



13th May 2016

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: 1.33B shares

Share Price: 0.8 cents

Market Capitalisation: \$10.6M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

David Kelly
Non-Executive Director

7.5m at 16.0g/t Au from surface in Cote D'Ivoire Diamond Drilling

Predictive Discovery Limited (ASX: PDI) is pleased to report encouraging initial assay results from the first three drill holes completed by Toro Gold Limited (Toro) in their recent diamond drilling program on Predictive's Kokoumbo Project in Cote D'Ivoire.

- Assay highlights:
 - KOD001: **7.5m at 16.0g/t Au** from 0m, including **1.5m at 74.2m** from 6.0m
 - KOD002: 7.5m at 1.6g/t Au from 0m
 - KOD003: **4.5m at 3.4g/t Au from 0m**
- Gold values are derived both from weathered bedrock and a thin layer of overlying soil or colluvium.
- Results received so far are for three holes out of the 15 holes drilled on the Kokoumbo exploration permit.
- More assay results expected in the next few weeks.
- A decision on the next phase of exploration at Kokoumbo will be made after all the drill results have been received.

Mr Paul Roberts, Predictive's Managing Director said: *"These are very encouraging initial drill results from surface and confirm the potential to discover good grade mineralisation at Kokoumbo."*

Toro continues to make excellent progress on the Toro Joint Venture tenements both at Kokoumbo and elsewhere with the start of RC drilling of the large gold-in-soil anomaly on the Boundiali permit in northern Cote D'Ivoire. We will continue to release drill assay data from both of these programs over the next 2-3 months."

TORO JOINT VENTURE BACKGROUND

Predictive is in joint venture with Toro Gold Limited (**Toro**), a UK-based company, on six granted permits and two permit applications in Cote D'Ivoire (Figure 1). The Toro Joint Venture operates through Predictive Discovery Limited's subsidiary, Predictive Cote D'Ivoire SARL (**Predictive CI**) of which Predictive now holds 49%. Toro can earn a further 14% of Predictive CI by spending US\$2.5 million, which would then lift its equity to 65%. At this stage, Predictive plans to contribute 35% of the ongoing expenditure once Toro achieves its 65% equity.

