



4 August 2014

## 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:** 388M shares

**Share Price:** 1.0 cents

**Market Capitalisation:** \$3.9M

### Directors

Phillip Harman  
*Non-Exec Chairman*

Paul Roberts  
*Managing Director*

Phil Henty  
*Non-Executive Director*

Tim Markwell  
*Non-Executive Director*

## Cote D'Ivoire: Geochemical Results Highlight New Gold Systems

Predictive Discovery (ASX: PDI) is pleased to announce very encouraging new gold results from two of its Cote D'Ivoire properties.

□ **Boundiali permit:**

- Large area identified, several kilometres long, coincident with a mapped shear zone.
- Within the well mineralised Syama-Sissingué-Tongon-Banfora greenstone belt and contains active artisanal gold workings.

□ **Ferkessedougou:**

- Two prospective areas defined with infill stream sediment sampling
- A largely unexplored area greenstone belt including historic artisanal gold workings.

□ Further work on new targets after the wet season

Mr Paul Roberts, the Company's Managing Director said:

*"Our large highly prospective ground position in Cote d'Ivoire is living up to expectations.*

*"These new results have now given us strong encouragement. The Boundiali stream sediment anomalies are particularly interesting as we know that similar values obtained using the same methods have resulted in the discovery of large gold deposits.*

*"Follow-up geochemical sampling and geological mapping will commence in November-December 2014 after the wet season with drilling planned in 2015."*

## Background

PDI holds four highly prospective exploration permits in Cote D'Ivoire: Kokumbo, Ferkessedougou, Boundiali and Kounahiri, covering a total area of 1,534km<sup>2</sup> (Figure 1). 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.

