



12th April 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: 3.0 cents

Market Capitalisation: \$7.1 M

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

David Kelly
Non-Executive Director

Boundiali Potential Increases with Addition of New Ground

(Re-lodged with additional technical detail in Figure 4 and Appendix 1)

Predictive Discovery Limited (ASX: PDI) is pleased to announce that the Toro Gold Joint Venture has substantially expanded its ground position north of the Nyangboue gold discovery in the Boundiali permit, northern Cote D'Ivoire:

- Grant of the Boundiali North permit in the Toro JV has added 16km of strike length to the same structural trend which hosts the Nyangboue discovery (Figure 2).
- Nyangboue discovery highlights:
 - **1.2 km long zone of known gold mineralisation** identified from RC and diamond drilling in 2016 and 2017.
 - Visible gold and high grades including (ASX releases 23/6/16, 25/7/16, 8/8/16 and 29/5/17):
 - **30m at 8.3 g/t Au** from 39m.
 - **28m at 4.0 g/t Au** from 3m.
 - **20m at 10.5 g/t Au** from 38m.
 - **9m at 7.9 g/t Au** from 99m.
- Regional scale soil geochemistry on the Boundiali North permit about to commence.
- Geological interpretation of a recent aeromagnetic survey over the Boundiali permit has indicated the possibility of a **shallowly north-plunging high grade gold mineralised zone**. Drilling is expected to test this possibility in the second half of 2018.

Mr Paul Roberts, Predictive's Managing Director said: *"Addition of the Boundiali North permit to the Toro Joint Venture ground holdings on the Nyangboue trend has expanded the area's potential significantly. Also, interpretation of the recent aeromagnetic data has identified a possible geological explanation for the zone of high grade mineralisation found in the centre of the Nyangboue soil anomaly and points to previously unrecognised high grade down-plunge gold potential. Diamond drilling to test this new geological concept possibly combined with reconnaissance RC drilling of new gold-in-soil geochemical anomalies in Boundiali North is expected by the second half of 2018."*

Visible gold in Boundiali diamond drill core:



INTRODUCTION

The Boundiali permit is located within a very well mineralised greenstone belt which includes 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 obtained a series of strong stream sediment anomalies, the best of which, a 24ppb Au anomaly, lies downstream of the Nyangboue gold mineralised zone intersected in the 2016 RC drilling program.

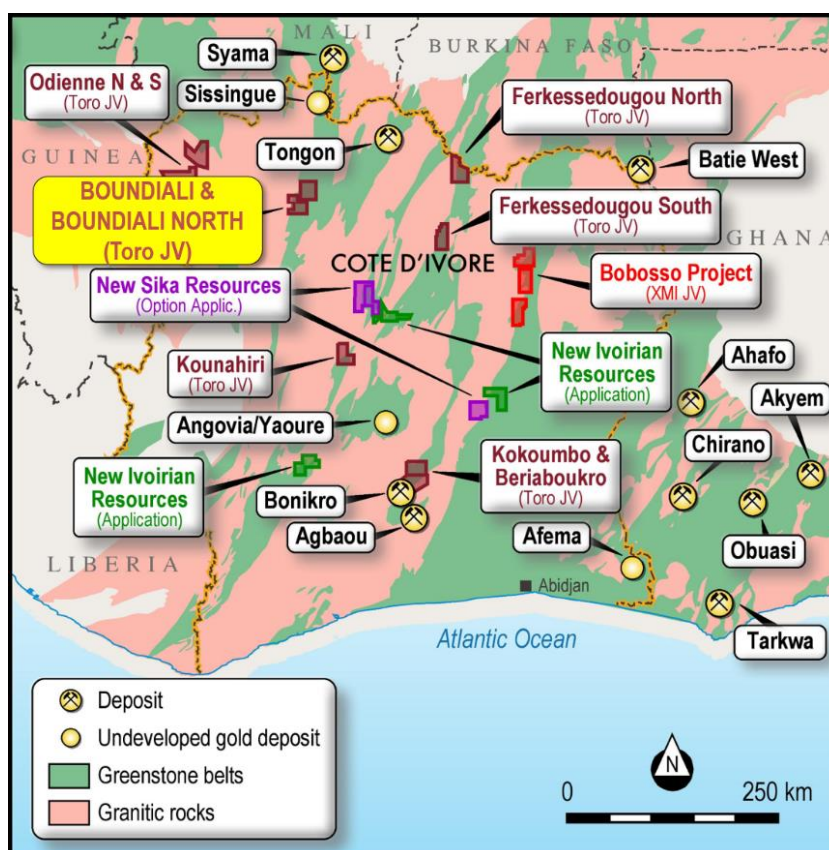


Figure 1: Locality map showing location of Boundiali and Boundiali North permits along with the other Toro JV permits (in brown), permits/applications covered by PDI's agreement with Progress Minerals over Bobosso (red), the wholly owned Ivoirian Resources permit applications (in green) and the optioned Sika Resources permit applications (in mauve).

