



## 31 MARCH 2013 QUARTERLY REPORT

### EXPLORATION HIGHLIGHTS

#### Gourma Project – Burkina Faso (BOE 100%)

- ❖ Numerous significant intercepts returned from maiden aircore drilling at the Gariaga Prospect including:
  - 14m @ 2.1g/t Au from 1m
  - 3m @ 11.3g/t Au from 5m
  - 7m @ 2.0g/t Au from 19m
  - 7m @ 1.0g/t Au from 29m
  - 3m @ 2.3g/t Au from 45m
  - 2m @ 3.2g/t Au from 29m
  - 5m @ 1.2g/t Au from 5m
- ❖ Gold mineralisation intercepted on all five 400m spaced Gariaga drill lines with multiple mineralised zones remaining open at depth and along strike to the NE and SW
- ❖ Continuous gold mineralisation in multiple zones now possible over a 3.8km strike length (Diabatou to Gariaga)
- ❖ Maiden aircore drilling on wide spaced lines across anomalous soil geochemistry at the Bohongou Prospect returned numerous wide low grade intercepts including:
  - 10m @ 1.2g/t Au from 22m
  - 17m @ 0.7g/t Au from 16m including 6m @ 1.2g/t Au from 59m
  - 18m @ 0.4g/t Au from 1m
  - 30m @ 0.3g/t Au from 4m
- ❖ Broad low grade gold mineralisation at Bohongou corresponds with quartz veined altered porphyry intrusive units up to 100m wide with individual strike lengths of over 1 kilometre
- ❖ Intercepts from the Foutouri Prospect gold in soil anomalies included:
  - 8m @ 1.0g/t Au from 1m
  - 18m @ 0.4g/t Au from 21m including 6m @ 0.9g/t Au from 21m
- ❖ Six sub-parallel zones of gold mineralisation at Foutouri remain open along strike and require trenching and additional drill testing
- ❖ Soil sampling has defined 2 main coherent +20ppb gold in soil anomalies, one >5km strike at Bongori and one >4km strike at Foutouri with further trenching planned

#### Golden Hill Project – Burkina Faso (BOE 100%)

- ❖ Regional wide spaced multi-element soil sampling completed with results outlining numerous coincident gold and multi-element anomalism in addition to previous gold anomalies

#### ASX Code:

BOE

#### Fast Facts:

Shares on Issue	390,373,182
Unlisted Options (various ex. prices / expiry dates):	76,400,001
Market Capitalisation @ 31 March 2013 (\$0.02)	\$7.8m
Cash @ 31 March 2013	\$2.1m
Debt	Nil

#### Directors:

Mr Leigh Ryan  
Mr Evan Cranston  
Mr Thomas Gladwin-Grove

#### Projects:

##### Boss Gold Sarl

- Prospective gold projects in Burkina Faso

##### Latrobe Oil Share Project

- Prospective oil shale project in Tasmania

##### Greenvale Mining NL

- Boss Resources holds 1.75 million shares in Greenvale Mining NL giving the Company a 3% interest in large oil shale projects in Queensland

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## EXPLORATION

Exploration in Burkina Faso during the quarter included the completion of infill soil sampling, mapping, rock chip sampling, trenching, aircore drill chip re-logging and geological interpretations based on aircore drilling within the Gourma Project, and restoration and re-logging of diamond drill core at the Golden Hill Project. No work was completed on the Tenkodogo Project.

### Gourma Project

#### Aircore Drilling

Results for the remaining 352 holes of the 15,038m Gourma Project regional aircore drilling program (Gariaga, Bohongou and Foutouri Prospects) were received during the quarter. The aircore program was designed to test for primary gold mineralisation beneath three strike extensive multi-element supported gold in soil anomalies within the Diabatou and Foutouri Permits (Fig. 1).

