31 January 2017

ASX Announcement

Quarterly Report for the Period Ending 31st December 2016

EXPLORATION

Côte d'Ivoire - Toro Gold Joint Venture

- **17km long gold-anomalous soil trend** on **Ferkessedougou North** permit obtained:
  - Peak values of 598ppb, 371ppb, 352ppb Au.
  - Gold anomaly distribution apparently controlled by large structures in aeromagnetic images.
  - Very wide spaced initial sample spacing (800 x 200m)
- Completion of induced polarisation and ground magnetics surveys on **Boundiali permit** in preparation for **March Quarter diamond drilling**
- Completion of infill soil sampling programs on Ferkessedougou North, Beriaboukro and Boundiali permits, totalling 2,153 samples. Results are expected shortly.

Côte d'Ivoire – Bobosso Project

- Advanced discussions with potential funding partners to enable diamond drilling to proceed.

Burkina Faso

- Advanced discussions with potential JV partner on Bonsiega Project.

Planned March Quarter Exploration Program

Côte d'Ivoire

- Toro JV:
  - Boundiali – diamond drilling program
  - Drill planning on other prospects, followed by RC drilling programs in March or June Quarters
- Bobosso – ground magnetics and geological mapping, tender diamond drilling program.
- New ground acquisitions are expected.

Burkina Faso

- Ongoing discussions with potential JV partners.

CORPORATE

- $2.7M cash at 31st December 2016 and no debt.

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: 1.63B shares

Share Price: 1.2 cents

Market Capitalisation: $19.6M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

David Kelly
Non-Executive Director

INTRODUCTION

PDI's principal focus is in the countries of Cote D'Ivoire and Burkina Faso in West Africa.

In Cote D'Ivoire, the Company has interests in six granted exploration permits and two permit applications, totalling 2,936km^2 (Figure 1), which are being actively explored under the terms of a joint venture with Toro Gold Limited. PDI is also conducting exploration under an agreement on the Bobosso Project, which covers a further 1,200km^2 (Figure 1).

In Burkina Faso, the Company has an effective Burkina-based team and a large regional tenement package in the north-east of the country covering 1,222km^2 (Figure 6). PDI's exploration focus is on the high-grade Bongou gold discovery and the surrounding area. A formal Mineral Resource Estimate on Bongou resulted in 184,000oz of gold 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 4/9/14).

PDI also holds an Exploration Licence in Victoria (Figure xx) which was drilled in 2016 by joint venture partner, Cape Clear Minerals Pty Ltd.

Predictive's current strategy is to maintain a high level of exploration activity on all of its projects through project-level funding – either via joint ventures or direct cash investments into private companies which hold the Company's ground. The Toro and Cape Clear Joint Ventures are operating well and generating significant newsflow.

PROJECTS

CÔTE D'IVOIRE

CÔTE D'IVOIRE BACKGROUND

Predictive has been increasingly focused on Cote D'Ivoire in recent years. The country covers over a third of the highly prospective Birimian gold belt, more than any other country in West Africa. Cote D'Ivoire is highly underexplored for gold because the exploration investment boom in the last decade largely bypassed the country because of political instability. Since the accession of President Alassane Ouattara in 2011 and his comfortable re-election in 2015, and with investment certainty provided by an updated Mining Act and a forward-looking Mines Administration, Cote D'Ivoire has become a highly attractive exploration investment destination.

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 and with XMI SARL, an Ivoirian company, on two additional permits and one permit application covering the Bobosso Project (Figure 1). The Toro Joint Venture operates through Predictive Discovery Limited's subsidiary, Predictive Cote D'Ivoire SARL (**Predictive CI**). Predictive now has interests in exploration ground in Cote D'Ivoire covering 4,136 km^2.

