



23rd February 2018

ASX Announcement

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

ASX: PDI

Issued Capital: 236 million shares

Share Price: 3.5 cents

Market Capitalisation: \$8.3 M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

David Kelly
Non-Executive Director

Two RC Drilling Programs Underway in Burkina Faso and Cote D'Ivoire

Predictive Discovery Limited (ASX: PDI) is pleased to announce that RC drilling programs are underway on both the Progress Minerals Joint Venture in Burkina Faso and the Toro Gold Joint Venture in Cote D'Ivoire.

- Approximately 10,000m of drilling planned at the **Bira** (Burkina Faso) and **Ferkessedougou North** (Cote D'Ivoire) prospects.
- **Bira:**
 - Historical drilling intercepts (ASX release dated 25/1/13) including:
 - **14.5m at 3.1g/t** from 1m
 - **13m at 2.5g/t Au** from 3m
 - **10m at 2.7g/t Au** from 14m
 - **23m at 1.2 g/t Au** from 30m
 - **21m at 1.7g/t Au** from 22m
 - **20m at 1.4g/t Au** from 99m
 - Good continuity of mineralisation indicated along strike and at depth, open to the north and south
 - 5,000m of drilling planned, testing approximately 800m of strike.
- **Ferkessedougou North:**
 - Broad, 17km long zone of gold-in-soil geochemical anomalies reported previously.
 - Bottle roll cyanide leach analyses of trench channel samples has revealed numerous zones with anomalous gold values, typically associated with contacts between narrow NE trending granodiorite bodies and the surrounding rocks.
 - Drilling will follow up both trench results and soil anomalies.
 - 4,440m drilling planned, testing 14 separate targets.

Mr Paul Roberts, Predictive's Managing Director said: *"Exploration is now advancing rapidly across our West African portfolio of joint ventured permits. We have recently reported encouraging RC drill results from multiple prospects at Bobosso in Cote D'Ivoire. These two new drilling programs are testing distinctly different opportunities: (1) Bira - aimed at confirming and extending a known gold mineralised zone, hopefully expanding the existing resource inventory on the Bonsiega group of permits; (2) Ferkessedougou - reconnaissance tests of widespread, gold-anomalous altered granitic rocks and metasediments exposed in the recent trenching program."*

EASTERN BURKINA FASO PROJECT

Background

Predictive's current tenement holdings in Burkina Faso are located in the east of the country, and cover approximately 90km of strike length of the Samira Hill greenstone belt in eastern Burkina Faso (Figure 1). 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 currently owns 100%, or has the rights to earn 95% to 100% of all its permits in Burkina Faso. Predictive has discovered gold mineralisation on multiple prospects in Eastern Burkina Faso area (see yellow dots on Figure 1).

