



20th October 2015

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: \$1.95M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

Phil Henty
Non-Executive Director

Tim Markwell
Non-Executive Director

New 6km long gold soil anomaly in northern Cote D'Ivoire

Predictive Discovery Limited (ASX:PDI) is pleased to report on new results from exploration work on the Company's Boundiali permit in northern Cote D'Ivoire by Joint Venture partner, Toro Gold Limited. Highlights include:

- **5.6 km long north-south gold-in-soil anomaly, with peak value of 0.8g/t Au.**
- New gold anomaly in the **same greenstone belt as Tongon and Syama Mines.**
- Anomalous gold results on 8 lines 800m apart with anomalous values occurring over widths of **up to 1 km** across a topographic high. Highly encouraging gold results given Toro Gold's very wide-spaced initial sampling grid (800 x 200m).
- Infill sampling expected to commence soon.

Mr Paul Roberts, the Predictive's Managing Director said: *"We are highly encouraged by these new soil results. The new 6km long anomaly suggests that a significant new gold mineralised system may be present in the Boundiali permit. 36 anomalous gold values were obtained on samples taken 200 metres apart on eight lines spaced at 800 metres. With this sample spacing, just 3 or 4 anomalous gold values on 2 lines could be enough to represent a large underlying gold ore deposit."*

These results further confirm the excellent progress that Toro Gold is making on Predictive's ground in Cote D'Ivoire and add to the excellent rock chip and soil geochemical results reported from the Kokoumbo permit on 15th September 2015, including identification of another 6km long gold-in-soil anomaly and rock chip samples containing up to 98g/t Au."

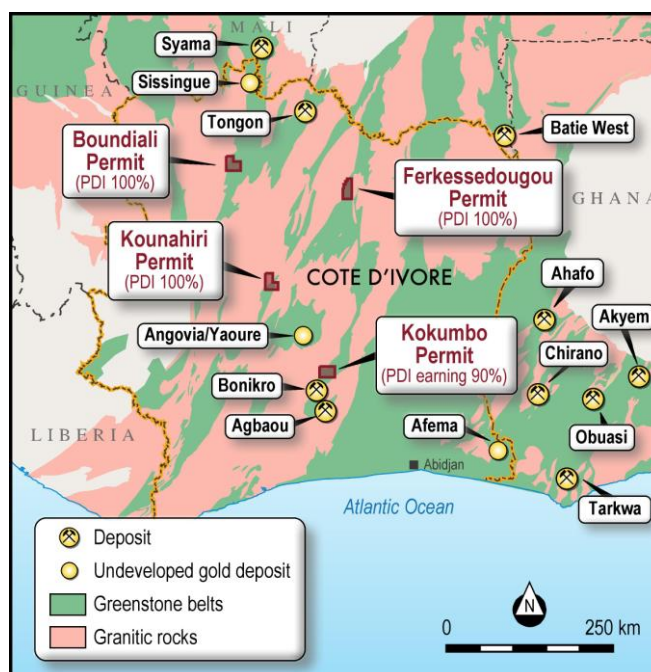


Figure 1: Locality map of PDI permits in Cote D'Ivoire

INTRODUCTION

Predictive is in Joint Venture with Toro Gold Limited (**Toro**), a Guernsey-based company, on all four of its permits in Cote D'Ivoire – Kokoumbo, Boundiali, Ferkessedougou and Kounahiri (Figure 1). Under the terms of the Joint Venture agreement, Toro can earn a 51% interest in Predictive Discovery Cote D'Ivoire SARL (Predictive CI), which holds Predictive's interest in the four permits, by spending US\$1 million on exploration and option payments. Once Toro has achieved its 51% interest, PDI may contribute 49% of expenditure from then on or dilute. If PDI decides to dilute, Toro can earn a further 14% in Predictive CI by spending an additional US\$2.5 million on exploration on the ground, leaving PDI with a 35% holding.