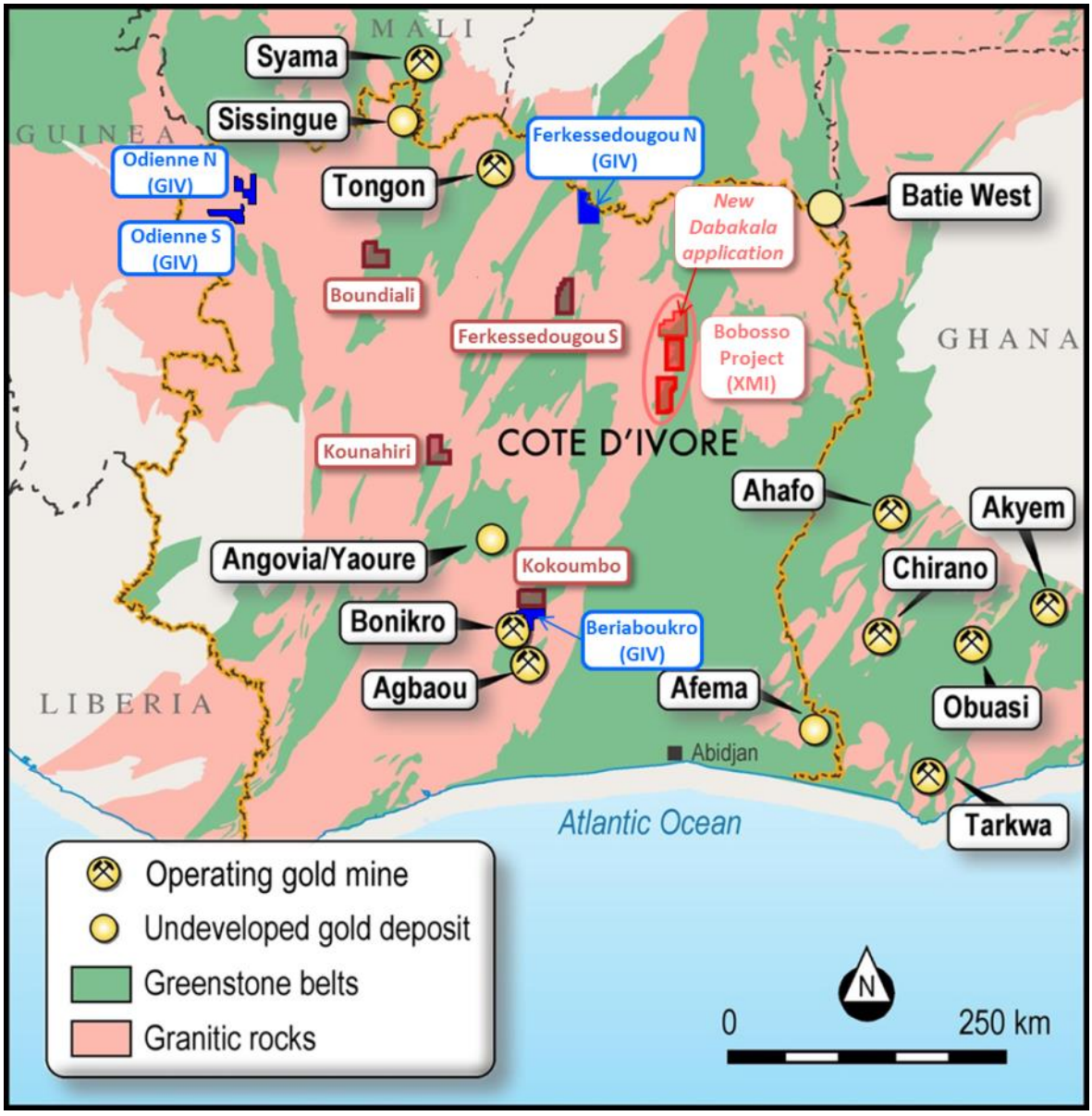

Figure 1: *Locality map showing the initial Toro Joint Venture permits (brown), location of the recently acquired GIV Joint Venture permits and permit applications (blue – ASX release dated 29/3/16), and the permits covered by PDI's agreement with XMI SARL over the Bobosso Project (red). Note location of XMI's recent Dabakala permit application.*

TORO GOLD JV

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 is earning a further 14% of Predictive CI by spending US$2.5 million, which will lift its equity to 65%. Predictive plans to contribute 35% of the ongoing expenditure once Toro achieves its 65% equity, which is expected in the March Quarter.

Boundiali Exploration Permit

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 1). 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 discovered a series of strong stream sediment anomalies, the best of which, a 24ppb Au anomaly, lies downstream of the new gold mineralised zone discovered in the recent drilling.

Nyangboue Prospect

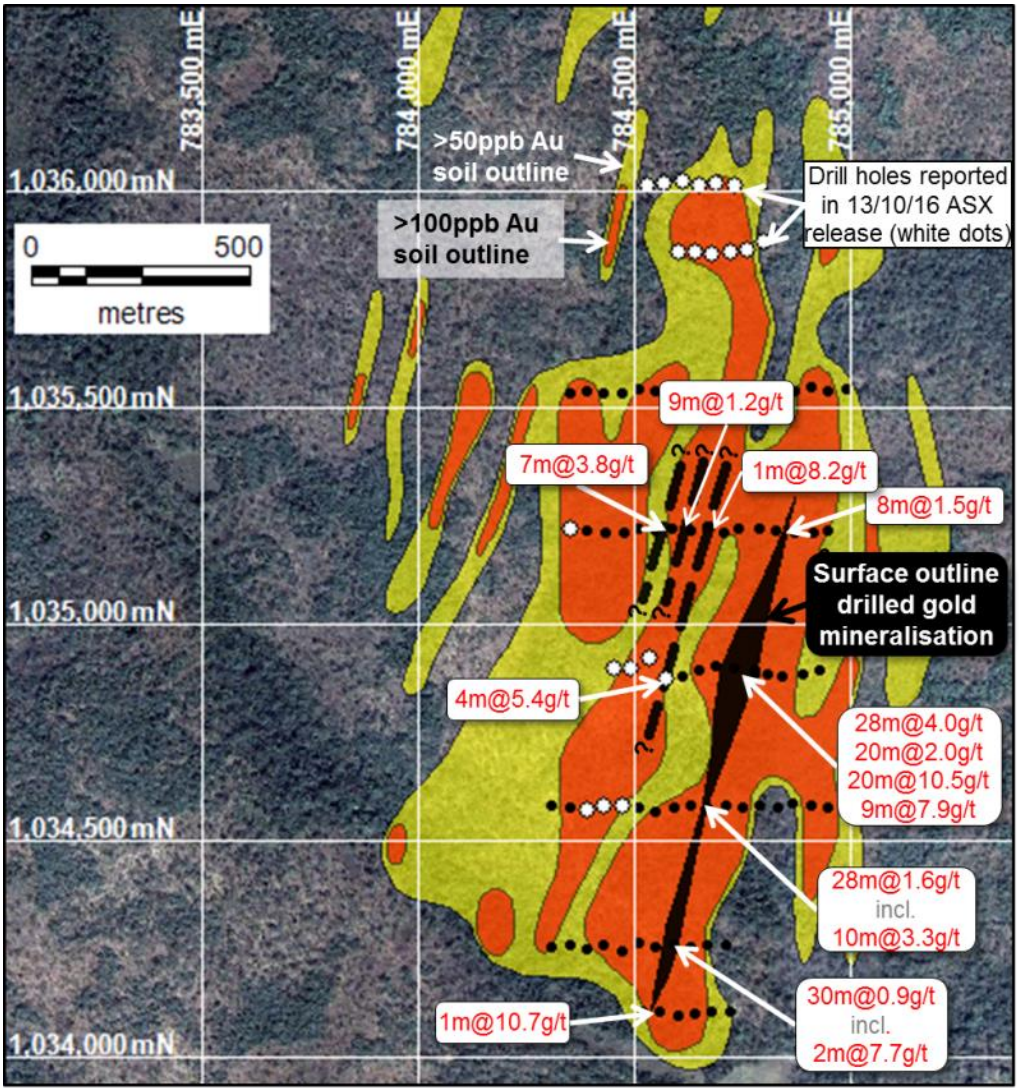

Figure 2: *RC drill hole collar locations on a gold-in-soil geochemical contour plan, highlighting key drill results, in the southern 2km portion of the Nyangboue Prospect (announced to the ASX on 23/6/16, 25/7/16, 8/8/16, 12/9/16 and 13/10/16). Gold geochemical contours are superimposed on satellite imagery.*

