8th August 2016

ASX Announcement

More high gold grades from Boundiali drilling, Cote D'Ivoire

Predictive Discovery Limited (ASX: PDI) is pleased to report ongoing encouraging gold assay results from RC drilling completed by Toro Gold Limited (Toro) on Predictive's Boundiali Project in Cote D'Ivoire, including:

- Drill assay highlights from the **Nyangboue Prospect** include:
  - **BRC004BIS (**BRC004 twin hole[1]):
    - **20m at 10.5/t Au** from **38m**,
    - Including **1m at 144.5g/t Au** and **1m at 21.4g/t Au**.
  - **BRC048** (on the drill line 320m south of BRC004)**:**
    - **10m at 3.3g/t Au** from **1m,** including **1m at 27.4g/t Au**,
    - **8m at 1.3g/t Au** from 21m**,**
    - Bulked intercept from 1 to 29m: **28m at 1.55g/t Au**
- Gold mineralisation now intersected on **three drill lines,** with a **minimum strike extent** of **at least 640m**, **open to the north, south and at depth**.
- Assay results for **57 holes** remain outstanding**.**

Mr Paul Roberts, Predictive's Managing Director said: *"As we receive more assay results from the Nyangboue prospect, a picture is slowly emerging of a large and complex gold mineralised system. With these new results, we now know that gold mineralisation extends for at least 640m along strike and is open to the north, south and at depth. But there is still a lot more news to come - from five more drill lines covering 1.3km of strike, for which we are yet to receive any results.*

It is important to recognise that a 320m drill line spacing in a gold deposit of this type is very wide. Potential exists to define large amounts of gold mineralisation by infill drilling between the three drill lines for which we already have results.

Drill results continue to arrive more slowly than we had expected owing to some delays at the analytical laboratory. We expect that assays will continue to be returned through August and possibly into early September. We will release these results to the ASX as soon as they come to hand."

[1] The "twin" hole is a re-drill of drill hole of BRC004. It was re-drilled because the original hole could not be re-entered to be deepened unlike the other deepened holes on the same section (BRC003, BRC005-007).

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: 1.5 cents

Market Capitalisation: $19.9M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

