

EXPLORATION UPDATE

By Electronic Lodgement **Company Announcements Office** ASX: BFE, BFEO **ASX Limited** 2 The Esplanade Perth WA 6000

17th June 2010

SHARE INFORMATION

Issued Shares: 109.5m Listed 20c Options: 30.8m **Unlisted Options:** 12.5m

BOARD OF DIRECTORS

MD: S. Rigby Non-Exec: M. Chester Non-Exec: M. Sheldrick

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Summary

MYSTIQUE GOLD PROJECT (JV with PacMag Metals ASX: PMH)

- Infill calcrete soil geochemical sampling within parts of the southern Mystique tenement (E28/1915) has generated a new large 1km x 1km +10ppb gold soil anomaly, peaking at 37ppb Au, approximately 4km to the southeast of the Torquata Prospect. This anomaly has been named the Salubris Prospect. A follow-up ~5,000m aircore drilling program to test this anomaly will commence in mid July.
- First pass calcrete soil geochemical sampling of the entire northern Mystique tenement (E28/1916) has generated a new large 5km x 1km +7.5ppb gold anomaly known as the Boonderoo Prospect. Within this broader anomaly two coherent +10ppb Au bullseye anomalies have been defined, both of which warrant follow-up aircore drill testing.
- Infill and follow-up calcrete soil geochemical sampling of four other historically defined gold anomalies within E28/1915 is in progress.
- Aboriginal Heritage survey completed over the Torquata and Salubris Prospects with no sites of significance being indentified.

KARIBIB LITHIUM PROJECT

- Assay results for the last four diamond holes drilled at Rubicon and Helikon during late April 2010 have now been returned. Only two of these holes, RDD-11 and RDD-12, successfully intersected the targeted pegmatite dykes while holes RDD-08 and HDD-01 were abandoned before intersecting the targeted dykes.
- Assay results for the two successful holes are consistent with those previously reported for the first 9 holes, with RDD-11 returning 1.28m @ 0.76% Li₂O from 50m, 2.04m @ 0.92% Li₂O from 53.26m and 1.72m @ 1.15% Li₂O from 65.54m.
- Due to the abandonment of HDD-01, the Helikon Prospect remains totally un-drill tested at this time.
- Regional assessment of the entire 765km² project area has commenced with the analysis of a high resolution HyMapper multispectral survey identifying numerous potential pegmatite targets requiring ground truthing via geological mapping and soil and rock chip geochemical surveys.



Managing Director Simon Rigby commented "That after some initial delays with the grant of the Exploration Licences at Mystique, the Company is very pleased with the results to date from the completed soil geochemical programs. The newly defined Salubris and Boonderoo Prospects are looking very interesting and drill testing of Salubris is scheduled for mid July. In the mean time the Company will continue to advance a number of other prospect areas at Mystique through further soil geochemical programs". Mr Rigby further commented "While the assay results for the diamond drilling program conducted at the Rubicon Prospect at Karibib have not delivered the expected mineralised widths, the lithium grades at +1% Li₂O returned from 5 of the 11 completed holes does continue to demonstrate the lithium potential of what is a relatively large 765km² tenement position. The Company now intends to take a more holistic exploration approach at Karibib by reviewing both the remaining historic mine workings such as Helikon and Frickes, but also following up the many new pegmatite targets defined by the HyMapper survey".

The Board of Black Fire Minerals Ltd (ASX: BFE) (Black Fire or Company) is pleased to present an update on the company's exploration projects and related activities as of the 16th June 2010.

CURRENT PROJECTS

MYSTIQUE JV GOLD PROJECT

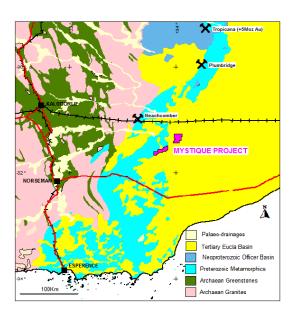
Black Fire entered into the Mystique JV with PacMag Metals Ltd (ASX: PMH) in September 2009. Under the JV agreement Black Fire may earn up to 75% equity in the project with the expenditure of A\$2.5M over 5 years.

Further Background information on the Mystique Project is included at the end of this update.