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**

Ground geophysical Surveys

An induced polarisation electrical geophysical survey and a ground magnetics survey covering the Nyangboue Prospect were completed in November-December 2016 (Figures 3 and 4). The results from this work are in the process of being integrated into the geological interpretation in preparation for a diamond drilling program which will commence in early February 2017.

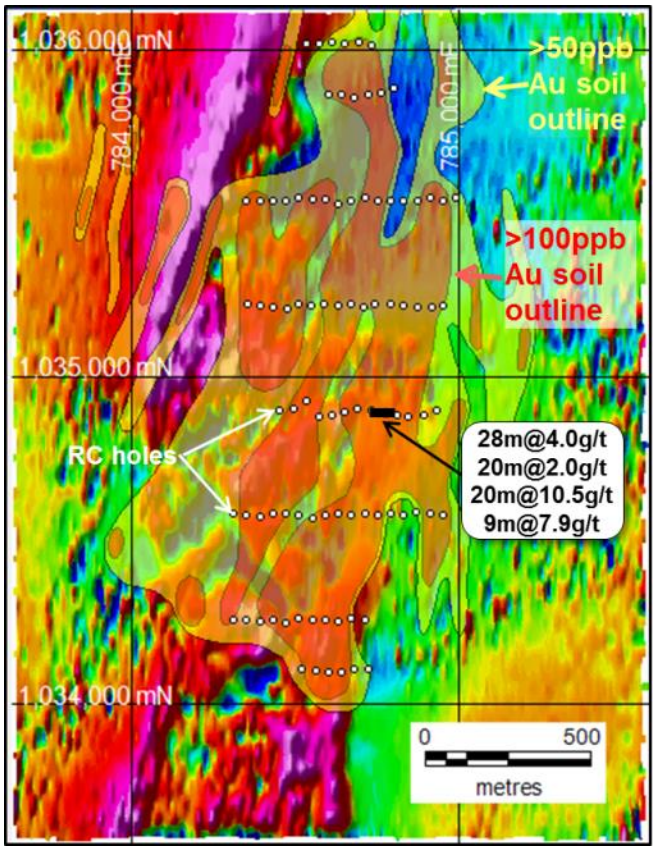

Figure 3: *Ground magnetic (analytical signal) image obtained from December Quarter ground magnetic survey superimposed with gold in soil geochemical anomalies and 2016 RC drill hole locations plus some drill assay highlights (announced to the ASX on 23/6/16 and 25/7/16).*

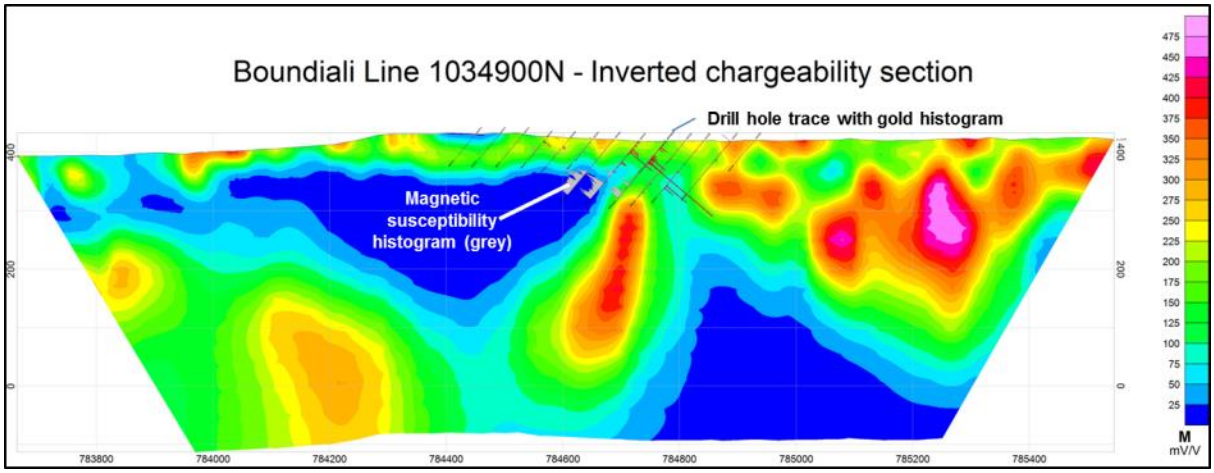

Figure 4: *Cross-section through line 1034900N which includes the highest grade RC drill intercepts obtained in the 2016 Nyangboue RC drill program (see gold histograms). The cross section was derived from chargeability data obtained in the December Quarter induced polarisation survey. Warm colours indicate high chargeability; this is generally derived from higher percentages of disseminated sulphides below the weathered upper 20-50m of the section. The apparently steep-dipping zone of high chargeability beneath the strongest gold drill intercepts may indicate a pyrite-mineralised zone extending to depths of several hundred metres (note vertical depth scale).*

Infill Soil Sampling – Boundiali Permit

Infill soil sampling, totalling 307 samples, was completed over the western and southern gold-in-soil anomalies (Figure 5). Sample spacing was 200x50m. Results are expected shortly.