David Kelly
Non-Executive Director

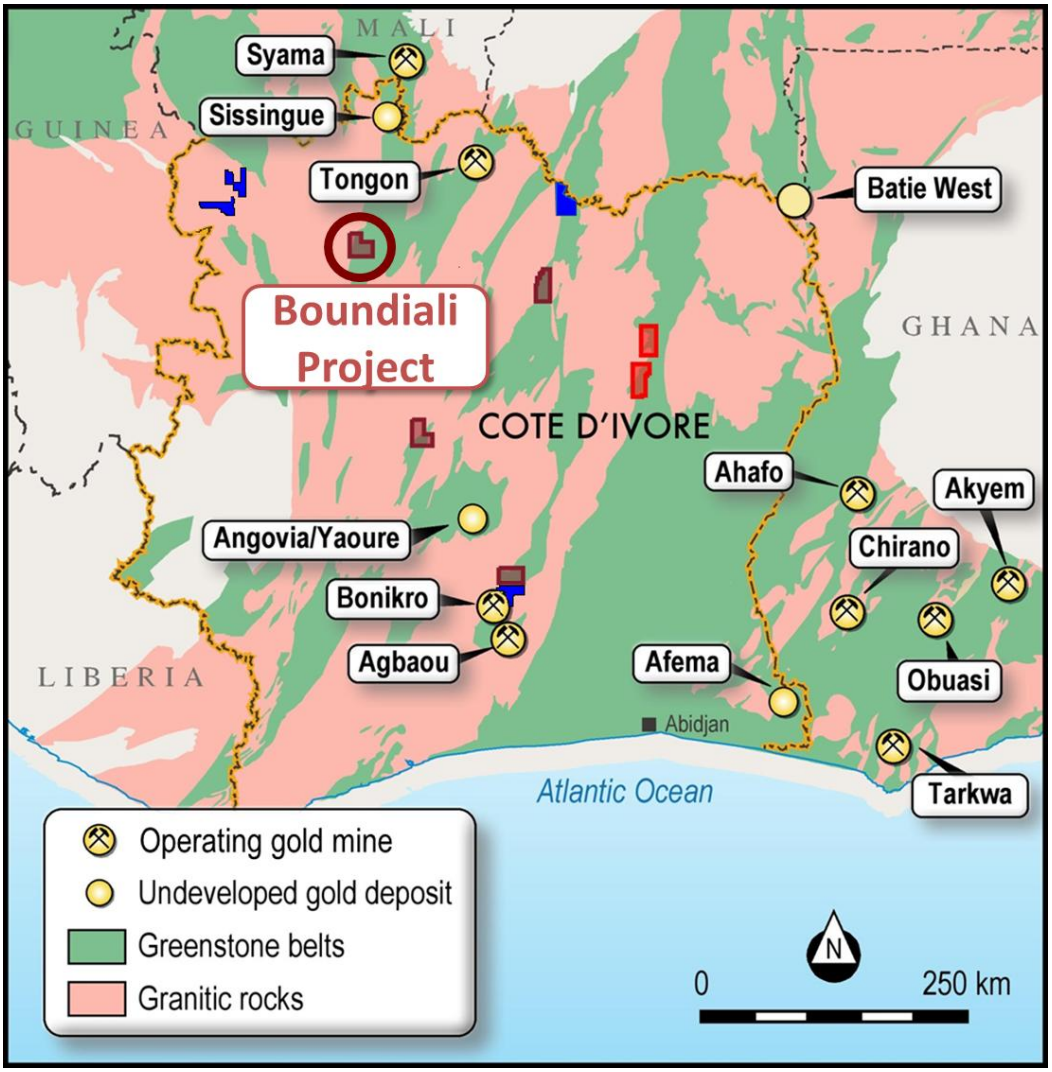

Figure 1: *Locality map showing the initial Toro Joint Venture permits (in brown) including Boundiali (highlighted), the GIV Joint Venture permits and permit applications (in blue), and the permits covered by PDI's agreement with XMI SARL over the Bobosso Project (red).*

BOUNDIALI DRILLING PROGRAM (NYANGBOUE PROSPECT)

The RC drilling program on the Boundiali permit is now complete with a total of 92 RC holes and 5,496m drilled. The program was designed to test a 2km long zone of strong and coherent gold-in-soil anomalies (Figure 2). These lie at the southern end of the Nyangboue Prospect, a 6km long gold-in-soil anomaly (Figure 4) first reported to the ASX on 20/10/15.

The RC holes were drilled:

- on eight east-west oriented lines, of which six are spaced 320m apart. The northernmost and southernmost lines are 160m from their neighbours (Figure 2). Hole collars are approximately 40m apart,
- mostly to depths of 50-60m, with the exceptions of a few holes (including BRC003-007) which were extended or re-drilled to depths of up to 130m,
- towards the west and angled at 50 degrees.

Additional details of the drill and assay methodologies employed in this program are reported in Table 1.