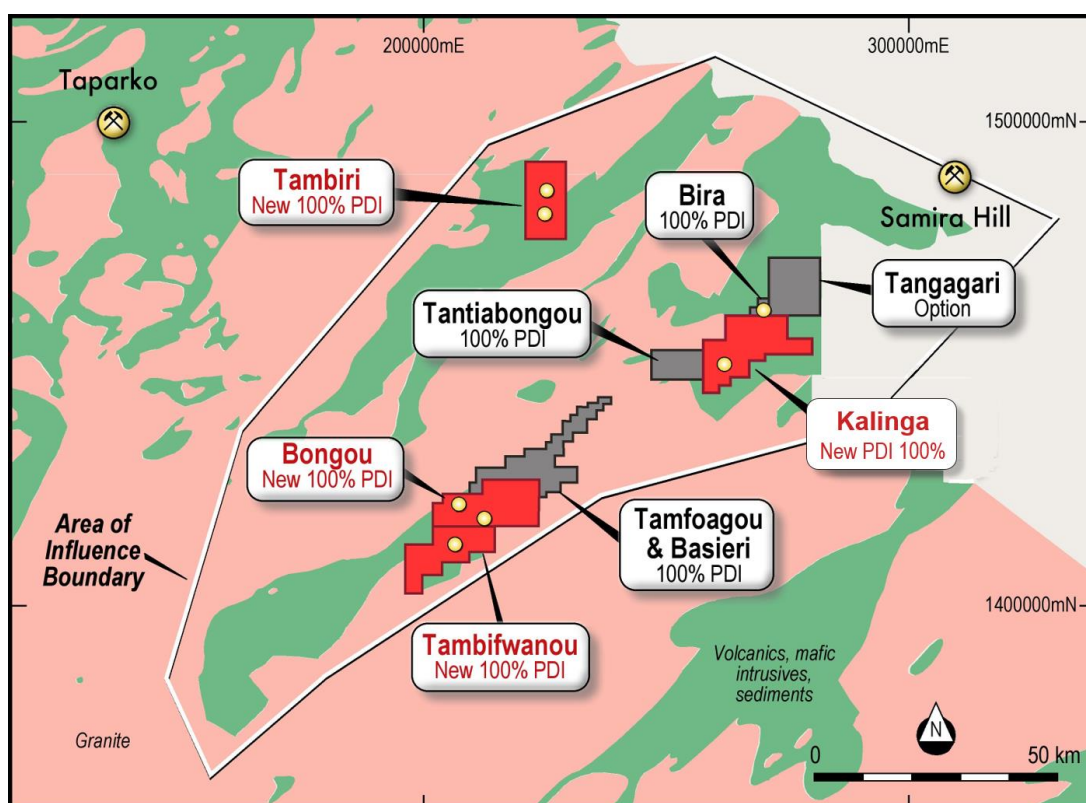


Figure 1: Locality map of PDI ground in eastern Burkina Faso, showing location of the Company's permits on a geology background plus the location of the area of influence for the current joint venture with Progress Minerals Inc. Red coloured polygons are new permits replacing old permits which reached the end of their terms in July 2017. Apart from Bira, these four new permits cover all the key gold prospects explored by PDI (yellow dots). The grey polygons are older permits also held by Predictive

Progress Minerals Joint Venture

The joint venture with Progress Minerals International (**Progress**) commenced on 30th September 2017. The agreement allows Progress to earn a 70% interest in all permits within the area of influence (AOI – see Figure 1) in Eastern Burkina Faso by spending \$US5 million on exploration and project evaluation.

The Joint Venture's objective is to advance PDI's eastern Burkina Faso prospects as quickly as possible towards a scoping study on a multi-pit mining operation feeding a central mill.

Bira Permit (Figures 1-3)

The area was explored by Anglo American through its subsidiary Anmercusa in the late 1990's. PDI holds a database of Anmercusa information including soil geochemistry and RC drill data from the Bira permit (ASX release 25/1/13). The RC drill data includes a series of very encouraging gold intersections (Figures 2 and 3). While PDI does not have access to the quality control data and the original laboratory assay files, it has verified the location of some of the drill holes on the ground.

Gold mineralisation was intersected in a series of holes extending over approximately 1km of strike. Some of the best intercepts (e.g. **14.5m at 3.1g/t Au** and **13m at 2.5g/t Au**) were obtained from multiple, closely spaced drill holes in two lines in the HL10 series (Figures 2 and 3) which were drilled to depths of 15 to 30m.

The consistency of reported intercepts both from section to section and down-dip from hole to hole in the southern part of the drilled area suggests good continuity, which, if confirmed by future drilling, will be important for future resource calculations.