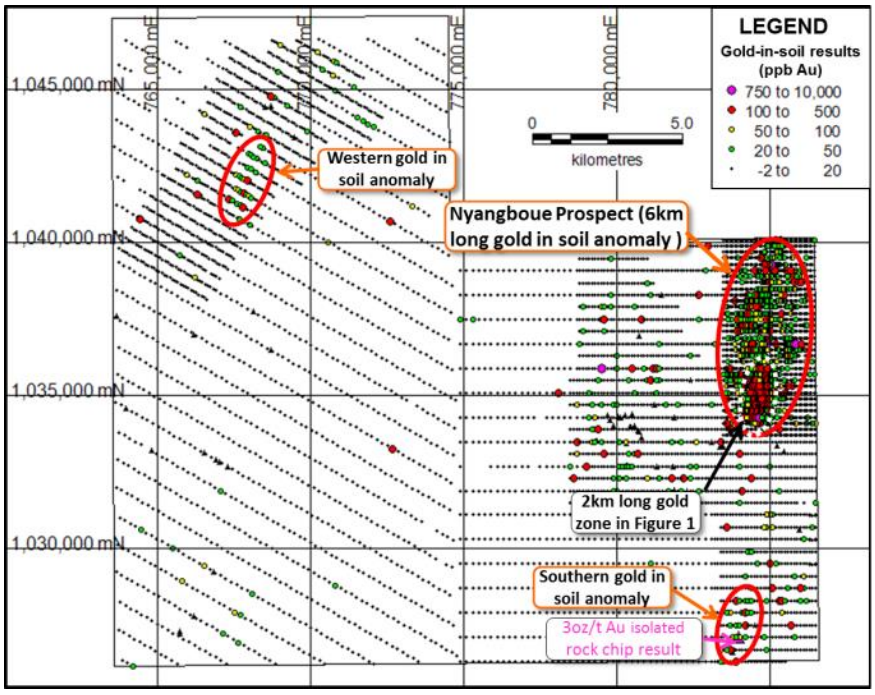

Figure 5: *Toro Gold soil sampling grid covering the entire Boundiali exploration permit (results reported to the ASX on 20/10/15 and 23/3/16). The large Nyangboue Prospect gold anomaly and two other coherent gold anomalies are highlighted on this map. Rock chip sample locations are shown as small black triangles.*

Kokoumbo and Beriaboukro Permits

Predictive CI is earning a 90% interest in the Kokumbo exploration permit in southern Cote D'Ivoire (Figure 1) from an Ivoirian company, Ivoir Negoce SARL. The Kokumbo permit covers an area of historic artisanal and French colonial era mining located in a highly prospective belt of rocks which also includes the Bonikro gold mine, currently in production by Newcrest, and Agbaou gold mine, where Endeavour Mining commenced commercial production in January 2014.

The Beriaboukro permit is located directly south of Kokoumbo (Figure 1) and is the subject of an agreement between Predictive Discovery Cote D'Ivoire SARL (which is jointly owned by PDI and Toro) and local Ivoirian company, Gold Ivoire Minerals SARL.

Aeromagnetic Data Re-processing

Historical aeromagnetic data was re-processed during the Quarter (Figure 6). The data is currently being interpreted in order to assist planning the next drill program.

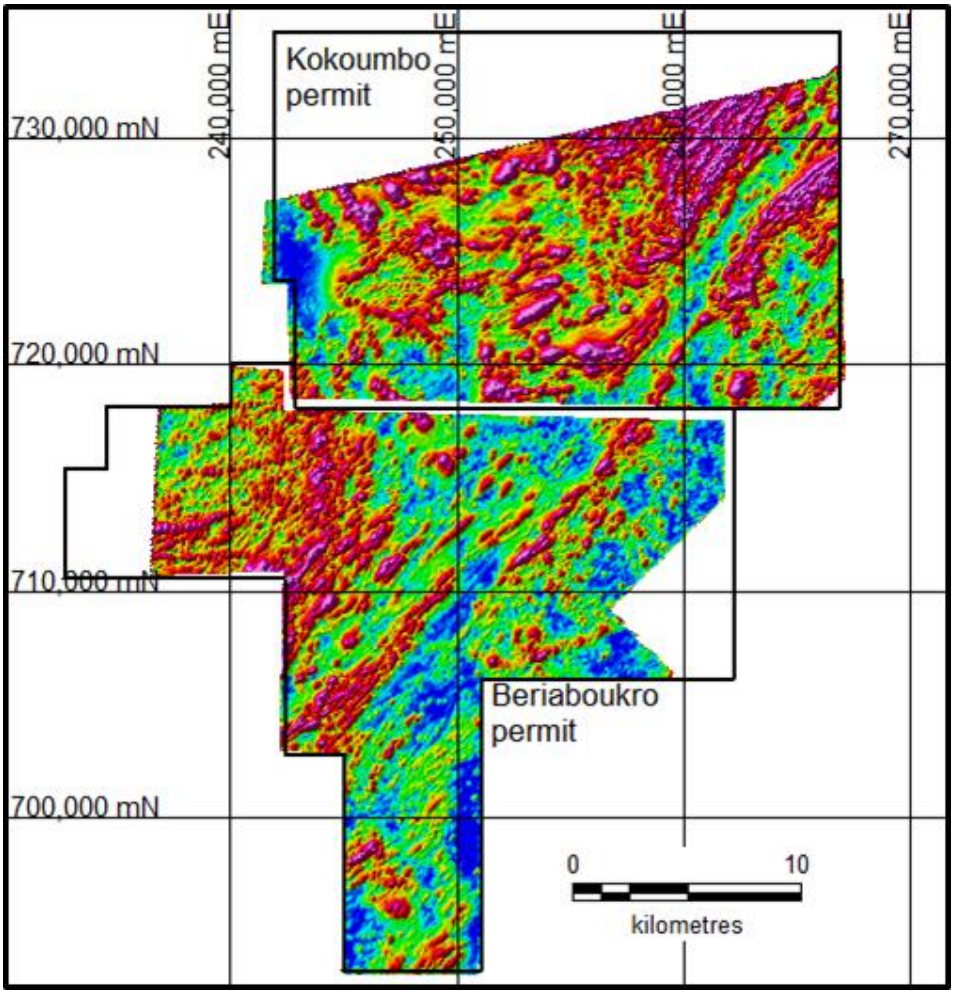

Figure 6: *Aeromagnetic (analytical signal) image of historical aeromagnetic survey data re-processed during the December Quarter.*