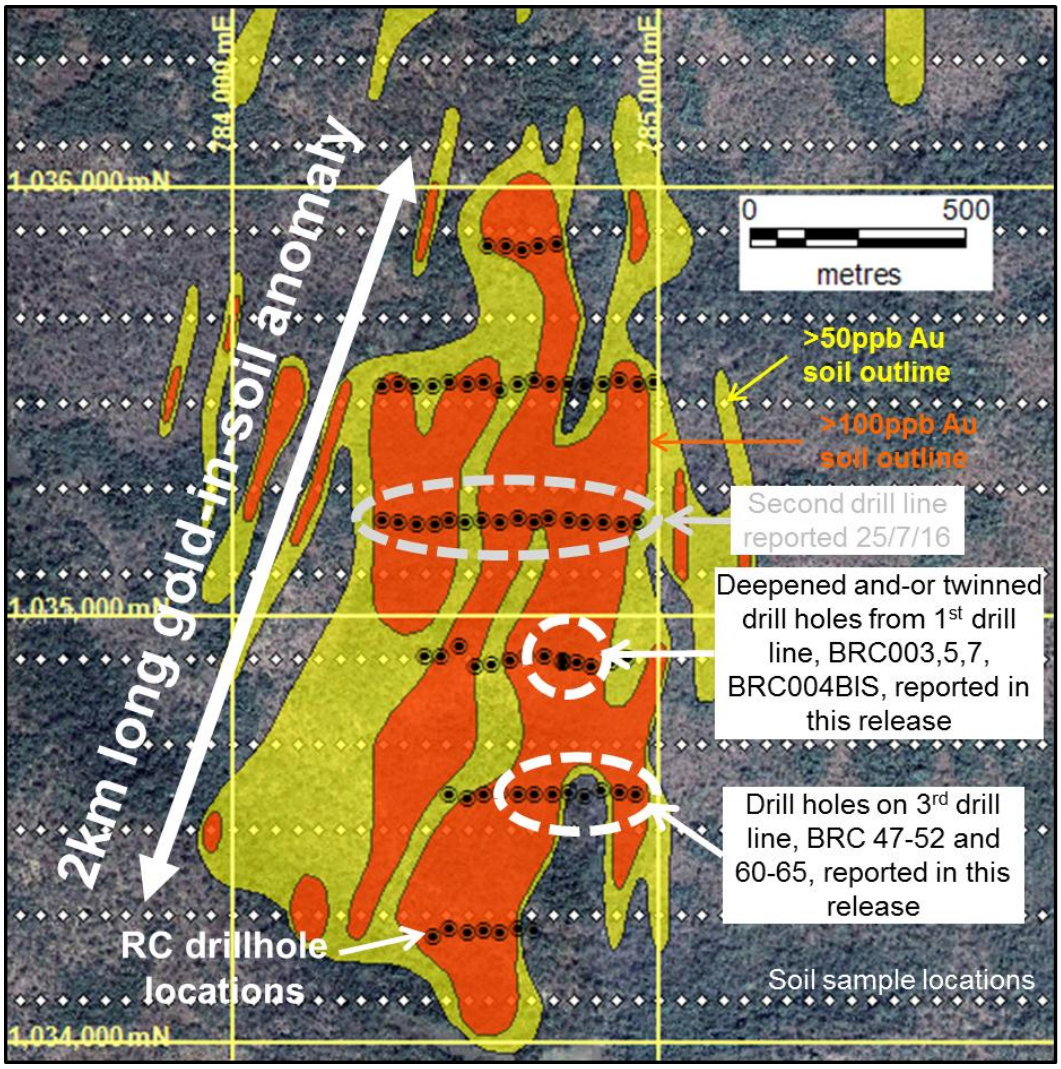

Figure 2: *RC drill hole collar locations on a gold-in-soil geochemical contour plan (reported to the ASX on 23/2/16) in the southern 2km portion of the Nyangboue Prospect. Gold geochemical contours are superimposed on satellite imagery.*

The first two sets of drill results included the following:

- 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**
- 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**

Results from 12 drill holes plus the deepened sections of four holes on the first drill section are reported in this release. Assay highlights (reported at a 0.5g/t Au cut-off grade) include the following:

Hole No.	Depth from (m)	Down-hole interval (m)	Au (g/t)	Comments
BRC004BIS (re-drill of BRC004)	38	**20**	**10.45**	Including **1m at 145.50/t Au** and **1m at 21.70g/t Au**
BRC048	1	**10**	**3.26**	Bulked intercept of **28m at 1.55g/t Au from 1m**. Including **1m at 27.4/t Au**
BRC048	21	8	1.26	
BRC050	31	**3**	**4.47**	

Cross sections through these drill holes are provided as Figures 3 and 4.

