

## **ASX ANNOUNCEMENT**

8<sup>th</sup> February, 2009

ASX: BFE, BFEO

#### **SHARE INFORMATION**

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

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# KARIBIB LITHIUM PROJECT: ENCOURAGING LITHIUM ROCK CHIP GEOCHEMICAL RESULTS

#### **Summary**

- Rock chip assay results for a geochemical sampling program at the historic Rubicon and Helikon lithium pegmatite mines at the 100% owned Karibib Project have been returned with very encouraging lithium and tantalum results.
- A total of 51 samples from Rubicon and 36 samples from Helikon were collected from the historic open pits, stockpiles and waste dumps with the aim of establishing the tenor of the lithium, tantalum, rubidium, beryllium and cesium mineralisation within the various portions of the extensively zoned pegmatite bodies.
- The average lithium assay for the 87 samples was 1.88% Li<sub>2</sub>O with 57 (65%) of the samples returning assays above 1.00% Li<sub>2</sub>O. The highest lithium assay returned was 7.18% Li<sub>2</sub>O from a sample taken at Helikon.
- The average tantalum assay for the 86 samples, excluding the highest grade sample that returned 14.55% Ta, was 415ppm Ta with 36 (41%) of the samples returning assays above 100ppm Ta. The next highest tantalum assay returned was 1.83% Ta.
- The assay results for rubidium, cesium, niobium and beryllium are also considered of interest with peaks of 1.83% Rb, 0.74% Cs, 26.87% Nb and 3.98% Be.
- Commencement of the Company's first drilling program at Rubicon and Helikon is scheduled for the first week of March 2010.

Managing Director Simon Rigby commented "The assay results for lithium, the key target metal at Karibib, are considered to be very encouraging with both petalite and lepidolite mineralisation carrying grades competitive with other lithium pegmatite deposits around the world. Importantly, the Karibib Project would appear to have the potential for additional "credit metals" and Black Fire intends to investigate the potential economic significance of these metals as part of the evaluation of the Karibib Project. The Company's efforts are now focused on the commencement of a drilling program at Karibib which is scheduled for the first week of March".



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The Board of Black Fire Minerals Ltd (ASX: BFE, BFEO) (Black Fire or Company) is pleased to announce that assay results from the rock chip geochemical sampling program completed over the historic Rubicon and Helikon lithium pegmatite mines at the Karibib Project in Namibia during late December 2009 have been returned with very encouraging lithium and tantalum results reported.

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

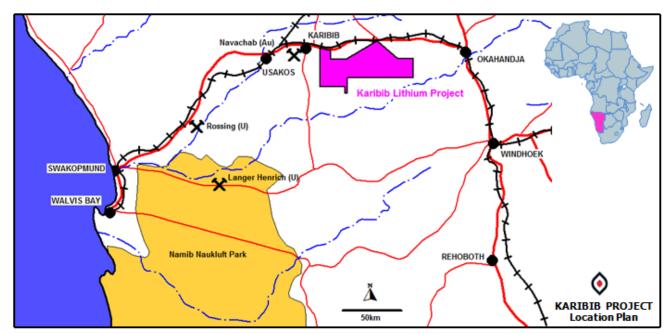


Figure 1 - Kiribib Lithium Pegmatite Project - Location Plan

#### **Rock Chip Geochemical Sampling Program Results**

A total of 51 samples from Rubicon and 36 samples from Helikon were collected from the historic open pits, stockpiles and waste dumps during late December 2009 with the aim of establishing the tenor of the lithium, tantalum, rubidium, beryllium and cesium mineralisation within the various portions of the extensively zoned pegmatite bodies (Figures 2, 3 & 4). Although the Company has searched widely for historic mining information, very limited data has been found regarding the actual lithium and associated metals grades returned from the extensively developed petalite – lepidolite – tantalite mineralisation and thus this rock chip geochemical data is an important step in the final planning of the upcoming drilling programs.