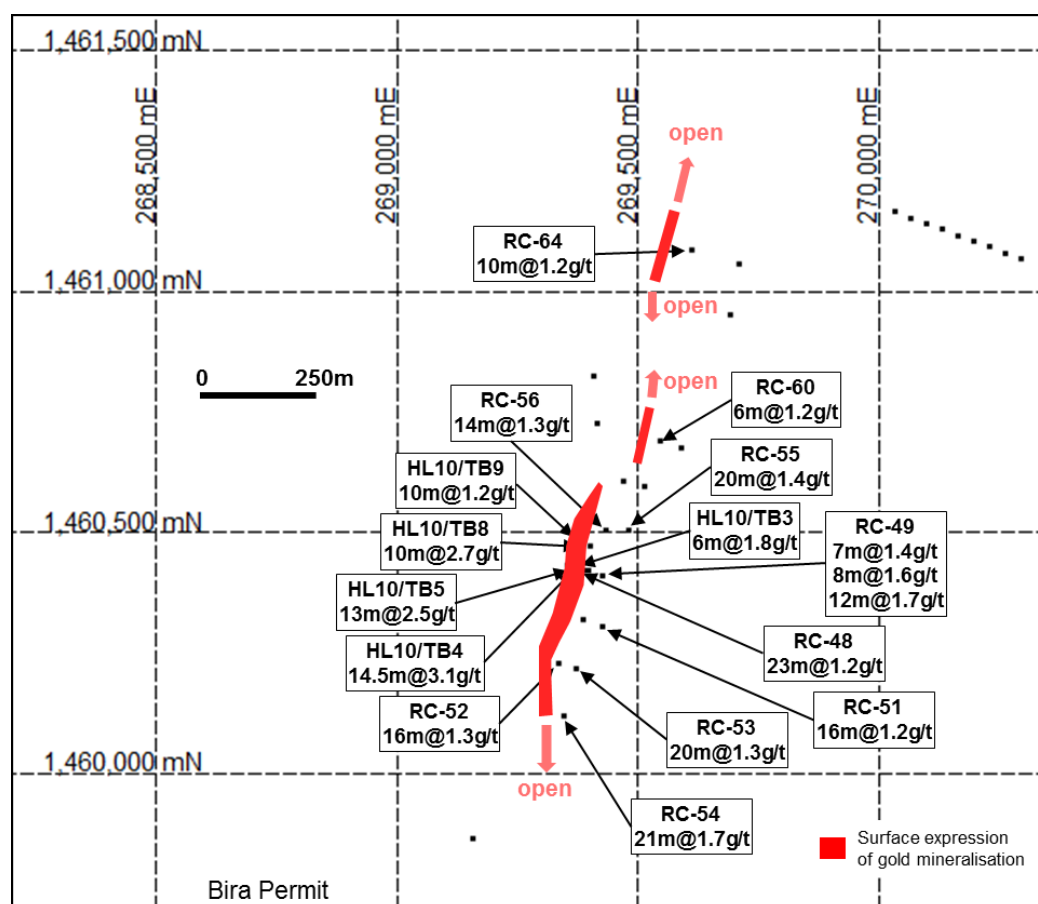


Figure 2: Historical drill results from the Bira permit, Burkina Faso (ASX release 25/1/13).

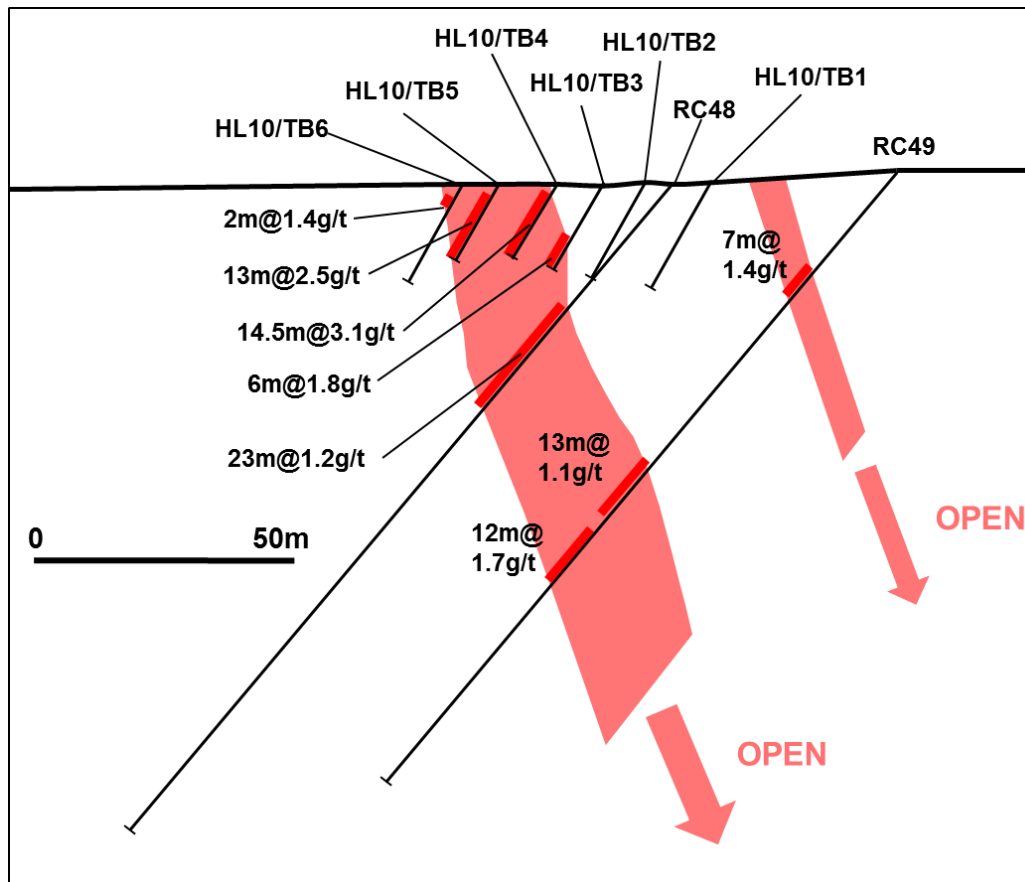


Figure 3: Cross section through historical gold intercepts, Bira prospect, Burkina Faso (ASX release 25/1/13).
No vertical exaggeration.

