



**GRYPHON**  
MINERALS LIMITED

# Quarterly Report

31 March 2014



## Banfora Gold Project | Burkina Faso, West Africa

- **Optimisation studies completed demonstrating potential for a low-cost 2Mtpa conventional heap leach start-up operation returning strong economics at US\$1200/oz gold<sup>2</sup>**
  - Annual production 71,000 oz Au (+80,00 oz Au first 3 years)
  - In pit inventory 800,000 oz Au
  - Life of Mine 8.7 years
  - Average gold grade 1.44g/t Au
  - Cash Costs (C1) US\$665/oz
  - Capex US\$79 million
- **2Mtpa Heap Leach preferred development option for the Banfora Gold Project for the following key reasons:**
  - Lower capital costs and operating costs than CIL options.
  - Demonstrates a very strong resilience to a lower gold price and also shows very good upside in a rising gold price environment.
  - At a higher than base case gold price scenario the operation would warrant simple and low cost up-scaling through increased Heap Leach throughput, or via the addition of a CIL plant.
  - Simplified mining operation due to lower cut-off grades and less selective mining requirement.
- **Excellent Metallurgical Recoveries<sup>1,8</sup>:** heap leach test work completed to date indicates gold recoveries of: 85% for oxide material, 74% for transitional and 65% in primary/sulphide. Additional metallurgical test work using diamond drill core material commenced this quarter to support the Feasibility Study.
- **Environmental Permit:** Gryphon was awarded the Environment Permit for the development of the Banfora Gold Project by the Burkina Faso Ministry of Environment and Sustainable Development, on 28 January 2014.
- **Full Permitting for the Mining Licence:** the Company formally presented its application for a Mining Licence for the Banfora Gold Project to the Burkina Faso National Commission of Mines on 18 February 2014. The National Commission has now instructed the Company to incorporate an exploitation company in anticipation of the mining licence being granted. Gryphon anticipates that the formal mining licence will be received in the coming weeks.
- **Environmental & Social:** Gryphon continues its corporate social responsibility work in Burkina Faso and relationships with the local stakeholders of the Project continues to strengthen through Community Consultation Committee (CCC) meetings, which are held on a regular basis. The site team recently visited various different Infrastructure and Urban Planning Departments to introduce the construction discipline of the resettlement process and attended CCC meetings to start the process of developing a housing sub-committee.
- **Feasibility Study:** Based on the successful outcome of the optimisation studies the Company is now finalising a Feasibility Study on the preferred 2Mtpa Heap Leach option, which is due for completion in July 2014.

### JORC 2012 Compliance Statement

The optimisation studies are at Scoping Study level and therefore based on low-level technical and economic assessments, and are insufficient to support the estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised. In discussing reasonable prospects for eventual economic extraction in Clause 20, the Code requires an assessment (albeit preliminary) in respect of all matters likely to influence the prospect of economic extraction including the approximate mining parameters by the Competent Person. While a Scoping Study may provide the basis for that assessment, the Code does not require a Scoping Study to have been completed to report a Mineral Resource. Scoping Studies are commonly the first economic evaluation of a project undertaken and may be based on a combination of directly gathered project data together with assumptions borrowed from similar deposits or operations to the case envisaged. They are also commonly used internally by companies for comparative and planning purposes. Reporting the general results of a Scoping Study needs to be undertaken with care to ensure there is no implication that Ore Reserves have been established or that economic development is assured. In this regard it may be appropriate to indicate the Mineral Resource inputs to the Scoping Study and the processes applied, but it is not appropriate to report the diluted tonnes and grade as if they were Ore Reserves. While initial mining and processing cases may have been developed during a Scoping Study, it must not be used to allow an Ore Reserve to be developed.

# Summary of Activities for the quarter ending March 2014

## Low Cost Exploration

### Banfora Gold Project<sup>5</sup>

- Reverse Circulation/Diamond drilling has commenced, to test high grade oxide targets within the proposed mining licence area.
- Nine new high priority gold targets have been identified this quarter for drill testing at the Banfora Gold Project.
- Multiple highly anomalous +1.0g/t gold-in-soil results, including up to **9.52g/t gold** in soils.
- Rock chips demonstrate high grade gold potential at the new Hillside Prospect, results include: **154g/t, 19.1g/t & 17.8g/t gold**.
- All targets are at surface and within close proximity of the proposed gold plant location.
- Follow up auger drilling has commenced to further define the recent soil anomalies.

### Houndé Belt & Regional Burkina Faso – Exploration Pipeline Strategy<sup>6</sup>

- Three new projects acquired through an earn-in joint venture agreement.
- Includes the Golden Hill Project located on the prolific Houndé belt. Historic drill results include:
  - **2m @ 168.80g/t** gold from 22m in hole RC97-075
  - **2m @ 98.40g/t** gold from 4m in hole RC98-148
  - **2m @ 58.90g/t** gold from 2m in hole RC97-82
  - **2m @ 53.14g/t** gold from 24m in hole IRC01-01
  - **22m @ 12.35g/t** gold from 22m in hole IRC01-19
- Gryphon has the ability to earn a majority interest in each.
- Complements Gryphon's future growth and development pipeline in Burkina Faso and is in line with Gryphon's low cost exploration strategy.

### Regional West Africa<sup>6</sup>

- **Mauritania Gold & Copper Projects:** Rock chips include **20.9% copper, 6.1 g/t gold** and **16.2 g/t silver** from new target at the Akjout Project, adjacent to First Quantum's Guelb Moghrein copper/gold mine.

## Corporate

### Cash and Working Capital

- At the end of the quarter Gryphon held approximately \$39 million in cash, plus approximately \$4 million in listed investments.
- In March 2014, the Company sold its holding in Renaissance Minerals Limited (ASX; RNS).
- Gryphon has achieved a significant reduction in overheads across the entire business and continues its commitment to stringent cost reviews and ongoing cost management processes.
- The Company remains focused on a 'de-risk, get ready & add value' strategy, while maintaining its fundamental principle of preserving its strong cash position in difficult market conditions.

### Financing

- The Company has received a number of indicative proposals from leading international banks and financiers for the debt financing for the development of the Banfora Gold Project. Gryphon is reviewing these terms with the intention of mandating financiers to act as lead arrangers in the coming weeks.

### Company Secretary

- Candice Donnelly and Carl Travaglini were appointed Joint Company Secretaries in February 2014.

# Banfora Gold Project Overview

## Overview of Banfora Gold Project | Burkina Faso

The Banfora Gold Project (ASX: GRY: 100%; 90% on issue of a mining license, 10% Burkina Faso Government) is located in South-West Burkina Faso, West Africa in a major gold producing district, host to such world class gold deposits as Tongon (4.2 Million oz Au), Syama (5 Million oz Au mined & 6.5 Million oz Au in resources) and Morila (6.5 Million oz Au). Burkina Faso is a stable and progressive nation with over 25 years of strong democratic government and an advanced mining code - demonstrating the nation's desire for mining development.

The project contains contiguous exploration licenses covering approximately 1,100 square kilometres of a major gold district. The project is easily accessible by road and is in close proximity to the town of Banfora and the major city of Bobo-Dioulasso.