After collection, the samples were sent to Genalysis Laboratory Services' sample preparation facility in Johannesburg, South Africa, with the sample pulps subsequently being sent to the Genalysis laboratory in Perth, Western Australia, for analysis using a sodium peroxide fusion and ICP-OES and ICP-MS determinations.





Figure 2 - Rubicon Prospect Area – (a) Aerial view of historic pit and dumps showing rock chip locations (dump sample locations not shown); (b) Rubicon I open pit looking NW; (c) coarse petalite crystals in north face of pit; and (d) massive lepidolite mineralisation in south face of pit.

The full assay results are presented in Appendix 1, but in summary;

- The average lithium assay for the 87 samples was 1.88% Li<sub>2</sub>O with 57 (65%) of the samples returning assays above 1.00% Li<sub>2</sub>O. The highest lithium assay returned was 7.18% Li<sub>2</sub>O from a sample taken at Helikon.
- The average tantalum assay for the 86 samples, excluding the highest grade sample that returned 14.55% Ta, was 415ppm Ta with 36 (41%) of the samples returning assays above 100ppm Ta. The next highest tantalum assay returned was 1.83% Ta. The top two highest assaying samples for tantalum were taken at Helikon.
- The average rubidium assay for the 87 samples was 0.49% Rb with 46 (52%) of the samples returning assays above 0.10% Rb. The highest rubidium assay returned was 1.83% Rb from a sample taken at Helikon.



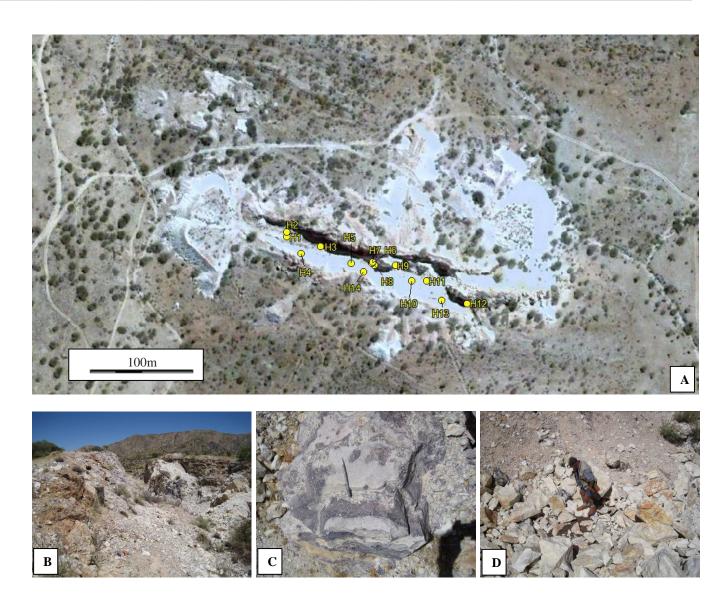


Figure 3 - Helikon I Prospect Area – (a) Aerial view of historic pit and dumps showing rock chip locations (dump sample locations not shown); (b) Helikon I open pit looking west; (c) lepidolite mineralisation; and (d) Project Manger Andreas Palfi inspecting waste dumps.

- The average cesium assay for the 87 samples was 910ppm Cs with 28 (32%) of the samples returning assays above 1000ppm Cs. The highest cesium assay returned was 7,403ppm (0.74%) Cs from a sample taken at Rubicon.
- The average niobium assay for the 86 samples, excluding the highest grade sample that returned 26.87% Nb, was 831ppm Nb with 34 (39%) of the samples returning assays above 100ppm Nb. The next highest niobium assay returned was 3.87% Nb. The top two highest assaying samples for niobium were taken at Helikon.
- The average beryllium assay for the 87 samples was 1,486ppm Be with 21 (25%) of the samples returning assays above 100ppm Be. The highest beryllium assay returned was 39,874ppm (3.98%) Be from a sample taken at Rubicon.



HELICON I WEST

HELICON I CENTRAL

DE CENTRAL

100m

A

A

Figure 4 - Helikon II Prospect Area – (a) Aerial view of historic pit and dumps showing rock chip locations (dump sample locations not shown); (b) Helikon II East pit looking east; (c) massive petalite in Helikon II West pit; and (d) high grade tantalite mineralisation in Helikon II East pit.