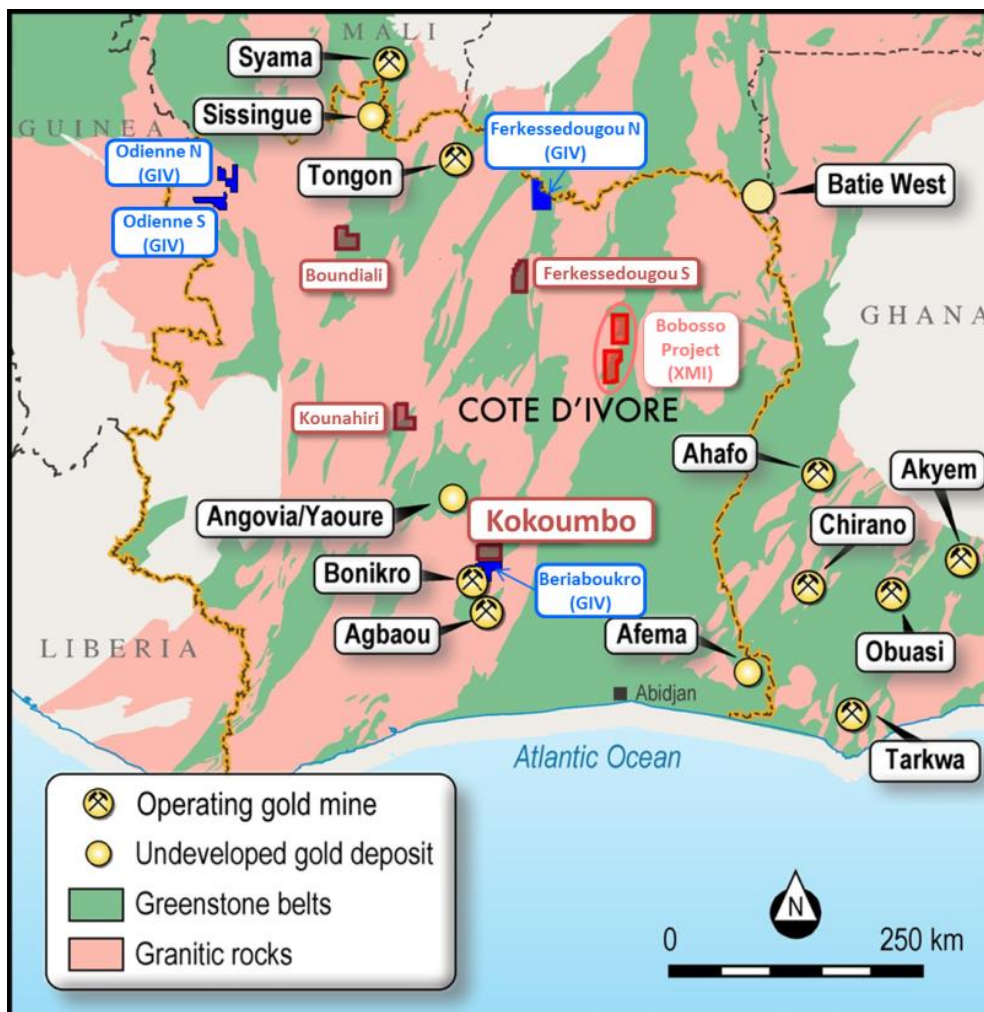


Figure 1: Locality map showing the initial Toro Joint Venture permits (in brown) including Kokoumbo (highlighted), the recently acquired GIV Joint Venture permits and permit applications (in blue), and the permits covered by PDI's agreement with XMI SARL over the Bobosso Project (red).

KOKOUMBO DIAMOND DRILLING PROGRAM

15 diamond drill holes totalling 1,610m were completed in April 2016. The diamond drilling program tested three prospects: Kokoumbo Hill, Sereme and Blonzwe (Figure 2).

Earlier chip-channel sampling at Kokoumbo Hill included significant results from three of four channel sampled zones (ASX release 10/11/15 and Figure 3):

- Kokoumbo KOCH001: **44m at 3.77g/t Au**, including **2m at 25.7g/t Au**;
- Kokoumbo KOCH003: **26m at 2.86g/t Au**;
- Kokoumbo KOCH004: 16m at 0.75g/t Au within a broader zone of 46m at 0.46g/t Au.