Beriaboukro Geochemical Sampling Program

Infill soil sampling, totalling 1,065 soil samples, was completed over the gold-in-soil anomalous areas highlighted in Figure 7. Most of the samples were collected on a 400 x 100m sample spacing but a tighter, 100 x 50m grid was established over the Ndinguinan site (also known as Takalaso). Results are expected shortly.

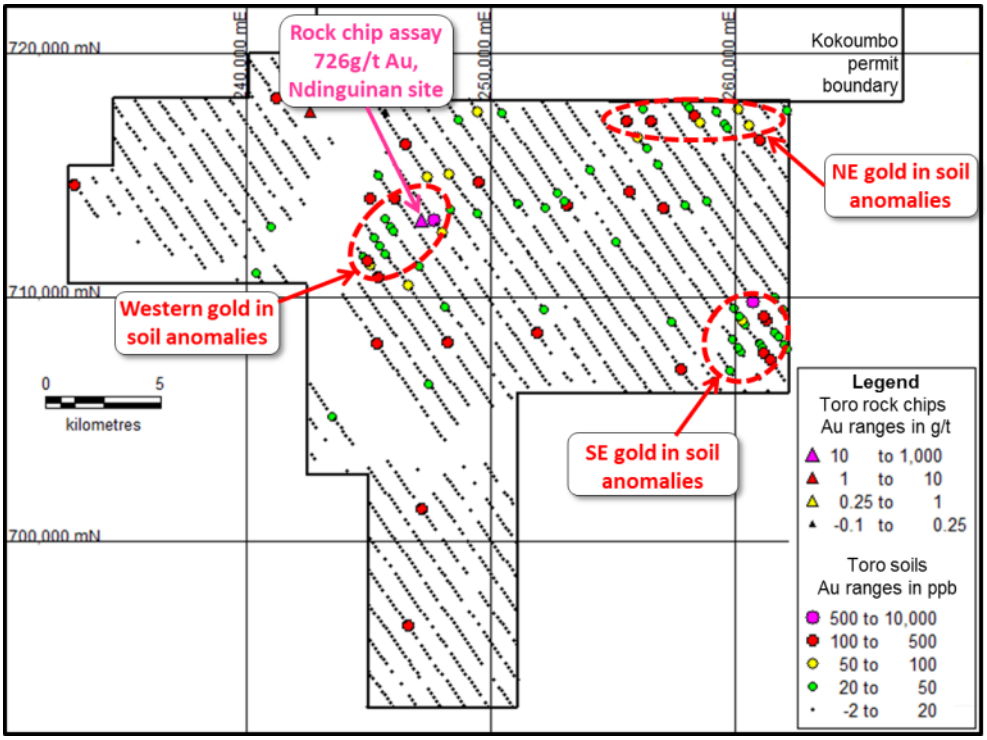

Figure 7: *Location of soil samples and gold-in-soil anomalous values, Beriaboukro permit*

Ferkessedougou North Permit

Ferkessedougou North is located directly in northern Cote D'Ivoire directly adjacent to Burkina Faso's southern border (Figure 1). It is the subject of an agreement between Predictive Discovery Cote D'Ivoire SARL (which is jointly owned by PDI and Toro) and local Ivoirian company, Gold Ivoire Minerals SARL.

Soil Sampling Program

Toro Gold carried out a soil sampling program covering most of the Ferkessedougou North 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.

1,637 soil samples were analysed for gold by fire assay at the ALS laboratory at Loughrea in Ireland. Additional details of the sampling methods are provided in Table 2.

Anomalous gold values (>20ppb Au) were found in numerous locations throughout the grid (Figure 1). A 17km long zone of elevated gold-in-soil values is highlighted on Figure 1. Peak gold-in-soil

values of 598, 371 and 352ppb Au were recorded from the grid. Given the 800 x 200m assayed sample spacing, these are encouraging soil results. A 1 km long gold ore deposit could be represented by a single value anomaly on such a wide spaced grid.