The assay results for lithium, the key target metal at Karibib, are considered by the Board to be very encouraging with both petalite and lepidolite mineralisation carrying grades competitive with other lithium pegmatite deposits around the world. In addition, the Karibib Project would appear to have the potential for some "credit metals" including tantalum, niobium, rubidium, beryllium and cesium and Black Fire intends to investigate the potential economic significance of these metals as part of the evaluation of the Karibib Project.

#### **Land Access Agreement**

As required under the Namibian *Minerals (Prospecting and Mining) Act 1992,* the Company has successfully entered into an Access Agreement with the owner of the pastoral property on which both the Rubicon and Helikon Prospects are located.



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#### **Proposed Drilling Program**

As outlined in the December 2009 Quarterly Report, the Company is currently planning to commence a program of diamond drilling at Karibib scheduled to commence around 1<sup>st</sup> March 2010. Negotiations with an appropriate diamond drilling contractor are well advanced. This program will initially focus on the Rubicon Prospect area and is aimed to broadly scope out the geometry of, and the zonation within, the pegmatite bodies to allow for better focusing of a more extensive follow-up RC drilling program currently scheduled to begin in May/June 2010.

#### **Project Background**

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 (Figure 1). 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 (a regional geology plan is presented in Appendix 2). 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 ( $Li_2O.Al_2O_3.2SiO_4$ ), petalilte ( $Li_2O.Al_2O_3.8SiO_4$ ), lepidolite ( $K(Li,Al)_3(SiAl)_4O_{10}(OH,F)_2$ ), amblygonite ( $Li_2O.Al_2O_3.2SiO_4$ ) and their weathering products including hectorite ( $Na_{0.3}(Mg,Li)_3Si_4O_{10}(OH)_2$ ), 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 a significant 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

#### **SIMON RIGBY**

Managing Director Ph: 61 (8) 9272-4353

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 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.



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## Appendix 1 – Detailed Rock Chip Assay Results

