predictive discovery LIMITED

ASX Announcement

31st January 2018

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: 4.0 cents

Market Capitalisation: $9.4m

Directors

Phillip Jackson
Non-Exec Chairman

Paul Roberts
Managing Director

David Kelly
Non-Executive Director

Quarterly Report for the Period Ending 31st December 2017

EXPLORATION

Côte D'Ivoire – Bobosso Project

- RC drill program totalling 4,244m. Assay results from first 4 prospects included:
  - **11m at 4.9g/t Au** from 5m including **1m at 41.33g/t Au**
  - **28m at 2.18g/t Au** from 5m including **1m at 14.16g/t Au**
  - **18m at 2.05 g/t Au** from 9m including **4m at 5.59g/t Au**
  - **19m at 1.28g/t Au** from 73m
  - **19m at 2.13g/t Au** from 3m
  - **21m at 1.59g/t Au** from 61m
  - **1m at 15.53g/t Au** from 61m
  - **19m at 1.00g/t Au** from 23m

Côte d'Ivoire - Toro Gold Joint Venture

- Ferkessedougou North - trenching program totalling 3,187m completed in the Quarter
- Aeromagnetic Surveys completed on Boundiali, Ferkessedougou North and Ferkessedougou South permits.

Burkina Faso

- Power auger program commenced.

Planned March Quarter Exploration Program

Côte d'Ivoire

- Progress-XMI JV (Bobosso) – release remaining RC drill results, data assessment and work program planning.
- Toro JV - 5,000m RC drilling program commencing at Ferkessedougou North in early February. Trenching on Ferkessedougou South

Burkina Faso

- Ongoing power auger drilling.
- RC drilling commencing in early February 2018.

Project Generation

- Application for new permits in Burkina (100% PDI) when tenement map is re-opened for applications.
- Project generation elsewhere in West Africa.

CORPORATE

- $2.92M in cash at 31st December 2017 and no debt.
- A Rights Issue and a modest placement raised $3.07 million before costs.

INTRODUCTION

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

In Cote D'Ivoire (Figures 1 and 2), the Company has interests in six granted exploration permits and two permit applications, totalling 2,749km², which are being actively explored under the terms of a joint venture with Toro Gold Limited (Toro). PDI is also conducting exploration under an agreement with Progress Minerals Inc (Progress) and Ivoirian Company, West African Venture Investments SARL (WAVI), on the Bobosso Project, which covers 1,200km². A further six permit applications covering 2,320km² were announced on 6 February 2017.

In Burkina Faso, the Company has a large regional tenement package in the north-east of the country covering 949km² (Figure 7). PDI's exploration focus is on the high-grade Bongou gold discovery and the surrounding area. A formal Mineral Resource Estimate on Bongou resulted in 184,000oz of gold in the Inferred and Indicated Mineral Resource categories with an average grade of 2.6g/t Au, including 136,000oz at 3.8g/t Au (ASX release dated 4/9/14).

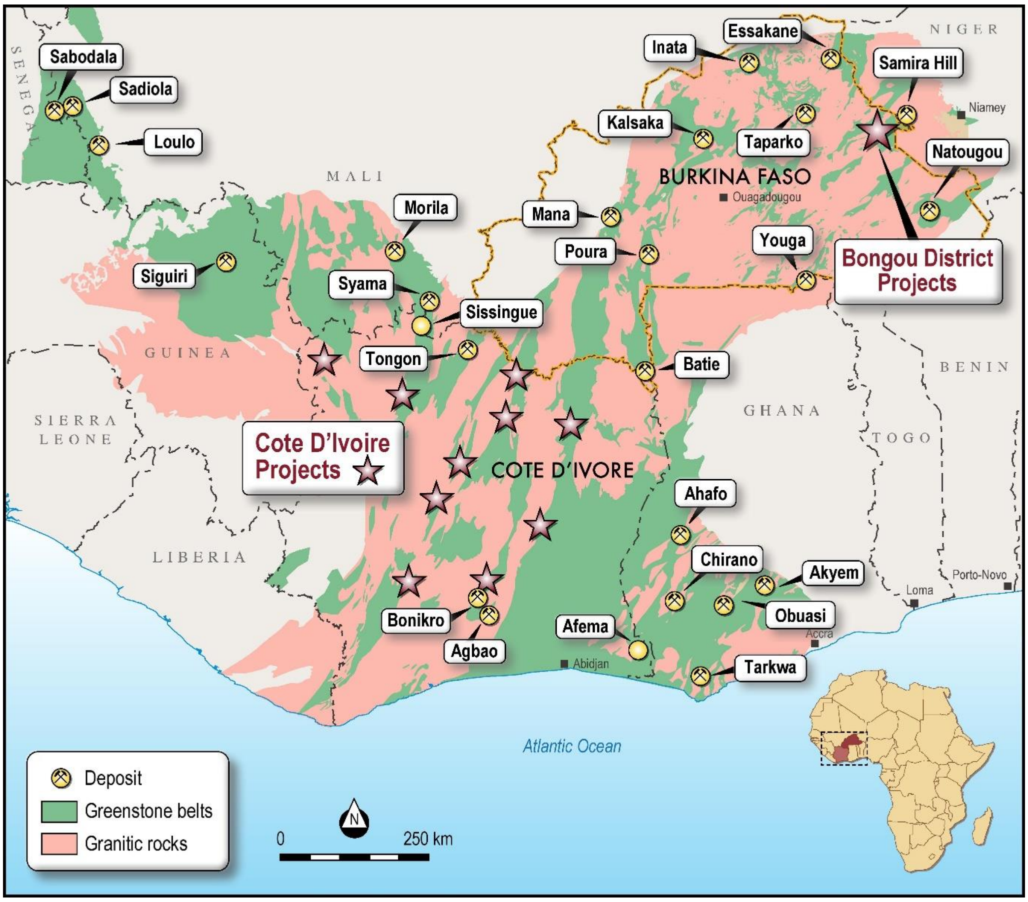

__Figure 1:__ Map of the Birimian Gold Belt showing major mines/gold deposits and PDI project areas (stars).

Predictive's current strategy is to maintain a high level of exploration activity on all of its projects through project-level funding, either via joint ventures or direct cash investments into private companies which hold the Company's ground. The Toro, Progress and Cape Clear Joint Ventures are operating well and have been generating significant newsflow. At the same time, the Company contunues to seek new ground in West Africa on which it can undertake early stage exploration in its own right.