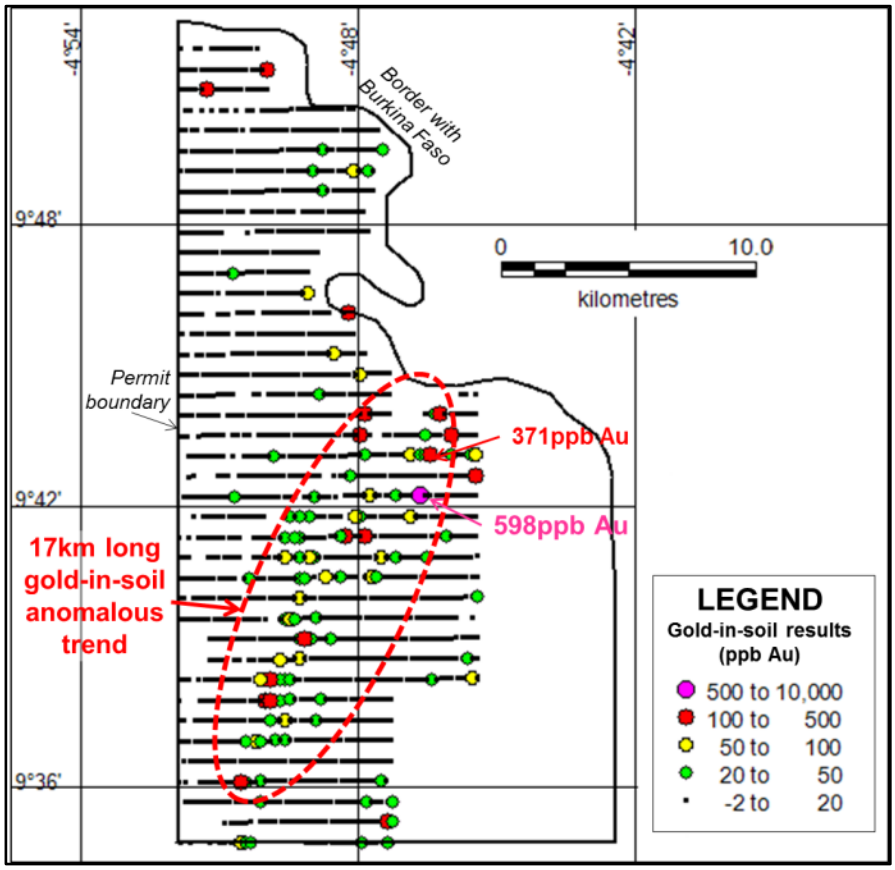

Figure 8: *Location of soil samples and gold-in-soil anomalous values, Ferkessedougou North permit*

The gold anomalies appear to be associated with strong north-south and north-east orientated structures in images of aeromagnetic data.

Infill Soil Sampling

An infill soil sampling program, totalling 1,065 samples, on a 400 x 100m sample spacing was carried out to follow up these results. Results are expected shortly.

Planned March Quarter Work Program

The March Quarter program will include the following:

- A 1,500m diamond drilling program at Boundiali, in order to follow up the encouraging RC drill results obtained in 2016 and guided by the results of the ground geological surveys, geological mapping and re-logging of the drill holes.
- Drill program planning for the Kokoumbo permit followed by RC drilling either in the March or June Quarters.

- A second round of infill soil sampling on the Ferkessedougou North and Beriaboukro permits prior to making a decision on possible drilling programs on Ferkessedougou North, Ferkessedougou South and/or Beriaboukro.

BOBOSSO PROJECT, COTE D'IVOIRE

The Bobosso Project consists of two granted exploration permits, Bassawa and Wendene in northern Cote D'Ivoire (Figure 1), which are held by an Ivoirian company, XMI SARl (**XMI**). Bassawa and Wendene are located in the southern extension of the well mineralised Hounde Belt in Burkina Faso, which includes Semafo's Mana Mine (5 Moz in ore resources and reserves[1]).

The Company is earning equity in the project through a joint venture with local licence holder, XMI SARL. Predictive currently holds approximately 35% equity in the project.

Previous exploration by Equigold, Lihir and Newcrest including a series of large drilling programs totalling 569 RC holes and 11 diamond drill holes has revealed a large gold mineralised system at the Bobosso project.

Predictive has been engaged in advanced discussions with a possible funding partner for this project. As a result, detailed field work plans have been made and the following program is expected to commence shortly:

- Detailed ground magnetics survey over the drilled Bobosso mineralised system and surrounding area.
- Geological mapping of the entire permit area
- BLEG stream geochemistry of the entire permit area
- Diamond drilling of the Bobosso prospect based on the above work plus the detailed re-logging of core and geological mapping of the prospect area in 2016. The diamond drilling is now expected to commence early in the June Quarter.

BURKINA FASO

The Company's tenement holding covers 1,222km^2 including approximately 100km of strike length in the Samira Hill greenstone belt in eastern Burkina Faso (the Bonsiega permit group, Figure 6). This belt hosts the 2.5 million ounce Samira Hill gold deposit across the border in Niger and contains numerous active artisanal gold mine sites along its length. PDI owns 100%, or has the rights to earn 95% to 100% of all its permits in Burkina Faso.

PDI has discovered gold mineralisation on multiple prospects in Eastern Burkina Faso during the past four years including the Bongou gold deposit. A formal Mineral Resource Estimate on Bongou

[1] *See http://www.semafo.com/English/operations-and-exploration/reserves-and-resources/default.aspx*

resulted in 184,000oz of gold 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).