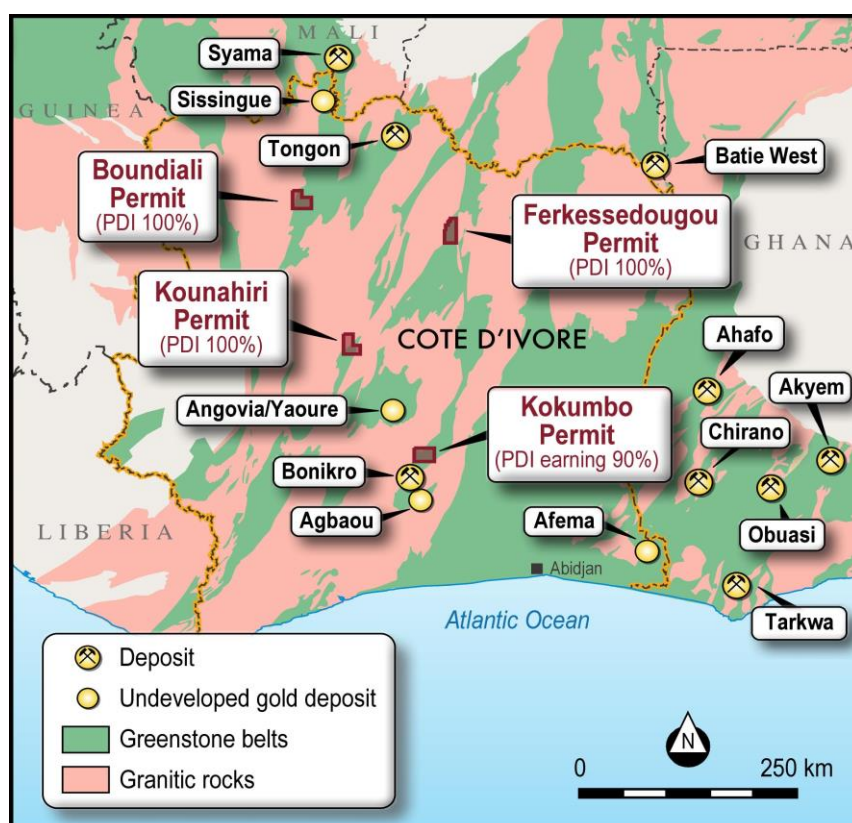


Figure 1: Locality map of PDI's interests in Cote D'Ivoire

The Company is using the bulk leach extractable gold (BLEG) method of stream sediment sampling for a first pass assessment of its extensive ground holdings in Cote D'Ivoire. This method has been employed very successfully for the discovery of large gold deposits throughout the world. A successful application of this technique was the discovery of the Perama Hill gold deposit in Greece in 1994<sup>1</sup> (now owned by Eldorado Gold). This is an outcropping 2 million ounce gold resource with an average grade of 3g/t Au<sup>2</sup>. There were no historical workings on this deposit prior to discovery. It was discovered with a **single BLEG sample of 9ppb Au in a 20km<sup>2</sup> catchment**

<sup>1</sup> Mc Alister M., Hammond, J. M., Normand, D. & Kampasakalis, M. 1999. Discovery case history for the Perama Hill gold deposit, Greece. In: New Generation Gold Mines Conference in Perth, West Aust., 22 – 23<sup>rd</sup> Nov 1999: 10 p.

<sup>2</sup> See: <http://www.eldoradogold.com/assets/europe/projects/perama-hill>

**area.** Follow-up stream sediment sampling in the small tributary directly draining the deposit obtained a value of **23ppb Au within 500m of the orebody** (see index plan - Figure 2).

## Boundiali Permit Stream Sediment Sampling

100 BLEG stream sediment samples covering the entire permit were collected during the June Quarter. The samples were assayed for gold and a suite of other elements at a Bureau Veritas laboratory in Perth.

Nine samples exceeding 6ppb gold were recorded by the survey. Of these, four were obtained from a **single catchment area covering 30 km<sup>2</sup>** with a **peak value of 24ppb Au**. The furthest sample downstream, covering the whole catchment area, recorded a value of **7ppb Au**. As Figure 2 demonstrates, this is a very similar result to the Perama Hill discovery in Greece.