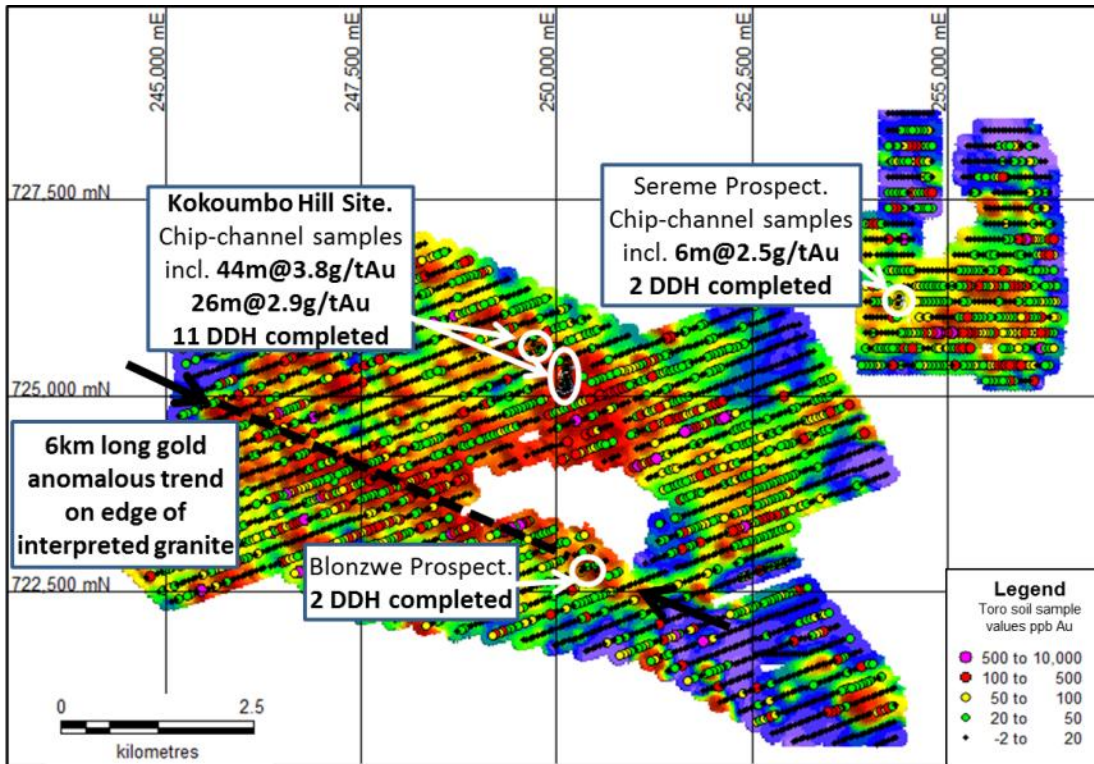


Figure 2: Location of Kokoumbo diamond drill locations, superimposed on a colour gridded image of gold in soil geochemistry (ASX release dated 15/9/15). The Kokoumbo Hill sites are in the centre of a large area of gold in soil anomalies and substantial historical and recent artisanal mine workings.

The drill core was cut at Toro’s camp in Yamoussoukro prior to submission to ALS for sample preparation. Toro has advised Predictive that there was some delay in getting the assay samples processed in Cote D’Ivoire so they were shipped to Senegal to prepare the pulps for assay instead. Three batches were submitted for assay at the ALS laboratory 6m at Loughrea in Ireland and the first batch of assay results is reported in this release.

The first three holes all intersected near-surface gold values, as follows (at a 0.5g/t Au cut-off):

- KOD001: **7.5m at 16.0g/t Au** from 0m, including **1.5m at 74g/t Au** from 6.0m.
- KOD002: 7.5m at 1.6g/t Au from 0m
- KOD003: **4.5m at 3.4g/t Au** from 0m

These holes each intersected a narrow layer of soil or colluvium followed by saprolite (i.e. very strongly weathered rock) of what are interpreted to be mafic volcanics. This presence of good gold grades well into the weathered bedrock – including the 74g/t Au value) is encouraging as it suggests a primary source. But the presence of gold in a shallow surface layer may also suggest supergene enrichment.

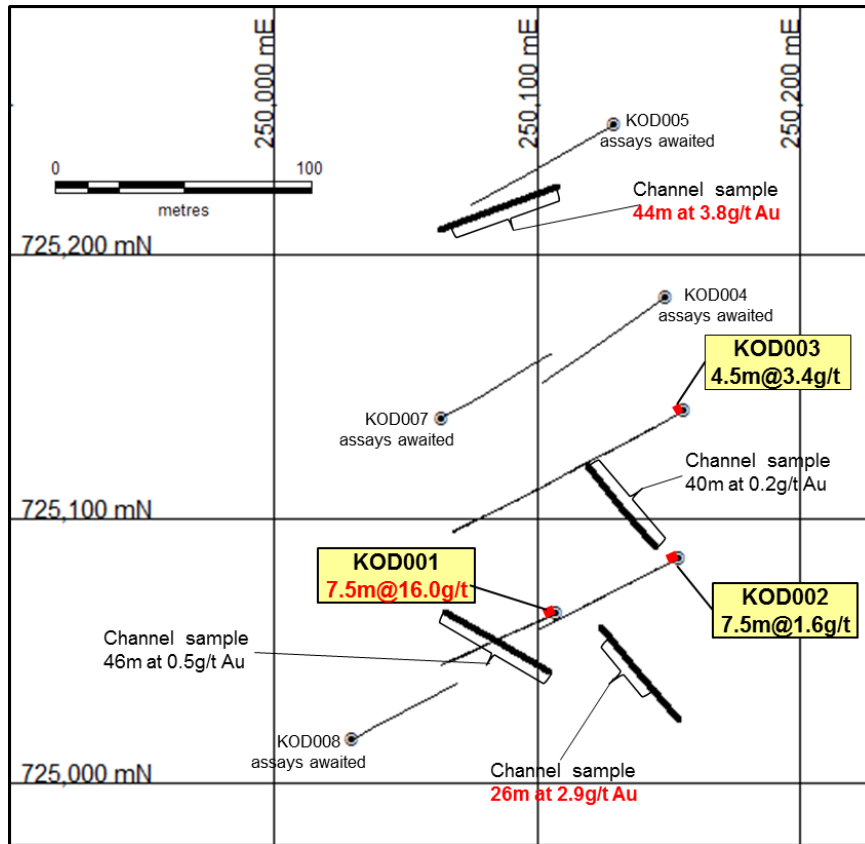


Figure 3: Drill plan of part of the Kokoumbo Hill prospect along with chip-channel sampling locations showing gold values (first reported on 10/11/15).