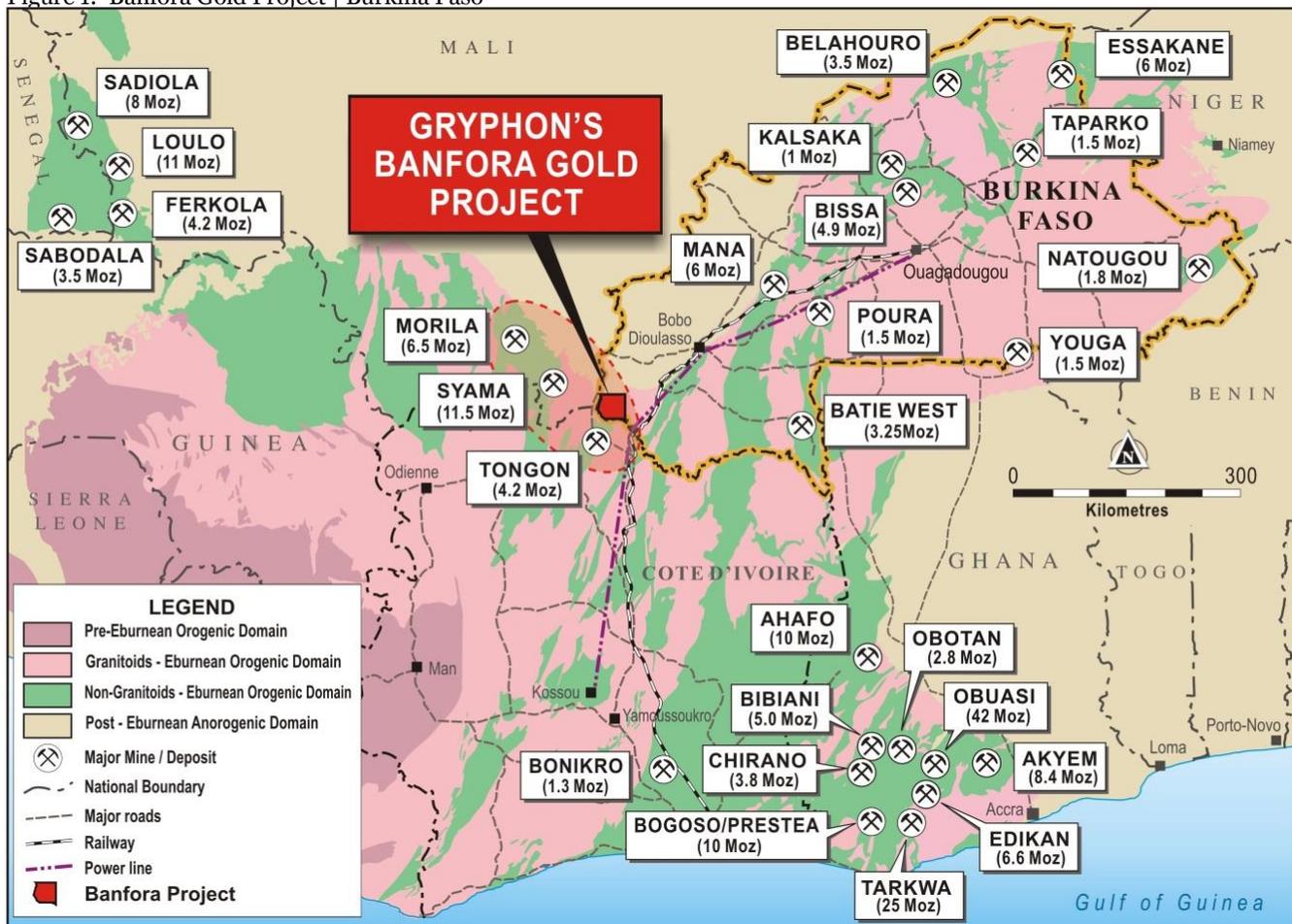
The Company completed optimisation studies<sup>1</sup> in February 2014, based on a number of alternative development options that are appropriate for current gold market conditions. Initiatives for capital cost reduction were the main focus of the optimisation studies, in conjunction with examining project economics across a range of gold prices, plant throughputs and optimum process routes.

The Company announced the results of the optimisation studies during the quarter<sup>1</sup>. The results demonstrate robust economics across a range of conventional Heap Leach (HL) and Carbon in Leach (CIL) development options, highlighting low capital and operating costs, significant free cash flow and excellent net present value (NPV) and internal rate of return (IRR).

The Company has identified a preferred low cost start up two million tonne per annum HL operation that will generate strong returns in a lower gold price environment and is highly leveraged to any gold price increases.

A full Feasibility Study on the preferred HL operation has commenced with the results expected in July 2014.

Figure 1: Banfora Gold Project | Burkina Faso



## Banfora Gold Project | Operational

### Optimisation studies – demonstrate robust economics<sup>1,2</sup>

**Potential for a low-cost heap leach start-up operation returning a strong NPV, IRR and short payback at US\$1200/oz gold**

Table 1: Highlights Summary for 2MTPA HL Operation at \$US1,200/oz gold

Annual production	71,000 oz Au (+80,00 oz Au first 3 years)
In pit inventory	800,000 oz Au
Life of Mine	8.7 years
Average gold grade	1.44g/t Au
Cash Costs (C1)	\$665/oz
NPV undiscounted*	\$206 million
NPV @ 5% discount*	\$154 million
IRR*	39%
Payback	2.1 years
Capex*	\$79 million

Notes: all dollars are stated in \$US

\* NPV and IRR excludes contingencies and sustaining capital

# Excludes project working capital, contingencies and sustaining capital

Gryphon released the results of its optimisation studies on 4 February 2014.

- Optimisation studies demonstrate robust project economics across a range of conventional HL and CIL development options, highlighting low capital & operating costs, significant free cash flow and excellent NPV & IRR's.
- Results highlight a preferred low cost start-up HL operation that will generate strong returns in a lower gold price environment and is highly leveraged to any gold price increases.
- The 2Mtpa HL operation can be easily up-scaled with either additional HL or CIL capacity for low capital requirements at a later date using cash flow.

These studies evaluated alternative development solutions for the Banfora Gold Project, appropriate for current gold market conditions. Initiatives for capital cost reduction were the main objective, in conjunction with examining project economics across a range of gold prices, plant throughputs and optimum process route.

Studies were undertaken on a range of lower gold price environments with US\$1200 used as the base case scenario. Optimisation and sensitivities were undertaken on Measured and Indicated resource estimates only (i.e. Inferred excluded for these studies) with gold prices ranging from US\$900/oz to US\$1500/oz.

The base case 2Mtpa CIL operation presented in the BFS released in ASX announcement dated 31 January 2013 is considered the optimal option under stronger gold market prices, but given current market conditions the optimisation studies focused on the following:

- Demonstrating the robust project economics of the Banfora Gold Project in a lower gold price environment;
- Re-optimising overall capital and operating costs of the project in key areas such as power supply, consumables, direct costs and contract mining tenders;
- A start-up 1Mtpa CIL plant sized to significantly reduce upfront capital costs utilising anticipated high grade mill feed in the first few years through a small size operation, whilst maintaining the optionality for future expansion; and
- A 2Mtpa simple open pit HL operation, targeting significantly lower capex and resilience in a lower gold price environment that can be easily expanded with cash flow at a later date.

The results of the studies indicate the following:

- The HL options are more robust at lower gold prices.
- The larger 2Mtpa CIL option converts more of the resource to pit inventory due to the higher process recoveries for the primary material.
- The 2Mtpa HL performs better across the range of gold prices due to the lower capital and operating costs.
- Robust project economics evident across a range of conventional HL and CIL development options, highlighting low capital & operating costs, significant free cash flow and excellent NPV & IRR's.

Optimisation results highlighted the preference for a low cost, 2Mtpa start-up HL operation that will generate strong returns in a lower gold price environment, and remain highly leveraged to gold price increases. The 2Mtpa HL operation can be easily upscaled with either additional HL or CIL capacity for low capital requirements at a later date using cash flow.

The 2Mtpa HL option was selected as the preferred project development option for the Banfora Gold Project for the following key reasons:

- Lower capital costs and operating costs than CIL options;
- Demonstrates a very strong resilience to a lower gold price and also shows very good upside in a rising gold price environment;
- At a higher than base case gold price scenario the operation would warrant simple and low cost up-scaling through increased HL throughput, or via the addition of a CIL plant.
- Simplified mining operation due to lower cut-off grades and less selective mining requirement.

On the back of the positive optimisation study outcomes, the Company immediately embarked upon progressing with a full Feasibility Study for the 2Mtpa HL operation at the Banfora Gold Project.