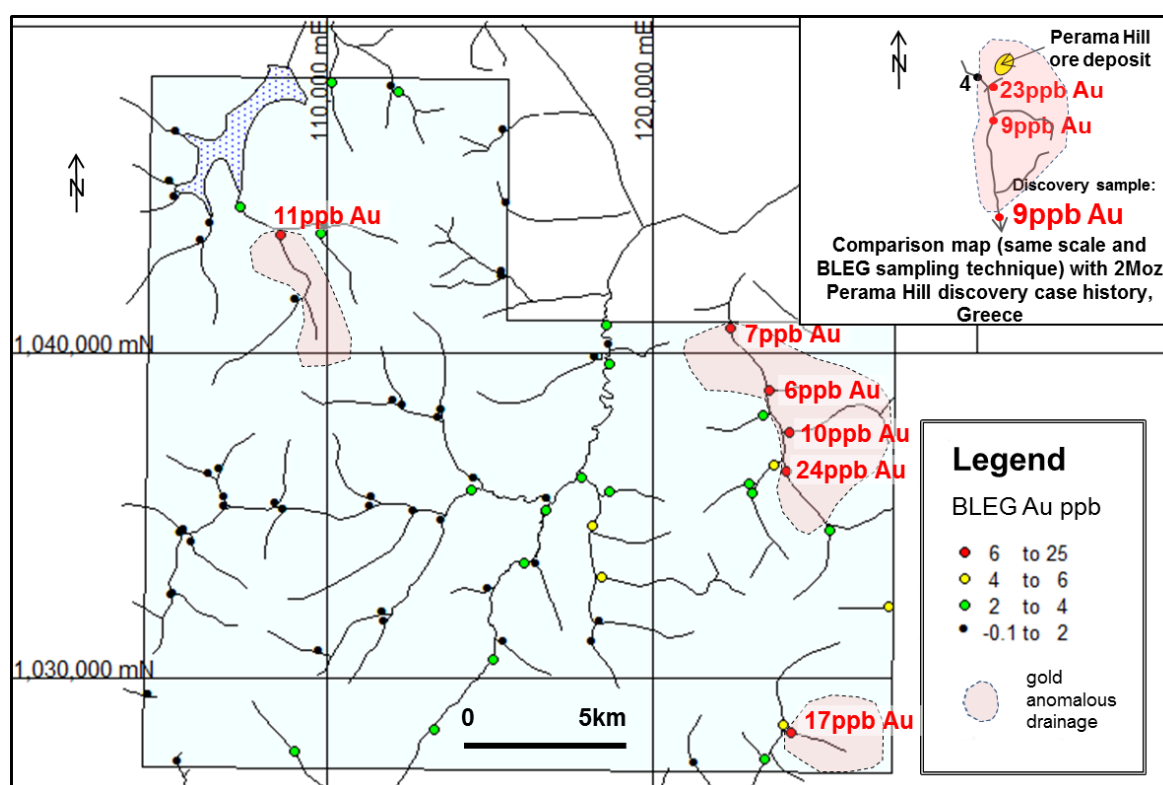


Figure 2: Map showing sample locations and gold values for the BLEG stream sediment survey at Boundiali with an index plan at the same scale illustrating the BLEG stream sediment sample results which led to the 2Moz Perama Hill gold discovery in Greece (owned by Eldorado Gold).

The **24ppb Au value** was collected from a large 15 km<sup>2</sup> catchment area downstream of a mapped NNE trending shear zone (Figure 3). A **second 10ppb Au** value was obtained from a 10 km<sup>2</sup> catchment area and draining the along strike projection of that same shear zone (Figure 3). It appears that the source of the gold could be several kilometres long presenting a high priority target for future exploration.



