>The three locations reported here all lie 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..</p> <p>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.</p> <p>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.</p>
<p>Exploration Done by Other Parties</p>	<p>Acknowledgment and appraisal of exploration by other parties.</p>	<p>Past exploration over target areas consisted of wide spaced soil sampling and an aeromagnetic survey.</p>
<p>Geology</p>	<p>Deposit type, geological setting and style of mineralisation.</p>	<p>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.</p>
<p>Drill Hole Information</p>	<p>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:</p> <ul style="list-style-type: none"> • 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 	<p>See Table 1 and the notes that accompany it. Individual power auger hole results from the 472 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 Figures 3, 4 and 5.</p>

	<ul style="list-style-type: none"> 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. 	
Data Aggregation Methods	<p>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.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	No weighted averaging or truncation methods were used for the power auger results.
Relationship Between Mineralisation Widths and Intercept Lengths	<p>These relationships are particularly important in the reporting of Exploration Results</p> <p>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').</p>	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 plan view of drill hole collar locations and appropriate sectional views.	Appropriate maps are provided in Figures 3 and 4.
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 Figures 3, 4 and 5 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	Apart from the previous power auger results and structures interpreted from ground magnetic data and the dolerite orientation shown in Figure 3, there are no other exploration data which are relevant to the results reported in this release.

	deleterious or contaminating substances.	
Further Work	<p>The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	RAB or air core drilling is planned to test Prospect 71 and Target 92. It may also be carried out Target 11 depending on the results of infill power auger drilling at that location.

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-pittable 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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