The Company has commenced additional HL metallurgical test work sufficient to support the Feasibility Study, with column tests underway at SGS Lakefield laboratories in Perth, Western Australia. All test work management and flowsheet definition is being undertaken by Kappes Cassiday & Associates Australia (KCAA) on behalf of the Company.

The Company is working towards finalising the HL Feasibility Study in July 2014. The program of works requires feasibility design work to proceed based on the additional testwork and inputs from KCAA, and the Company has engaged Lycopodium Minerals in Perth (Lycopodium) to provide the design support. Given their involvement in the original CIL feasibility study, this approach provides the Company with an efficient, timely and cost effective outcome. Furthermore KCAA and Lycopodium have collaborated on numerous HL studies in the past, including: St Ives Gold in Western Australia, Suzdal Heap Leach Project in Kazakhstan and Tasiast in Mauritania.

## Highlights of the Optimisation Studies<sup>1,2</sup>

Results from the optimisation studies clearly highlight that the HL development option has the potential to generate strong investment returns in a lower gold price environment. Pit optimisations were conducted at US\$1200/oz in conjunction with sensitivity analyses that predict clear upside at higher gold prices to support a plant capacity expansion of either HL or CIL, as well as the ability to remain profitable and withstand a lower gold price environment.

The estimated initial capital cost of US\$79M (excluding contingencies, working capital and sustaining capital) for the construction of a 2Mtpa HL facility and associated infrastructure is significantly lower when compared with comparative CIL options. This provides the Company with a low cost development path to production which, when combined with the robust economics at low gold prices, is manageable and attractive to project financiers.

Excellent gold recoveries have so far been confirmed from a number of HL column tests undertaken on bulk trench oxide samples from near surface and HQ diamond drill core at depth within portions of the Nogbele deposit. Based on this test work and additional bottle roll tests on the deposits recoveries were adopted for the optimisation studies of: 85% for oxide material, 74% for transitional and 65% in primary/sulphide. The additional HL metallurgical test work that has commenced at SGS Lakefield laboratories will confirm these recoveries and optimise reagent consumptions in an effort to reduce overall operating costs.

# Review of the Quarter ended 31 March 2014

Table 2: 2Mtpa Heap Leach Highlights (US\$1,200/oz gold)

Heap Leach Plant Feed	[Mt]	17.3
Grade	g/t	1.44
Strip Ratio	W:O	2.6
Annual Gold production	koz/yr	71
Total Gold Production	koz	614
Total Contained Gold	koz	800
Mine Life	yr	8.7
Capital Costs	US\$M	79
Plus contingencies & project working capital	US\$M	16
Revenue @ US\$1200/oz	US\$M	\$737
Generated Cashflow	US\$M	\$289
NPV* undiscounted	US\$M	\$206
NPV* @ 5% Discount Rate	US\$M	\$154
IRR <sup>1</sup>		39%
Cash Cost (C1) <sup>#</sup>	US\$/oz	\$665
All in sustaining costs (includes C1 cash costs, royalties, refining costs & sustaining capital)	US\$/oz	\$777

\* NPV and IRR excludes contingencies and sustaining capital

# C1 cash cost as defined by Mackenzie Wood (formerly Brook Hunt)

## Metallurgy – Current Knowledge on Oxide Material<sup>1,8</sup>

The Banfora ores are all 'non-refractory', typically 'free-milling' with a high gold recovery by cyanidation leach and low to moderate reagent consumptions.

In determining the metallurgical response of orebody to cyanidation, two HL testing programs were conducted prior to the current feasibility program. The initial test program was conducted on trench samples of Nogbele oxide material with the second program on drill core composites representing oxide and transition types. The current metallurgical test work program that was commenced this quarter will support the HL feasibility study due for completion in July, 2014.

KCAA was involved in development and monitoring of the second program and will continue this work through the current feasibility program.

The previous two test work programs confirmed gold recoveries of up to 85% were achieved with low cyanide consumption and fast leaching rates, with most of the recoverable gold extracted after 30 days. The 550kg of samples used for the second program were collected from HQ diamond drill core, comprising Nogbele oxide and transitional material. Intermittent bottle roll tests performed on 10 sub-composite samples concluded a crush size of 25mm for the previous column test work.

The previous test work results showed:

- A coarse crush size of 25 millimetres.
- Moderate cement additions (5 - 6kg/t).
- Low cyanide consumption (0.2 – 0.4kg/t).
- Fast leach time of 30 days.
- Good permeability and low slump levels.

## Metallurgy – Fresh/Sulphide Upside<sup>1,8</sup>

As part of the optimisation work, a total of 8 samples were selected from low grade fresh material at Nogbele. An average grade between 0.5 g/t and 1.0 g/t was selected and 5 kg of material was assayed from existing core. Analysis was conducted by BIGGS laboratory in Ouagadougou, Burkina Faso, using the intermittent bottle roll technique designed by KCAA to provide indicative results of column leach testing.

Recoveries from the intermittent bottle roll test work on the fresh rock (sulphide) samples were very encouraging, with an average recovery of 64.5% and a maximum recovery of 74.5%. The fresh/sulphide resource at Banfora is very large

# Review of the Quarter ended 31 March 2014

of which currently only a small portion is included in the open pit designs, meaning there is potentially upside to expanding the pit designs deeper.

## Metallurgy – New Test Work Program

Using the results of previous test work, the Company has commenced additional HL metallurgical test work sufficient to support completion of a Feasibility Study on a HL operation at the Banfora Gold Project. Additional core material has been collected and received at SGS Lakefield laboratories in Perth, including high grade material from the Nogbele deposit, and representative samples from the Fourkoura, Stinger and Samavogo deposits.

Head assay work is under way and a total of 16 columns have recently commenced leaching at the SGS laboratory. Results of the column tests will provide the necessary data to support the HL feasibility study, including: recoveries, crush sizes, cement consumptions, cyanide consumptions, crushing circuit design parameters, other reagents consumptions and heap leach configuration, geotechnical and stability parameters.

Results of this metallurgical test work program will be available in the next quarter.

## Summary of Mineral Resource Estimates<sup>3,4</sup>

As part of the optimisation studies the Company has reviewed and undertaken a revised calculation of the Banfora Gold Project resource estimates.

The key factors taken into account with calculating new resources include:

- A lower gold price environment (factoring in the significant drop in gold price from its highs and the previous resource estimate calculations).
- A more robust technique of Multiple Indicator Kriging (MIK) with block support adjustment and Ordinary Kriging (OK) estimation methods has been used that is more aligned with the Heap Leach mining option.
- Mining dilution is incorporated with the new resource estimate as previously it was taken into account at the mine design stage.
- Wireframe depths have been reduced below the pit floors due to a lower gold price and fresh rock metallurgical recoveries associated with the Heap Leach processing route.

The key outcomes from the change in the resource estimates from the previous released resource (Refer to ASX announcement on 31 January 2013) are:

- A robust mineral resource estimate that is aligned with HL style mining and processing.
- Mining dilution has been taken into account within the new resource for portions of the deposit that warrant it.
- Measured and Indicated resource estimates have decreased a minor amount while inferred estimates have had a larger decrease due to the factors mentioned above.
- Any sustained increase in the gold price at a later date and /or an increase in metallurgical recoveries from the fresh (sulphide) material regarding HL processing and / or mine processing design and scale (HL or CIL) has the potential to result in an increase the size of the mineral resource estimate.