COTE D'IVOIRE

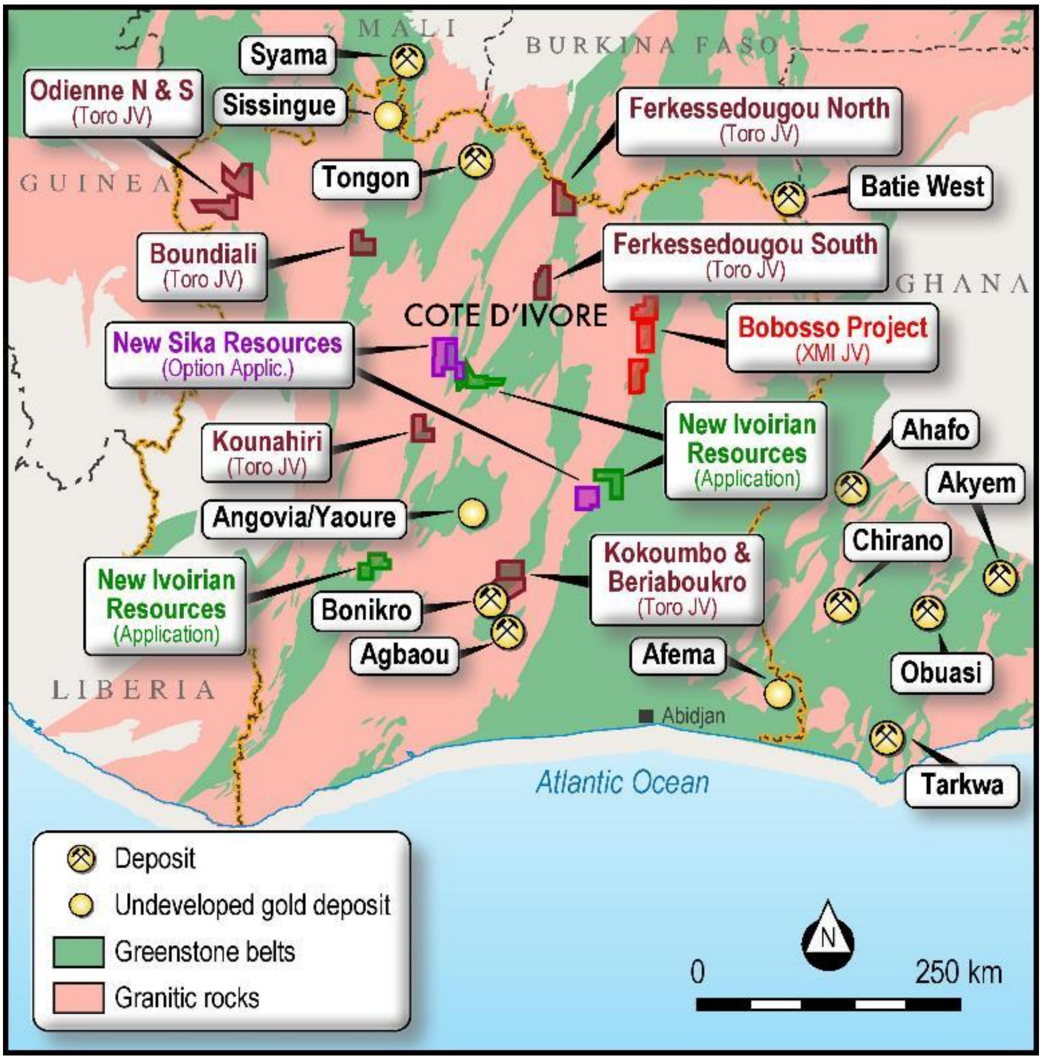

Figure 2: Locality map showing the Toro JV permits/applications (in brown), permits/applications covered by PDI's agreement with XMI SARL and Progress Minerals Inc over the Bobosso Project (red), the wholly owned Ivoirian Resources SARL permit applications (in green) and the optioned Sika Resources permit applications (in magenta).

Introduction

Predictive has expanded its ground position Cote D'Ivoire in recent years. The country covers over a third of the highly prospective Birimian gold belt, more than any other country in West Africa. Cote D'Ivoire is highly underexplored for gold because the exploration investment boom in the last decade largely bypassed the country because of political instability. Since the accession of President

Alassane Ouattara in 2011 and his comfortable re-election in 2015, and with investment certainty provided by an updated Mining Act and a forward-looking Mines Administration, Cote D'Ivoire has become an attractive exploration investment destination.

In Cote D'Ivoire, Predictive holds joint ventures with (1) Toro Gold Limited, a UK-based company and (2) West African Ventures Investment SARL (WAVI) SARL and Progress Minerals International (Inc) of Canada (Progress). It has also entered into an option agreement with Sika Resources Pty Ltd on three permit applications held by Sika's subsidiary, Moaye Resources SARL.

Bobosso Project, Cote D'Ivoire

Introduction

The Bobosso Project consists of two granted exploration permits, Bassawa and Wendene in northern Cote D'Ivoire (Figure 2), which are held by an Ivoirian company, XMI SARL (**XMI**). Bassawa and Wendene are located in the southern extension of the well mineralised Hounde Belt in Burkina Faso, which includes Semafo's Mana Mine (5 Moz in ore resources and reserves[1]).

Previous exploration by Equigold, Lihir and Newcrest including a series of large drilling programs totalling 569 RC holes and 11 diamond drill holes. This obtained many gold mineralised intercepts beneath a 7km^2 gold-in-soil geochemical anomaly (ASX release dated 28/10/15) indicating the presence of a large gold mineralised system.

Earlier geological mapping and re-logging of historical diamond drill core by Predictive staff has demonstrated that the gold mineralisation is hosted in a sequence of mafic volcanics, with lesser felsic to intermediate volcanics and minor metasediments. Gold mineralisation is found in both broad, moderate grade alteration zones (carbonate-silica-sericite-pyrite) and narrower, higher grade quartz veins.

PDI earned a 37% equity in the Bobosso project through an agreement which was signed in October 2015 with the owner of XMI, West Africa Venture Investment (**WAVI**). In 2017, Predictive and WAVI entered into a funding agreement with Progress Minerals Inc (**Progress**) by which Progress is funding US$1 million of expenditure to earn a 30% equity in the project (ASX release dated 16/3/17). Expenditure on the RC drilling program reported here will complete the US$1 million commitment once drilling and analytical costs are paid. Once that expenditure has been formally accepted, Predictive's equity will reduce to 30%.

RC Drilling Program

An RC drilling program, totalling 45 holes and 4,244m, was completed on 21st December 2017. It was designed to explore six small areas within the large Bobosso gold mineralised system by testing:

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

- for extensions to gold mineralisation intersected in the earlier diamond drilling e.g. Target 4,
- for a postulated flat mineralised zone at the Wendene Hill location, and
- along strike from historical drill intercepts e.g. BRC39 and BRC135.

The holes were mostly drilled towards the SSE on a 160 degree azimuth in keeping with the previously inferred ENE strike and north dip of the mineralised zones.

The program was carried out by a Cote D'Ivoire-based drill contractor, Foramin, and the drill samples were assayed by Bureau Veritas in Abidjan. Additional details about the program are provided in Table 1.

Six target areas were drill tested (Figure 3), the results of four of which are reported here:

Target 4

Figures 4 to 6 illustrate the distribution of gold mineralised intercepts in this prospect, highlighting the results of this drill program plus historical drill intercepts (ASX release dated 28/10/15) and the joint venture's 2017 diamond drill results (ASX release dated 20/7/17). Figure 4 shows that most mineralisation is contained within one, east-west striking, gold mineralised zone, which is over 200m long. The cross sections (Figures 5-6) show that the zone dips steeply to the north.

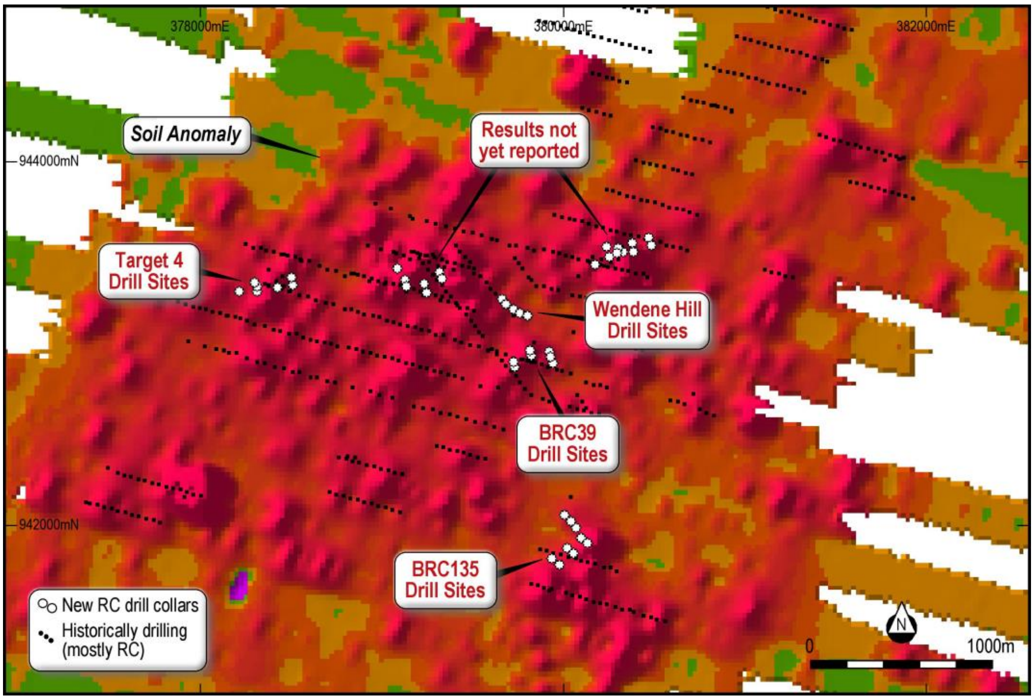

__Figure 3:__ RC drill hole locations plotted on a map showing historical drilling superimposed on a gold-in-soil geochemistry gridded image (red "peaks" with higher gold values and green "flats" with low grades). Note the scale of the gold mineralised system as indicated by the soil geochemical anomaly and the extent of untested gold anomalous areas.