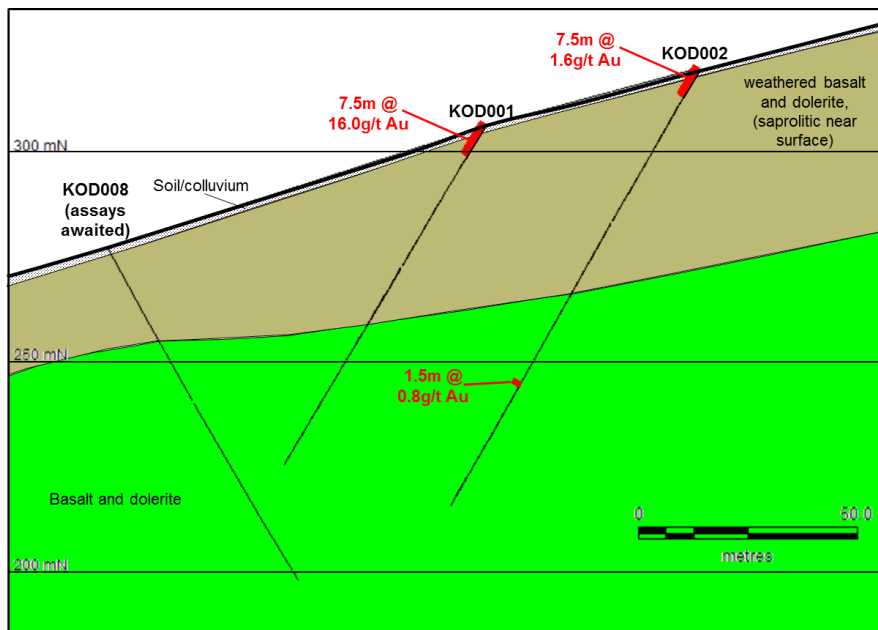


Figure 4: Cross section through the first two holes of the Kokoumbo drill program (see Figure 3 for location plan).



Figure 5: Photograph taken just as drill hole KOD001 was being set up. Note also the surrounding large area of recent surficial artisanal gold workings.

NEXT STEPS

Predictive and Toro are awaiting the results of the 12 remaining holes from this initial drill program on the Kokoumbo permit before discussing the objectives and timing of the next phase of exploration.

TABLE 1 – DRILL RESULTS – TORO GOLD DIAMOND DRILL PROGRAM (FIRST THREE HOLES)

Hole No.	UTM 30N Easting	UTM 30N Northing	RL (m)	Hole depth (m)	Hole dip (°)	Azimuth (°)	Depth from (m)	Interval in m (estimated true widths in brackets)	Au (g/t) at 0.5g/t Au cutoff grade	Comments
KOD001	250,107	725,064	306	94.05	-60	240	0	7.5 (5.0)	16.05	0-2m is soil/colluvium. Includes 1.5m at 74g/t Au from 6.0m
KOD002	250,154	725,085	320	120.53	-60	240	0	7.5 (5.0)	1.56	Rotated quartz block at surface followed by saprolite to 6m and clay to 8m
KOD002	250,154	725,085	320	120.53	-60	240	85.5	1.5 (true width not known)	0.88	
KOD003	250,156	725,141	339	196.92	-60	240	0	4.5 (3.0)	3.41	Soil/colluvium 0-1.5m, laterite 1.5-3.0m, saprolite from 3.0m onwards

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Technique	<p>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.</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>All of the sampling described in Table 1 refers to diamond drill core.</p> <p>Diamond drill core was cut in half and submitted for crushing, pulverisation and gold assay. The remaining half was retained in the core trays.</p> <p>The drill samples are judged to be representative of the rock being drilled because representative sub-sampling of both the core was achieved.</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>DD: Diamond drilling produced HQ and NQ sized drill core.</p>
Drill Sample Recovery	<p>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.</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>Diamond drill core recovery was measured in the standard way. No relationship between core recovery and grade has been observed.</p>