Table 3: Mineral Resource Estimate for the Banfora Gold Project<sup>\*\*</sup>

Lower cut (g/t)	Measured			Indicated			Measured + Indicated			Inferred			Total		
	Tons (Mt)	Grade g/t Au	Gold (MOZ)	Tons (Mt)	Grade g/t Au	Gold (MOZ)	Tons (Mt)	Grade g/t Au	Gold (MOZ)	Tons (Mt)	Grade g/t Au	Gold (MOZ)	Tons (Mt)	Grade g/t Au	Gold (MOZ)
0.5 <sup>#</sup>	7	1.4	0.3	60	1.4	2.7	67	1.4	3.0	16	1.3	0.7	83	1.4	3.6
1.0	3	2.3	0.2	29	2.1	1.9	32	2.1	2.2	8	1.9	0.5	40	2.1	2.6
1.5	2	2.9	0.2	16	2.8	1.4	18	2.8	1.6	4	2.6	0.3	22	2.8	1.9

Notes:

<sup>#</sup> For the HL studies a lower cut of 0.5g/t has been used for the estimation and hence it has been highlighted. Rounding has been applied to two significant figures.

<sup>\*\*</sup> The table combines the estimates for four different deposits, Nogbele, Fourkoura, Stinger and Samavogo.

## Permitting

As reported in the previous quarter, the Company conducted a successful public enquiry and presentation to the Burkina Faso Ministry of Environment. This completed the formalities of the Environmental permitting process and Gryphon was awarded the Environment Permit for the development of the Banfora Gold Project by the Burkina Faso Ministry of Environment and Sustainable Development on 28 January 2014 (refer to ASX Announcement 28 January 2014). This is the penultimate step toward securing the Mining Licence.

On 18 February 2014, the Company formally presented its application for a Mining Licence for its Banfora Gold Project to the Burkina Faso National Commission of Mines. The Banfora Gold Project business case and the corresponding environmental and social impact assessment was presented to the National Commission, including the Company's proposal to develop a HL operation at the project.

The National Commission has now advised Gryphon that the Burkinabe exploitation company should be incorporated in anticipation of the mining licence being granted. The incorporation requirements are well advanced and the Company anticipates that the formal mining licence will be received in the coming weeks.

## Environmental & Social

Gryphon continues its corporate social responsibility work in Burkina Faso and relationships with the local stakeholders of the Project continues to strengthen through Community Consultation Committee (CCC) meetings which are held on a regular basis. The CCC is made up of around 80 representatives of government, communities and other stakeholders. Its membership includes human rights and local capacity development NGOs, who work together to help ensure that the workings of the CCC is appropriate to the project's operating context and that engagement with communities is on the basis of informed participation.

The Project continues to enjoy the support of a specialist resettlement consulting group with relevant experience in Burkina Faso, who work closely with project staff to ensure that resettlement activities are coordinated with the Project's broader community relations priorities.

Through the period the site team visited various different Infrastructure and Urban Planning Departments to introduce the construction discipline of the resettlement process and attended Community Consultation Committee meetings to start the process of developing a Housing sub-committee.



Images: Two demonstration model houses and two grain storage structures

The quarterly water quality sampling program was undertaken in February. The environmental team has also completed the monthly groundwater level monitoring and finalised census of community water sources. The team has planned the location for additional rain gauges in key catchments; design of rain gauge mounting was amended to minimise land take.

## **Banfora Gold Project | Low Cost Exploration<sup>5</sup>**

### ***Targeting high grade near-mine mineralisation + generation of new district prospects***

Nine new robust and significant gold-in-soil anomalies have been delineated from the latest results of soil geochemistry, rock chipping and mapping from the southern portion of the Banfora Gold Project.

- Nine new high priority gold targets have been identified for drill testing this quarter at the Banfora Gold Project.
- Multiple highly anomalous +1.0g/t gold-in-soil results, including up to 9.52g/t gold in soils.
- Rock chips demonstrate high grade gold potential, results include: 154g/t, 19.1g/t & 17.8g/t gold.
- All targets are at surface and within close proximity of the proposed gold plant location.
- Follow up auger and multi-purpose Reverse Circulation/Diamond drill rig mobilising to commence testing of high grade oxide targets within the proposed mining licence area.

### ***Soil Geochemistry - cost efficient and highly effective exploration technique***

To date soil geochemistry has played a significant role in locating all known gold mineralisation on the Project and the exploration team continue to use this cost efficient and highly effective exploration technique.

In line with its low cost exploration approach the Company has been conducting focused campaign style field exploration programs at Banfora using primarily soil and stream geochemistry, rock chipping as well as detailed geological mapping. This has culminated with the identification of these nine new high priority targets.

Combining drainage and soil geochemistry with an increasing knowledge about the geology and understanding of the controls on known gold mineralisation, the Company's highly skilled exploration team have identified these new targets outside of the current gold deposit areas.

Soil geochemical grids have been expanded during the past twelve months as part of the Company's low cost add value strategy and approximately 8000 soil samples have been collected during 2013, from which these new targets have emerged. Soil geochemical sampling is a low cost exploration tool and has been extremely effective in identifying all known gold deposits at the Banfora Gold Project to date.

### ***Drilling – underway***

Low cost auger drilling has commenced at the Banfora Gold Project for a 2,500m program of bedrock sampling as a prelude to a Reverse Circulation (RC) program. The auger rig is being used to help focus and prioritise drilling of the numerous broad, high priority areas defined by previous shallow soil sampling (refer to ASX Announcement 29 January 2014).

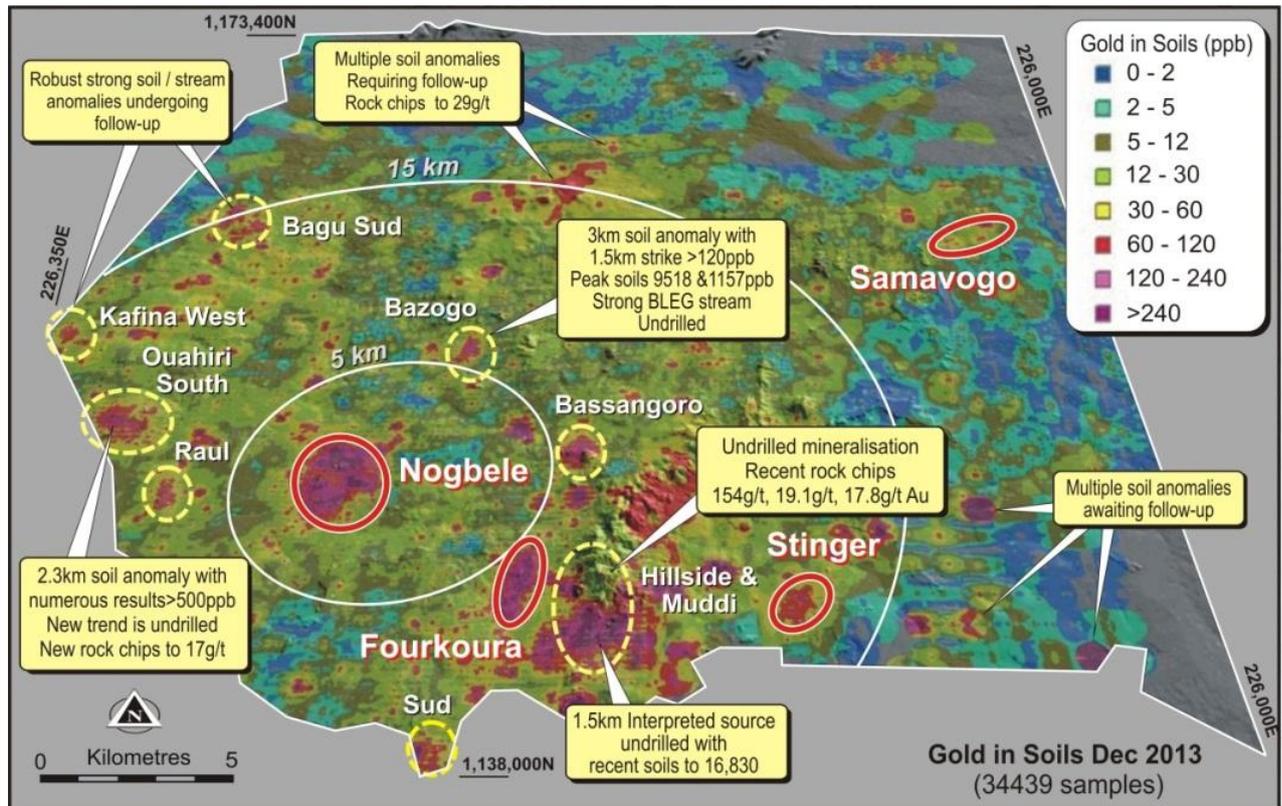
The auger sampling will be undertaken at the Bazogo, Muddi, Ouahiri South, Kafina West, Sud, Bassongoro and Raul Targets, where numerous +200 ppb gold-in-soil results, to a peak of 16,830 ppb, have been received (Figure 3). Recent broad spaced surface pitting down to weathered rock has confirmed the presence of mineralised bedrock at Kafina West and Ouahiri South.