Exploration Activities and Results to Date

E28/1915 - Torquata (Southern Tenement)

Exploration activities on the southern Mystique tenement have focused on compiling and reviewing all of the historic exploration data which has resulted in the recognition of 5 historic soil geochemical anomalies outside of the Torquata Prospect that warranted infill geochemical sampling. These +10ppb Au anomalies were largely defined in the late 1990's on 1km x 1km sample spacings and were not followed up at the time (Figure 2). In the light of the subsequent discovery of the +5Moz Tropicana deposit via a 10 - 30ppb Au soil anomaly, these anomalies are considered encouraging targets.



Infill sampling of the first of these anomalies has resulted in the definition of a strong, coherent 1km x 1km +10ppb gold soil anomaly located 4km south of the Torquata Prospect. This new prospect, known as Salubris, peaks at 37ppb Au and the Board has approved its immediate testing with a 5,000m aircore drill program to commence in mid July (Figure 1). As part of this program, some scout aircore drilling will be undertaken between Torquata and Salubris to test interpreted sites of potential primary mineralisation that could be sourcing these surface anomalies. Follow-up infill soil sampling of the remaining 4 historic regional soil anomalies has commenced with results expected during July 2010.





Further data compilation of the historic aircore drilling of the Torquata Prospect has also recently been completed. This work has confirmed the importance of likely north-south, northeast-southwest and northwest- southeast controls to the gold anomalism. **An initially small**. **5–10 hole RC drilling program**

northwest- southeast controls to the gold anomalism. An initially small, 5–10 hole RC drilling program designed to test various interpreted bedrock source scenarios for Torquata will be undertaken as soon as an appropriate drill rig becomes available.

In preparation for drill testing both the historic Torquata Prospect and the newly defined Salubris Prospect, an Aboriginal Heritage survey has been completed over 36km² of the north-eastern end of E28/1915. **The final heritage report for this survey has been received with no sites of significance being identified and drilling within this area can now commence.**

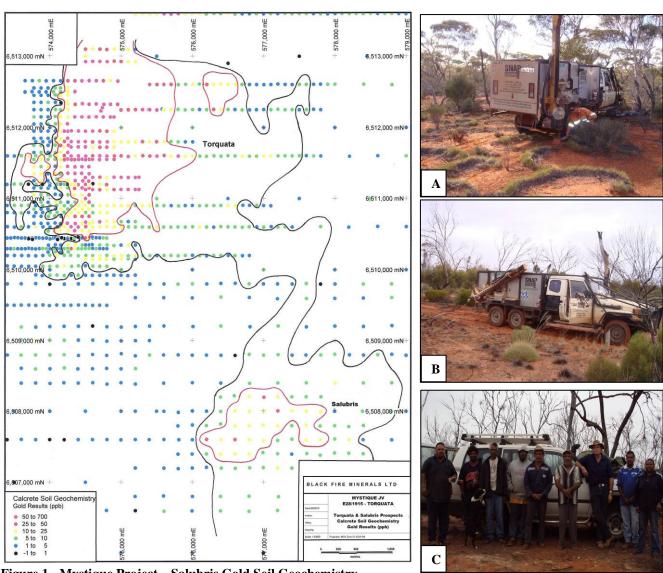


Figure 1 - Mystique Project – Salubris Gold Soil Geochemistry

Mystique Photographs – (A) & (B) Auger calcrete soil sampling, (C) Heritage survey team at Torquata