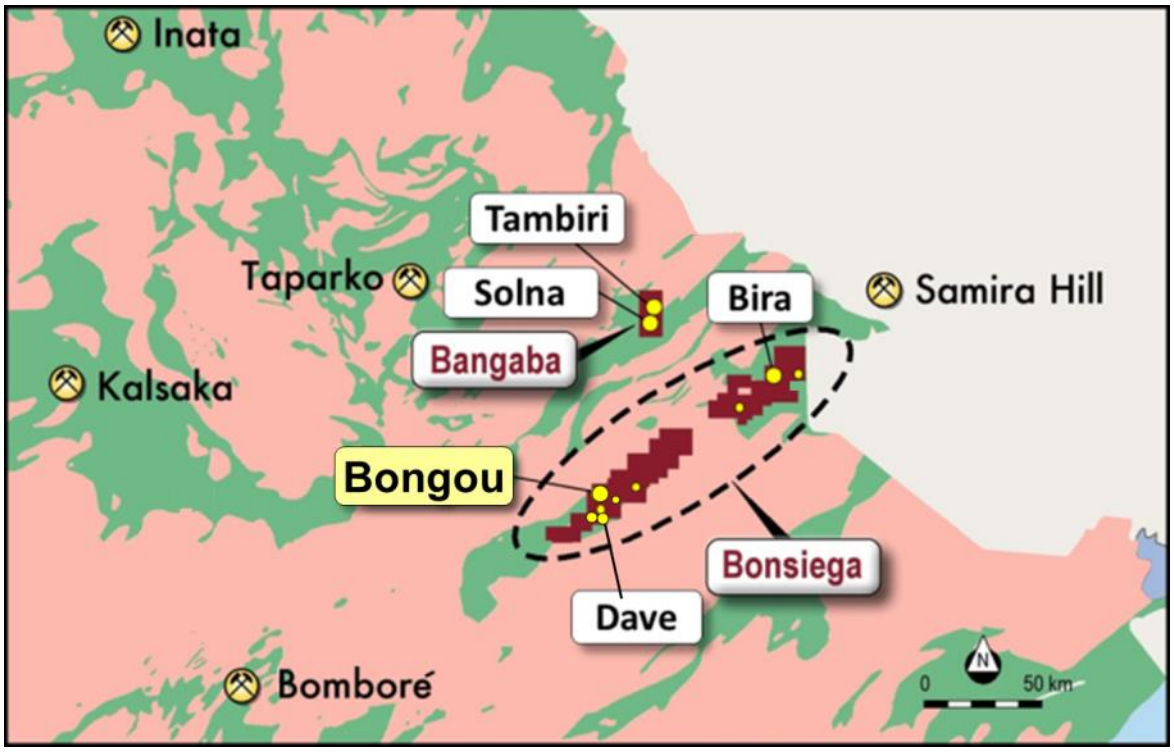

Figure 9: *Locality map of PDI permits in eastern Burkina Faso, showing location of Bongou and other key prospects.*

No work was carried out in Burkina Faso during the June Quarter apart from field visits to the project areas with potential joint venture partners. Costs are being restricted to the maximum extent possible.

The Company is engaged in ongoing advanced discussions about a possible joint venture on the Bonsiega Project.

AUSTRALIA

CAPE CLEAR JOINT VENTURE (EL5434)

Introduction

Exploration Licence 5434 is located west of Ballarat in Victoria (Figure 10). It was granted to PDI in July 2013. The area is highly prospective for shallowly concealed Stawell-style gold mineralisation. PDI previously carried out geological mapping and a gravity survey over part of the EL area. Execution of a binding farm-in agreement with Cape Clear Minerals Pty Ltd (CCM) on this EL was announced to the ASX on 22nd September 2014. Under that agreement, CCM could earn 75% equity in the licence by spending $500,000 on exploration, including at least 1,000m of drilling. CCM has complied with those conditions and has therefore achieved a 75% equity in the project.

Figure 10: *Cape Clear Exploration Licence Locality Plan*

Exploration on EL5434 is targeted at discovery of Stawell-style and/or Ballarat-style gold mineralisation on the margins of a concealed Cambrian basalt ridge located on the west side of the major north-south striking Avoca Fault. The Stawell gold deposit is located in a comparable geological position on the western side of a basalt ridge, which is, in turn, west of the major Coongee Fault.

No field work was undertaken during the Quarter.

Predictive and CCM are in discussions over revision of the joint venture arrangements such that Predictive will participate in exploration of the northern portion of EL5434, which PDI regards as being more prospective, and CCM will explore the southern portion in its own right.

CORPORATE

Cash Position

The Company held $2,706, 000 in cash at the end of the December Quarter with no debt.

A combination of several placements and an SPP raised $3,049,450 before costs towards the end of the September Quarter and at the beginning of the December Quarter. Of this, $2,384,000 was raised in the December Quarter.

TABLE 1 – SOIL AND ROCK CHIP SAMPLING RESULTS

Sample numbers	Northing (WGS84-30N)	Easting (WGS84 – 30N)	RL	Hole dips	Azimuth	Hole Depth	From	Interval	Au (ppb)
Toro soil sample numbers in the ranges 41352-42339 and 47584-49999. Every second sample was submitted for gold analysis.	Refer to Figure 8 for map locations of all samples	Refer to Figure 8 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 Figure 8
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 Ferkessedougou North permit range from approximately 240m to 340m. Individual RLs are not reported in this announcement because they are not relevant to interpreting geochemical data of this type.									

Section 1: Sampling Techniques and Data		
Criteria	**JORC Code Explanation**	**Commentary**
Sampling Technique	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	The sampling described in this report refers samples obtained from the Ferkessedougou North exploration permit in Cote D'Ivoire. The soil samples were collected from shallow holes with depths between 10 and 50cm.
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 for soil sampling 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 map (Figure 8) are for Universal Transverse Mercator (UTM), Datum WGS 84, Zone 30 - 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 soil 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 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.	The Ferkessedougou North exploration permit was granted to GIV Minerals SARL in 2015. Predictive Discovery Cote D'Ivoire SARL may earn a 51% interest by spendingUS$1 million and 85% by completing a DFS.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	Information about previous exploration work has not been found.
Geology	Deposit type, geological setting and style of mineralisation.	The geology of the Ferkessedougou permit is mapped as schists, 2 mica granite and granodiorite.
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:	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.

	• 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.	
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 view of drill hole collar locations and appropriate sectional views.	An appropriate plan showing the locations of the soil samples, classified by results, are shown in this release.
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.	Geological mapping and follow-up infill soil sampling is planned on the permit as outlined in this release.

	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

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 1,200km^2 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 substantial interests in a large portfolio of tenements in Côte D'Ivoire covering a total area of 4,136 km^2.

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.