Aircore drilling at the Gariaga Prospect was conducted on 6 lines, with 5 lines spaced 400m apart and one line offset to the north to cover an interpreted parallel structure. All holes were drilled to blade refusal with total coverage achieved on each traverse wherever possible. Mineralisation is associated with quartz veined, strongly altered, variably sheared quartz diorite and andesitic basalt units. Results indicate several zones of gold mineralisation and shearing sub-parallel to the regional structural and lithological trend (NE-SW) over a strike length of more than 2 kilometres. Better intercepts are associated with intense limonite and deep weathering. The next phase of drilling will test these zones at depth and infill at a 100m line spacing including testing the mineralised trend along strike to the SW towards Diabatou across an area of transported alluvium associated with a drainage system. It is envisaged that the mineralisation will continue beneath the alluvium giving it a total strike length of over 3.8 kilometres.

Aircore drilling results from the Gariaga Prospect include the following significant >2.9 gram x metre intercepts:

Table 1: Gariaga Prospect Aircore Drilling (all 1m resamples) – includes all >2.9gxm results

Hole ID	Coordinates *		Dip (°)	Az * (°)	Hole Depth (m)	Intercept (m)			Grade (g/t Au)
	East (m)	North (m)				From	To	Width	
GAAC001	264127	1385254	-55	315	29	0	3	3	0.4
GAAC011	263993	1385384	-55	315	75	38	39	1	1.3
GAAC015	263883	1385494	-55	315	42	29	36	7	1.04
incl.						30	33	3	1.98
GAAC033	264213	1385726	-55	315	42	18	30	12	1.31
incl.						19	26	7	1.97
GAAC034	264197	1385745	-55	315	49	1	15	14	2.1
and						41	43	2	1.3
GAAC036	264154	1385780	-55	315	39	1	7	6	0.51
incl.						2	3	1	1.42
GAAC040	264096	1385851	-55	315	46	40	46	6	0.61
incl.						41	42	1	1.64
GAAC041	264686	1385808	-55	315	66	48	55	7	0.55
GAAC042	264670	1385841	-55	315	67	35	54	19	0.47
incl.						45	48	3	2.32
GAAC051	264507	1386002	-55	315	36	16	24	8	0.38
GAAC062	263938	1385792	-55	315	23	9	11	2	1.49
GAAC080	263881	1384912	-55	315	45	5	10	5	1.23
GAAC081	263870	1384940	-55	315	51	0	2	2	1.46
GAAC083	263735	1385076	-55	315	74	29	31	2	3.32
GAAC085	263689	1385129	-55	315	42	5	8	3	11.34

\* WGS84 Zone 31N, 0.1g/t lower cut, max 4m internal waste, no upper cut, only >2.9 gram x metre intercepts reported

Aircore drilling at the Bohongou Prospect was conducted on 16 lines, with lines spaced between 200 and 2800m apart designed to test 2 sub-parallel mineralised structures associated with the Gourma Shear Zone (Fig. 1). All holes were drilled to blade refusal (average depth 25m) with total coverage achieved on each traverse wherever possible. Broad zones of low grade gold mineralisation were identified in the drilling with 8 holes ending in mineralisation. Gold intercepts are associated with quartz veined, strongly limonitic, quartz feldspar porphyry intrusives within highly weathered, sheared ultramafic units. Broad low grade mineralisation up to 90m wide was also encountered at the greenstone / granite contact in holes BOAC132 to BOAC137. Both styles of mineralisation have the potential for significant gold grade enrichment at structural intersections or jogs within this 10km long stretch of the Gourma Shear Zone. The next phase of drilling will target these structures.

Aircore drilling at the Foutouri Prospect was conducted on 5 lines, spaced between 200 and 400m apart with one line offset to the north to cover an additional interpreted parallel structure (Fig. 1). All holes were drilled to blade refusal (average depth 20m) with total coverage achieved on each traverse wherever possible. Mineralisation is associated with quartz veined, limonitic, quartz diorite units within six NE-trending sub-parallel shear zones. The best drill intercept is coincident with the largest group of artisanal workings. Infill soil sampling and trenching is continuing to the SW of Foutouri, with the next phase of drilling designed to target the highest tenor gold and multi-element anomalies along the remaining 18km of untested portions of the Gourma Shear Zone.