The diamond drilling will initially test beneath the new Hillside Prospect where high grade rock chips have been returned including 154g/t, 19.1g/t and 11.9g/t gold, as well as other priority zones within the newly identified prospects.

The overall aim is to identify and define new high grade oxide ounces in close proximity to the proposed Nogbele processing plant. Several of the targets are located within the Mining Licence Application area.

Initial drill results are pending and are anticipated to be released in the next quarter.

Figure 3: Soil Geochemical Targets at the Banfora Gold Project



## Nine High Priority Gold Targets

1. **Bazogo Prospect** is located approximately five kilometres north of the proposed Nogbele gold plant. Geologically the target is on the contact between a mafic sequence of basalts and gabbros against metasediments. The soil geochemical anomaly extends over 1500 metres within a +120 ppb gold-in-soil contour with up to **9.51g/t gold** in soils.
2. **Ouahiri South Prospect** is located approximately nine kilometres west of the proposed Nogbele gold plant. The prospect has geological similarities to the Nogbele gold deposit with a large diorite body dipping underneath basalts and dolerites with associated hematite and iron carbonate alteration. The anomaly covers 2400 metres x 1400 metres. Within the anomaly there are numerous +400 ppb gold-in-soil results and several >1.0 g/t gold including up to **2.81 g/t gold** in soils and recent rock chip results to **17.8 g/t gold**.
3. **Kafina West Prospect** is located approximately 13 kilometres west of the proposed Nogbele gold plant. The target lacks outcrop exposures due to a thin layer of transported cover. Nevertheless the soils are highly anomalous in this regolith terrain environment with multiple values +200 ppb gold extending over 800m strike. The anomaly occurs in similar regolith terrain as the Stinger deposit, but at Kafina West the results are almost twice as strong.
4. **Raul Prospect** is located approximately seven kilometres north west of the proposed Nogbele gold plant. The target is also located close to cross cutting structures in the same diorite unit that hosts the Ouahiri South Prospect. The anomaly extends over 1000 metres with peak values of up to **2.10g/t gold** in soils. A single line of historical shallow auger drill holes terminated within the new anomaly returning a peak assay of **2.50g/t gold**. No other drilling has taken place within the newly defined prospect which remains open.
5. **Hillside Prospect** is located approximately seven kilometres south east of the proposed Nogbele gold plant. The target is located close to the Fourkoura gold deposit in an area of recent artisanal workings. The geology is well exposed with a broad zone of sheared vesicular basalt containing abundant sulphides. All recently analysed soil, rock and drainage geochemistry associated with the area is highly anomalous. High grade rock chips including **154.0 g/t**, **19.14 g/t** and **12.44 g/t** have been returned. This is a high priority drill target. (Figure 5)

6. **Sud Prospect** is located approximately 10 kilometres south of the proposed Nogbele gold plant. The target occurs on the same structure that hosts the Fourkoura deposit. Geophysical VTEM imagery indicates the anomaly is favourably located adjacent to an intrusion, similar to the Fourkoura deposit. Recent soil sampling, following up on an anomalous BLEG stream result returned multiple soil values greater than 600 ppb gold.
7. **Muddi Prospect** is located approximately eight kilometres south east of the proposed Nogbele gold plant. The target is ideally located adjacent to the proposed haul road between the Stinger and Fourkoura gold deposits within the proposed Mining Lease. The target is defined by soil geochemistry over 1200 metres with a peak gold-in-soil anomaly of 16,830ppb (**16.83g/t**) gold. (Figure 5)
8. **Bassangoro South Prospect** is located approximately five kilometres east of the proposed Nogbele gold plant. A first pass shallow drill programme was undertaken on the initial target in 2012 with little success. However follow up work identified an extremely anomalous BLEG stream result draining the area and provided impetus to relook at the prospect again, especially towards the east of previous drilling. Reviewing the recent BLEG result in regolith terrain and geological context identified the need to complete additional soil geochemical sampling. After the infill soil sampling over the past 6 months a new coherent undrilled gold-in-soil anomaly has emerged, with a peak value of 2481 ppb (**2.48g/t**) gold within a strong coherent anomaly.
9. **Bagu Sud Prospect** is located approximately 13 kilometres north west of the proposed Nogbele gold plant. The target is within a very large and coherent anomalous gold-in-BLEG stream anomaly on the western side of the property. The geology includes sheared contacts between carbonaceous metasediments and a large silicified diorite dyke. In recent months 800m x 100m spaced soils have been selectively in-filled and closed down to better define the anomaly with results of +1 g/t gold with a peak of **4.70g/t gold in soils**.