Planned Drilling

An RC drilling program totalling approximately 50 holes and 5,000m has been planned. Proposed holes are located in 17 cross sections 50-55m apart, with 2 to 4 holes on each section, and testing to a maximum vertical depth of 120m. The program is planned to test a strike length of about 800m along the known mineralised trend.

FERKESSEDOUGOU NORTH

Background

Predictive is in joint venture with Toro Gold Limited, 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 former subsidiary, Predictive Cote D'Ivoire SARL (Predictive CI) of which Predictive now holds 35%. Predictive is currently contributing 35% of ongoing Joint Venture expenditure.

The Ferkessedougou North permit is located in northern Cote D'Ivoire directly adjacent to Burkina Faso's southern border (Figure 4). It is subject to an agreement between Predictive CI and local Ivoirian company, Gold Ivoire Minerals SARL.

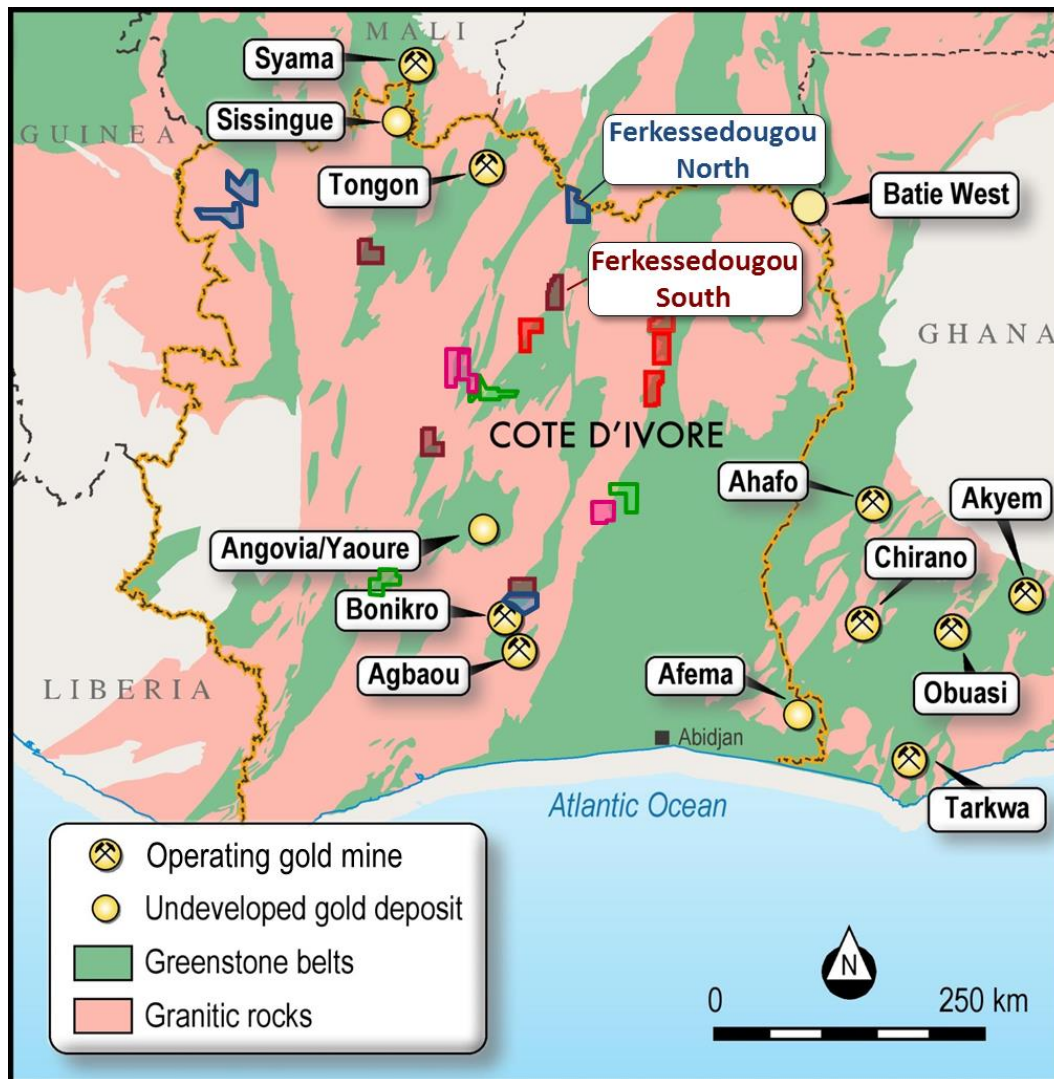


Figure 4: Locality map showing exploration permits/permit applications in which Predictive has an interest in Cote D'Ivoire, and highlighting the Toro JV permits where work activities are planned or underway in the current field season.