Aircore drilling results from the Bohongou and Foutouri Prospects include the following significant >2 gram x metre intercepts:

Table 2: Bohongou and Foutouri Prospects Aircore Drilling (all 1m resamples) – includes all >2.0gxm results

Hole ID	Coordinates *		Dip (°)	Az * (°)	Hole Depth (m)	Intercept (m)			Grade (g/t Au)
	East (m)	North (m)				From	To	Width	
BOAC014	255766	1387670	-55	315	45	36	45eoh	9	0.47
BOAC024	255607	1387465	-55	315	32	22	32eoh	10	1.20
BOAC025	255599	1387478	-55	315	19	0	16	16	0.20
BOAC031	255473	1387050	-55	315	55	0	55eoh	55	0.13
BOAC033	255434	1387082	-55	315	41	0	2	2	1.38
and						9	36	27	0.18
BOAC034	255419	1387101	-55	315	37	0	28	28	0.11
BOAC038	255491	1387034	-55	315	22	10	22eoh	12	0.24
BOAC058	255334	1386912	-55	315	41	20	40	20	0.23
BOAC065	254666	1386929	-55	315	17	10	13	3	0.79
incl.						10	12	2	1.02
BOAC067	254548	1386129	-55	315	54	42	44	2	2.37
BOAC107	251845	1383885	-55	315	36	26	27	1	2.25
BOAC118	251445	1383635	-55	315	32	19	32eoh	13	0.16
BOAC127	251991	1383383	-55	315	33	3	20	17	0.14
BOAC129	251964	1383406	-55	315	34	4	34eoh	30	0.31
BOAC130	251950	1383420	-55	315	23	2	23eoh	21	0.26
BOAC131	251939	1383433	-55	315	34	2	17	15	0.20
BOAC133	255090	1387424	-55	315	28	1	19	18	0.37
BOAC134	255078	1387438	-55	315	35	14	35eoh	21	0.22
BOAC135	255063	1387453	-55	315	33	16	33eoh	17	0.65
incl.						23	29	6	1.24
FTAC006	288008	1409145	-55	315	21	1	12	11	0.85
incl.						1	9	8	1.00
FTAC010	288070	1409080	-55	315	25	6	7	1	2.11
FTAC013	287975	1409176	-55	315	13	6	7	1	4.36
FTAC022	288036	1408838	-55	315	39	21	39	18	0.41



Hole ID	Coordinates *		Dip (°)	Az * (°)	Hole Depth (m)	Intercept (m)			Grade (g/t Au)
	East (m)	North (m)				From	To	Width	
incl.						21	27	6	0.93
FTAC027	287933	1408941	-55	315	16	11	15	4	0.6

\* WGS84 Zone 31N, 0.1g/t lower cut, max 4m internal waste, no upper cut, only >2 gram x metre intercepts reported

All intercepts are derived from individual one metre samples collected using a PVC spear system and although all care is taken to collect a representative sample the results are indicative only. Irrespectively Boss implements a rigorous quality control program with aircore drilling involving the insertion of one certified standard from an accredited New Zealand laboratory, a blank sample, and a duplicate sample within every 60 samples submitted for analysis. The ALS laboratory in Ouagadougou, Burkina Faso was used for gold analysis on all the AC samples. Samples were assayed using standard fire assay techniques on a 50 gram charge with an atomic absorption finish.

### Soil Sampling, Trenching, Mapping and Rock Chip Sampling

During the quarter 565 infill soil samples were collected from the Bongori Prospect, 243 samples from the Bongori South Prospect and 389 samples from the Foutouri Prospect. All samples were collected at a 100m x 100m spacing. Gold assays included 73 gold values >50ppb to a maximum of 762ppb Au from the Foutouri Prospect. Results to date have defined 2 main coherent >20ppb gold in soil anomalies, one >5km strike at Bongori and one >4km strike at Foutouri. The Bongori anomaly also includes highly anomalous antimony and arsenic soil results. Follow up trenching is planned across both prospect areas prior to wide spaced aircore drilling.

