



17th May 2017

First Diamond Drill Results from Boundiali, Cote D'Ivoire

Predictive Discovery Limited (ASX: PDI) is pleased to announce assay results from the first five diamond drill holes into the Nyangboue prospect, Boundiali Project, one of the Company's joint ventured exploration permits with Toro Gold Limited in Cote D'Ivoire.

Drill results included:

O NDC001:

- 4.5m at 6.6g/t Au from 75m within a broader mineralised interval of 21m at 1.7g/t Au, and
- 3.0m at 4.1g/t Au from 176m,
- both within a broader mineralised interval of 118.5m averaging 0.5g/t Au

o NDC003:

- 4.5m at 2.9g/t Au from 43.5m, and
- 1.5m at 10.0g/t Au
- both within a broader mineralised interval of 54m averaging 0.7g/t
 Au
- □ Visible gold observed in thin quartz veins (see Figure 1).
- □ RC drilling on the southern and eastern gold-in-soil anomalies on the Boundiali permit is now underway.

Mr Paul Roberts, Predictive's Managing Director said: "Our geological understanding of the Nyangboue mineralised system has been improved by this diamond drill program. Oriented diamond drill core has shown that the main gold mineralised zone coincides with a contact between coarser and finer grained sheared sedimentary rocks. Also, the mineralised zone appears to strike NNE and dip steeply east, approximately parallel to the shear orientation. Based on the drilling so far, there may be some supergene enrichment and broadening of the gold mineralised zones in weathered rock in the top 40-50m but good grades also persist to depth in the fresh rock below".



Figure 1: Visible gold (circled), several millimetres across, in a folded quartz vein in diamond drill core

Predictive Discovery

ASX

Announcement

Limited is a gold exploration company with strong technical capabilities focused on its advanced gold exploration projects in West Africa.

ASX: PDI

Issued Capital: 1.63B shares

Share Price: 0.9 cents

Market Capitalisation:

\$14.6M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts

Managing Director

David Kelly
Non-Executive Director



INTRODUCTION

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 (Figure 2). The southern part of this belt has had little exploration to date and represents a first-class opportunity to make new large gold discoveries.

Predictive was granted the Boundiali permit in January 2014. The Company's first exploration program on the permit was a BLEG stream sediment survey (ASX release dated 4/8/14) which obtained a series of strong stream sediment anomalies, the best of which, a 24ppb Au anomaly, lies downstream of the Nyangboue gold mineralised zone intersected in the 2016 RC drilling program.

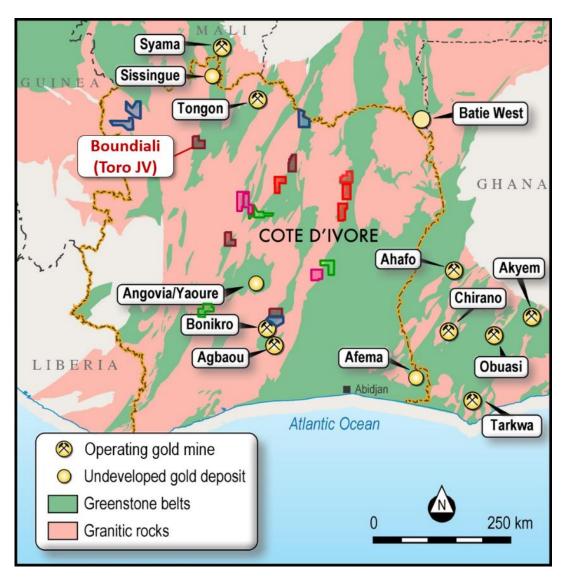


Figure 2: Locality map showing the location of Boundiali along with the other initial Toro JV permits (in brown), the GIV JV permits/permit applications (in blue), permits/applications covered by PDI's agreement with XMI SARL over the Bobosso Project (red), the recent wholly owned Ivoirian Resources SARL permit applications (in green) and the recent, optioned Sika Resources SARL permit applications (in magenta).



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, including Boundiali (Figure 2). 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 has been earning a further 14% of Predictive CI by spending US\$2.5 million, to lift its equity to 65%. The Company has recently received formal notification from Toro that it has completed the required expenditure and has therefore earned 65%. Predictive intends to contribute 35% of the ongoing expenditure after completion of an audit of those expenses.