SAMPLE	WGS84_East	WGS84_North	Prospect	Li2O (%)	Ta (ppm)	Rb (ppm)	Cs (ppm)	Nb (ppm)	Be (ppm)	Fe (%)
R1	602813	7555297	Rubicon I	0.65	6.2	420.6	5110.05	7	37430	0.69
R2	602813	7555297	Rubicon I	2.64	45.8	10921.4	1203.75	90	46	0.18
R3	602748	7555314	Rubicon I	2.73	268	754.1	513.06	117	64	0.12
R4	602726	7555308	Rubicon I	1.05	111.2	4263	561	94	122	0.16
R5	602726	7555312	Rubicon I	3.11	4.5	182.1	87.1	9	29	0.39
R6	602638	7555535	Rubicon I	3.14	3.8	101.2	198.4	23	13	0.42
R7	602633	7555535	Rubicon I	1.02	6.2	2173.2	360.39	19	48	0.24
R8	602672	7555320	Rubicon I	1.82	66.4	8029	804.37	102	58	0.05
R9	602672	7555328	Rubicon I	0.72	132.9	3143.9	414.92	113	68	0.37
R10	602696	7555326	Rubicon I	2.85	5.1	196.6	116.48	18	17	0.18
R11	602620	7555348	Rubicon I	1.87	130.4	7782.6	713.92	188	77	0.23
R12	602635	7555371	Rubicon I	0.88	99.6	1263.1	3263.49	88	504	0.31
R13	602637	7555375	Rubicon I	2.16	37.8	9386.8	964.48	71	22	0.25
R14	602637	7555375	Rubicon I	0.63	124.8	2492.4	7403.44	119	14	0.21
R15	602657	7555375	Rubicon I	3.86	4.4	37.8	21.16	14	7	0.52
R16	602658	7555375	Rubicon I	0.88	11.2	23.6	21.51	9	16	0.29
R17	602619	7555392	Rubicon I	2.50	47.7	10767.9	1099.35	85	34	0.13
R18	602658	7555377	Rubicon I	3.31	4.8	892.4	212.49	11	16	0.4
R19	602600	7555381	Rubicon I	1.73	28.2	8086.5	822.22	51	24	0.39
R20	602581	7555391	Rubicon I	1.85	4.6	71.9	50.57	6	24	0.21
R21	602581	7555391	Rubicon I	3.81	1.3	34.5	5.23	Х	4	0.79
R22	602591	7555403	Rubicon I	1.74	54.5	2407.1	642.89	42	14	0.34
R23	602604	7555425	Rubicon I	0.64	45.4	6018.1	2236.21	42	29	0.54
R24	602610	7555445	Rubicon I	3.97	2.5	36.1	87.6	2	2	0.89
R25	602623	7555438	Rubicon I	1.09	52.6	596.7	416.74	21	31	0.54
R26	602578	7555459	Rubicon I	0.10	4.2	936.9	128.93	17	30	0.53
R27	602569	7555451	Rubicon I	0.13	27.1	2100.6	502.04	15	6	0.34
R28	602548	7555410	Rubicon I	0.24	143.9	68.8	22.54	119	33	0.11
R29	602568	7555422	Rubicon I	1.60	127.7	6779.3	708.15	170	22	0.22
R30	602489	7555516	Rubicon I	2.85	413	10673.9	1526.58	144	18	0.15
R31	602388	7555518	Rubicon II	3.69	53.9	11469.8	2609.74	81	30	0.11
R32	602391	7555518	Rubicon II	0.63	5.6	2823.4	312.79	15	4	0.03
R33	602391	7555523	Rubicon II	4.00	4.1	230.5	74.23	8	3	0.62
R34	602371	7555546	Rubicon II	3.23	85.9	12526.7	1325.51	121	45	0.04
R35	602376	7555546	Rubicon II	0.96	1.1	30.4	8.18	4	10	0.76
R36	602338	7555565	Rubicon II	2.66	77.8	10294.9	1045.01	91	71	0.43
R37	602316	7555583	Rubicon II	2.89	111.8	10948.5	999.97	108	1316	0.31
R38	No Position Recorded		Rubicon II	1.54	1.5	114.7	16.26	3	43	0.61
R39	No Position Recorded		Rubicon II	0.72	1.1	103.9	21.42	5	19	0.66
R40	No Position Recorded		Rubicon II	1.14	3.2	68.7	15.68	Х	35	0.6
R41	No Position Recorded		Rubicon II	2.76	168.2	11243.7	1833.59	122	13	0.18
R42	No Positio	n Recorded	Rubicon II	0.08	2844	155.6	27.89	7702	9	0.52