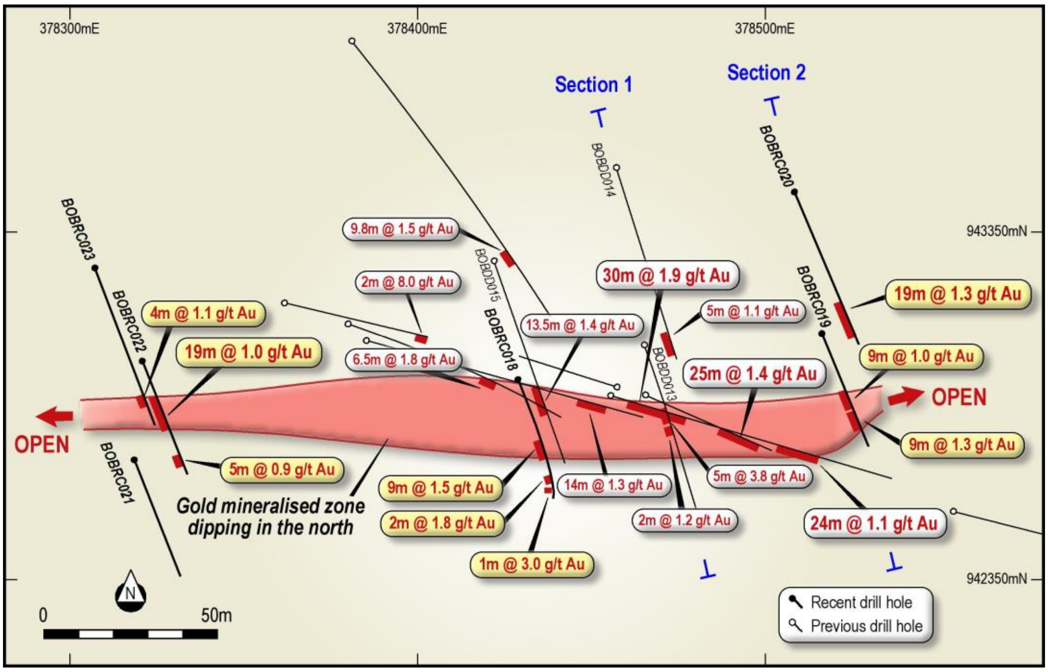

Figure 4: *Target 4 plan view showing results of recent RC drill program (yellow labels) along with historical results in black (reported to the ASX on 28/10/15) and 2017 diamond drill results with (collars labelled). Note that deeper intercepts (e.g. in holes BOBRC020 and BOBDD014) are down-dip extensions of the shallower gold intercepts of the near surface gold anomalous zone (coloured in pink).*

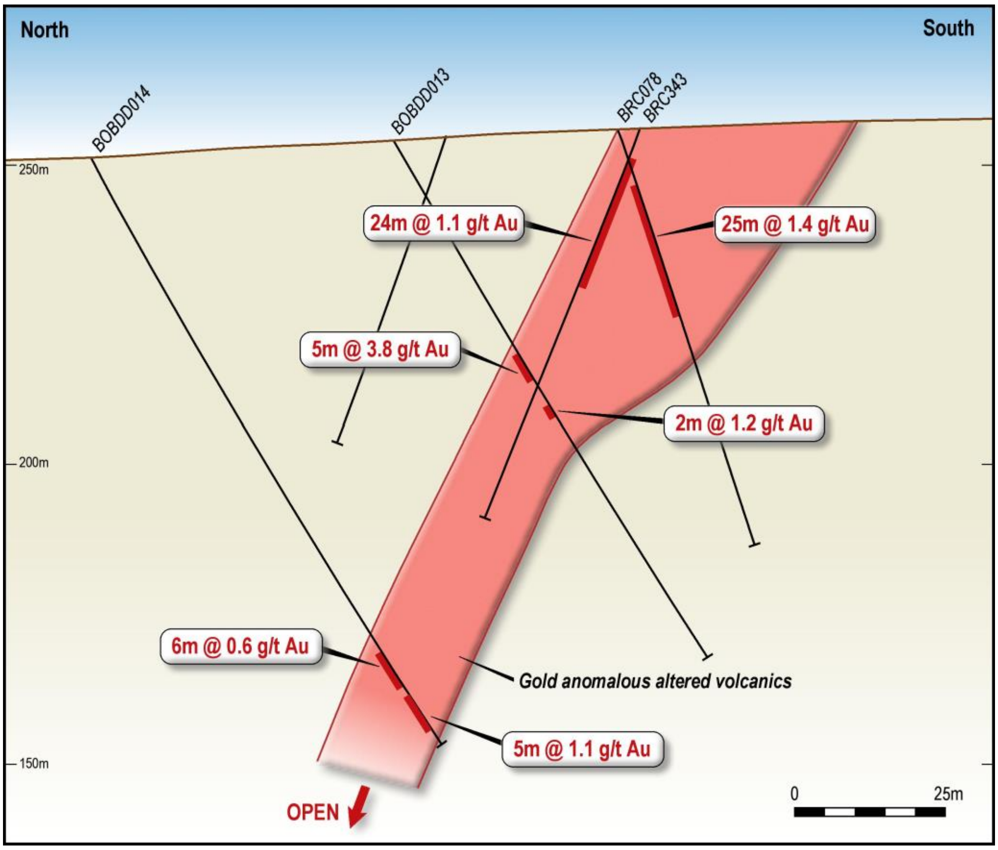

Figure 5: *Cross-section 1 through Target 4 (see Figure 4 for location). Gold anomalous altered volcanics (coloured in red) contain values exceeding 0.1 g/t Au.*