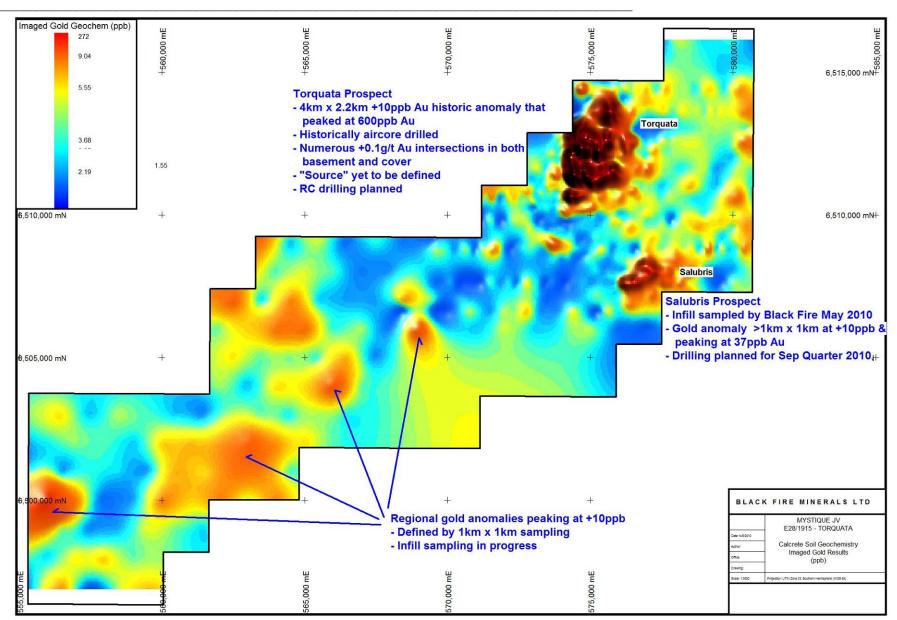


Figure 2 - Mystique Project - E28/1915 Imaged Gold Soil Geochemistry



E28/1916 - Boonderoo (Northern Tenement)

Exploration activities on the northern Mystique tenement have focussed on completing the first pass calcrete soil geochemical screening of the entire tenement area. The assay results for this work have been received with the resultant definition of a large, 5km long by 1km wide coherent, but modest tenor (+7.5ppb Au) gold anomaly on the western side of the project area known as the Boonderoo Prospect. Within this large anomaly, two coherent "bullseye" anomalies peaking at 15.6ppb Au have been defined.

The Company believes that although the Boonderoo Prospect does not display the same high tenor results as Torquata or Salubris, its size and coherency warrants aircore drill testing. To this end, the Company intends to undertake an Aboriginal Heritage survey over the prospect area to allow this drill testing to commence as soon as possible.

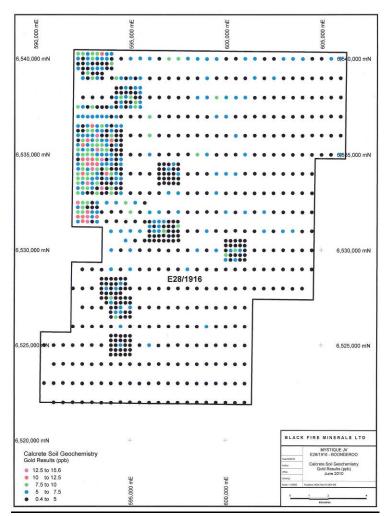


Figure 3 - Mystique Project - Boonderoo Gold Soil Geochemistry



Mystique News Flow – 3rd Quarter 2010

Based on the current approved exploration program and budget, the Company expects the following Mystique Project related news flow over the next 3-4 months;

- Commencement of AC drilling at Salubris during mid July with assay results expected 4-6 weeks later.
- Assay results for the infill soil sampling of the remaining four regional gold anomalies within E28/1915 due in July.
- Completion of an Aboriginal Heritage survey over the Boonderoo Prospect and the subsequent commencement of an AC drilling program.
- Commencement of RC drilling at Torquata dependant on rig availability.

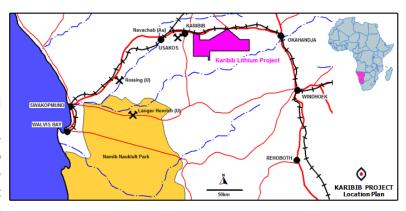
KARIBIB LITHIUM PROJECT

Background information on the Karibib Project is included at the end of this update.

Exploration Activities and Results to Date

Exploration activities at the Karibib Project to date have focussed on compiling the historic databases, ground reconnaissance, rock chip geochemistry and completion of a 13 hole diamond drilling program.

The results for the first 9 holes drilled at the Rubicon Prospect were reported in detail on the 28^{th} April 2010. While four of these nine holes intersected encouraging lithium grades (+1% Li₂O), broadly in line with expectations and consistent with the rock chip geochemistry results, the mineralised widths in these holes were less than expected based on open pit observations. Instead, broader, lower grade (+0.1% Li₂O) halos were defined around the narrower +1% Li₂O zones.