SAMPLE	WGS84 East	WGS84 North	Prospect	Li2O (%)	Ta (ppm)	Rb (ppm)	Cs (ppm)	Nb (ppm)	Be (ppm)	Fe (%)
R43	602790	7555728	Rubicon III	3.70	110.7	15210.7	1593.1	135	18	0.3
R44	602830	7555702	Rubicon III	4.03	99.5	12530.9	1736.13	145	26	0.08
R45	No Position Recorded		Rubicon III	3.01	122.7	12125.5	2183.8	140	18	0.18
R46	No Position Recorded		Rubicon I	2.47	74.6	10206.8	1255.48	118	12	0.28
R47	No Position Recorded		Rubicon I	1.19	205.5	6680.7	2688.68	142	16	1.75
R48	No Position Recorded		Rubicon I	2.56	736.2	483.5	679.23	78	5	0.73
R49	No Position Recorded		Rubicon I	3.87	2.9	121.6	216.32	Х	2	0.9
R50	No Position Recorded		Rubicon I	0.59	661	4272.7	1139.56	434	5	0.53
R51	No Position Recorded		Rubicon I	0.66	0.2	451.4	2663.76	Х	39874	0.48
H1	605660	7561593	Helikon I	3.89	734.1	16924.8	1832.51	1094	1644	0.12
H2	605660	7561597	Helikon I	0.13	145558.9	563	693.43	268720	2459	Х
H3	605693	7561583	Helikon I	2.38	1022.6	9568.1	723.04	1376	398	0.21
H4	605674	7561576	Helikon I	0.34	18346.2	1335.4	1991.46	38794	11323	0.23
H5	605723	7561567	Helikon I	2.01	277.2	7504	640.8	203	149	0.34
Н6	605743	7561567	Helikon I	0.10	42.3	250.3	61.19	63	107	0.23
H7	605744	7561568	Helikon I	7.18	116.8	41.4	27.45	37	224	0.13
Н8	605746	7561565	Helikon I	3.89	184.7	17730.6	2586.46	178	34	0.06
Н9	605766	7561565	Helikon I	0.52	85.8	401.7	74.8	65	30	0.27
H10	605782	7561550	Helikon I	2.66	226.3	10937.4	1057.05	149	124	0.3
H11	605797	7561550	Helikon I	1.83	153.9	11389.9	3339.54	102	25	0.22
H12	605836	7561528	Helikon I	3.76	215.8	18383.4	3146.78	209	9	0.05
H13	605811	7561531	Helikon I	2.20	126.5	8906.2	835.09	70	138	0.5
H14	605735	7561559	Helikon I	3.02	90.3	11868	1061.32	102	70	0.19
H15	No Position Recorded		Helikon I	0.14	50.1	242	37.33	27	20	0.47
H16	No Position Recorded		Helikon II E	0.65	24.3	973.8	106.89	27	6	0.69
H17	No Position Recorded		Helikon II E	0.83	2.8	74.8	11.37	7	26	0.51
H18	No Position Recorded		Helikon II E	0.10	7.3	543.9	16.3	17	12	0.55
H19	606054	7562354	Helikon II E	2.14	111.8	8253.8	497.18	87	405	0.5
H20	606054	7562394	Helikon II E	0.14	2.2	560.3	173.53	8	9	0.1
H21	606054	7562334	Helikon II E	3.88	68.7	15902.8	805.61	122	25	0.08
H22	606021	7562366	Helikon II E	1.45	192.3	5876.2	467.83	69	176	0.36
H23	605976	7562384	Helikon II E	2.30	328.5	10703.2	1218.28	117	45	0.43
H24	605936	7562384	Helikon II E	0.04	31.5	205.3	24.16	20	13	0.39
H25	No Position Recorded		Helikon II E	1.53	4870.9	7478.3	252.03	12746	37	0.82
H26	No Positio	n Recorded	Helikon II E	0.01	9.1	44.2	2.45	34	2	0.53
H27	605692	7562387	Helikon II C	NS	NS	NS	NS	NS	NS	NS
H28	605644	7562418	Helikon II C	0.30	67.5	118.8	17.25	66	213	0.13
H29	605644	7562418	Helikon II C	0.46	6.7	302	21.69	13	35	0.28
H30	605581	7562406	Helikon II C	2.32	143.7	9543.6	705.42	127	102	0.31
H31	605456	7562395	Helikon II W	2.47	12.9	312.6	122.03	30	5	0.3
H32	605456	7562395	Helikon II W	0.15	6.8	527.3	65.92	15	7	0.58
H33	605328	7562362	Helikon II W	1.01	6.1	519.2	13.13	21	15	0.67
H34	605328	7562362	Helikon II W	0.29	278.5	462.5	1446.91	613	30046	1.23
H35	No Position Recorded		Helikon II W	3.19	126.2	14163	1075.99	126	585	0.09



SAMPLE WGS84\_East WGS84\_North Prospect Li2O (%) Nb (ppm) Fe (%) Ta (ppm) Rb (ppm) Cs (ppm) Be (ppm) H36 605689 7562414 Helikon II C 296.7 8247.6 652.91 98 399 0.44 2.11 Helikon II C NS H37 605717 7562416 NS NS NS NS NS NS H38 605746 7562426 Helikon II C 2.65 106.7 10399.7 775.43 92 40 0.3

Appendix 2 - Regional Geology Plan