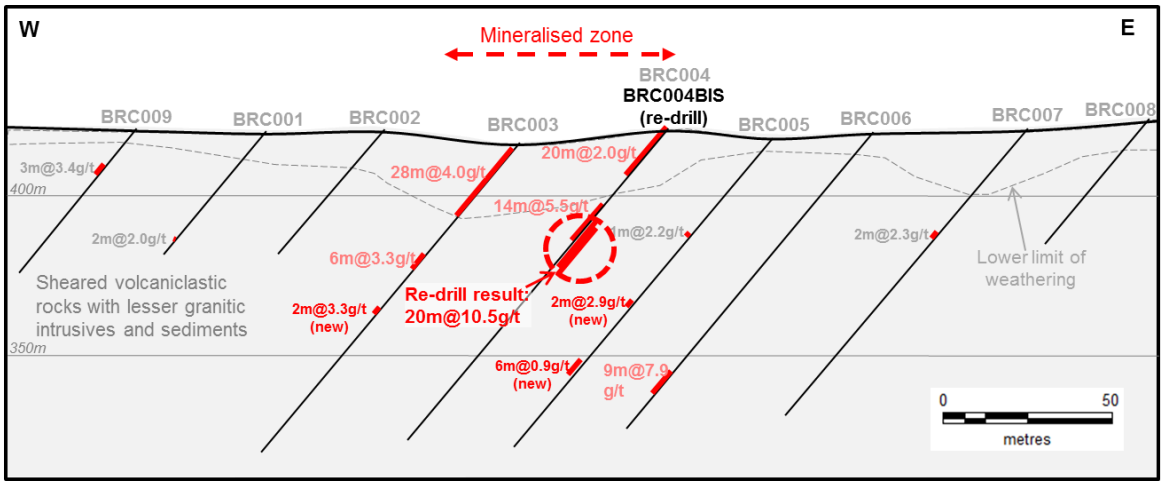

Figure 3: *Cross-section through the first drilled cross section including the new result reported in this release from the BRC004 re-drill (BRC004BIS). The section also shows results reported to the ASX on 23/6/16 and 25/7/16.*

The orientation of the gold mineralised zones in the first drilled section (Figure 3) is not yet clear and a program of diamond drilling will be required to resolve this. Nevertheless, the new result from the BRC004BIS twin hole confirms the presence of high gold grades in unweathered rocks at this prospect, which bodes well for future, deeper drilling.

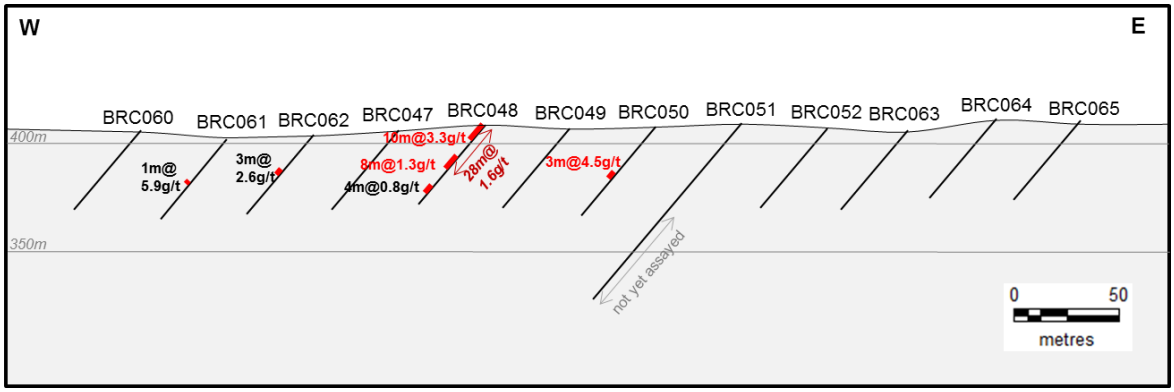

Figure 4: *Cross-section through the next cross-section to the south including all of the new RC drill holes reported in this release.*

As noted in earlier ASX releases, initial observations from logging these drill holes and mapping the limited rock exposures at surface are as follows:

- The mineralised zone appears to lie within a large and complex ductile shear zone containing:
    - Quartz-sericite schists which are interpreted to be derived from volcano-sedimentary rocks,
    - granitic intrusives,
    - sediments,
    - felsic volcanics with quartz phenocrysts,
    - possible mylonites (extremely strongly sheared rocks) and
    - possible mafic volcanics.
- Sparse rock outcrops indicate that shearing dips steeply to the east, which is why holes were drilled towards the west.
- Gold values are generally associated with zones of quartz veining (1-2cm veinlets - both smoky grey quartz and white quartz.
- Visible gold has been panned from some of the RC drill chips and fines. Follow-up screen fire assays on intervals with high gold grades and/or visible gold are therefore planned.
- The dip and dip direction of the mineralisation is not yet understood. Holes BNRC003-007 have now been extended/re-drilled to help address this question.
- The sheared rock sequence contains minor sulphides, including pyrite, pyrrhotite and arsenopyrite.