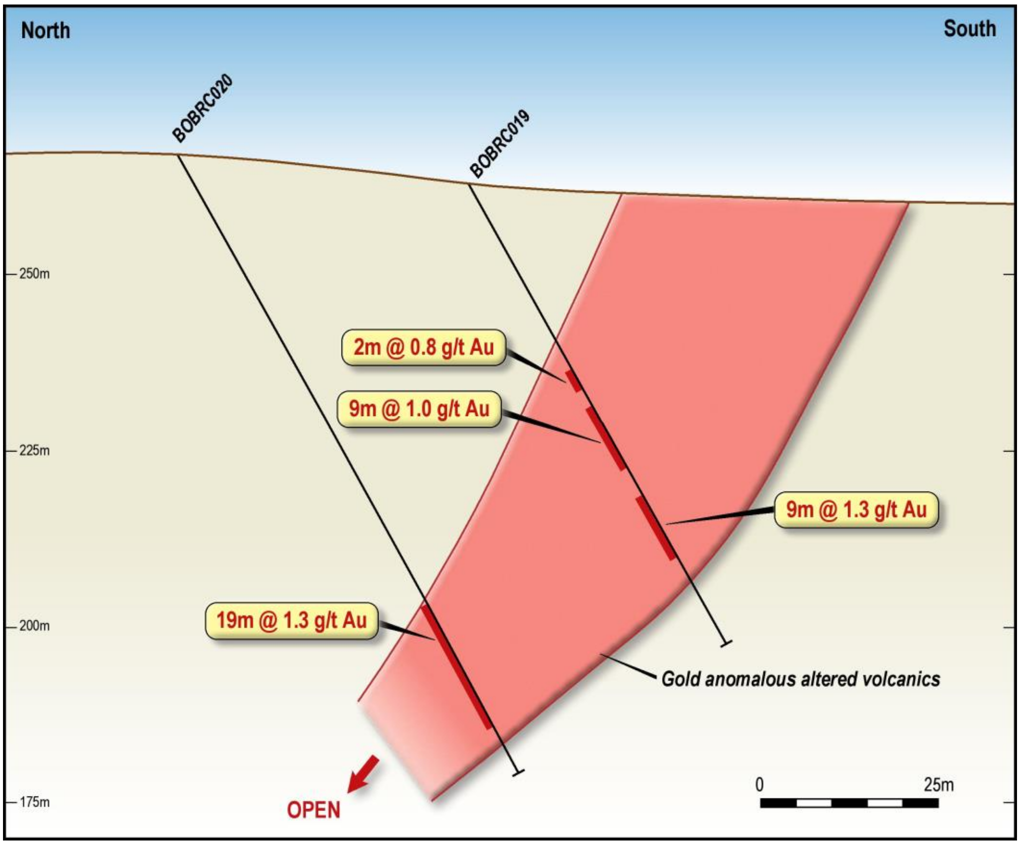

Figure 6: *Cross-section 2 through Target 4 (see Figure 4 for location). Gold anomalous altered volcanics (coloured in pink) contain values exceeding 0.1 g/t Au.*

Wendene Hill Prospect

Drilling here was designed to test an area where gold-anomalous altered volcanics had been observed at surface, suggesting the presence of a flat zone of gold mineralisation. One line of vertical drill holes was placed here and showed that quite thick zones of gold-bearing altered volcanics are located in the immediate subsurface (Figure 7). The best individual intercept was **11m at 4.93g/t Au from 5m**.

The mineralisation has been tested over 200m and is open to the north and east.

While the reason for the flat zone is not yet completely understood, Predictive's current interpretation is that this mineralisation may have formed a result of thrust tectonics on north dipping structures generating mineralised structures which have both steep north-dipping and flat components.

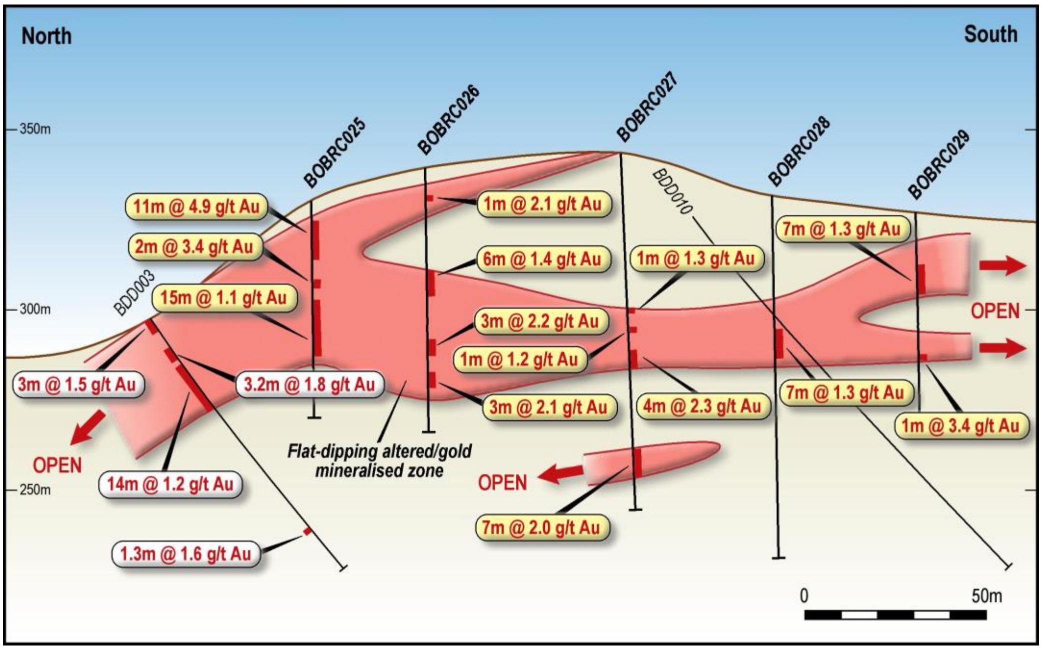

Figure 7: *Wendene Hill Cross-section (see Figure 3 for location). Gold anomalous altered volcanics (coloured in pink) contain values exceeding 0.1 g/t Au.*

BRC39 Target

Drilling here was designed to follow-up an encouraging historical drill intercept (BRC39 - 16m at 1.32g/t Au from 62m) and observations of pyritic altered volcanics in artisanal workings.

The drilling obtained several encouraging results (best intercept – **28m at 2.18g/t Au from 5m**) and indicated a north-east strike and variable dips towards the north-west (Figure 8). The mineralised alteration zone at least 150m long and is open to the north-east and south-west.

Here, as in other locations, the best widths and grades appear to be more common in the near-surface, suggesting a component of supergene enrichment, and indicating that future infill drilling should ensure that every cross-section includes a near-surface intercept in order to obtain a fair representation of widths and grades at (open-pit) mineable depths.

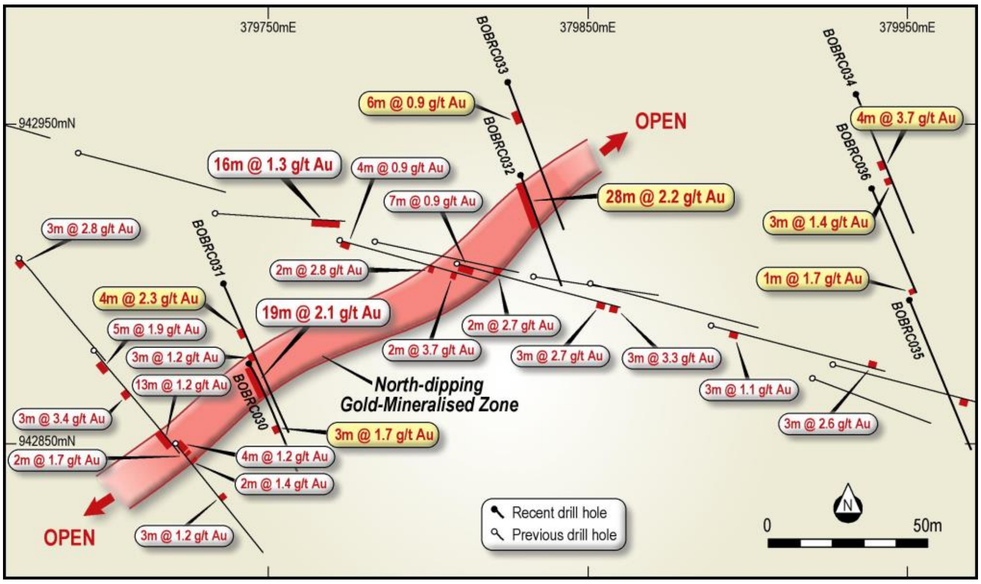

Figure 8: *BRC39 target plan view showing results of recent RC drill program (yellow labels) along with historical results in black (reported to the ASX on 28/10/15). Near-vertical dips are indicated in the south-western drill holes whereas the mineralisation's dip appears to be shallower in the north-east (e.g. in holes BOBRC32 to BOBRC33).*

BRC135 Target

Drilling here was designed to follow-up an encouraging historical drill intercept (BRC135: 8m at 2.72 g/t Au from 26m) and to test a strong and hitherto untested east-west structure observed in aeromagnetic data.

The drilling identified a NNE striking zone of gold mineralisation with a best intercept of **21m at 1.59g/t Au from 61m** (stopped in mineralisation). Dips appear to be near vertical. The known strike length is at least 120m, and the zone is open to the south-west.

The drilling was partly designed to test a north-east to east-north-east feature (in keeping with mineralisation strikes further to the north), so the eastern-most section missed the target zone. This result highlights the variability in strike (and dip) of the mineralised zones and hence the need to step out carefully on each zone in future drill programs until the average strike and dip is determined.