Boundiali Background

The Boundiali permit is located within a very well mineralised greenstone belt which contains the large operating Tongon and Syama gold mines in Cote D'Ivoire and Mali respectively. The southern part of this belt has had little exploration to date and represents a first class opportunity to make new large gold discoveries.

Toro Soil Survey - Boundiali

Toro carried out a soil sampling program covering the entire Boundiali permit on 800m spaced lines. Samples were collected 100m apart on each line but only every other sample was submitted for analysis, resulting in a reported station spacing of 800m x 200m.

2,350 soil samples were analysed for gold by fire assay at the ALS laboratory at Loughrea in Ireland. Anomalous gold values (>20ppb Au) were found in numerous locations throughout the grid (Figure 2). Clusters of anomalous gold values on more than one line, which might be indicative of a gold ore deposit, were particularly associated with plus 4ppb gold values obtained in Predictive's 2014 stream sediment BLEG sampling program¹ (Figure 2).

The largest cluster of anomalous gold values was obtained in the north-east part of the permit coinciding with two strong BLEG stream sediment gold values of 10.5 and 24.2ppb Au¹ (Figures 2 and 3). This zone extends over eight lines with a **strike length of 5.6km**, covers an area of **4.5 km²** and includes a **peak value of 790ppb Au (0.8g/t Au)**. In addition, there are NNE trends apparent within the overall anomaly (Figure 3) suggesting the presence of **higher grade mineralised gold structures** inside the broader soil anomaly.

Given the 800 x 200m sample spacing, these are excellent soil results. A 30m wide, one kilometre long gold deposit with a 50 to 100m low grade gold halo around it might generate just three or four anomalous values in such a grid. These results are suggestive of a much larger gold mineralised system than that. In addition, outside of the NE Boundiali anomaly, there are numerous other anomalous gold values which also require follow up (Figure 2).