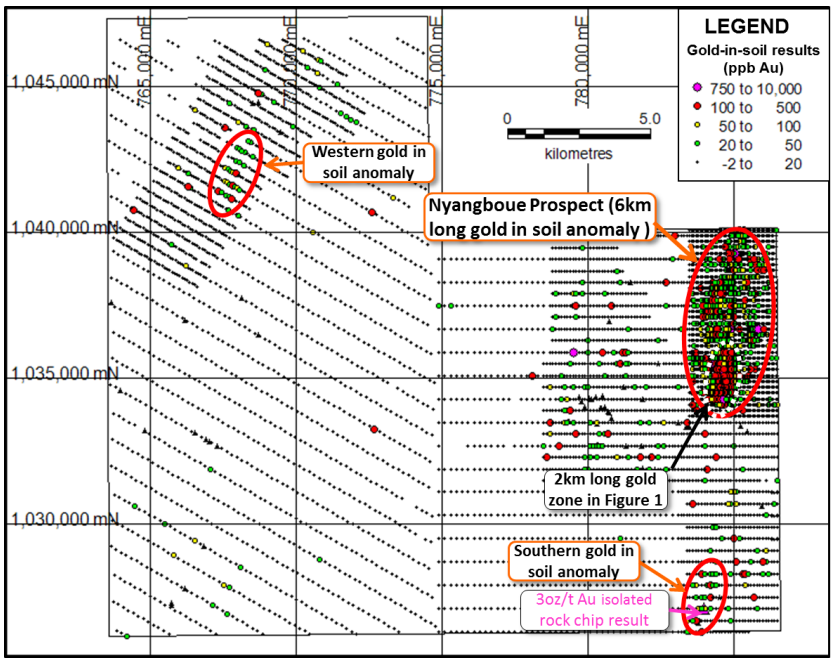

Figure 5: *Toro Gold soil sampling grid covering the entire Boundiali exploration permit (results reported to the ASX on 20/10/15 and 23/3/16). Results in grade intervals are shown for all of Toro soil results to date. The large Nyangboue Prospect gold anomaly and two other coherent gold anomalies are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

NEXT STEPS

As explained in earlier releases, assay results are being received more slowly than had been expected. At this stage, the Company expects to be releasing drill data through the remainder of August and possibly into early September.

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.

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 (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 gold mineralised zone described in this release.

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

Hole No.	UTM 29N Easting	UTM 29N Northing	RL (m)	Hole depth (m)	Hole dip (°)	Azimuth (°)	Depth from (m)	Down-hole interval (m)[1]	Au (g/t) at 0.5g/t Au cut-off grade[2]	Comments
BRC003	784731	1034901	417	130	-50	270	56	4	0.74	Results from 56 to 130m (0-56m reported 23/6/16).
BRC003	784731	1034901	417	130	-50	270	67	2	3.25	
BRC003	784731	1034901	417	130	-50	270	78	2	0.70	
BRC003	784731	1034901	417	130	-50	270	85	9	0.55	
BRC004BIS	784777	1034889	421	130	-50	270	0	2	0.56	BRC004 was re-drilled as BRC004BIS (6m south of the original hole) because the original hole could not be re-entered.
BRC004BIS	784777	1034889	421	130	-50	270	38	**20**	**10.46**	
BRC004BIS	784777	1034889	421	130	-50	270	64	1	1.44	
BRC004BIS	784777	1034889	421	130	-50	270	104	2	0.59	
BRC004BIS	784777	1034889	421	130	-50	270	128	1	1.00	
BRC005	784810	1034887	418	130	-50	270	66	2	2.85	Results from 66 to 130m (0-66m
BRC005	784810	1034887	418	130	-50	270	90	6	0.92	