Soil sampling was carried out on a tightening sample pattern during 2016 and 2017, commencing with a sample spacing of 800 x 200m sample spacing, with infill sampling to 200 x 50m (ASX releases dated 1/2/17 and 28/4/17) – see Figure 5.

Anomalous gold values (>20ppb Au) have been found in numerous locations throughout the grid (Figure 5). 16 samples with gold-in-soil values exceeding 0.5g/t Au have now been recorded, the highest value being 1.2g/t Au (1210ppb Au).

Geological mapping shows that foliation/shearing trends are NNE orientated. Geological observations in artisanal workings (Figure 5) and more recent geological mapping indicates that the

geology consists of metasediments and granitic rocks, both of which are intruded by thin dyke-like bodies striking north-east parallel to the regional foliation.

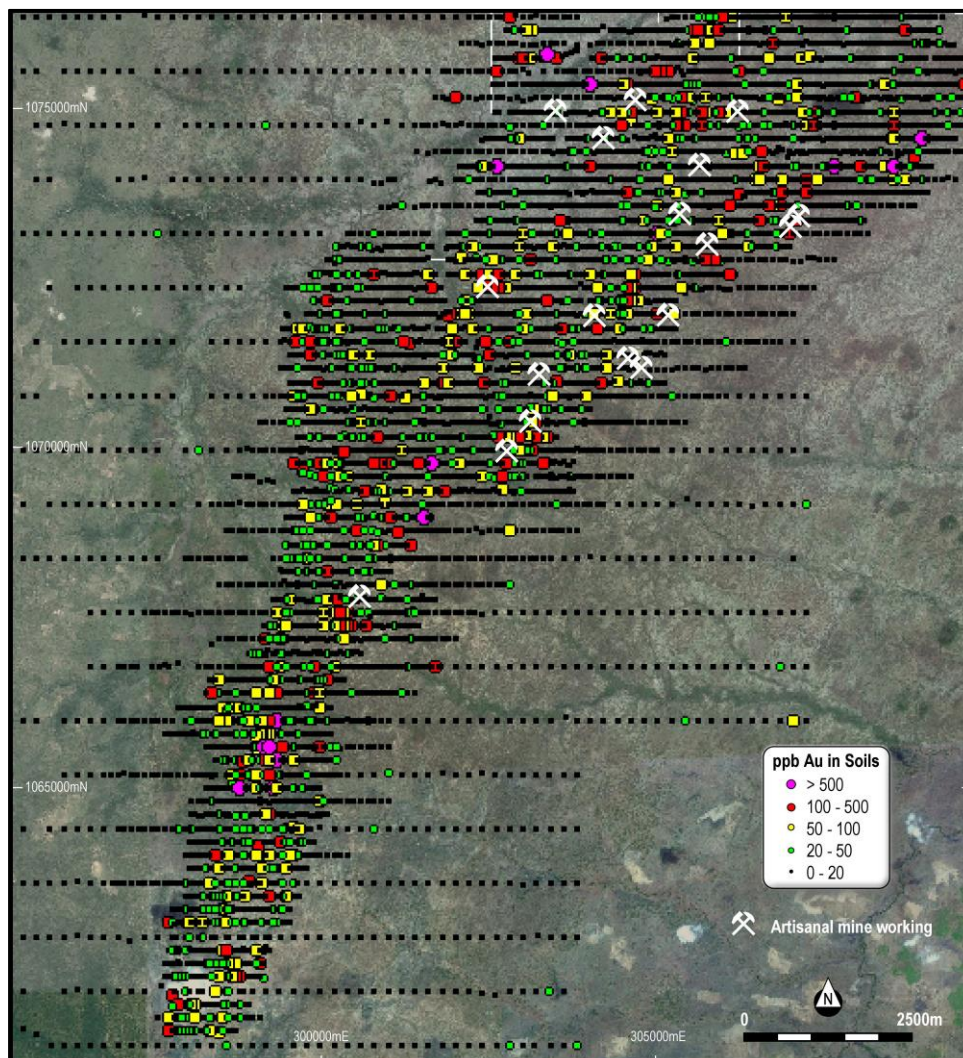


Figure 5: Location of soil samples and gold-in-soil anomalous values, Ferkessedougou North permit, reported to the ASX on 1/2/17 and 28/4/17.

Trenching Program

25 trenches totalling 3,187m were excavated using a backhoe in December, 2017 (Figure 6). The trenches were positioned over areas with anomalous soil geochemical values. As Figure 6 demonstrates, the program could only test a very small portion of the soil anomaly.