The east-west structure appears to be un-mineralised in this location. However, given that it is over 2km long and untested elsewhere, there will be a need to test it further in future drill programs.

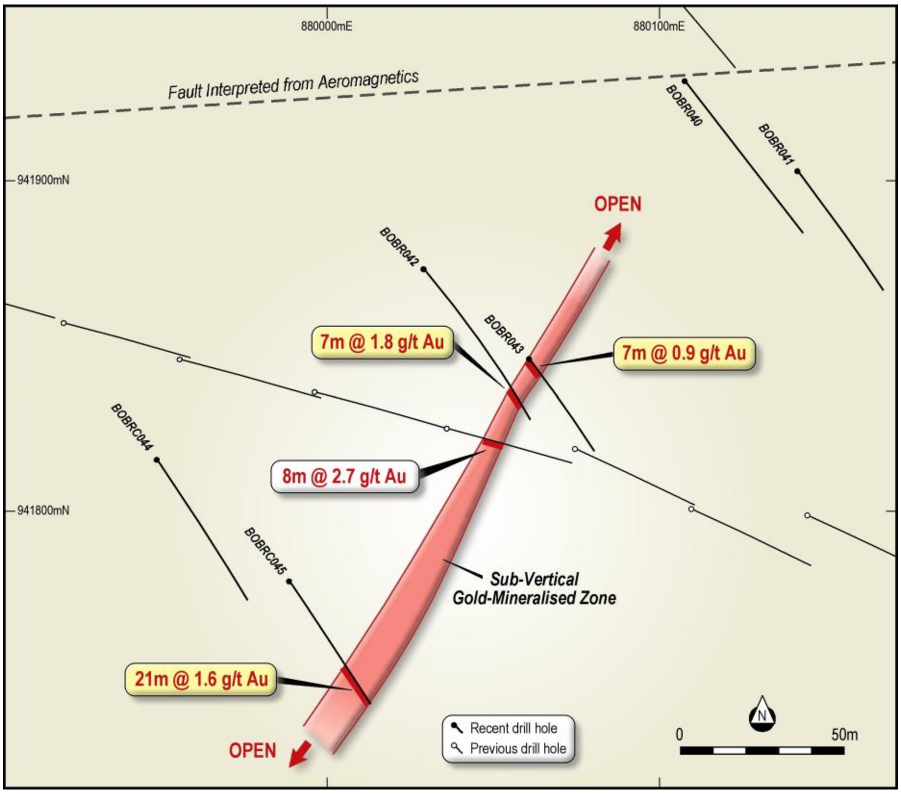

Figure 9: *BRC135 target plan view showing results of recent RC drill program (yellow labels) along with historical results in black (reported to the ASX on 28/10/15).*

CONCLUSIONS

The reported drill results have shown that:

- The strike orientations of the gold mineralised zones in the Bobosso system (associated with wide alteration zones and disseminated pyrite) range from east-west to north-north-east. Therefore, given the lack of outcrop in most areas, extensions to each mineralised zone need to be tested carefully in a stepwise fashion until mineralisation strike and dip is established.
- Gold grades and widths are generally highest in the near-surface, suggesting some supergene enrichment. Resource drilling will therefore need to obtain a shallow intercept on each section to ensure that a representative picture of average grades and widths at open pit mineable depths are obtained.
- The mineralised alteration continuity that was observed in the 2017 diamond drilling has been further confirmed by these results. The primary alteration is easily identifiable by its distinctive pale colour and can therefore be traced from hole to hole quite easily. Much of it is gold-anomalous especially where pyrite and/or quartz veining is present.
- The flat mineralised zone at Wendene Hill may be the first of a number yet to be discovered within the Bobosso mineralised system. Such zones could be important targets, especially in the near surface, as they present the opportunity to discover significant

volumes of mineralisation within the zone of supergene enrichment and with potentially low stripping ratios if they are shown to be economically viable to mine.

- This drilling has contributed to the ongoing process of identifying mineralised zones with significant gold-bearing widths, especially in the near surface, most of which are open along strike. The historical drilling has been a useful starting point for testing new areas, however given the generally incorrect historical drill orientation and the prevalence of better grades and widths in the near surface, which were not optimally tested, there is a substantial opportunity to find more zones of the type described here. Furthermore, as Figure 2 demonstrates, there are large untested areas within the outline of the Bobosso soil geochemical anomaly which have seen no drilling at all.

This drill program did not focus on the high grade vein style which is also present in the area. Initial indications are that such vein styles are not very persistent along strike, requiring very detailed drilling for resource estimation. Such drilling may be contemplated in future programs.

Planned December Quarter Work Program – Bobosso JV

Both Predictive and Progress are reviewing the results of this drill program as they come in. When all results have been received, the joint venture will determine the next exploration program both on the Bobosso gold mineralised system and the surrounding exploration permits.

Toro Gold Joint Venture (Predictive 35%)

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 2). 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 expenditure by Predictive CI.

Ferkessedougou North

The Ferkessedougou North permit is located in northern Cote D'Ivoire directly adjacent to Burkina Faso's southern border (Figure 2). It is subject to an agreement between Predictive CI and local Ivoirian company, Gold Ivoire Minerals SARL.

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). Anomalous gold values (>20ppb Au) have been found in numerous locations throughout the grid (Figure 10). 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. Gold mineralisation observed in artisanal workings and the soil anomalies themselves are also NNE orientated suggesting that the source of the anomalies is a series of mineralised shear zones.

A trenching program using a backhoe was conducted during the December Quarter. 25 trenches were dug, totalling 3,187m (Figure 10).

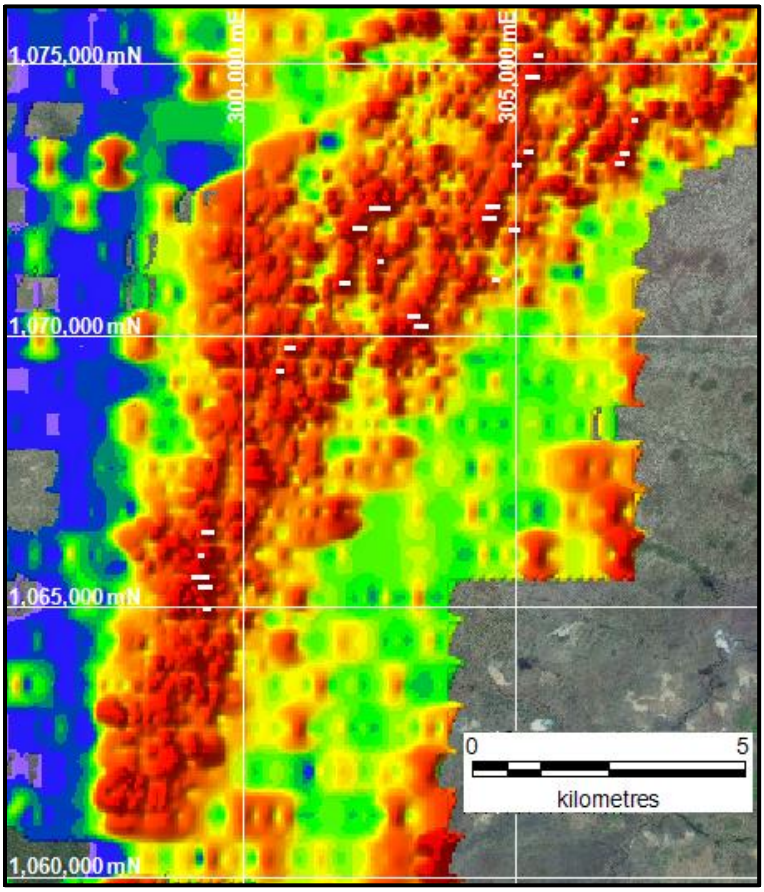

Figure 10: *Trench locations (white bars) on a gridded colour image of gold-in-soil geochemical anomalies (red "peaks" with higher gold values and green "flats" with low values) on the Ferkessedougou North permit.*

Aeromagnetic Surveys

Aeromagnetic surveys, totalling 11,600 line km, were carried out over three permits – Boundiali, Ferkessedougou North and Ferkessedougou South (Figure 2). Preliminary data has now been received and while the data has not yet been interpreted, interesting structures have been observed in all three areas

Planned March Quarter Work Program – Toro Gold JV

RC drilling, totalling 5,000m is planned on the Ferkessedougou North and Ferkessedougou South permits, commencing on Ferkessedougou North.