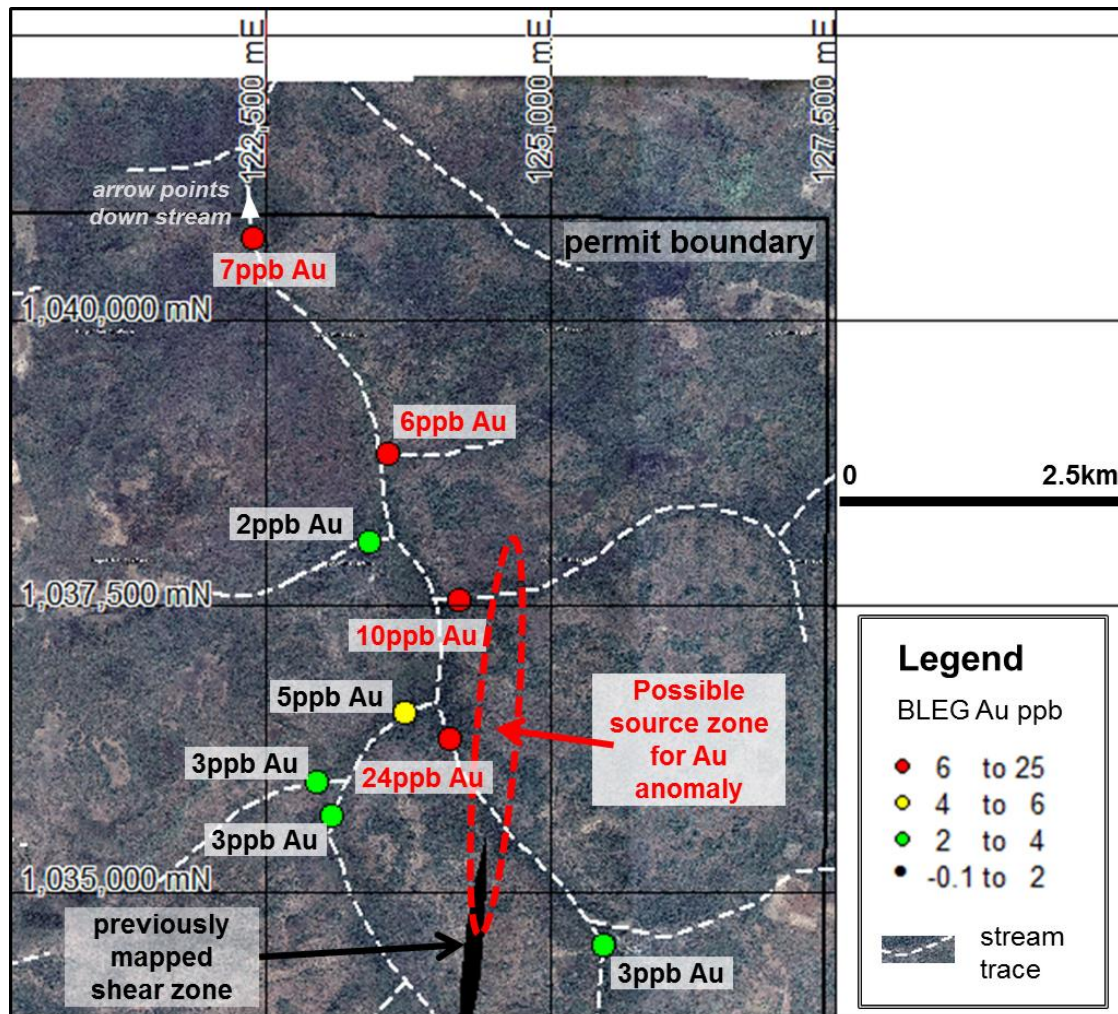


Figure 3: Map showing the largest of the three anomalous zones on Boundiali with the location of a shear zone from historical geological mapping which may correlate with the source of gold - on a satellite imagery background. The red dashed ellipse illustrates the possible orientation and extent of the gold source.

### Ferkessedougou Permit Stream Sediment Sampling

Anomalous values above 6ppb Au obtained in the March Quarter were followed up with infill BLEG sampling. This work has outlined two consistently gold anomalous catchment areas (Figure 4). Of these, the northern anomaly partly drains several historical artisanal gold mining sites. A soil sampling program is required to follow up these anomalies.