Channel samples were collected along the trenches in 2m intervals. The samples were assayed by 1kg bottle roll cyanide leaching¹ at the Elam Laboratory in Yamoussoukro. More details on the sampling program along with a summary of the analyses are provided in Table 1.

¹ This is a geochemical analytical method. A bottle roll cyanide leach does not necessarily extract all of the gold in the sample. It is therefore not equivalent to a typical fire assay analysis which generally relies on a strong acid digestion to extract the gold.

The trenches revealed widespread anomalous gold values, many of which are associated either thin (generally 3-10m wide) weathered granodiorite bodies – either within them or in the enclosing granites/metasediments. Gold appears to be associated with quartz veins and pyrite hosted mainly within the granodiorite

While outcrop is quite limited, the initial results suggest that there may be five or more NNE trending (shear parallel) dyke-like bodies possibly each extending continuously or semi-continuously over some kilometres of strike. As such, they represent a significant exploration target and warrant the current RC drilling program.

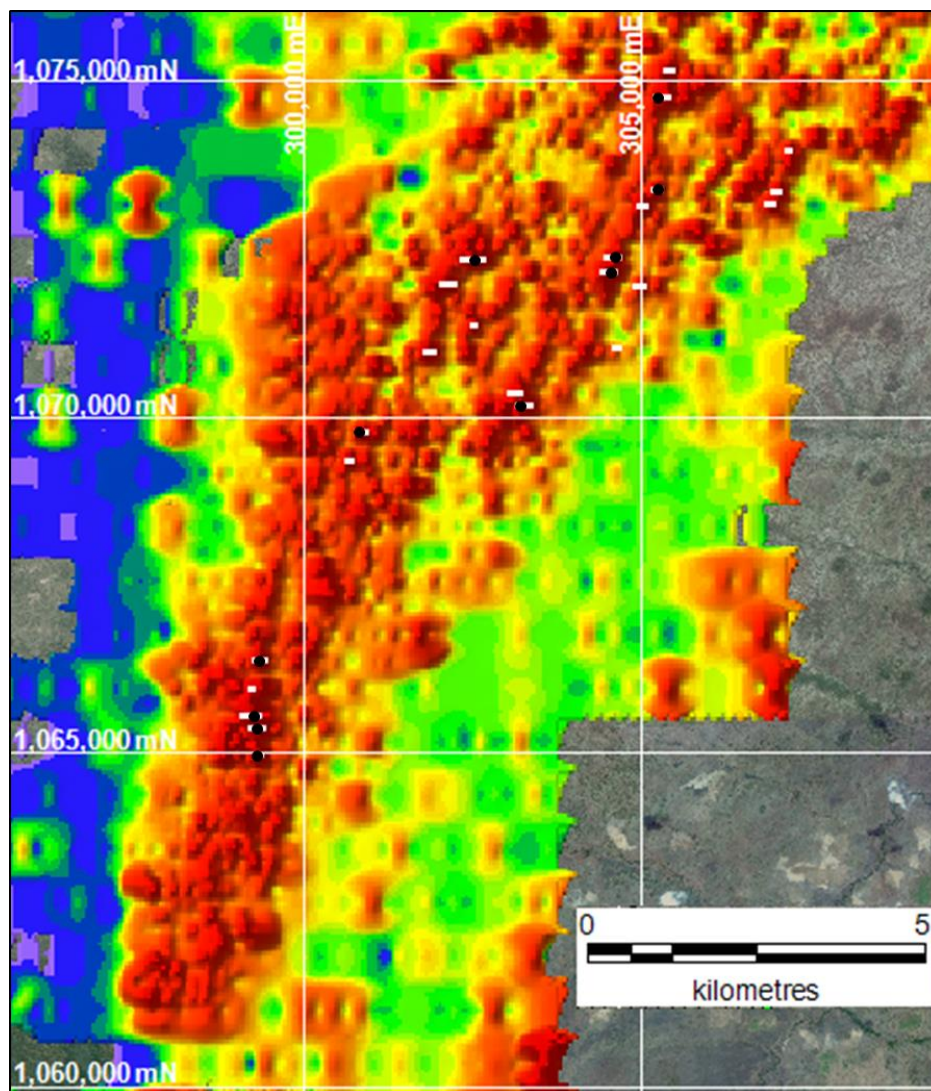


Figure 6: Location of Ferkessedougou North trenches shown on a gridded colour image of gold in soil geochemical values (red=high, blue=low, reported to the ASX on 1/2/17 and 28/4/17) and satellite imagery. Trenches are shown as white bars. Trenches with values >0.5g/t Au are marked with black dots.