Predictive is in joint venture with Toro Gold Limited (**Toro**), a UK-based company, on seven granted permits and two permit applications in Cote D'Ivoire, including Boundiali and Boundiali North (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%. PDI is contributing to 35% of ongoing exploration expenditure.

Boundiali North Permit

This permit is located directly north of the Nyangboue gold discovery (Figure 2). It covers 16km of the interpreted north-trending structure which is inferred to control both the Nyangboue mineralisation and an arsenic-gold anomalous trend which extends south from there to the Nyangboue South prospect. A portion of the permit application was excised from the granted permit because of classified forest in that area (see Figure 2).

The permit is held by a local Cote D'Ivoire company, DS Resources SARL (DSR). Predictive Discovery Cote D'Ivoire SARL has entered into an agreement with DSR to acquire up to 85% ownership of the permit by completion of a definitive feasibility study. DSR may contribute its share of mine development costs or convert its interest into a net smelter return royalty at the rate of 1% of royalty for 10% of equity i.e. a maximum royalty of 1.5%.

Current Work Program

A reconnaissance soil geochemical survey will commence shortly with an initial soil sample density of 800 x 100m². In line with previous practice, 200m spaced samples will be assayed for gold initially. Infill (100m spaced) samples will then be submitted for analysis in the vicinity of anomalous gold results.

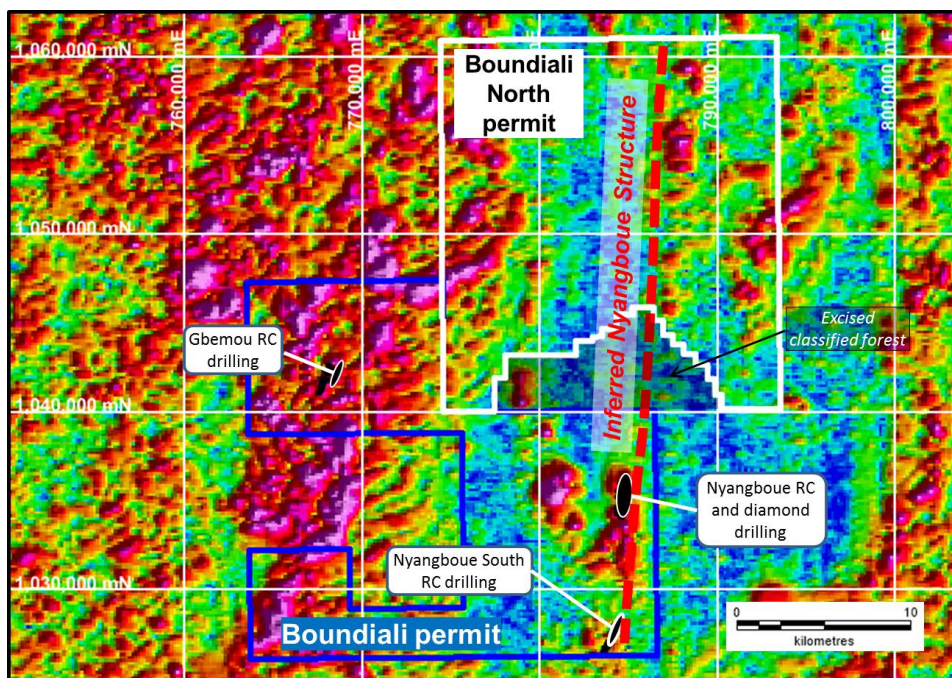


Figure 2: Location of Boundiali & Boundiali North plus drilling on regional aeromagnetic map.

Nyangboue Prospect

RC and diamond drilling on the Nyangboue Prospect in 2016-17 obtained a series of highly encouraging intercepts (announced to the ASX on 23/6/16, 25/7/16, 8/8/16, 12/9/16, 13/10/16 and 29/5/17) including:

- NDC007 - **30m at 8.3g/t Au** from 39m includes **1.5m at 56.9g/t Au** and **4.5m at 26.5g/t Au**.
- 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**.

Drilled gold mineralisation covers a known strike length of 1.2km in the centre of which there is a series of high grade gold intercepts (see Figure 3).