The assay results for the last four diamond holes drilled at Rubicon and Helikon during late April 2010 have now been returned. Only two of these holes, RDD-11 and RDD-12, successfully intersected the target pegmatite dykes while holes RDD-08 and HDD-01 were abandoned before intersecting the targeted dykes.

Assay results for the two successful holes are consistent with those previously reported for the first 9 holes, with RDD-11 returning 1.28m @ 0.76% Li₂O from 50m, 2.04m @ 0.92% Li₂O from 53.26m and 1.72m @ 1.15% Li₂O from 65.54m. Hole RDD-12 returned no intersections above 0.5% Li₂O. Detailed drill locations are shown in Table 1 and Figures 4 & 5, while a full tabulation of all assay results for the diamond drilling program is presented in Table 2.



Table 1 – Karibib Project - Diamond Holes Completed March – April 2010

Hole ID	Prospect	Northing (WGS84)	Easting (WGS)	Azimuth (Mag)	Dip	Final Depth (m)
RDD-01	Rubicon	7555339	602934	227	-70	83.66
RDD-02	Rubicon	7555395	602838	227	-70	94.53
RDD-03	Rubicon	7555443	602751	227	-70	94.38
RDD-04	Rubicon	7555494	602713	227	-70	84.43
RDD-05	Rubicon	7555599	602663	227	-70	106.38
RDD-06	Rubicon	7555620	602446	227	-70	61.48
RDD-07	Rubicon	7555689	602386	227	-70	73.44
RDD-08	Rubicon	7555737	602853	227	-70	139.48
RDD-09	Rubicon	7555430	602934	227	-70	109.47
RDD-10	Rubicon	7555491	602836	227	-70	115.45
RDD-11	Rubicon	7555543	602746	227	-70	100.05
RDD-12	Rubicon	7555605	602547	227	-70	106.37
HDD-01	Helikon	7561665	605731	195	-55	139.50

Table 2 – Karibib Project March–April 2010 Diamond Drilling Results (0.5%Li₂O Lower Cut-Off)

Hole ID	From (m)	To (m)	Interval (m)	% Li₂O			
RDD-01	45.95	46.85	0.90	1.06			
	51.13	51.82	0.69	1.43			
RDD-02	No Intersections >0.5% Li ₂ O						
RDD-03	No Intersections >0.5% Li₂O						
RDD-04	26.50	30.00	3.50	0.62			
	39.15	39.59	0.44	1.06			
	43.00	45.00	2.00	0.73			
RDD-05	64.00	65.36	1.36	0.68			
	74.32	75.00	0.68	1.11			
RDD-06	17.64	18.80	1.16	0.82			
RDD-07	36.10	38.43	2.33	1.14			
	43.44	44.71	1.27	1.11			
RDD-08	Hole Abandoned						
RDD-09	93.00	95.00	2.00	0.77			
RDD-10	No Intersections >0.5% Li ₂ O						
RDD-11	50.00	51.28	1.28	0.76			
	53.26	55.30	2.04	0.92			
	65.54	67.26	1.72	1.15			
RDD-12	No Intersections >0.5% Li₂O						
HDD-01	Hole Abandoned						





Karibib Photographs – (A) Drilling at Rubicon, (B) Drilling at Helikon, (C) Core cutting, (D) Drill rig repairs