Figure 4: Bazogo Prospect, Banfora Gold Project

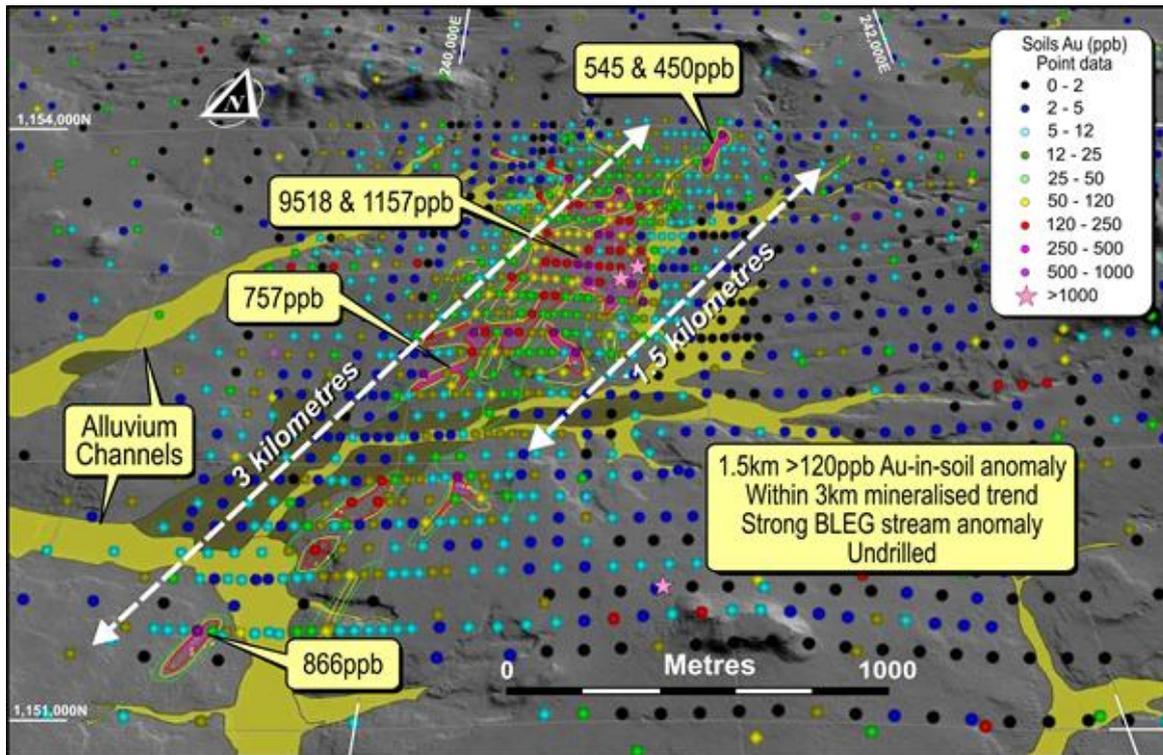
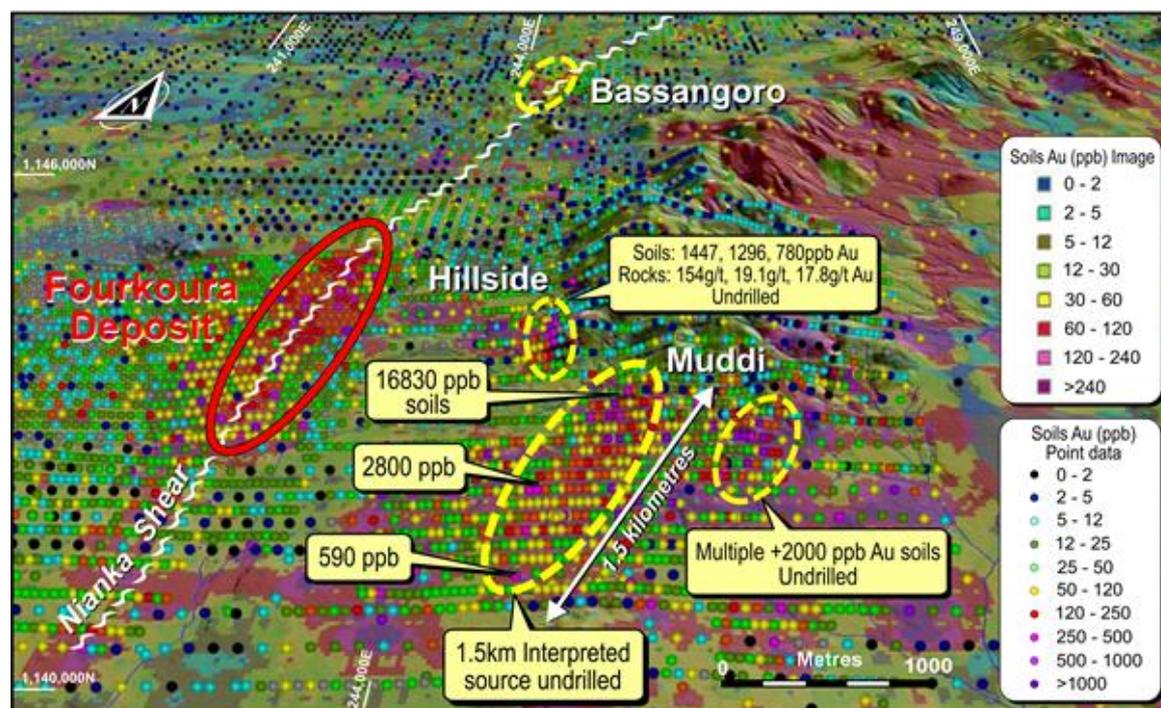


Figure 5: Hillside and Muddi Prospects – Banfora Gold Project



## Burkina Faso Exploration Pipeline | Houndé Belt & Regional Projects<sup>6</sup>

### Golden Hill, Gourma and Tenkodogo Joint Venture (Earning up to 80%)

#### Highlights

- Three project areas covering 1750 km<sup>2</sup> (Golden Hill, Gourma & Tenkodogo Projects).
- Significant exposure to highly prospective ground on the prolific Houndé Belt, Burkina Faso.
- Gryphon has the ability to earn a majority interest in each by meeting two years of minimum expenditure commitments.
- Complements Gryphon's future growth and development pipeline in Burkina Faso.
- In line with Gryphon's low cost exploration strategy.

In March 2014, Gryphon and Boss Resources (ASX: BOE) signed a binding heads of agreement to establish a joint venture over the Golden Hill, Gourma and Tenkodogo gold projects located in Burkina Faso, totalling over 1,750 km<sup>2</sup>.

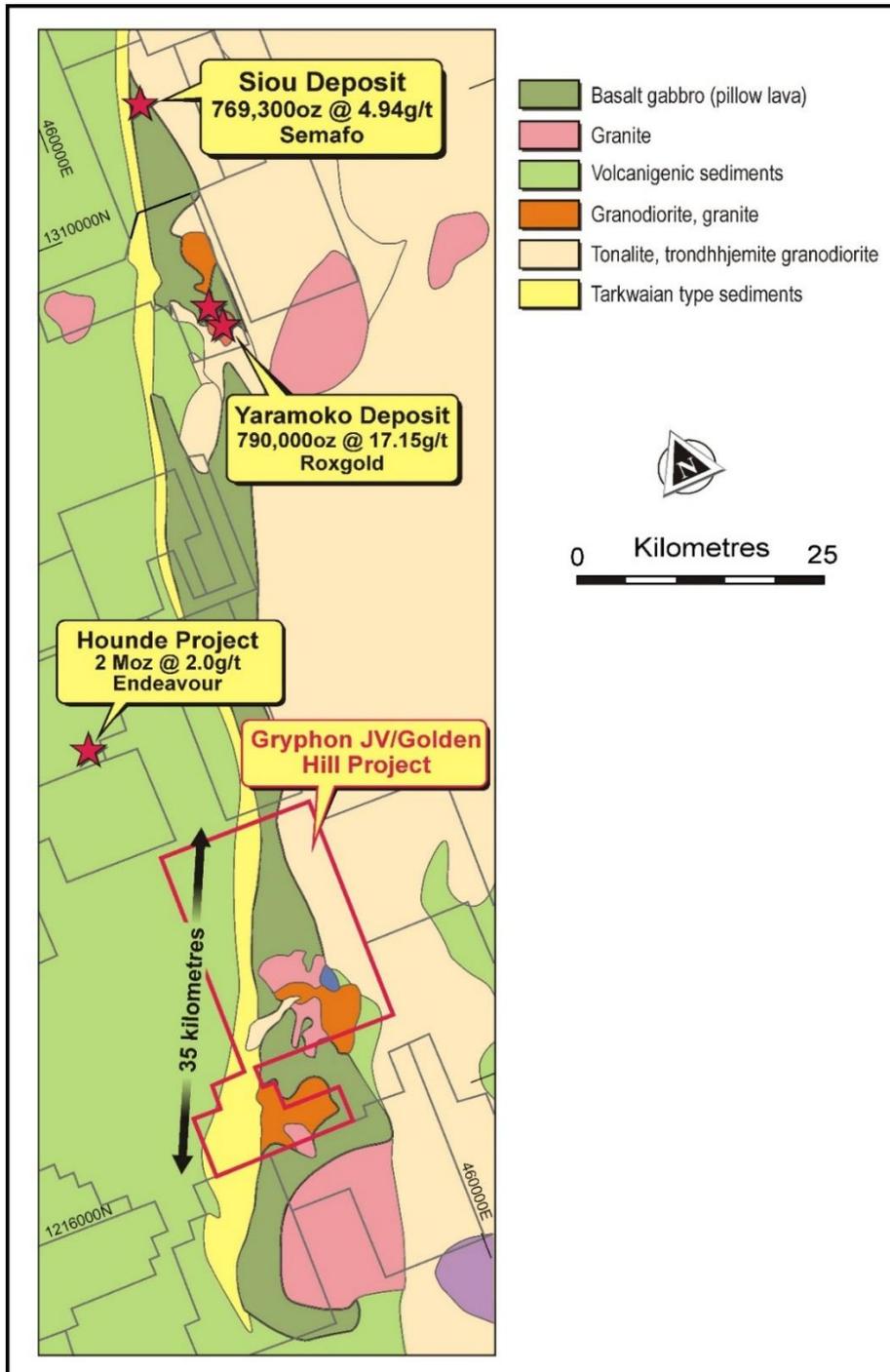
Gryphon intends to apply proven low cost exploration techniques that have been successful at the Banfora Gold Project and elsewhere in West Africa to build on the previous work undertaken at the Projects, to identify and prioritise targets ready for drill testing.