New Geological Interpretation from Recent Aeromagnetic Survey Data

A detailed aeromagnetic survey was flown by Xcalibur Airborne Geophysics over the eastern part of the Boundiali permit in the March Quarter. Survey details are provided in Appendix 1 and a total magnetic intensity image is provided as Figure 4.

Interpretation of the survey results integrated with geological mapping has produced a new detailed geological interpretation (Figure 3).

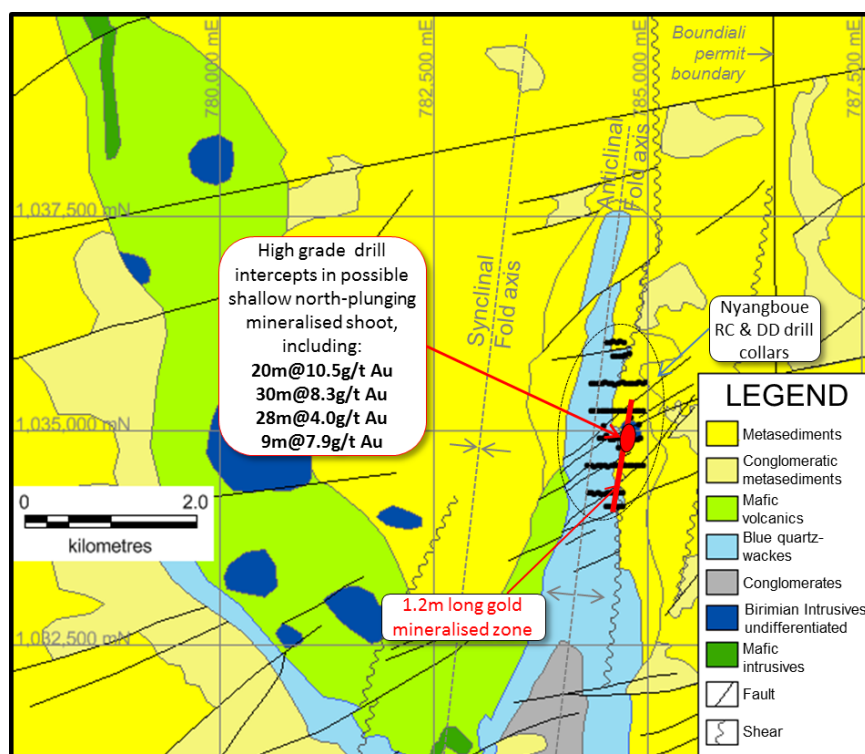


Figure 3: *Geology of north-eastern portion of the Boundiali exploration permit, northern Cote D'Ivoire.*

The new geological interpretation shows that the volcano-sedimentary sequence is folded into a syncline-anticline fold pair with the gold-mineralised Nyangboue shear zone coinciding with the eastern (sheared) margin of a tight NNE-trending anticline. The geological map pattern indicates that this anticline and the adjacent broader syncline both plunge shallowly to the north. It is therefore possible that the high grade gold mineralisation in the centre of the drilled area (Figure 3) is controlled by the same shallow plunge, offering potential for an extensive zone of high grade mineralisation to the north. Given the widths and grades in this central zone, there is **potential to discover a viable underground mining target possibly continuing a considerable distance down plunge to the north** beyond the limit of the shallow, potentially open pittable mineralisation, which is known from surface (e.g. 28m at 4.0g/t Au from 3m).