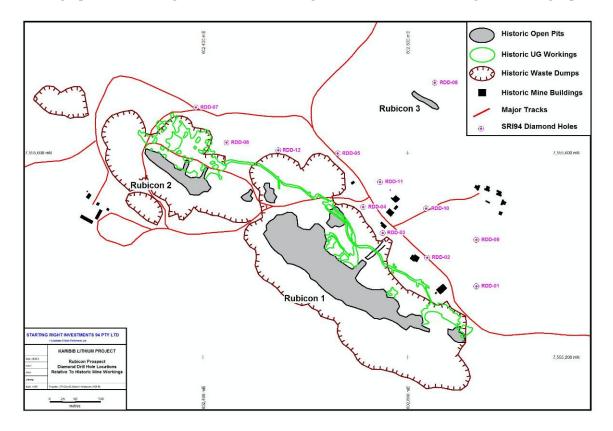


Figure 4 - Karibib Project - Rubicon Prospect Drill Hole Locations



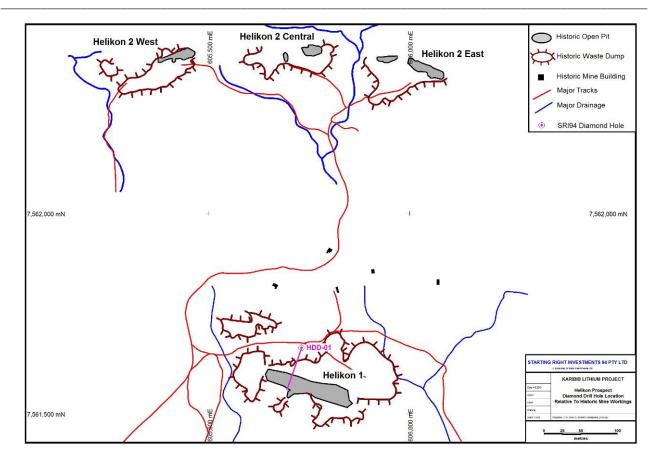


Figure 5 - Karibib Project - Helikon Prospect Drill Hole Locations

While the diamond drilling program conducted at the Rubicon Prospect has not delivered the expected mineralised widths, the lithium grades at +1% Li₂O returned from 5 of the 11 completed holes does continue to demonstrate the lithium potential of the pegmatite field, of which the Company's licences cover 765km². In addition, due to the abandonment of the only hole attempted at Helikon, this prospect remains effectively un-tested.

The Company intends to now take a more holistic exploration approach at Karibib by reviewing both the remaining historic mine workings such as Helikon and Frickes, but also exploring for new outcropping and blind lithium bearing pegmatite dykes. This work has commenced with the analysis of multispectral HyMapper survey data collected over the project in 2008. As shown on Figure 6, the survey covers the majority of the Project area. By comparing the multispectral "signature" of the known lithium bearing pegmatites at Rubicon and Helikon and then seeking similar "signatures" elsewhere within the project area, more than 12 new potential lithium bearing pegmatite "clusters" have been identified. Each of these areas will now need to be assessed on the ground using standard geological and geochemical techniques.

<u>Karibib News Flow – 3rd Quarter 2010</u>

Based on the current approved exploration program and budget, the Company expects the following Karibib Project related news flow over the next 3-4 months;

- Exploration Update upon completion of the current project scale exploration activities including Prospect rankings and plans for subsequent drill testing as warranted.
- Grant of the Licence renewals by the Namibian Ministry of Mines and Energy.