NYANGBOUE PROSPECT

RC drilling on the Nyangboue Prospect in 2016 obtained a series of highly encouraging intercepts (announced to the ASX on 23/6/16, 25/7/16, 8/8/16, 12/9/16 and 13/10/16) including:

- BRC003 28m at 4.04g/t Au from 3m, including 1m at 49.7g/t Au
- BRC004 20m at 1.97g/t Au from 0m
- BRC004 14m at 5.51g/t Au from 32m, including 1m at 31.6g/t Au
- BRC004BIS (twin hole) 20m at 10.45g/t Au from 38m including 1m at 145.5g/t Au
- BRC006 9m at 7.9 g/t Au from 99m including 1m at 44.7g/t Au
- BRC023 7m at 3.8g/t Au from 33m including 1m at 11.3g/t Au
- BRC048 28m at 1.55g/t Au from 1m including 1m at 27.4g/t Au
- BRC010 30m at 0.92g/t Au from 14m including 2m at 7.68g/t Au

Diamond Drilling

A 1,658m diamond drilling program was completed during the March Quarter. Ten holes were drilled, most of which were designed to test the central section of the gold mineralised zone encountered in the 2016 RC drill program (Figure 3). The objectives of the program were to:

- obtain orientated core within the mineralised zone to understand the geological controls on gold mineralisation encountered in the earlier RC drill program, and
- test several geophysical and geochemical targets.

The diamond drilling was carried out by Energold and the core samples were assayed by ALS at Loughrea in Ireland. Additional details about the program are provided in Table 1.

A table of drill results at a 0.5g/t Au cut-off grade is as follows:



Hole No.	Depth from (m)	Down- hole interval (m) ¹	Au (g/t) at 0.5g/t Au cut-off grade ²
NDC001	75	4.5	6.59
NDC001	85.5	1.5	0.73
NDC001	93	3.0	1.15
NDC001	136.5	1.5	1.42
NDC001	166.5	3.0	0.72
NDC001	175.5	3.0	4.09
NDC001	192	3.0	1.64
NDC001	225.5	3.0	0.94
NDC002	19.5	1.5	2.35
NDC002	36	4.5	0.91
NDC002	120	3.0	0.82
NDC002	141	1.5	2.61
NDC002	147	4.5	0.62
NDC002	168	1.5	0.88
NDC002	186	1.5	3.33
NDC002	192	3.0	0.60
NDC002	204	3.0	1.01
NDC003	19.5	1.5	1.69
NDC003	31.5	4.5	0.51
NDC003	43.5	4.5	2.91
NDC003	72	1.5	10.0
NDC004	48	1.5	0.67
NDC004	66	1.5	1.61
NDC005	30	3.0	1.25

Geological observations drawn from the diamond drilling include the following:

- The gold mineralisation appears to be concentrated on or near a regional contact between coarser grained conglomeratic sediments to the west and finer grained sandstones and shales to the east.
- Oriented core shows that the mineralised rocks are sheared with the foliation (or shear)
 orientation being NNE with a steep dip to the east. The gold in soil geochemical anomaly
 is also orientated NNE which suggests that the primary control on gold mineralisation is the
 shearing, especially in the area near the regional sheared contact between coarser and finer
 grained sediments.
- Visible gold (Figure 1) has been observed within or on the contact of thin quartz veins, a
 few of which are folded, which generally dip moderately to the west i.e. cross cutting the
 shear orientation. The veins in which gold is observed are typically quite thin, up to a few
 centimetres wide. Once this observation was made in the first diamond drill holes, the



- decision was made to drill the last few holes from west to east in order to sample this vein set as well as possible.
- As with most mineralised systems containing visible gold, standard fire assay gold methods
 have generated quite variable results, a phenomenon known as the "nugget effect". Check
 analyses with different methods (e.g. screen fire assays) are planned.
- The mineralised zones also contain disseminated sulphides oriented parallel to the shear orientation and some of the gold may be associated with them.

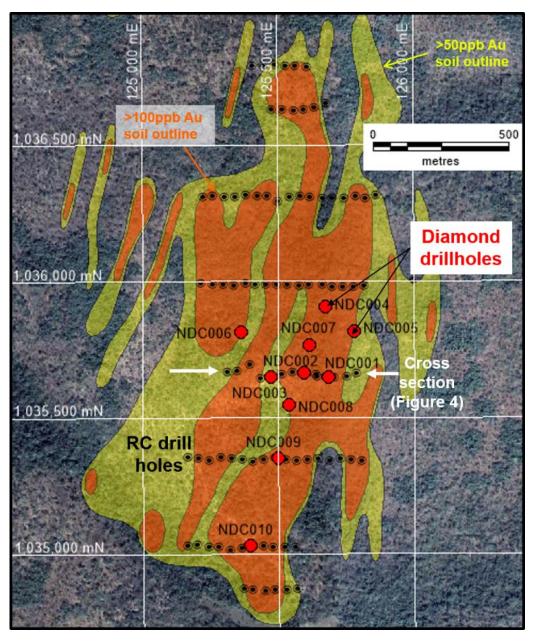


Figure 3: Diamond drill and RC drill hole collar locations on a gold-in-soil geochemical contour plan (reported to the ASX on 23/2/16) in the southern 2km portion of the Nyangboue Prospect. Gold geochemical contours are superimposed on satellite imagery.