A program of approximately 1,000m of trenching will be carried out on the Ferkessedougou South permit, commencing shortly.

BURKINA FASO (Predictive 100%)

The Company's tenement holding covers 949km^2 including approximately 100km of strike length in the Samira Hill greenstone belt in eastern Burkina Faso (Figure 11). This belt hosts the 2.5 million ounce Samira Hill gold deposit across the border in Niger and contains numerous active artisanal gold mine sites along its length. PDI owns 100%, or has the rights to earn 95% to 100% of all its permits in Burkina Faso.

PDI has discovered gold mineralisation on multiple prospects in Eastern Burkina Faso during the past four years including the Bongou gold deposit. A formal Mineral Resource Estimate on Bongou resulted in 184,000oz of gold in the Inferred and Indicated Mineral Resource categories with an average grade of 2.6g/t Au, including 136,000oz at 3.8g/t Au (ASX release dated 4th September, 2014).

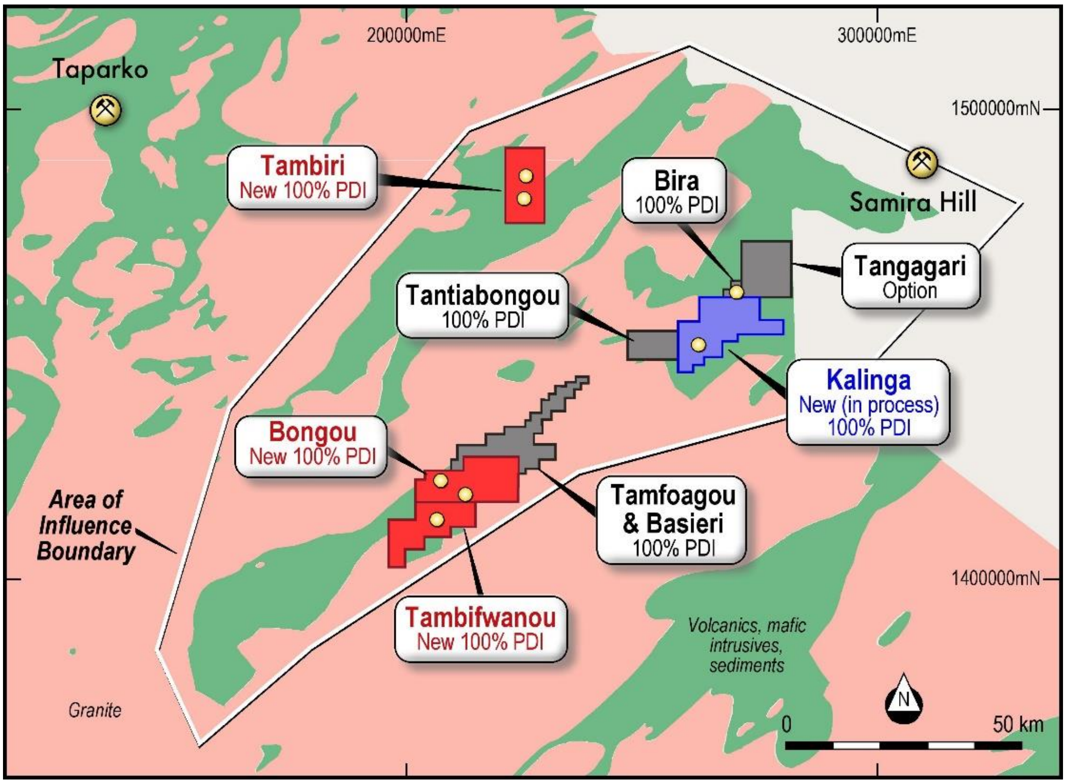

Figure 11: *Locality map of PDI permits in eastern Burkina Faso, showing location of the Company's permits on a geology background and area of influence location for the new joint venture with Progress Minerals Inc. Red coloured polygons are new permits replacing old permits which reached the end of their terms in July 2017. The blue polygon is the Kalinga permit for which fees have now been paid (and therefore formal grant of the new permit grant is expected soon). 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*

Power Auger Drilling Program

A 2700 hole power auger drilling program commenced in December 2017. 312 holes have been drilled so far on the Bira and Kalinga permits (Figure 11).

Planned March Quarter Work Program – Progress Burkina Faso JV

RC drilling is expected to commence in early February 2018. A 52 hole program totalling over 5,000m has been planned focused around the Bira Prospect.

The power auger drill program will also continue during the Quarter

AUSTRALIA

Cape Clear Joint Venture – Predictive 25%

Introduction

Exploration Licence 5434 is located west of Ballarat in Victoria (Figure 12). It was granted to PDI in July 2013. The area is highly prospective for shallowly concealed Stawell-style gold mineralisation. PDI previously carried out geological mapping and a gravity survey over part of the EL area. Execution of a binding farm-in agreement with Cape Clear Minerals Pty Ltd (CCM) on this EL was announced to the ASX on 22nd September 2014. Under that agreement, CCM could earn 75% equity in the licence by spending $500,000 on exploration, including at least 1,000m of drilling. CCM has complied with those conditions and has therefore achieved a 75% equity in the project.

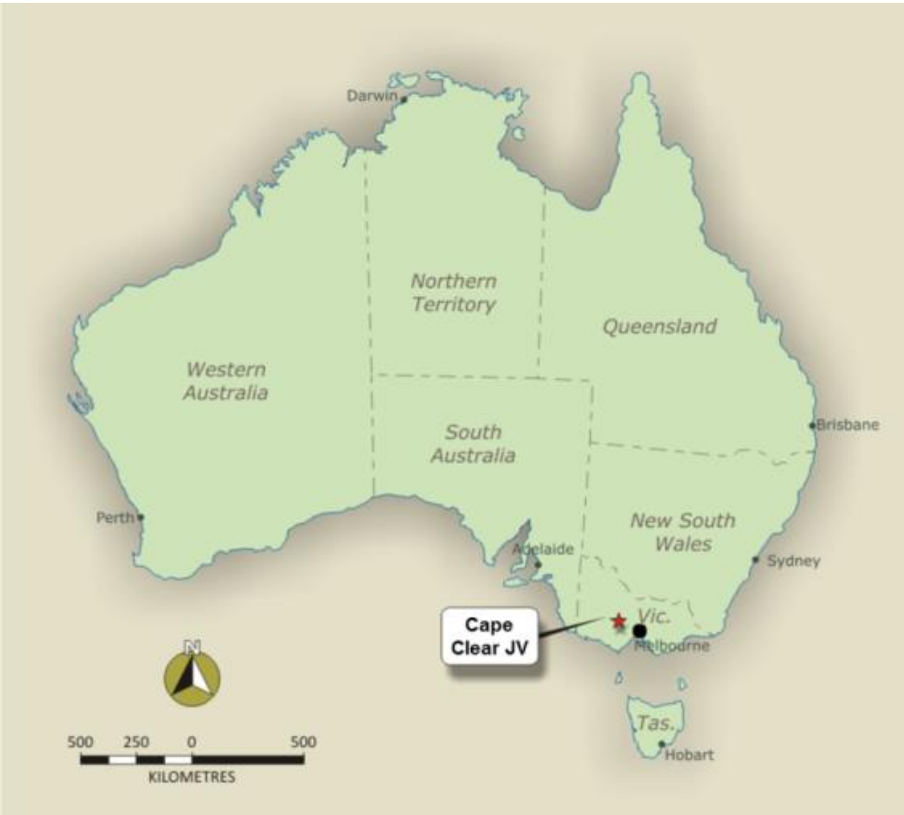

Figure 12: *Cape Clear Exploration Licence Location*

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

Geophysical data on the properties was reviewed during the December Quarter.