Planned RC Drilling Program

The RC drilling program which is now underway consists of 74 shallow holes, totalling 4,440m and testing 14 separate zones (Figure 7) – both trench gold anomalies and soil geochemical targets. Samples are also being analysed at ELAM using a 1kg bottle roll method. Anomalous (>0.25g/t Au)

samples from trench and all significant RC drill hole intersections will be sent for fire analysis at ALS at Loughrea in Ireland once the program is complete.

Toro Gold is also carrying out approximately 1km of trenching on the Ferkessedougou South permit, which will probably be followed by additional RC drilling there (using the same RC rig) in March or April.

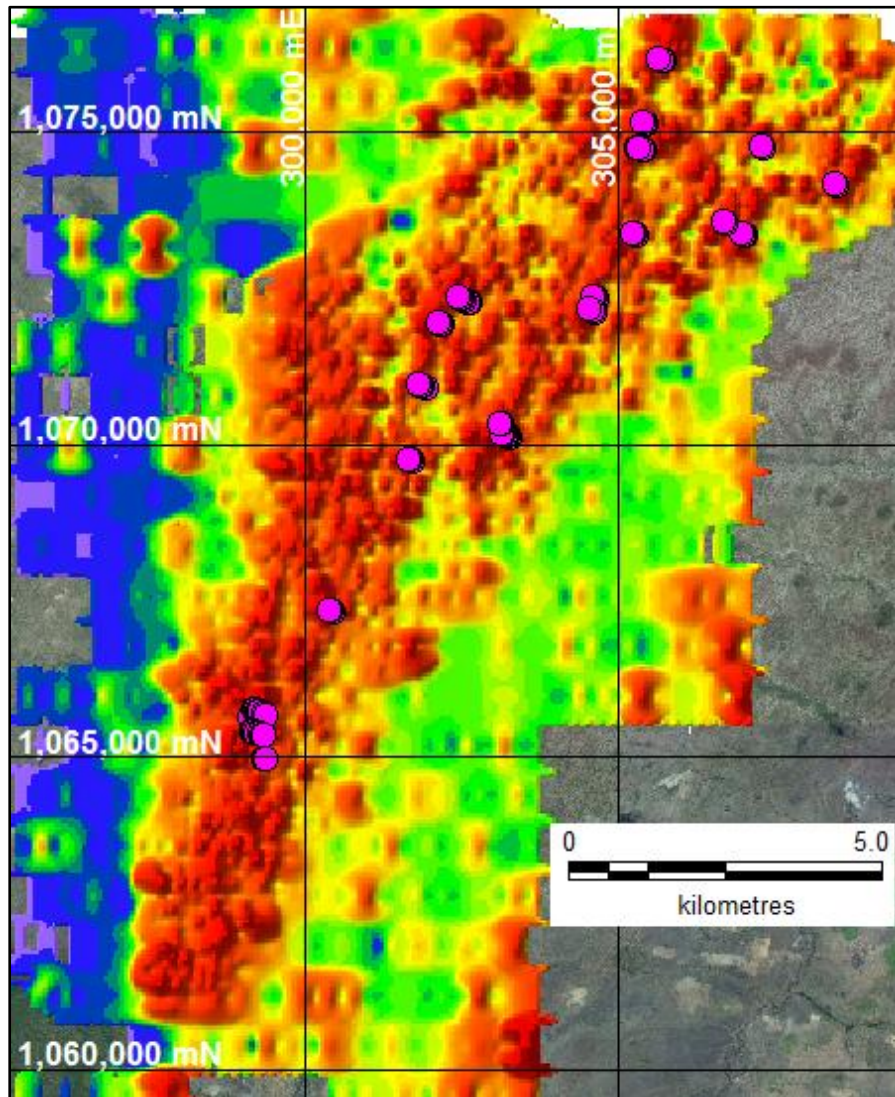


Figure 7: Location of planned Ferkessedougou North RC drill holes on shown on a gridded colour image of gold in soil geochemical values (red=high, blue=low, reported to the ASX on 1/2/17 and 28/4/17) and satellite imagery. Magenta dots are planned drill hole locations.