¹ Reported to the ASX on 4th August 2014

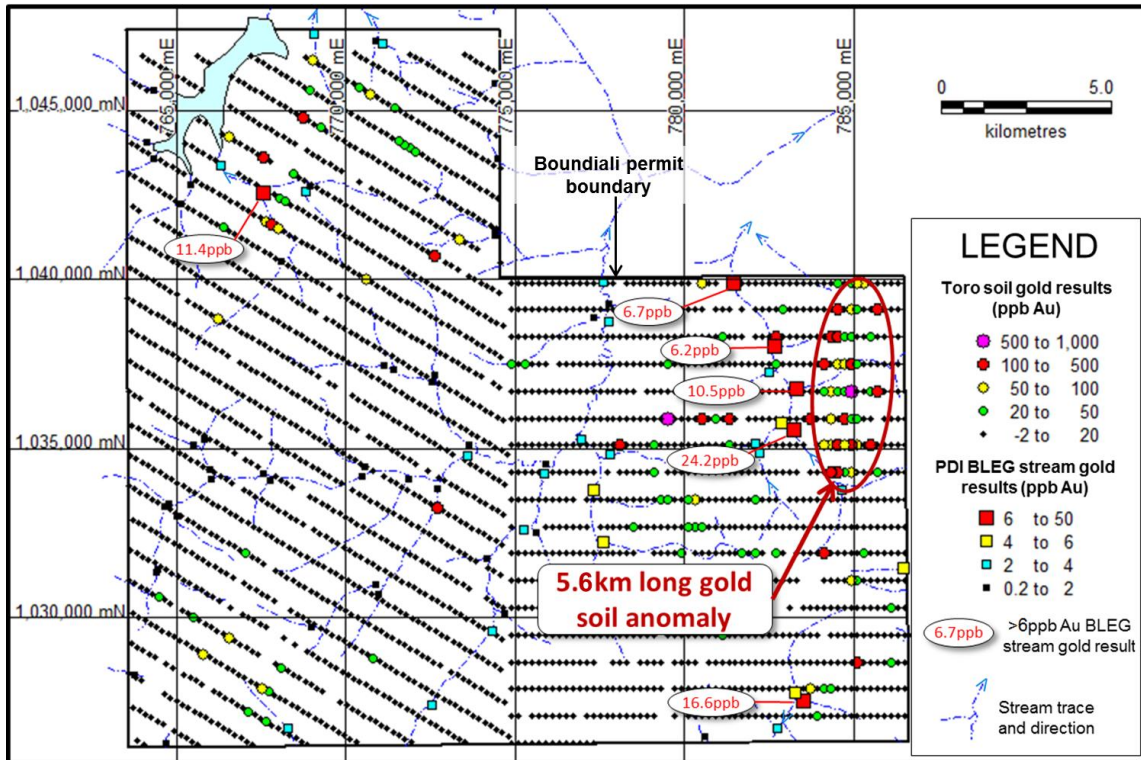


Figure 2: Toro Gold soil sampling grid covering the entire Boundiali exploration permit. Results in grade intervals are shown both for the Toro soil results and PDI's earlier BLEG stream sediment sampling results (reported on 4th August 2014). The large NE Boundiali gold anomaly is highlighted on this map.

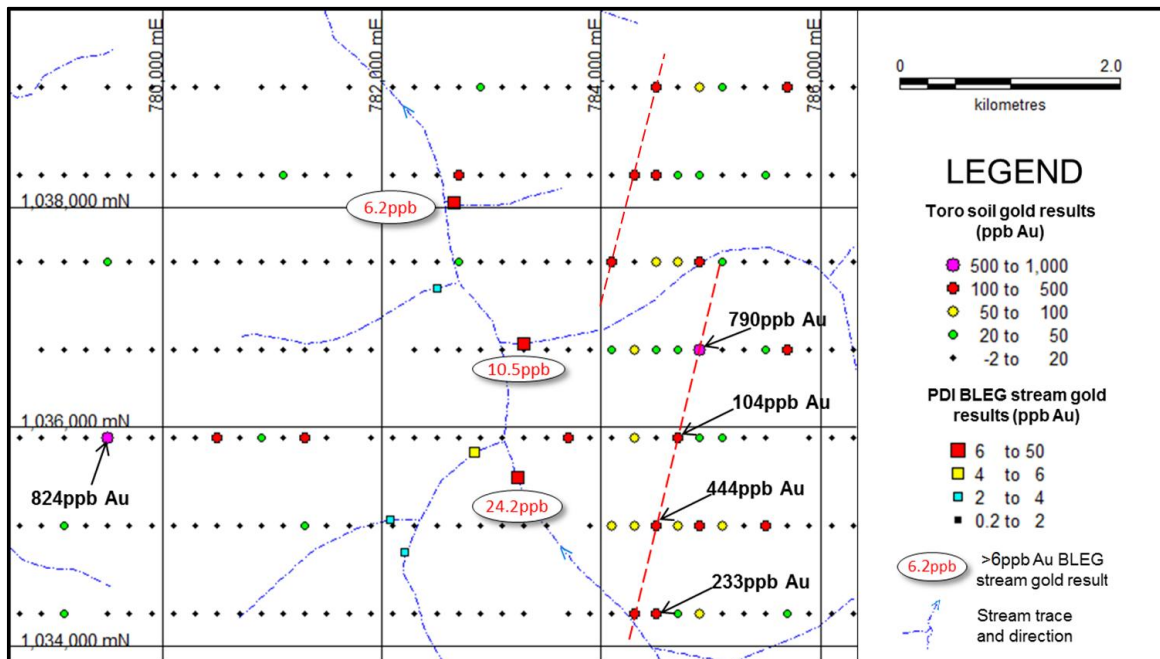


Figure 3: Toro Gold soil sampling grid in the NE portion of the Boundiali exploration permit. Results in grade intervals are shown both for the Toro soil results and PDI's earlier BLEG stream sediment sampling results (reported on 4th August 2014). Multi-line NNE gold anomalous trends within the broader NE Boundiali anomaly are highlighted.