CORPORATE

Cash Position

The Company held $2.92 million in cash at the end of the December Quarter with no debt.

Rights Issue and Placement

Predictive announced a Rights Issue to raise up to $2.6 million on 26th October 2017. The Issue was oversubscribed and some additional funds were raised via a modest placement. The total amount raised before costs was $3.07 million.

TABLE 1 – DRILL RESULTS – PROGRESS MINERALS JV BOBOSSO RC DRILL PROGRAM

Hole No.	UTM 30N Easting	UTM 30N Northing	RL (m)	Hole depth (m)	Hole dip (°)	Azimuth (°)	0.25g/t Au cutoff			0.5g/t Au cutoff			Comments
							Depth from (m)	Interval (m)	Au (g/t)	Depth from (m)	Interval (m)	Au (g/t)	
BOBRC018	378429	943308	251	75	-60	160	0	2	0.96	0	1	1.64	
BOBRC018	378429	943308	251	75	-60	160	**39**	**12**	**1.19**	**40**	**9**	**1.47**	
BOBRC018	378429	943308	251	75	-60	160	63	8	0.96	63	2	1.84	
BOBRC018	378429	943308	251	75	-60	160				70	1	3.01	
BOBRC019	378516	943321	263	75	-60	160	**28**	**18**	**0.70**	31	2	0.84	
BOBRC019	378516	943321	263	75	-60	160				37	9	0.97	
BOBRC019	378516	943321	263	75	-60	160	**50**	**12**	**1.09**	**51**	**9**	**1.33**	
BOBRC020	378508	943362	267	100	-60	160	**73**	**21**	**1.19**	**73**	**19**	**1.28**	
BOBRC021	378319	943285	262	75	-60	160	*No significant results*						
BOBRC022	378321	943313	256	75	-60	160	**23**	**22**	**0.91**	**23**	**19**	**1.00**	
BOBRC022	378321	943313	256	75	-60	160	50	18	0.54	52	2	0.94	
BOBRC022	378321	943313	256	75	-60	160				63	5	0.89	
BOBRC023	378307	943340	254	100	-60	160	56	13	0.43	58	2	0.74	
BOBRC023	378307	943340	254	100	-60	160	76	17	0.54	82	4	1.15	
BOBRC024	378221	943286	256	96	-60	160	20	10	0.44	23	4	0.62	
BOBRC024	378221	943286	256	96	-60	160	69	1	1.24	69	1	1.24	
BOBRC024	378221	943286	256	96	-60	160	84	4	0.63	84	2	0.96	

BOBRC025	379671	943244	330	60	-90	0	**4**	**12**	**4.54**	**5**	**11**	**4.93**	**includes 1m @ 41.33 g/t Au from 13m**
BOBRC025	379671	943244	330	60	-90	0	**20**	**25**	**1.02**	22	2	3.77	
BOBRC025	379671	943244	330	60	-90	0				**28**	**15**	**1.06**	
BOBRC026	379692	943219	340	74	-90	0	9	1	2.05	9	1	2.05	
BOBRC026	379692	943219	340	74	-90	0	**30**	**22**	**0.86**	30	6	1.40	
BOBRC026	379692	943219	340	74	-90	0				49	3	2.18	
BOBRC026	379692	943219	340	74	-90	0	**57**	**7**	**1.14**	58	3	2.14	
BOBRC027	379737	943189	344	100	-90	0	**43**	**17**	**0.82**	44	1	1.25	
BOBRC027	379737	943189	344	100	-90	0				50	1	1.20	
BOBRC027	379737	943189	344	100	-90	0				56	4	2.32	
BOBRC027	379737	943189	344	100	-90	0	68	7	0.42				
BOBRC027	379737	943189	344	100	-90	0	**83**	**10**	**1.49**	**83**	**7**	**2.00**	
BOBRC028	379772	943166	331	100	-90	0	29	3	0.79	29	3	0.79	
BOBRC028	379772	943166	331	100	-90	0	37	7	1.29	37	7	1.29	
BOBRC029	379810	943151	327	60	-90	0	15	9	1.10	15	7	1.34	
BOBRC029	379810	943151	327	60	-90	0	40	1	3.38	40	1	3.38	
BOBRC030	379744	942875	285	75	-60	160	**3**	**20**	**2.04**	**3**	**19**	**2.13**	
BOBRC030	379744	942875	285	75	-60	160	40	6	0.99	43	3	1.65	
BOBRC030	379744	942875	285	75	-60	160	55	1	1.75	55	1	1.75	
BOBRC030	379744	942875	285	75	-60	160	65	1	2.32	65	1	2.32	
BOBRC030	379744	942875	285	75	-60	160	70	5	0.85	70	5	0.85	
BOBRC031	379736	942900	286	100	-60	160	**27**	**10**	**1.13**	31	4	2.25	
BOBRC031	379736	942900	286	100	-60	160	46	5	0.83	48	3	1.20	
BOBRC031	379736	942900	286	100	-60	160	69	2	0.51				
BOBRC031	379736	942900	286	100	-60	160	77	1	1.89	77	1	1.89	
BOBRC032	379829	942934	295	75	-60	160	**5**	**30**	**2.06**	**5**	**28**	**2.18**	**includes 1m @ 14.16 g/t Au from 11m and 3m @ 5.54g/t Au from 27m**
BOBRC033	379825	942963	297	100	-60	160	19	11	0.65	19	6	0.89	
BOBRC033	379825	942963	297	100	-60	160	40	2	0.81	40	2	0.81	
BOBRC033	379825	942963	297	100	-60	160	46	3	0.42				
BOBRC033	379825	942963	297	100	-60	160	57	2	0.59				
BOBRC034	379934	942959	295	100	-60	160	2	2	1.06	2	1	1.70	
BOBRC034	379934	942959	295	100	-60	160	**46**	**4**	**3.67**	**46**	**4**	**3.67**	
BOBRC034	379934	942959	295	100	-60	160	58	3	1.38	58	3	1.38	
BOBRC035	379951	942895	295	106	-60	160	*No significant results*						
BOBRC036	379939	942930	295	75	-60	160	72	1	1.66	72	1	1.66	
BOBRC037	380080	941983	262	116	-60	140	*No significant results*						
BOBRC038	380047	942018	256	100	-60	140	*No significant results*						
BOBRC039	380018	942057	254	95	-60	140	*No significant results*						
BOBRC040	380108	941930	258	107	-60	140	13	3	0.47				
BOBRC040	380108	941930	258	107	-60	140	104	3	0.38				
BOBRC041	380142	941903	259	88	-60	140	43	6	0.51	46	2	0.90	
BOBRC042	380029	941873	262	103	-60	140	78	2	1.09	78	2	1.09	
BOBRC042	380029	941873	262	103	-60	140	**87**	**10**	**1.33**	**87**	**7**	**1.76**	
BOBRC043	380061	941846	245	67	-60	140	1	7	0.94	1	7	0.94	
BOBRC043	380061	941846	245	67	-60	140	16	1	1.25	16	1	1.25	
BOBRC043	380061	941846	245	67	-60	140	62	3	0.53	63	2	0.61	
BOBRC044	379948	941816	244	95	-60	140	48	3	1.05	48	1	2.41	
BOBRC045	379988	941779	249	82	-60	160	1	2	2.12	1	1	3.92	
BOBRC045	379988	941779	249	82	-60	160	25	7	0.56	27	3	0.92	

BOBRC045	379988	941779	249	82	-60	160	**61**	**21**	**1.59**	**61**	**21**	**1.59**	**Stopped in mineralisation**
BOBRC050	380339	943503	266	75	-60	160	**9**	**20**	**1.88**	**9**	**18**	**2.05**	**includes 4m @ 5.59 g/t Au from 23m**
BOBRC050	380339	943503	266	75	-60	160	**61**	**1**	**15.53**	**61**	**1**	**15.53**	
BOBRC051	380309	943525	268	89	-60	160	0	9	0.53	3	6	0.61	
BOBRC051	380309	943525	268	89	-60	160	23	2	0.82	23	2	0.82	
BOBRC051	380309	943525	268	89	-60	160	54	2	0.72	54	2	0.72	

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 RC drill holes. A representative subsample of the sample was obtained by riffle splitting. The assayed drill samples are judged to be representative of the rock being drilled because representative sub-sampling of the RC samples was achieved.
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 carried out by the reverse circulation drilling method.