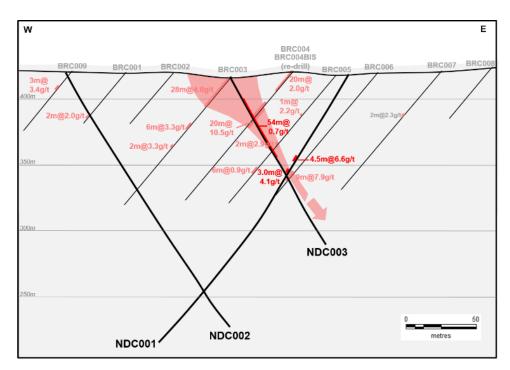


Figure 4: Cross-section through the first drilled cross section showing three new diamond drill holes (NDC001-003) and including several of the better intercepts from the diamond drilling program. An interpretation of the principal mineralised zone is shown in pink shading. The cross section also shows RC drill results reported to the ASX on 23/6/16 and 15/8/16.

Reverse Circulation Drilling

A 3,000m RC drill program has now commenced to test the southern and western soil gold in anomalies reported previously. These are now known as the Nyangboue South and Gbemou anomalies respectively (Figure 5).

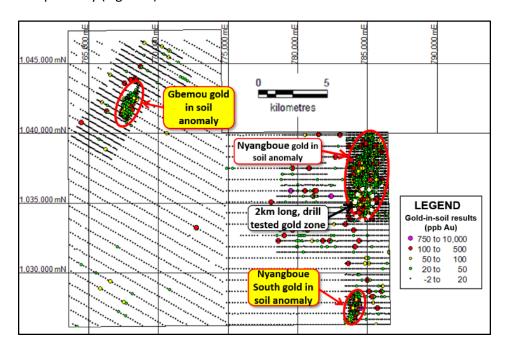


Figure 5: Toro Gold soil sampling grid covering the entire Boundiali exploration permit (results reported to the ASX on 20/10/15 and 23/3/16. The two RC drilling target areas are highlighted in yellow.



TABLE 1 – DRILL RESULTS – TORO BOUNDIALI DIAMOND DRILL PROGRAM (NYANGBOUE PROSPECT)

Hole No.	UTM 29N Easting	UTM 29N Northing	RL (m)	Hole depth (m)	Hole dip (°)	Azim uth (°)	Depth from (m)	Down- hole interval (m) ¹	Au (g/t) at 0.5g/t Au cut- off grade ²	Comments
NDC001	1034885	784820	420	250.4	-60	270	75	4.5	6.59	Broader
NDC001	1034885	784820	420	250.4	-60	270	85.5	1.5	0.73	mineralised
NDC001	1034885	784820	420	250.4	-60	270	93	3.0	1.15	zones including
NDC001	1034885	784820	420	250.4	-60	270	136.5	1.5	1.42	some of these intervals are
NDC001	1034885	784820	420	250.4	-60	270	166.5	3.0	0.72	21m at 1.69g/t
NDC001	1034885	784820	420	250.4	-60	270	175.5	3.0	4.09	Au from 75m
NDC001	1034885	784820	420	250.4	-60	270	192	3.0	1.64	and 118.5m at
NDC001	1034885	784820	420	250.4	-60	270	225.5	3.0	0.94	0.53g/t Au , also
NDC002	1034885	784606	448	227.6	-60	90	19.5	1.5	2.35	from 75m
NDC002	1034885	784606	448	227.6	-60	90	36	4.5	0.91	A broader
NDC002	1034885	784606	448	227.6	-60	90	120	3.0	0.82	mineralised
NDC002	1034885	784606	448	227.6	-60	90	141	1.5	2.61	interval covering some of these zones averages 87m at 0.39g/t Au from 120m.
NDC002	1034885	784606	448	227.6	-60	90	147	4.5	0.62	
NDC002	1034885	784606	448	227.6	-60	90	168	1.5	0.88	
NDC002	1034885	784606	448	227.6	-60	90	186	1.5	3.33	
NDC002	1034885	784606	448	227.6	-60	90	192	3.0	0.60	
NDC002	1034885	784606	448	227.6	-60	90	204	3.0	1.01	
NDC003	1034901	784729	419	145.8	-60	90	19.5	1.5	1.69	A broader
NDC003	1034901	784729	419	145.8	-60	90	31.5	4.5	0.51	mineralised
NDC003	1034901	784729	419	145.8	-60	90	43.5	4.5	2.91	interval covering
NDC003	1034901	784729	419	145.8	-60	90	72	1.5	10.0	some of these zones averages 54m at 0.69g/t from 19.5m.
NDC004	1035144	784807	418	160.0	-60	135	48	1.5	0.67	"Scissor" holes
NDC004	1035144	784807	418	160.0	-60	135	66	1.5	1.61	testing NE
NDC005	1035057	784913	421	153.8	-60	315	30	3.0	1.25	oriented structure in ground magnetic data