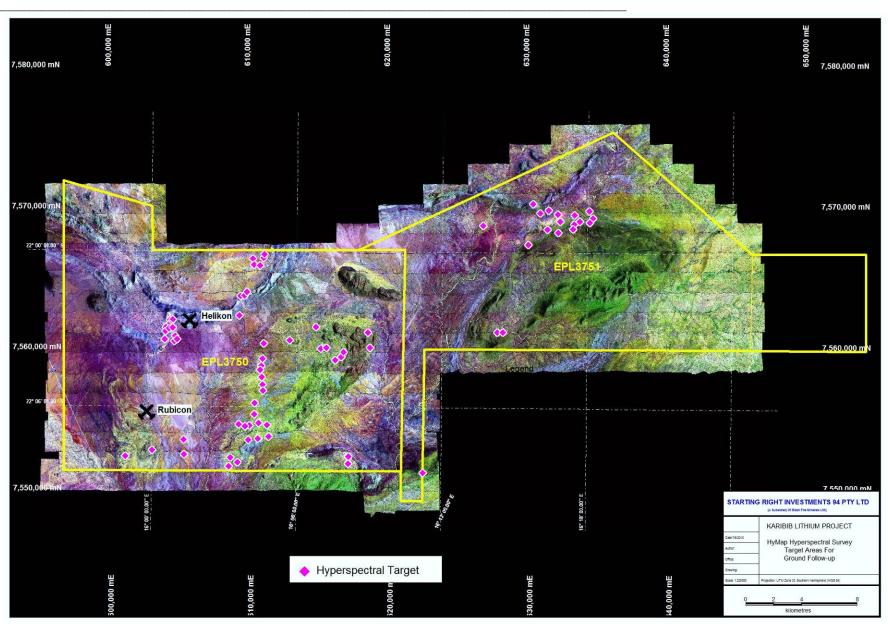


Figure 6 - Karibib Project - HyMapper Multispectral Pegmatite Targets



CURRENT INVESTMENTS

PREDICTIVE DISCOVERY PTY LTD

Investment Background

On the 31st March 2010 Black Fire announced that it had acquired a 15.8% equity position in Predictive Discovery Pty Ltd (PD), an unlisted, Perth based, West African focused mineral exploration company. This equity was acquired via a seed placement totaling 14.5m shares at \$0.04/share for A\$580,000.

The decision to invest in PD was based on:

- A strong Board and technical team who have a successful record of mineral discoveries and extensive industry networks;
- A West African (Birimian Belt) gold focus;
- Existing interests in over 1,000km² of gold prospective tenements in Burkina Faso that cover a strike length of over 80km of favorable greenstone rocks and structures, with past encouraging drilling results but limited recent exploration (Figure 7);
- Control over certain intellectual property rights developed within the A\$100m Australian Predictive Mineral Discovery Cooperative Research Centre (pmd*CRC) and the potential for this IP to increase discovery success and reduce exploration costs.

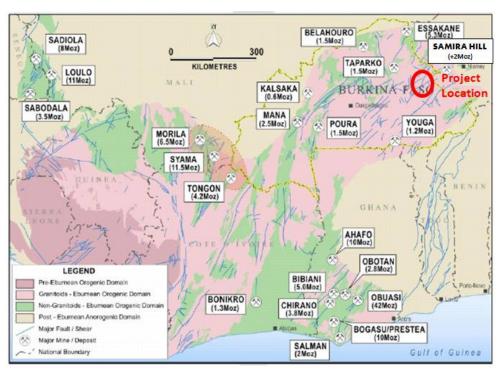


Figure 7 - Predictive Discovery Project Location Relative To Gold Endowment & Birimian Greenstone Belts Of West Africa (modified after Bassari).

Exploration Activities and Results to Date

PD have commenced ground exploration activities in Burkina and have undertaken programs of geological mapping, rock chip sampling and geophysical interpretations. In addition, a 6,000m RAB drilling program was completed at the Watamtonga and Fouli Prospects during May. Some encouraging gold assay results were returned from the rock chip programs, however, all assays are currently pending for the RAB drill holes.



PD have also reported a new artisanal alluvial gold working has "appeared" within the project area at Tamboana with over 500 people working over a kilometer wide zone. The source of the alluvial gold is yet to be determined and will be targeted as part of planned upcoming exploration programs.



Photograph of Tamboana Artisanal Site. Inset photo of recovered coarse gold

PD Corporate Information

PD has advised Black Fire that they are currently assessing a number of further project acquisition opportunities in West Africa and Australia and that the PD Board has commenced the IPO process for the company with a likely listing date on the ASX in September 2010.

Under the terms of the Company's investment in PD, Black Fire shareholders have a preferential right to take up to 10% of any securities issued by PD under the planned IPO to list the company on the ASX.

PROJECT GENERATION

The Company has continued to aggressively seek new quality projects to add to the portfolio and has completed detailed due diligence on a number of projects in the last three months. The Board is hopeful of bringing one or more of these potential transactions to fruition during the next quarter.

In addition, the Company also continues to seek strategic investment opportunities, similar to the PD investment, whereby Black Fire can gain early exposure to other quality teams and projects. Value creation for Black Fire will be through capital growth and the potential for JV participation or other business transactions with the target company.

CORPORATE INFORMATION

Black Fire's current exploration and project generation activities remain fully funded with the Company holding a current cash position of ~A\$4.6m.



SIMON RIGBY

Managing Director
Black Fire Minerals Ltd

The information in this report that relates to Exploration Results is based on information compiled by Mr. S. Rigby, who is a Member of the Australian Institute of Geoscientists and who has had sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activities which are being undertaken to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Rigby is an employee of Black Fire Minerals and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

PROJECT BACKGROUNDS

Mystique Gold Project JV

Black Fire entered into the Mystique JV with PacMag Metals Ltd in September 2009. Under the JV agreement Black Fire may earn up to 75% equity in the project with the expenditure of A\$2.5M over 5 years.