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.	Sample recovery was assessed by weighing sample bags. The geologists on site reported 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 drill 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 samples were riffle split on site.. 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 prepared and assayed for gold by 50g fire assay at the Bureau Veritas laboratory in Abidjan, Cote D'Ivoire. At the lab, regular assay repeats, lab standards, checks and blanks were inserted and analysed. Unlabelled standards (Certified Reference Materials), blanks and duplicates were also inserted by team members on site at Bobosso.
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	No twinning was undertaken in this program. Field data collection was undertaken by site geologists and supervised largely by Progress 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 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 holes reported here were drilled as shown on the included locality plans. 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.	All drill holes reported here were drilled approximately at right angles to the anticipated strike of the gold mineralisation.

	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.	
Sample Security	The measures taken to ensure sample security	Reference RC samples are currently stored securely at rented premises at Dabakala, the closest town to the Bobosso project area.
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 Wendene exploration permit (on which the Bobosso prospect is located) was granted to XMI SARL in December 2015. Currently, Predictive Discovery Limited holds 37% and West Africa Mine Investment (WAVI) holds 63%. Progress Minerals Inc is earning 30% by expenditure of $US1 million on exploration. Once this expenditure is complete, Progress will hold 30%, Predictive 30% and WAVI 40%.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	A substantial amount of exploration was carried out by Equigold and Lihir Gold Limited. This work has been acknowledged and the historical drill results reported to the ASX on 20/1015.
Geology	Deposit type, geological setting and style of mineralisation.	The geology of the Bobosso permit consists of mafic volcanics and intrusives, metasediments, intermediate volcanics and intrusives. The target deposit is type is “orogenic gold”.
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 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. The assumptions used for any reporting of metal equivalent values should be clearly stated.	The RC samples were all sampled 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 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 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 generally not yet been estimated as these will be guided by a 3D interpretation of the drill results which is still in progress.
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 and representative cross sections 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 3m.
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 949km^2 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 km^2.

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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TENEMENT STATUS – DECEMBER QUARTER, 2017

Name	Number	Location	Area (sq. km)	PDI equity	Changes in holding during September Quarter, 2017
Kalinga (formerly Fouli)	Arrêté 2014-294/MCE/SG/DGMGC	Burkina Faso	186	100%	None
Tantiabongou	Arrêté 2017-054 /MCE/SG/DGMGC	Burkina Faso	50	100%	None
Tambifwanou (formerly Sirba)	Arrêté 2017-119/MCE/SG/DGMGC	Burkina Faso	136	100%	None
Bongou (formerly Madyabari)	Arrêté 2017-121/MCE/SG/DGMGC	Burkina Faso	171	100%	None
Tamfoagou	Arrêté 2017-132/MCE/SG/DGMGC	Burkina Faso	83	100%	Arrete received.
Tangagari	Arrêté 2013-37 /MCE/SG/DGMGC	Burkina Faso	94	Earning 95%; current equity 0% (until final cash payment is made)	Renewal in progress
Tambiri (formerly Bangaba)	Arrêté 2017-120/MCE/SG/DGMGC	Burkina Faso	127	95%	Remaining payment made increasing equity from 84% to 95%
Bira	Arrêté 2016-129/MCE/SG/DGMGC	Burkina Faso	12	100%	None
Basieri	Arrêté 2017-133/MCE/SG/DGMGC	Burkina Faso	73	100%	Arrete received
Kokoumbo	Mining exploration permit No. 307	Cote D'Ivoire	300	Predictive CI earning 90%. PDI now owns 35% of Predictive CI.	None
Ferkessedougou South	Mining exploration permit No. 310	Cote D'Ivoire	290	35%	None
Boundiali	Mining exploration permit No. 414	Cote D'Ivoire	299	35%	None

Kounahiri	Mining exploration permit No. 317	Cote D'Ivoire	260	35%	None
Bassawa	Mining exploration permit No. 570	Cote D'Ivoire	400	37% beneficial interest	None
Wendene	Mining exploration permit No. 572	Cote D'Ivoire	400	37% beneficial interest	None
Dabakala	Mining exploration permit application	Cote D'Ivoire	400	37% beneficial interest	None
Beriaboukro (Toumodi)	Mining exploration permit No. 464	Cote D'Ivoire	400	Predictive CI can earn 85% in the permit. PDI currently owns 35% of Predictive CI.	None
Ferkessedougou North	Mining exploration permit No. 367	Cote D'Ivoire	400	Predictive CI can earn 85% in the permit. PDI currently owns 35% of Predictive CI.	None
Odienne North	Mining exploration permit application	Cote D'Ivoire	400	Subject to it being granted, Predictive CI can earn 85% in the permit. PDI currently owns 35% of Predictive CI.	None
Odienne South	Mining exploration permit application	Cote D'Ivoire	400	Subject to it being granted, Predictive CI can earn 85% in the permit. PDI currently owns 35% of Predictive CI.	None
Cape Clear	EL 5434	Victoria, Australia	63	25%	None

+Rule 5.5

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

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

Name of entity

PREDICTIVE DISCOVERY LIMITED

ABN	**Quarter ended ("current quarter")**
11 127 171 877	31 DECEMBER 2017

Consolidated statement of cash flows			**Current quarter $A'000**	**Year to date (6 months) $A'000**
1.	**Cash flows from operating activities**			
1.1	Receipts from customers		-	-
1.2	Payments for			
	(a)	exploration & evaluation*	(411)	(1,112)
	(b)	development		
	(c)	production		
	(d)	staff costs**		
	(e)	administration and corporate costs*	(117)	(349)
1.3	Dividends received (see note 3)			
1.4	Interest received		1	3
1.5	Interest and other costs of finance paid			
1.6	Income taxes paid			
1.7	Research and development refunds			
1.8	Other (provide details if material)			
1.9	**Net cash from / (used in) operating activities**		**(527)**	**(1,458)**

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

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

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

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of shares	3,067	3,067
3.2	Proceeds from issue of convertible notes		
3.3	Proceeds from exercise of share options		
3.4	Transaction costs related to issues of shares, convertible notes or options	(329)	(329)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	**Net cash from / (used in) financing activities**	**2,738**	**2,738**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	711	1,642
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(527)	(1,458)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,738	2,738
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period**	**2,922**	**2,922**

5.	**Reconciliation of cash and cash equivalents** at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	**Current quarter $A'000**	**Previous quarter $A'000**
5.1	Bank balances	402	691
5.2	Call deposits	2,520	20
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**2,922**	**711**

6.	**Payments to directors of the entity and their associates**	**Current quarter $A'000**
6.1	Aggregate amount of payments to these parties included in item 1.2	70
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-

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

Fees paid to directors

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

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

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

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

9.	**Estimated cash outflows for next quarter**	**$A'000**
9.1	Exploration and evaluation	228
9.2	Development	
9.3	Production	
9.4	Staff costs	
9.5	Administration and corporate costs	192
9.6	Other (provide details if material)	
9.7	**Total estimated cash outflows**	**420**

10.	**Changes in tenements (items 2.1(b) and 2.2(b) above)**	**Tenement reference and location**	**Nature of interest**	**Interest at beginning of quarter**	**Interest at end of quarter**
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2	Interests in mining tenements and petroleum tenements acquired or increased	Tambiri (Burkina Faso - replacing Bangaba in previous quarter)	Ownership	84%	95%

Compliance statement

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

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

Sign here: (Company secretary) Date: 31 January 2018

Print name: Eric Moore

Notes

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