Nine hundred and forty four (944) infill soil samples were collected from the Lotto and Tampora Prospects. All samples were collected at a 100m x 100m spacing. Gold assays have been received for 670 samples. Results to date include only 9 gold values >50ppb to a maximum of 518ppb Au from an area 400m south of the Main Tampora workings. It is suspected that laterite cap rock is masking soil results within the area. More detailed mapping is required.

One 19m long trench was excavated by hand at the Diabatou Prospect during the quarter. Due to difficult digging conditions the planned length of 200m was not achieved. Nine 2m composite channel samples were collected from within saprolitic quartz diorite, across several NE to NNW trending goethitic shears and quartz veins. Six selective rock chip samples of variably orientated quartz veins was also completed. The channel sample results returned a maximum of 0.05g/t Au. Assays for the rock chips are awaited.

During the quarter field checking of soil anomalies, mapping and geological interpretation was completed at all the main prospects including the Bongori-Foutouri, Lotto-Tampora, Gariaga NE and Fouanmbori. A total of 48 rock chip samples were collected in the course of field checking and mapping. Assays have been received for 38 of these samples, with the best results including 28.5g/t Au and 4.6g/t Au from smoky vein quartz at Bongori, 2.5g/t Au, 2.3g/t Au and 1.7g/t Au from saprolitic quartz veined basalt at Tampora, and 1.2g/t Au from quartz veined pyritic quartz diorite at Diabatou.

### Golden Hill Project

#### Regional Multi-Element Soil Sampling

During the quarter gold and multi-element results were received from the Baniri and Mougue Permits 1km x 1km spaced soil sampling program designed to confirm historic gold in soil anomalism and identify major gold-bearing fluid pathways using 51 element sample analysis. Results highlight significant Ag-Cu-Zn-Sb anomalism associated with the northern extension of the



Ma Au in soil anomaly and a separate coincident As-Cu-Zn-Sb adjacent to a coincident Bi-Te-Mo to the north of Ma within the Baniri Permit. These areas will be ground checked during the next quarter as a priority.

A significant coincident Au-Ag-Mo-Te anomaly is located between and along strike of the Nabere and Nabale artisanal workings within the Mougue Permit. This area will also be ground checked next quarter.

Results for 27 of the 40 rock chip samples collected during the regional soil sampling program were received during the quarter. Several rock chip samples returned high grade Au values including 2.4g/t Au, 1.9g/t Au and 1.6g/t Au from quartz veined carbonate-sericite altered basalt at the Nabere prospect, on the Mougue Permit. Results for the remaining 13 rock chip samples are awaited.

### **Latrobe Oil Shale Project - Tasmania**

A response from the Fushun Mining Group with respect to a Memorandum of Understanding sent to them late in September is still awaited.

## **CORPORATE**

On 8 March 2013, Mr Evan Cranston moved from an executive to a non-executive role with the Company. The Board of Boss would like to thank Mr Cranston for his corporate and marketing contribution over the past 10 months and looks forward to his continuing expertise and advice in his capacity as non-executive director.

In an effort to reduce costs, Boss Resources has begun sharing exploration staff in Burkina Faso with another Perth based junior explorer.

Cash on hand at quarters end was \$2.1 million.





For further information please contact:

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*Boss Resources Limited is a gold and oil shale exploration company focussed on increasing shareholder and other stakeholder wealth by exploring for and developing quality mineral resources. Evaluation and acquisition of additional highly prospective exploration projects in West Africa, especially in Burkina Faso, and the development of an oil shale processing facility in Tasmania is seen as critical to the growth of the company.*

*The information in this report that relates to exploration results is based on information compiled by Mr Leigh Ryan, the company's Managing Director, who is a member of the Australian Institute of Geoscientists. Mr Ryan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking 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 Ryan consents to the inclusion in the report of the matters based on information in the form and context in which it appears.*