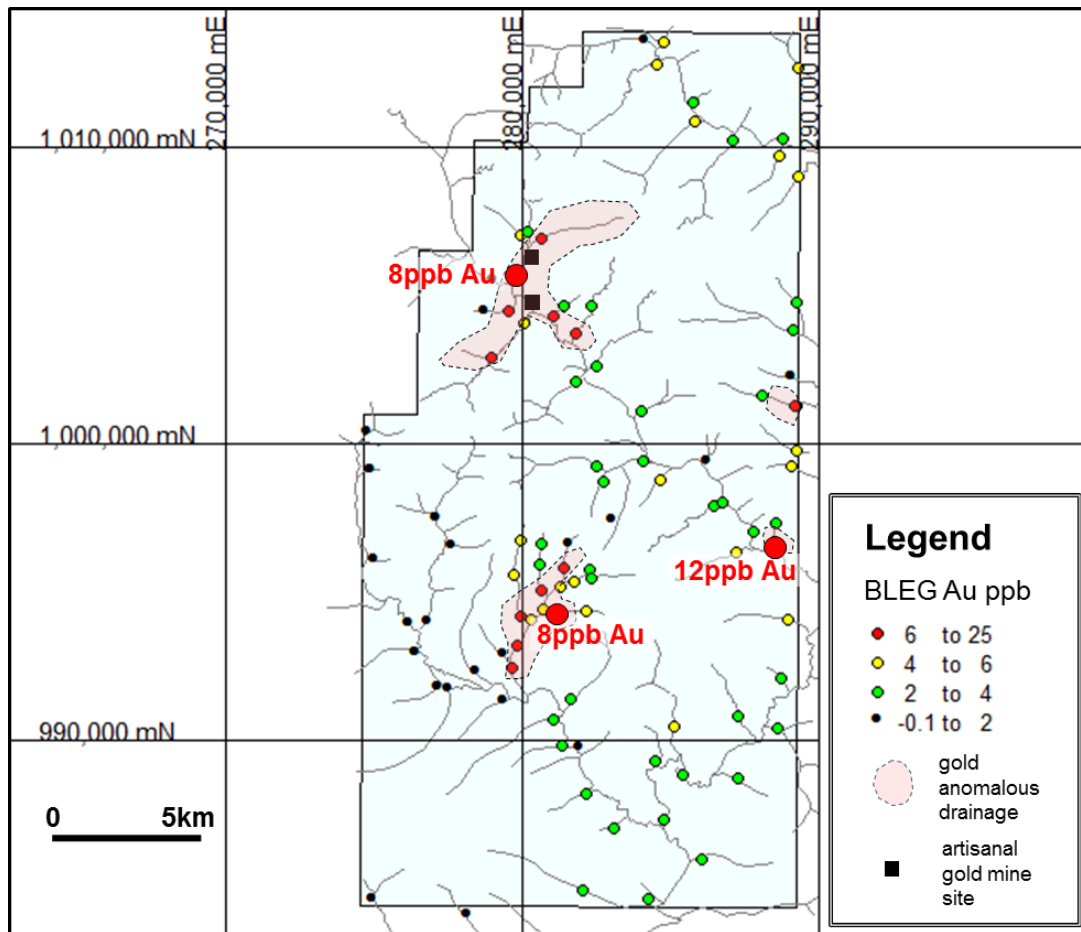


Figure 4: Map showing sample locations and gold values for the BLEG stream sediment survey at Ferkessedougou.

### Planned Follow-up Program

Follow-up work will be carried out after the current rainy season and will consist initially of:

- geological mapping, infill stream sediment sampling and possible ground magnetic surveys at Boundiali, and
- geological mapping and wide spaced soil sampling at Ferkessedougou.

A second phase of geochemistry will be carried out at Boundiali once the location of the source of the BLEG anomalies has been narrowed down. The discovery of coherent strong gold soil or bedrock anomalies at either Boundiali or Ferkessedougou will lead to a follow-up drilling program in 2015.

*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's major focus is in Burkina Faso, West Africa where it has assembled a substantial regional ground position totalling 1,605km<sup>2</sup> 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 Bongou trend where a series of high-grade gold drill intercepts have been obtained recently. PDI also has interests in a strategic portfolio of tenements in Cote D'Ivoire covering a total area of 1534 km<sup>2</sup>.*

### 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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**TABLE 1 – STREAM SEDIMENT SAMPLE RESULTS**

<b>BLEG Stream Sediment Results</b>									
<b>Power auger hole numbers</b>	<b>Northing (WGS84-30N)</b>	<b>Easting (WGS84 – 30N)</b>	<b>RL</b>	<b>Hole dips</b>	<b>Azimuth</b>	<b>Hole Depth</b>	<b>From</b>	<b>Interval</b>	<b>Au (ppb)</b>
PDC00139-271	Refer to Figures 2 and 4 for map location of stream sediment samples	Refer to Figures 2 and 4 for map location of stream sediment samples	See notes	Not relevant to stream sediment samples	Not relevant to stream sediment samples	Samples were collected from very shallow excavations (generally less than 10cm) on stream banks and islands within streams on which active sediment has accumulated.	Not relevant to stream sediment samples	Not relevant to stream sediment samples	See notes and Figures 2 and 4
Notes: BLEG ("bulk leach extractable gold") stream sediment sampling is a reconnaissance exploration technique. With the method used by PDI, samples composed of the finest grained "active sediment" (i.e. sediment that has been deposited very recently in stream flooding events) are collected from banks and islands within streams in which fine sediment has collected. This particular technique, when combined with accurate, very low detection limit analysis (0.02ppb Au for PDI's samples) provides a low cost and highly effective method for identifying prospective areas in stream catchment areas as large as 10 km <sup>2</sup> . The RL ranges for Boundiali and Ferkessedougou areas are, respectively is 338-442m and 271-316m. Individual RLs are not reported in this announcement because they are not relevant to interpreting geochemical data of this type; stream locations and catchment areas are important, however, and these are shown on Figures 2 and 4.									

## Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
<b>Sampling Technique</b>	<p>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report.</p> <p>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</p>	<p>The sampling described in this report refers bulk leach extractable gold (BLEG) stream sediment samples obtained from the Ferkessedougou exploration permit in Cote D'Ivoire.</p> <p>The Cote D'Ivoire BLEG samples consisted of silt and clay material obtained from active stream sediment within and on the banks of streams which flow during the rainy season.</p>
<b>Drilling</b>	<p>Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).</p>	<p>This is not relevant to a BLEG stream sediment program.</p>
<b>Drill Sample Recovery</b>	<p>Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</p>	<p>This is not relevant to a BLEG stream sediment program.</p>

<b>Logging</b>	<p>Whether core and chip samples have been geologically and geotechnical logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean/Trench, channel, etc) photography. The total length and percentage of the relevant intersections logged.</p>	<p>BLEG stream sediment location descriptions are all recorded along with any outcrop or float geology at the sample site.</p>
<b>Sub-Sampling Technique and Sample Preparation</b>	<p>If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>BLEG stream sediment samples consist of silt and clay material which is extracted from the other stream sediment material by decanting the fine grained material in suspension and then settling it out of suspension using a flocculant.</p>
<b>Quality of Assay Data and Laboratory Tests</b>	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<p>BLEG stream sediment samples were assayed at the former Ultra Trace (now Bureau Veritas) laboratory in Perth.</p> <p>Field duplicates were submitted with the BLEG samples.</p>
<b>Verification of Sampling and Assaying</b>	<p>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</p>	<p>This is not relevant to a BLEG stream sediment program.</p>



<b>Location of Data points</b>	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used Quality and adequacy of topographic control</p>	<p>Coordinates shown on the locality map for the Cote D'Ivoire BLEG stream sediment results is for Universal Transverse Mercator (UTM), Datum WGS 84, Zone 30 - Northern Hemisphere.</p>
<b>Data Spacing and Distribution</b>	<p>Data spacing for reporting of Exploration Results</p> <p>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <p>Whether sample compositing has been applied</p>	<p>The BLEG sampling was designed to test catchment areas averaging approximately 5 km<sup>2</sup>. Infill BLEG sampling on the Ferkessedougou permit was designed to test catchment areas of approximately half that size.</p>
<b>Orientation of Data in Relation to Geological Structure</b>	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</p>	<p>This is not relevant to a BLEG stream sediment program.</p>
<b>Sample Security</b>	<p>The measures taken to ensure sample security</p>	<p>Reference BLEG samples from Cote D'Ivoire are stored at PDI's sample store in Ouagadougou, Burkina Faso.</p>
<b>Section 2 Reporting of Exploration Results</b>		
<b>Mineral Tenement and Land Tenure Status</b>	<p>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</p> <p>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</p>	<p>The Ferkessedougou and Boundiali exploration permits were granted in June 2013 and January 2014 respectively and are both owned 100% by PDI.</p>
<b>Exploration Done by Other Parties</b>	<p>Acknowledgment and appraisal of exploration by other parties.</p>	<p>PDI is not aware of any effective gold exploration over either of these permits however historic records are incomplete at the Cote D'Ivoire government geological agency.</p>
<b>Geology</b>	<p>Deposit type, geological setting and style of mineralisation.</p>	<p>The geology of the Ferkessedougou and Boundiali permits consists of granite, metasediments, mafic volcanics and intrusives, and conglomerates.</p>
<b>Drill Hole Information</b>	<p>A summary of all information material to the understanding of the exploration results including a tabulation of the following</p>	<p>This is not relevant to a BLEG stream sediment program.</p>

	<p>information for all Material drill holes:</p> <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length</li> <li>• 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.</li> </ul>	
<b>Data Aggregation Methods</b>	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <p>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	This is not relevant to a BLEG stream sediment program.
<b>Relationship Between Mineralisation Widths and Intercept Lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</p>	This is not relevant to a BLEG stream sediment program.
<b>Diagrams</b>	<p>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.</p>	Appropriate plans showing the locations of the stream sediment samples, classified by results, are shown in this release.
<b>Balanced Reporting</b>	<p>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</p>	All BLEG stream sediment results have been reported.

	reporting of Exploration Results.	
<b>Other Substantive Exploration Data</b>	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.	No other exploration data has yet been collected on these permits.
<b>Further Work</b>	<p>The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling.</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Follow-up geochemical sampling is planned on both permits, as outlined in this release.