The project is located within the Proterozoic Albany - Fraser Belt (also referred to as the Tropicana Belt) whose gold prospectivity has only become apparent in the last 10 years and as such has a relatively low exploration maturity.

The discovery of the +5Moz Tropicana gold deposit by the Anglogold - Independence Group JV using simple calcrete soil geochemical techniques has resulted in much exploration interest in the Belt with a number of other encouraging prospects such as Beachcomber (Anglogold – Independence JV) and Plumridge (Corvette Resources) being reported.

The Mystique project is centered on the Torquata Prospect which is defined by a substantial 4km x 2.2km +10ppb Au (peak 600ppb) historic gold soil anomaly, defined before the discovery of Tropicana. This anomaly is larger and stronger than that publically reported as defining Tropicana. Subsequent historical vertical aircore drilling of parts of the anomaly on an average 200m x 100m pattern highlighted the presence of a Tertiary cover sequence overlaying interleaved Proterozoic felsic and mafic granulites. Numerous +0.1g/t gold results were returned both from within the lignite horizons in the cover sequence and to a lesser extent in the targeted Proterozoic bedrock. Best aircore drill intersections reported include 3m @ 2.92g/t Au, 1m @ 0.62g/t Au, 6m @ 0.2g/t Au and 1m @ 0.84g/t Au. These results are of a similar magnitude to those intersected in early reconnaissance aircore drilling programs over the main Tropicana gold zones that were only subsequently identified by deeper RC and core drilling. A total of three follow-up RC holes were historically drilled, but these represent an ineffective test of such an extensive area of gold anomalism.

Past exploration at Torquata was completed prior to the discovery of Tropicana (now +5Moz Au) in August 2005. In light of the Tropicana discovery, the significance of the scale and tenor of the Torquata soil anomaly makes this prospect a priority for further exploration. In addition, further regional exploration in the broader project area is warranted to test for further significant gold soil geochemical anomalies.

Karibib Lithium Project

The Karibib Lithium Pegmatite Project comprises two granted and adjoining Exclusive Prospecting Licences covering 765km² and located approximately 25km east-southeast of the town of Karibib and 120km northwest of Namibia's capital, Windhoek. The project is located on open grazing lands and is proximal to excellent infrastructure including the town of Karibib and the major B2 sealed highway and railway that connects



Windhoek to the ports of Swakopmund and Walvis Bay. Karibib is a centre of marble and granite quarrying and also supports the nearby Anglogold Ashanti Navachab gold mine.

Black Fire acquired 100% of the Karibib Lithium Pegmatite Project in November 2009.

The project area covers a portion of the Cambrian Karibib Pegmatite Field with the pegmatite intrusions being hosted in Damaran age (Neoproterozoic) schists, marbles, quartzites, gneisses and granites. The individual lithium bearing pegmatites mapped to date are up to 1.6km long, 5 to 40 metres wide and often show well defined regular internal zoning. Lithium minerals including spodumene (Li₂O.Al₂O₃.2SiO₄), petalilte (Li₂O.Al₂O₃.8SiO₄), lepidolite (K(Li,Al)₃(SiAl)₄O₁₀(OH,F)₂), amblygonite ((Li,Na)AlPO₄(F,OH)) and their weathering products including hectorite (Na_{0.3}(Mg,Li)₃Si₄O₁₀(OH)₂), have been recorded within the pegmatites.

The Karibib Project has not been subjected to any significant modern exploration with only some minor historical drilling being undertaken at Rubicon I, for which there is no record of assay as the operation was in wind-down mode at the time owing primarily to lower prevailing market prices for lithium in the mid 90's. The historic lithium mining activities were largely small scale open pit and underground gouging operations that only exploited small portions of the outcropping pegmatites. This provides an opportunity for Black Fire to carry out drilling programs to test the down dip and strike potential of the historic deposits and utilise modern regional exploration techniques to assess the entire project area for new outcropping and/or blind lithium bearing pegmatite targets.

Further project details are available on the company's website at: www.blackfireminerals.com.au