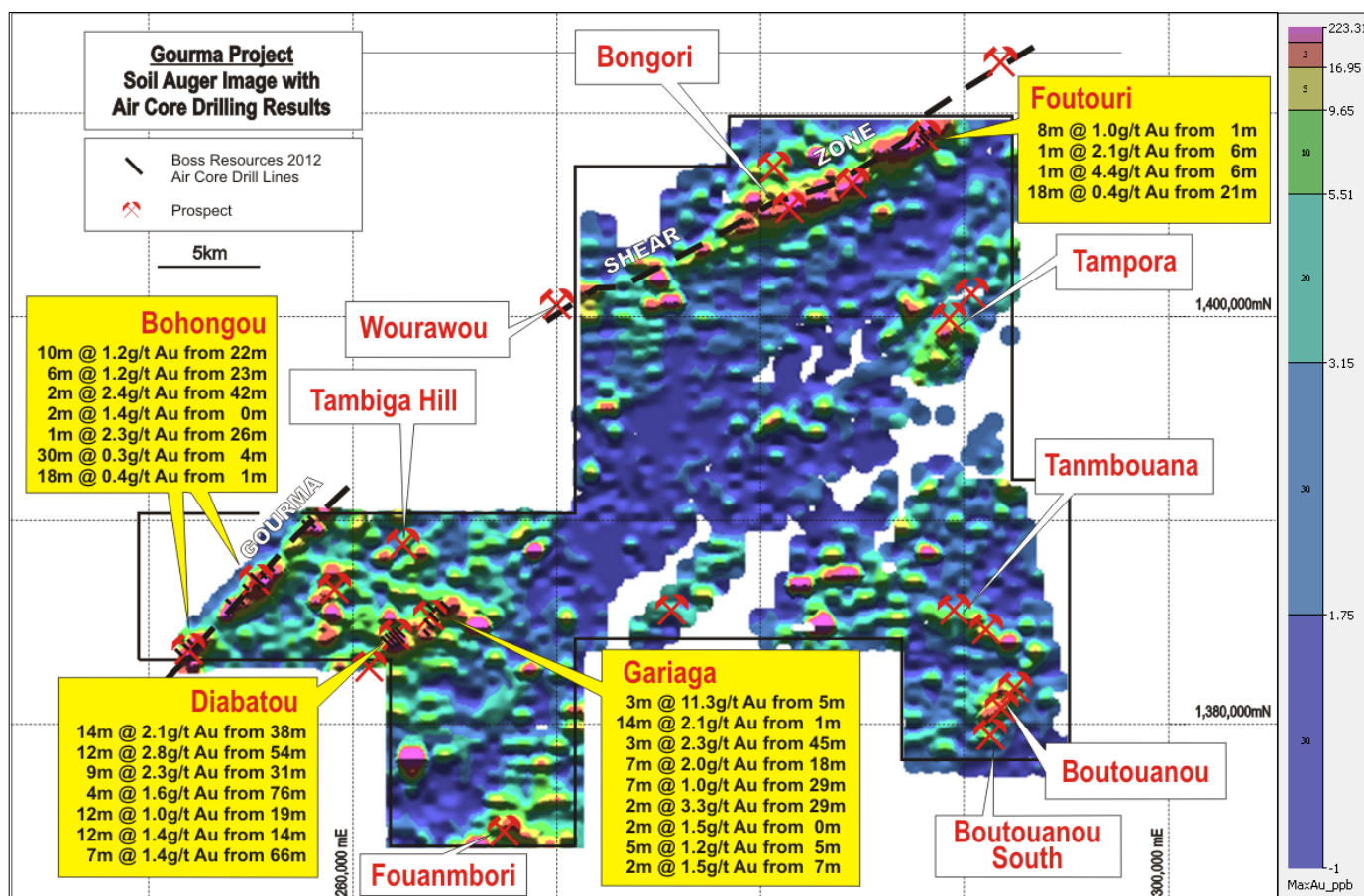


Figure 1: Gourma Project Aircore drilling and recent intercepts over combined gold in soil and gold in auger image