For further details please contact:

Paul Roberts
Managing Director
Tel: +61 402 857 249
Email:
paul.roberts@predictivediscovery.com

Ric Moore
Company Secretary
Tel: +61 8 6143 1840
Email:
rmoore@auroraminerals.com

TENEMENT STATUS – DECEMBER QUARTER, 2016

Name	Number	Location	Area (sq. km)	PDI equity	Changes in holding during December Quarter, 2016
Fouli	arrêté 2014-294 /MCE/SG/DGMGC	Burkina Faso	186.2	100%	None
Tantiabongou	arrêté 2013-168 /MCE/SG/DGMGC	Burkina Faso	50	100%	Renewal is in progress along with a ground reduction to 50 km^2.
Sirba	arrêté 2014-296 /MCE/SG/DGMGC	Burkina Faso	136.9	100%	None
Madyabari	arrêté 2014-295 /MCE/SG/DGMGC	Burkina Faso	171.9	100%	None
Tamfoagou	arrêté 2015-281/MCE/SG/DGMGC)	Burkina Faso	238	100%	None
Tangagari	arrêté 2013-37 /MCE/SG/DGMGC	Burkina Faso	127.5	Earning 95%; current equity 0% (until final cash payment is made)	Renewal in progress
Bangaba	Arrete 2015-109 /MCE/SG/DGMGC	Burkina Faso	128	Earning 95%; current equity 84%	None
Bira	2013-33/MCE/SG/DGMGC	Burkina Faso	21	100%	None
Basieri	2013-16/MCE/SG/DGMGC	Burkina Faso	73.5	100%	None
Kokoumbo	Mining exploration permit No. 307	Cote D'Ivoire	300	Predictive CI earning 90%. PDI now owns 49% of Predictive CI.	Reduced by 25%
Ferkessedougou South	Mining exploration permit No. 310	Cote D'Ivoire	290	49%	Reduced by 25%
Boundiali	Mining exploration permit No. 414	Cote D'Ivoire	399	49%	None
Kounahiri	Mining exploration permit No. 317	Cote D'Ivoire	347	49%	None

Bassawa	Mining exploration permit	Cote D'Ivoire	400	15% beneficial interest	PDI exploration expenditure will shortly lift PDI equity to approximately 35%
Wendene	Mining exploration permit	Cote D'Ivoire	400	15% beneficial interest	PDI exploration expenditure during the March and June Quarters will shortly lift PDI equity to approximately 35%
Dabakala	Mining exploration permit application	Cote D'Ivoire	400	15% beneficial interest	New application by XMI SARL (PDI's partner on Bassawa and Wendene permits)
Beriaboukro (Toumodi)	Mining exploration permit	Cote D'Ivoire	400	Predictive CI can earn 85% in the permit. PDI currently owns 49% of Predictive CI.	None
Ferkessedougou North	Mining exploration permit	Cote D'Ivoire	400	Predictive CI can earn 85% in the permit. PDI currently owns 49% of Predictive CI.	None
Odienne North	Mining exploration permit application	Cote D'Ivoire	400	Subject to it being granted, Predictive CI can earn 85% in the permit. PDI currently owns 49% of Predictive CI.	None
Odienne South	Mining exploration permit application	Cote D'Ivoire	400	Subject to it being granted, Predictive CI can earn 85% in the permit. PDI currently owns 49% of Predictive CI.	None
Cape Clear	EL 5434	Victoria, Australia	160	25%	None

+Rule 5.5

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

Name of entity

PREDICTIVE DISCOVERY LIMITED

ABN	**Quarter ended ("current quarter")**
11 127 171 877	31 DECEMBER 2016

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (6 months) $A'000**
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	1
1.2	Payments for		
	(a) exploration & evaluation	(292)	(512)
	(b) development		
	(c) production		
	(d) staff costs*		
	(e) administration and corporate costs	(157)	(311)
1.3	Dividends received (see note 3)		
1.4	Interest received	3	4
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid		
1.7	Research and development refunds		
1.8	Other (provide details if material)		
1.9	**Net cash from / (used in) operating activities**	**(446)**	**(818)**

* The company's accounting policy allocates staff costs to activities and are accordingly included in items 1.2 (a) and 1.2 (e).

2.	**Cash flows from investing activities**		
2.1	Payments to acquire:		
	(a) property, plant and equipment	(5)	(5)
	(b) tenements (see item 10)		
	(c) investments		
	(d) other non-current assets		

Consolidated statement of cash flows		**Current quarter $A'000**	**Year to date (6 months) $A'000**
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment		
	(b) tenements (see item 10)		
	(c) investments		
	(d) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	**Net cash from / (used in) investing activities**	**(5)**	**(5)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of shares	2,384	3,049
3.2	Proceeds from issue of convertible notes		
3.3	Proceeds from exercise of share options		
3.4	Transaction costs related to issues of shares, convertible notes or options	(113)	(146)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	**Net cash from / (used in) financing activities**	**2,271**	**2,903**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	886	626
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(446)	(818)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(5)	(5)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,271	2,903
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period**	**2,706**	**2,706**

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter $A'000	Previous quarter $A'000
5.1	Bank balances	346	426
5.2	Call deposits	2,360	460
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**2,706**	**886**

6.	Payments to directors of the entity and their associates	Current quarter $A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	87
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Fees paid to directors

7.	Payments to related entities of the entity and their associates	Current quarter $A'000
7.1	Aggregate amount of payments to these parties included in item 1.2	-
7.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

8.	**Financing facilities available** *Add notes as necessary for an understanding of the position*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
8.1	Loan facilities		
8.2	Credit standby arrangements		
8.3	Other (please specify)		

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

9.	**Estimated cash outflows for next quarter**	**$A'000**
9.1	Exploration and evaluation	500
9.2	Development	
9.3	Production	
9.4	Staff costs	
9.5	Administration and corporate costs	190
9.6	Other (provide details if material)	
9.7	**Total estimated cash outflows**	**690**

10.	**Changes in tenements (items 2.1(b) and 2.2(b) above)**	**Tenement reference and location**	**Nature of interest**	**Interest at beginning of quarter**	**Interest at end of quarter**
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	Tantiabongou, Burkina Faso	100% ownership – area reduction	94km^2 permit area	50km^2 area
		Kogodou South, Burkina Faso	Option agreement	Right to earn 100%	0%
10.2	Interests in mining tenements and petroleum tenements acquired or increased				

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Sign here: Date: 31 January 2017

(Company secretary)

Print name: Eric Moore

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.