BRC005	784810	1034887	418	130	-50	270	114	1	2.66	reported 23/6/16).
BRC005	784810	1034887	418	130	-50	270	123	1	1.14	
BRC007	784889	1034887	420	117	-50	270	No significant result			Results from 56-117m (0-56m reported 23/6/16).
BRC008	784929	1034897	425	53	-50	270	No significant result			
BRC047	784630	1034584	408	50	-50	270	12	1	1.10	
BRC048	784670	1034580	410	50	-50	270	1	**10**	**3.26**	**Bulked interval consists of 28m at 1.55g/t Au**
BRC048	784670	1034580	410	50	-50	270	21	**8**	**1.26**	
BRC048	784670	1034580	410	50	-50	270	39	4	0.77	
BRC049	784710	1034582	409	50	-50	270	No significant result			
BRC050	784750	1034580	410	55	-50	270	0	2	1.06	
BRC050	784750	1034580	410	55	-50	270	6	1	1.64	
BRC050	784750	1034580	410	55	-50	270	31	**3**	**4.47**	
BRC051	784790	1034586	411	108	-50	270	No significant result			
BRC052	784830	1034577	409	50	-50	270	No significant result			
BRC060	784510	1034580	408	50	-50	270	6	3	0.57	
BRC061	784550	1034568	404	50	-50	270	29	1	5.94	
BRC062	784590	1034579	406	50	-50	270	24	3	2.57	
BRC062	784590	1034579	406	50	-50	270	40	2	1.01	
BRC063	784868	1034589	408	50	-50	270	No significant result			
BRC064	784910	1034584	422	50	-50	270	30	1	1.96	
BRC065	784949	1034581	413	50	-50	270	No significant result			

[1] No true widths reported because the orientation of the gold mineralisation is not yet properly understood.
[2] Minimum grade x width interval reported of 1 g/t x m. Maximum down-hole internal waste of 4m. 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 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	All of the sampling described in Table 1 refers to RC drill holes. A representative subsample of the RC drill chips was obtained using an on-rig riffle splitter. A second reference sample was obtained using a spear. The assayed drill samples are judged to be representative of the rock being drilled because representative sub-sampling of the RC drill samples was achieved.

	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 largely carried out by reverse circulation with a face sampling hammer. The holes were collared using a blade bit, which was used to refusal (towards base of saprolite/saprock).
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.	RC recovery was assessed by weighing the sample bags and calculating recoveries using an estimate of rock density. The Toro site geologists report that recoveries are consistently good.
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 RC 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 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 RC samples submitted for assay were all sub-sampled by an on-rig 3-tier/multi stage riffle splitter (producing a 1/8th split). 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) and precision have been established.	All samples reported in this 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.
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 hole has been twinned (BRC004BIS) and the results of the repeat hole are reported herein. 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 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	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 on two lines spaced 320m apart with hole collars approximately 40m apart. 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 considered to have introduced a sampling bias, this should be assessed and reported if material.	All drill holes reported here were drilled approximately at right angles to the anticipated strike of the target geochemical anomaly (Figure 2).

Sample Security	The measures taken to ensure sample security	The drill 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 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 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 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 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 • 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.	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 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.	All RC samples were collected and assayed in 1m intervals. No top cuts have been applied to the drill results. Up to 3m (down-hole) of internal waste is included. Mineralised intervals are reported on a weighted average basis.

	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
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 geological controls on mineralisation in these initial drill holes into the prospect are not yet well understood. The holes were drilled from east to west to test a steeply east dipping foliation in the limited rock exposures seen in the area. The mineralisation lies within what Toro interprets to be a ductile shear zone which would suggest that mineralisation should lie parallel to foliation. Nevertheless, the gold intercepts are actually suggestive of a west-dipping mineralised envelope. The most mineralised holes have been extended; assays of the deepened holes should provide some additional information on this question along with careful re-logging and XRF readings on the RC chip samples in the coming months. True widths may only be understood properly after a diamond drilling program is carried out, possibly later in 2016.
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 two cross sections showing the location of the drill holes are 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 and at least 1g/t x m with a maximum thickness of internal waste of 3.0m 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.	Most of the drill results from this program have not yet been received. Further work will be considered once the results of this drilling program come to hand. A follow-u p drill program later in 2016 is likely.

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 1,500km^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 3,937 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.

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