 $^{^1}$ No true widths reported because the orientation of the gold mineralisation is not yet properly understood (gold values are controlled both by the east-dipping shearing and west-dipping quartz veins.

 $^{^2}$ Minimum grade x width interval reported of 1 g/t x m. Maximum down-hole internal waste of 1.5m. All assayed in 1m intervals.

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	All of the sampling described in Table 1 refers to diamond drill holes.	



	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.	A representative subsample of the core was obtained by splitting or cutting the core lengthways. The assayed drill samples are judged to be representative of the rock being drilled because representative sub-sampling of the diamond core samples was achieved.
	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.	
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 drilling was carried out by diamond drilling.
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.	Core recovery was assessed by measurement of recovered core. The Toro site geologists report that recoveries are consistently good.



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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.	Logging of diamond drill holes 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. 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.
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 subsampling 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 core was cut in half. The sampled material is considered to be representative of the samples as a whole.
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)	All samples reported in t0his release were assayed for gold by 50g fire assay at the ALS laboratory in Loughrea in Ireland. High grade samples were checked at the laboratory by gravimetric means. At the lab, regular assay repeats, lab standards, checks and blanks were inserted and analysed. Unlabelled standards (Certified Reference Materials), blanks and duplicate samples were also inserted by Toro personnel on site at Boundiali. Samples are prepared at Toro's sample preparation laboratory at Mako in Senegal.



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	and precision have been established.	
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	One RC hole was twinned (BRC004) previously but no twinning was undertaken in this program. Field data collection was undertaken by Toro Gold geologists and supervised by Toro Gold management.
Location of Data points	Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used Quality and adequacy of topographic control	Collar positions were located using a hand held GPS with a location error of +/-3m. Collar coordinates listed in the table are for the WGS84 datum, Zone 29 North.
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 holes reported here were drilled as shown on the included locality plan. No judgement has yet been made by an independent qualified consultant on whether the drill density is sufficient to calculate a Mineral Resource. The samples were not composited.
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	All drill holes reported here were drilled approximately at right angles to the anticipated strike of the gold mineralisation.



	considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample Security	The measures taken to ensure sample security	The core samples are currently stored securely at Toro Gold's compound in the town of Boundiali.
Audits or Reviews	The results of any audits or reviews of sampling techniques and data	No audits or reviews of sampling techniques and data have been carried out given the reconnaissance nature of this drill program.
	Section 2 Re	porting 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 Boundiali exploration permit was granted to PDI Cote D'Ivoire SARL in January 2014.Toro Gold Limited may earn a 65%% interest in PDI Cote D'Ivoire SARL by spending US\$3.5 million. Subject to an audit, this expenditure has now been achieved.
	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.	
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 prior to PDI's initial work, 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 • hole length • hole length 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.	All of the required data is provided in Table 1 (above).
Data Aggregation Methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum	All diamond core samples were collected and assayed in 1.5m intervals.



	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 top cuts have been applied to the drill results. Up to 1.5m (down-hole) of internal waste is included except in the reported broader mineralised intervals were variable but sometimes large amount of internal waste were included. Mineralised intervals are reported on a weighted average basis.
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 have not been estimated as the gold appears to occur both in east dipping shearing and west-dipping quartz veins so it is difficult to determine at this stage, how to calculate true width. Some petrographic studies are required to help resolve this question.
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 showing the location of the drill holes are included in 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 and at least 1g/t x m with a maximum thickness of internal waste of 1.5m 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

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.

Half of the drill results from the diamond drill program have not yet been received. Further work will be considered once the results of this drilling program come to hand. RC drilling on nearby soil geochemical anomalies is now in progress.

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 1,200km² 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 large portfolio of permits and permit applications in Côte D'Ivoire covering a total area of over 6,000 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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