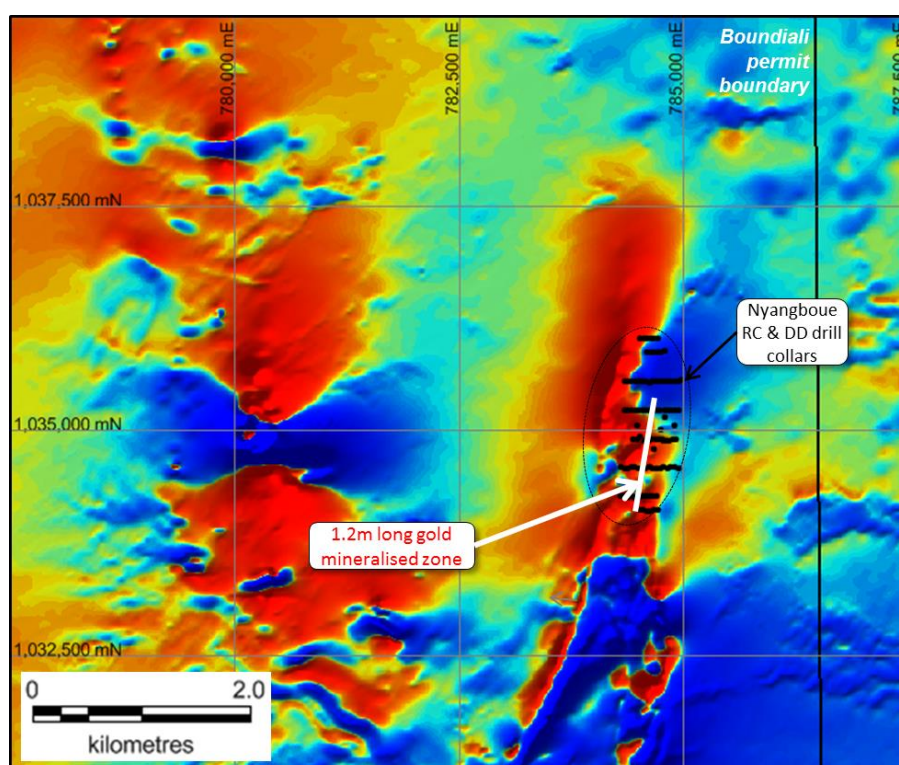


Figure 4: Total magnetic intensity image of north-eastern portion of the Boundiali exploration permit, northern Cote D'Ivoire.

Next Steps

Predictive will meet Toro management in London in early May, 2018 to discuss the next drilling programs after the planned Ferkessedougou South RC drill program, which is expected to commence in April. Drill programs under consideration will include both the Boundiali and Kokoumbo permits (Figure 1). This next drilling program will either be undertaken before the commencement of the rainy season in July or immediately afterwards in the December Quarter.

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.

For further details please contact:

Paul Roberts
Managing Director
Tel: +61 402 857 249
Email:

paul.roberts@predictivediscovery.com

Bruce Waddell
Company Secretary
Tel: +61 8 6143 1840
Email:

bwaddell@auroraminerals.com

APPENDIX 1

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	Not applicable – this release refers to an aeromagnetic survey.

	<p>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>	
Drilling	<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>	Not applicable – this release refers to an aeromagnetic survey.
Drill Sample Recovery	<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>	Not applicable – this release refers to an aeromagnetic survey.
Logging	<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>	Not applicable – this release refers to an aeromagnetic survey.
Sub-Sampling Technique and Sample Preparation	<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.</p>	Not applicable – this release refers to an aeromagnetic survey.

	<p>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>	
Quality of Assay Data and Laboratory Tests	<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>	Not applicable – this release refers to an aeromagnetic survey.
Verification of Sampling and Assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes</p> <p>The verification of significant intersections by either independent or alternative company personnel. Discuss any adjustment to assay data</p>	Not applicable – this release refers to an aeromagnetic survey.
Location of Data points	<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>GPS navigation was used to locate data points. Details: NovAtel OEM6 Series, 120 Channel with NovAtel CORRECT or Omnistar DGPS.</p> <p>Altitudes were measured using a Renishaw Industrial Laser Module (IML 500)</p> <p>Grid system details: WGS84, Zone 29N.</p>
Data Spacing and Distribution	<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</p>	<p>The line spacing was 50m, magnetic data readings were taken every 4m along lines.</p> <p>No information is reported that is relevant to a Mineral Resource of Reserve estimation.</p>

	Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	
	Whether sample compositing has been applied	
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.	Magnetic data was collected on east-west lines which is approximately at right angles to the regional strike.
Sample Security	The measures taken to ensure sample security	Not applicable – this release refers to an aeromagnetic survey.
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 undertaken.
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 has earned a 65%% interest in PDI Cote D'Ivoire SARL by spending US\$3.5 million. PDI is currently contributing 35% of exploration expenditure.
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: <ul style="list-style-type: none"> • 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 	Not applicable – this release refers to an aeromagnetic survey.

	<ul style="list-style-type: none"> 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	<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>	Not applicable – this release refers to an aeromagnetic survey.
Relationship Between Mineralisation Widths and Intercept Lengths	<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>	Not applicable – this release refers to an aeromagnetic survey.
Diagrams	Appropriate maps and sections (with intercepts) 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 map is included – Figure 4 – a total magnetic intensity image of the area.
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.	Not applicable – this release refers to an aeromagnetic survey.
Other Substantive Exploration Data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological	All relevant exploration data is either reported in this release or has been reported previously and is referred to in the release.

	<p>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.</p>	
Further Work	<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>	<p>Geological interpretation of the aeromagnetic data and geological mapping will assist the design of the next drilling program, which is expected to be carried out during calendar 2018.</p>