<p>Logging</p>	<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. The total length and percentage of the relevant intersections logged.</p>	<p>Logging of DD records lithology, mineralogy, mineralisation, alteration, structure, weathering and other features of the samples. Logging of sulphide mineralization and veining is quantitative. All holes were logged in full.</p> <p>No judgement has yet been made by independent qualified consultants on whether the geological and geotechnical logging has been sufficient to support Mineral Resource estimation, mining and metallurgical studies.</p>
<p>Sub-Sampling Technique and Sample Preparation</p>	<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 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.</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>	<p>The core was cut in half longitudinally. Half core samples were collected for assay, and the remaining half core samples stored in the core trays.</p> <p>Core samples were submitted for assay in 1.5m intervals.</p> <p>The sampled material is considered to be representative of the core as a whole.</p>
<p>Quality of Assay Data and Laboratory Tests</p>	<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>All samples were assayed for gold by 50g fire assay at the ALS laboratory in Loughrea.</p> <p>At the lab, regular assay repeats, lab standards, checks and blanks were inserted and analysed.</p> <p>Unlabelled standards (Certified Reference Materials) were also inserted.</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>No holes have yet been twinned.</p> <p>Field data collection was undertaken by Toro Gold geologists and supervised by Toro Gold management.</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 positions were located using a hand held GPS with a location error of +/- 3m.</p> <p>Collar coordinates listed in the table are for the WGS84 datum, Zone 30 North.</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>The holes were drilled on approximately 50m-spaced cross sections.</p> <p>No judgement has yet been made by an independent qualified consultant on whether the drill density is sufficient to calculate a Mineral Resource.</p> <p>Diamond drill samples were not composited.</p>
Orientation of Data in Relation to Geological Structure	<p>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.</p>	<p>All drill holes reported here were drilled approximately at right angles to the anticipated strike of a target shallow east dipping zone. The gold values encountered to date appears to consist of a layer parallel to the surface.</p>
Sample Security	<p>The measures taken to ensure sample security</p>	<p>The drill core is stored securely at Toro's field office at Kplessou on the Kokoumbo permit.</p>
Audits or Reviews	<p>The results of any audits or reviews of sampling techniques and data</p>	<p>No audits or reviews of sampling techniques and data have been carried out given the reconnaissance nature of this drill program.</p>
Section 2 Reporting of Exploration Results		
Mineral Tenement and Land Tenure Status	<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 Kokumbo exploration permit was granted in June 2013. PDI Cote D'Ivoire SARL is earning a 90% interest in the Kokumbo permit from local partner, Ivoir Negoce. PDI Cote D'Ivoire SARL is a wholly owned subsidiary of PDI. Toro Gold Limited has earned a 51% interest in PDI Cote D'Ivoire SARL by spending US\$1 million.</p>

<p>Exploration Done by Other Parties</p>	<p>Acknowledgment and appraisal of exploration by other parties.</p>	<p>Extensive historical exploration has been carried out on the Kokumbo permit and was acknowledged and described in PDI's release to the ASX dated 10/6/14.</p>
<p>Geology</p>	<p>Deposit type, geological setting and style of mineralisation.</p>	<p>The geology of Kokumbo consists of granite, metasediments, mafic volcanics and intrusives, and conglomerates. Quartz-vein hosted mineralisation observed at Kokumbo is considered to be of the orogenic gold type.</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 • 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. 	<p>All of the required data is provided in Table 1 (above).</p>
<p>Data Aggregation Methods</p>	<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>	<p>All core was sampled in 1.5m intervals.</p> <p>No top cuts have been applied to the drill results.</p> <p>Up to 3m (down-hole) of internal waste is included.</p> <p>Mineralised intervals are reported on a weighted average basis.</p>
<p>Relationship Between Mineralisation Widths and Intercept Lengths</p>	<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>	<p>True widths are estimated for the shallow mineralised intervals.</p>

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.	An appropriate plan and cross section is included in the text of this document.
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.	All intercepts containing grades above 0.5g/t Au are reported in this release.
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 exploration data is either reported in this release or has been reported previously and is referred to in the release.
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>	Results of the rest of the Kokoumbo drilling are awaited after which a decision about follow-up drilling or other exploratory work will be made.

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 operates in Burkina Faso, West Africa where it has assembled a substantial regional ground position covering 1,500km² and is exploring for large, open-pit 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 substantial interests in a large portfolio of tenements in Côte D'Ivoire covering a total area of 3,937 km².

Competent Persons Statement

The exploration results and the Exploration Target 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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