This strategy is expected to ultimately fast track exploration on the properties as it will direct drilling to those areas most likely to deliver a significant discovery.

#### Golden Hill Project

The Golden Hill project is the most advanced of all the projects in the JV agreement area and is considered particularly prospective as it is located within the highly mineralised Houndé Greenstone Belt. This belt hosts the majority of the high grade discovered gold ounces in Burkina Faso, including Semafo's (TSX, OMF: SMF) recently discovered Siou Deposit (reserves of 769k oz @ 4.94 g/t gold) plus the high grade Yaramoko deposit owned by Roxgold (TSX.V: ROG) (790koz @ 17.15 g/t Gold). The belt also hosts Semafo's Mana Mine (6 Moz) and Endeavour Mining's (TSX: EDV, ASX: EVR) 2Moz 2.0g/t deposit (Figures 6 and 7). The Golden Hill project straddles the same structure and stratigraphy that host these high grade deposits.

Figure 6: Golden Hill Project Location



A number of useful baseline datasets have been collected over the property by Boss Resources and previous explorers, including Orezone Gold Corporation (TSX: ORE), who identified and undertook the initial drill campaigns on some, but not all, of the prospects.

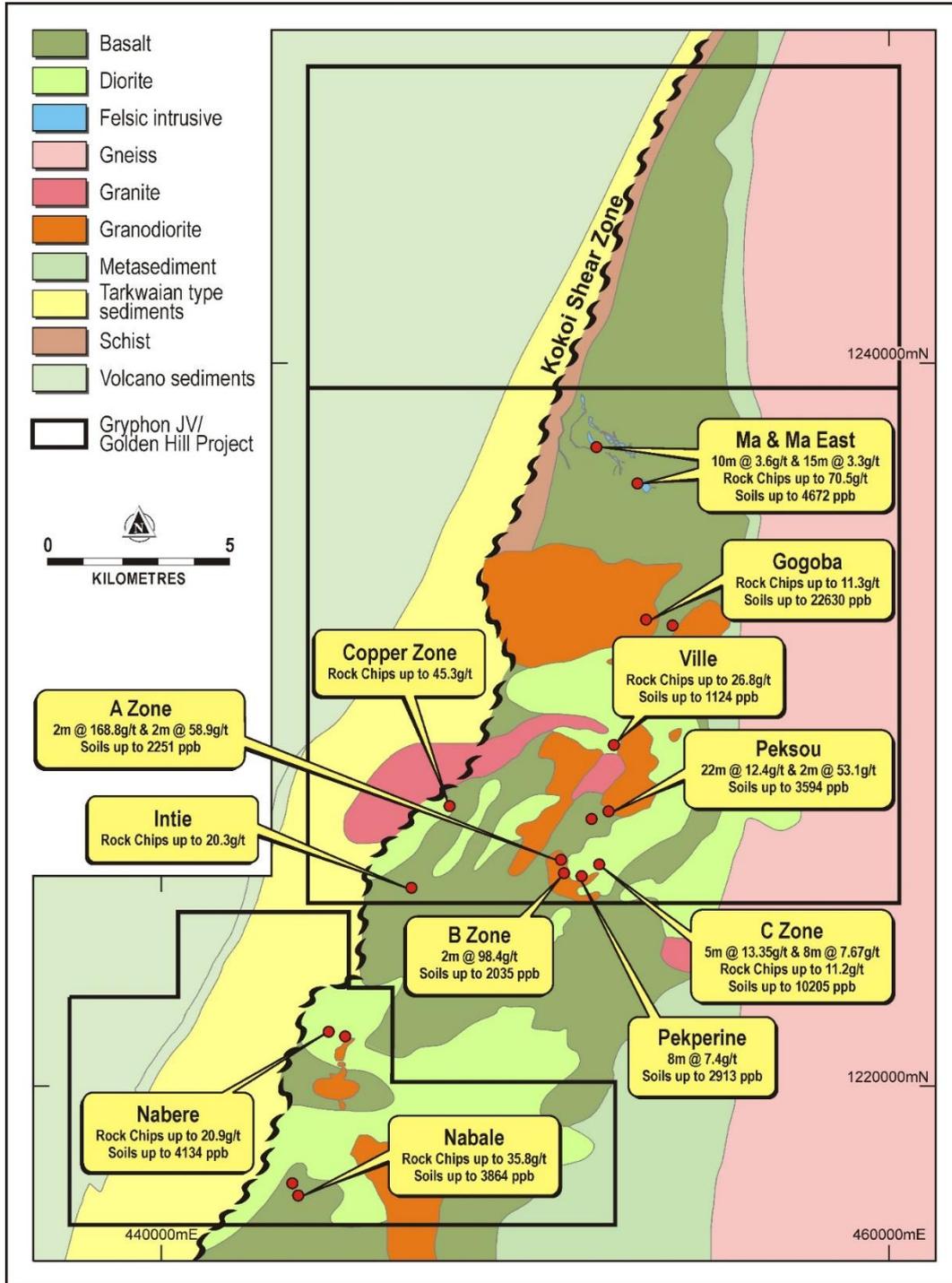
# Review of the Quarter ended 31 March 2014

Table 4: Selection of significant historic drill intercepts at the Golden Hill Project

Prospect	Hole	Northing	Easting	From (m)	To (m)	Interval (m)	Au g/t
<b>A Zone</b>	RC97-075	451119	1226464	22	24	<b>2</b>	<b>168.80</b>
	RC97-082	451088	1226415	2	4	<b>2</b>	<b>58.90</b>
	RC97-080	451036	1226441	4	32	<b>28</b>	<b>3.81</b>
	RC98-143	451001	1226290	26	44	<b>18</b>	<b>3.85</b>
<b>B Zone</b>	RC98-148	451156	1226055	4	6	<b>2</b>	<b>98.40</b>
<b>C Zone</b>	CZRC002	451764	1227376	20	25	<b>5</b>	<b>13.35</b>
	CZRC014	451769	1227319	63	71	<b>8</b>	<b>7.67</b>
	RC99-163	451941	1227328	6	20	<b>14</b>	<b>4.09</b>
	CZRC006	451778	1227345	34	47	<b>13</b>	<b>4.11</b>
	CZRC019	452032	1227341	6	28	<b>22</b>	<b>2.36</b>
	CZRC004	451786	1227365	19	30	<b>11</b>	<b>3.77</b>
<b>Pekperine</b>	RC99-157	452114	1226137	18	26	<b>8</b>	<b>7.39</b>
<b>Peksou</b>	IRC01-19	452396	1227600	22	44	<b>22</b>	<b>12.35</b>
	IRC01-01	452362	1227596	28	30	<b>2</b>	<b>53.14</b>
	TKC074	452283	1227629	46	56	<b>10</b>	<b>4.56</b>
	IRC01-03	452275	1227643	35.5	48	<b>12.5</b>	<b>3.16</b>
	TKC077	452417	1227588	28	36	<b>8</b>	<b>4.75</b>
	IRC00-33	452593	1228024	10	12	<b>2</b>	<b>15.20</b>
<b>Ma &amp; Ma East</b>	RCS99-07	452641	1237277	0	24	<b>24</b>	<b>2.12</b>
	GOC023	453453	1236201	4	19	<b>15</b>	<b>3.31</b>
	GOC037	452346	1237423	9	19	<b>10</b>	<b>3.59</b>

*Drill results are interpreted to approximate true widths*

Figure 7: Golden Hill Project



## **Gourma Gold Project**

The Gourma Project is located within the Fada N'Gourma Greenstone Belt, 250km east of Ouagadougou and only 80km SSW of Niger's largest gold deposit, the 50,000 ounce per annum Samira Hill gold mine (1.9 million ounce project). The Project consists of four contiguous permits (Diabatou, Tyara, Foutouri and Boutouanou) that cover a total area of 850km<sup>2</sup> and is easily accessible by existing roads.