Planned Follow-up Work

Toro plan to follow up these results by:

- Submitting 100m spaced samples which have already been collected across the two main anomalous areas, and
- Further field sampling across the two main soil anomalies on lines spaced at 200 metres.

This work will commence soon with results expected before the end of 2015.

Elsewhere in Cote d'Ivoire, new soil sampling results are expected from Toro's soil sampling on the Ferkessedougou and Kounahiri permits (Figure 2).

TABLE 1 – SOIL SAMPLING RESULTS

Sample numbers	Northing (WGS84-30N)	Easting (WGS84 – 30N)	RL	Hole dips	Azimuth	Hole Depth	From	Interval	Au (ppb)
Toro sample numbers in the range 14350-15000 and 16002-20189. In general. Every second sample was submitted for gold analysis	Refer to Figures 2-3 for map locations of all samples	Refer to Figures 2-3 for map locations of all samples	See notes	Not relevant to the samples described in this report	Not relevant to the samples described in this report	Soil samples were collected from 10-50cm depth	Not relevant to the samples described in this report	Not relevant to the samples described in this report	See notes and Figures 2-3
Notes: Soil sampling is a reconnaissance exploration technique. In the sampling and sample preparation method used by Toro, soil samples were collected from shallow holes and then dried and sieved at 80# at a local field camp. The prepared samples were then sent to the ALS laboratory in Loughrea in Ireland for fire assay analysis. RL ranges for the Boundiali permit are 360 to 442m. 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	The sampling described in this report refers samples obtained from the Boundiali exploration permit in Cote D'Ivoire. The soil and lag samples were collected from shallow holes with depths between 10 and 50cm.

	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.	
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).	This is not relevant to a soil sampling program.
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.	This is not relevant to a soil sampling program.
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.	Soil samples are described in terms of soil type, regolith and landscape classification and colour. Descriptions are largely qualitative.
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.	The sample preparation method is appropriate and standard for soil samples of this type.

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 has a very low (1ppb Au) detection limit which is appropriate for samples of this type.
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	This is not relevant to a soil sampling program.
Location of Data points	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. Specification of the grid system used Quality and adequacy of topographic control	Coordinates shown on the locality maps (Figures 2-3) are for Universal Transverse Mercator (UTM), Datum WGS 84, Zone 29 - 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	The soil sampling grid was 800 x 200m and is considered appropriate for a reconnaissance exploration grid of this type. No Mineral Resource can be estimated from these data.
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.	The samples were collected along lines which were designed to cross cut the interpreted bedding and foliation strike orientations in permit.
Sample Security	The measures taken to ensure sample security	Samples are stored securely at Toro Gold's field office in Yamoussoukro.
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	The Boundiali exploration permit was granted to PDI Cote D'Ivoire SARL in January 2014. Toro Gold Limited may earn a 51% interest in PDI Cote D'Ivoire SARL by spending US\$1

	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.	million.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	PDI is not aware of any effective gold exploration over the Boundiali permit however historic records are incomplete at the Cote D'Ivoire government geological agency.
Geology	Deposit type, geological setting and style of mineralisation.	The geology of the Boundiali permit consists of granite, metasediments, mafic volcanics and intrusives, and conglomerates.
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.	This is not relevant to a soil sampling program. Sample coordinate information is provided in Table 1 and on the maps included in this release.
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.	This is not relevant to a soil sampling program..
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').	This is not relevant to a soil sampling program.
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	Appropriate plans showing the locations of the soil samples, classified by results, are shown in this release.

	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.	Results from all assayed soil samples have been reported.
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.	All relevant, new exploration data is 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.	Follow-up infill soil sampling is planned on the permit as outlined in this release.

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-pit mineable 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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