**TABLE 1 – TRENCH RESULTS – TORO GOLD JV –
FERKESSEDOUGOU NORTH PERMIT**

Trench No.	UTM East (Zone 30)	UTM North (Zone 30N)	RL (GPS)	Interval (0.25)	Au g/t (0.25)	Interval (0.5)	Au g/t (0.5)
FNTR001	299300	1064960	291	2	0.66	2	0.66
FNTR002	299234	1065363	296	8	0.58	6	0.67
FNTR002	299255	1065363	296	14	0.38		
FNTR002	299279	1065363	296	2	0.76	2	0.76
FNTR002	299305	1065363	296	2	0.54	2	0.54
FNTR002	299316	1065363	296	10	0.31		
FNTR003	299162	1065561	290	12	1.04	8	1.40
FNTR003	299181	1065561	290	10	0.53	6	0.66
FNTR003	299208	1065561	290	4	0.42		
FNTR003	299217	1065561	290	6	0.54	2	0.84
FNTR003	299230	1065561	290	4	0.55	2	0.77
FNTR003	299248	1065561	290	16	0.45	2	0.80
FNTR003	299253	1065561	290			2	0.54
FNTR004	299197	1065962	282	<i>no significant result</i>			
FNTR005	299323	1066364	288	6	0.69	4	0.89
FNTR005	299335	1066364	288	8	0.32		
FNTR005	299408	1066364	288	8	0.26		
FNTR006	300796	1069764	292	2	0.51	2	0.51
FNTR007	300635	1069360	285	<i>no significant result</i>			
FNTR008	303040	1070363	276	<i>no significant result</i>			
FNTR009	304631	1071027	267	4	0.25		
FNTR010	303198	1070163	272	16	0.93	14	1.02
FNTR011	304930	1071960	262	<i>no significant result</i>			
FNTR012	304528	1072153	264	4	0.60	2	0.81
FNTR012	304587	1072153	264	10	0.47	2	1.07
FNTR012	304600	1072153	264	4	0.26		
FNTR013	304613	1072369	269	2	0.79	2	0.79
FNTR014	304930	1071960	270	<i>no significant result</i>			
FNTR015	305245	1073386	277	2	1.63	2	1.63
FNTR015	305255	1073386	277	2	0.85	2	0.85
FNTR016	306867	1073162	276	<i>no significant result</i>			
FNTR017	306959	1073361	284	<i>no significant result</i>			
FNTR018	302037	1071969	259	<i>no significant result</i>			
FNTR019	302461	1072356	263	4	0.65	2	0.96
FNTR019	302628	1072356	263	2	0.87	2	0.87
FNTR020	301780	1070959	285	<i>no significant result</i>			
FNTR021	302488	1071365	263	<i>no significant result</i>			
FNTR022	307190	1073960	266	<i>no significant result</i>			
FNTR023	305363	1075152	269	<i>no significant result</i>			
FNTR024	305682	1076163	246	14	0.58	6	1.00
FNTR025	305293	1074765	256	10	0.48	6	0.53

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.	All of the sampling described in Table 1 refers to channel sampling of trenches which is considered to be representative of the weathered rock in the trenches.
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).	No drilling is reported here.
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.	No drilling is reported here.

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.	The trenches were geologically mapped. 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 samples were obtained using channel sampling. The sampled material is considered to be representative of the weathered rock mass 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 prepared and assayed for gold by 1kg bottle roll cyanide leaching at the Elam laboratory in Yamoussoukro, Cote D'Ivoire. This is considered a partial extraction method. At the lab, regular assay repeats, lab standards, checks and blanks were inserted and analysed.

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	Field data collection was undertaken by site geologists and supervised by Toro Gold Ltd 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	Trench start positions (at the western end) 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 30 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 trenches reported here were located as shown on the included locality plan. Assay data derived from 1kg bottle roll cyanidation of trench samples is not an appropriate data source for estimation of 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 trenches reported in this release were orientated east-west, almost at right angles to the NNE strike of observed foliations which are thought to parallel the strike of the gold mineralisation.
Sample Security	The measures taken to ensure sample security	Reference samples are currently stored securely in Yamoussoukro.
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.
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 Ferkessedougou North exploration permit was granted to GIV Minerals SARL in 2015. Predictive Discovery Cote D'Ivoire SARL may earn a 51% interest by spending US\$1 million and 85% by completing a DFS.

	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.	Information about previous exploration work has not been found.
Geology	Deposit type, geological setting and style of mineralisation.	The geology of the Ferkessedougou North, permit is mapped as metasediments, 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: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	This is not relevant to a trenching program. Sample coordinate information is provided in Table 1 and on the map included in this release.
Data Aggregation Methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	The trench samples were all sampled and assayed in 2m intervals. No top cuts have been applied to the drill results. Up to 2m (down-hole) of internal waste is included except in the reported broader mineralised intervals where variable but sometimes large amount of internal waste are 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	True widths have generally not yet been estimated as these will be guided by a 3D interpretation of the drill results which are yet to come..

	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').	
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.	Appropriate plans are included 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.	Intercepts are reported at 0.25g/t Au and 0.5g/t Au cutoffs and containing at least 1g/t x m with a maximum thickness of internal waste of 2m.
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.	The next exploration program will be decided after all drill results have been received.

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 949km² and has been 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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