The Gourma Project covers a highly under-explored sequence of Birimian greenstones that host abundant artisanal workings within strike extensive regional shear zones.

There are several significant gold targets that will be geologically reviewed by the Company. The Tambiga Hill prospect contains over 1,000 artisanal pits and shafts up to 60m deep that cover an area 500m x 250m. At the Diabatou prospect active hard rock and colluvial workings cover an area of 1,600m x 400m while at the nearby Gariaga Prospect artisanal workings cover an area of 1,300m x 800m.

## **Tenkodogo Gold Project**

The Tenkodogo Project is located on the Gourma Shear Zone, 125km southeast of Ouagadougou within the SW strike extension of the Fada N'Gourma Greenstone Belt of Burkina Faso. The project consists of two contiguous exploration permits (Bassare and Kassougou) that cover a total area of 410km<sup>2</sup>. Access is all year round directly off the Ouagadougou-Tenkodogo highway. The project contains 24 strike kilometres of Birimian Greenstones and is only 30km east of the 5.9Moz Kiaka deposit (B2 Gold & Volta Resources). Very little previous exploration work has been conducted on the project.

The material terms of the Joint Venture (JV) are as follows:

- Gryphon to sole manage the JV and fund all exploration on the projects up to the completion of a Definitive Feasibility Study (DFS) and decision to mine.
- Boss to have a free carried interest to completion of a DFS and decision to mine.
- Gryphon shall meet two years minimum expenditure commitments on the permits to earn 51% in the JV.
- On delivery of the DFS Gryphon's interest in the JV will increase to 70%.
- Gryphon has the right to acquire an additional 10% interest in the JV for A\$2.5million.
- Upon completion of the DFS but prior to a decision to mine, Boss may elect to convert the remainder of their interest to a 1.5% NSR otherwise Boss shall be free carried to a decision to mine and will then be required to contribute on a pro rata basis.
- Subject to standard due diligence, including legal due diligence on title and tenement status.
- As part of the transaction Gryphon shall also acquire all the camp property, plant and equipment supporting the projects for a total amount of A\$260,000.

## **Regional Exploration| Other Projects, West Africa**

### **Mauritania, Tijirit Gold Project (100%)<sup>7</sup>**

Activity at the Tijirit Gold Project currently comprises prospect mapping and surface sampling building the team's geological understanding on the geological and structural controls to mineralisation. This work will assist in identifying where future drilling should take place as the Company looks to expand upon the encouraging results to date which include 67m @ 1.16 g/t gold from 66m and rock chip results to 38.9 g/t Au.

Gryphon's exploration work has identified multiple high priority gold targets with similar host lithology, alteration and structural settings to the nearby world class 15 million oz Tasiast Gold Mine operated by Kinross Gold Corporation.

Mauritania is a major province for gold, copper and iron ore and has significant operating mines including the world-class Tasiast gold mine. The Tijirit Gold Project is located in North-west Mauritania and covers approximately 1,400 square kilometres of contiguous exploration licenses.

# Review of the Quarter ended 31 March 2014

## **Mauritania, Akjoujt Copper/Gold Project (100%)<sup>6</sup>**

Reconnaissance and prospect scale mapping continued following up on some very encouraging rock chip results received early in the quarter, to a peak of **20.9% copper, 6.1g/t gold and 16.2 g/t silver**. Additional mapping has taken place expanding out from where the mineralised rocks were collected, leading to the identification of several new zones with chloritised schist with iron carbonate alteration within distinct shear zones.

The Akjoujt Copper/Gold Project is located 30 kilometres to the west of the Guelb Moghrein copper/gold mine operated by First Quantum Minerals Ltd. The project area covers approximately 750 square kilometres of contiguous exploration license area.

## **Mauritania, Saboussiri Copper/Gold Project (60%)**

Results from a detailed BLEG stream survey were received leading to the identification of two areas of interest, both of which had no prior exploration work. A broad zone of copper anomalism has been defined by multiple BLEG stream samples extending over an area of approximately 70 square kilometres. The highest gold and silver BLEG stream results came from an area not explored previously. The BLEG survey clearly defined the Toumbou gold prospect and Diaguili copper prospects confirming the robust nature of the technique used. Field work has commenced following up on these results through geological mapping and geochemical prospecting.

The Saboussiri Copper/Gold Project is located in Southern Mauritania and covers approximately 1,000 square kilometres of continuous exploration licenses.

## **Liberia (Tawana Resources NL | Gryphon Minerals owns approximately 9%)**

Tawana Resources NL (ASX: TAW) is currently exploring the Mofe Creek Iron Ore Project located 10 kilometres from the historic Bomi Hills Mine (+50Mt high grade DSO magnetite), only 25 kilometres from the coast and adjacent to a heavy haul railway and port. Tawana is currently undertaking a drilling program to define a maiden resource and advancing studies on an early start up operation.

In April 2014 Tawana completed a placement raising \$5 million dollars to advance the design, engineering, environmental and logistics studies to support the early start-up option and longer term development operational scenarios.

## **Corporate**

### **Cash and Working Capital**

At the end of the quarter Gryphon held approximately \$39 million in cash, plus approximately \$4 million in listed investments.

In March 2014, the Company sold its holding in Renaissance Minerals Limited (ASX; RNS).

Gryphon has achieved a significant reduction in overheads across the entire business and continues its commitment to stringent cost reviews and ongoing cost management processes. As a result of the cost reduction program the Company continues to realise significant savings.

The Company remains focused on a '**de-risk, get ready & add value**' strategy, while maintaining its fundamental principle of preserving its strong cash position in difficult market conditions.

### **Financing**

Given the positive results from the optimisation studies of the 2mtpa HL operation, the Company has commenced a formal funding process with a number of leading Australian and international banks and financiers.

The Company has received a number of indicative proposals from leading international banks and financiers for the debt financing for the development of the Banfora Gold Project. Gryphon is reviewing these terms with the intention of mandating financiers to act as lead arrangers in the coming weeks.

### **Company Secretary**

Candice Donnelly and Carl Travaglini were appointed Joint Company Secretary in February 2014.

For further information in relation to the group's activities please visit our website [www.gryphonminerals.com.au](http://www.gryphonminerals.com.au).

## Notes

<sup>1</sup> Refer to ASX Announcement dated 4 February 2014 (for Exploration Results Gryphon is not aware of any new information or data that materially affects the information included in the said announcement.). The optimisation studies are at Scoping Study level therefore based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

In discussing reasonable prospects for eventual economic extraction in Clause 20, the Code requires an assessment (albeit preliminary) in respect of all matters likely to influence the prospect of economic extraction including the approximate mining parameters by the Competent Person. While a Scoping Study may provide the basis for that assessment, the Code does not require a Scoping Study to have been completed to report a Mineral Resource.

Scoping Studies are commonly the first economic evaluation of a project undertaken and may be based on a combination of directly gathered project data together with assumptions borrowed from similar deposits or operations to the case envisaged. They are also commonly used internally by companies for comparative and planning purposes. Reporting the general results of a Scoping Study needs to be undertaken with care to ensure there is no implication that Ore Reserves have been established or that economic development is assured. In this regard it may be appropriate to indicate the Mineral Resource inputs to the Scoping Study and the processes applied, but it is not appropriate to report the diluted tonnes and grade as if they were Ore Reserves.

While initial mining and processing cases may have been developed during a Scoping Study, it must not be used to allow an Ore Reserve to be developed.

<sup>2</sup> All material assumptions underpinning the production targets detailed in this report (including all financial information derived from those production targets) are detailed in the ASX announcement dated 4 February 2014 and Gryphon confirms those assumptions continue to apply and have not materially changed.

<sup>3</sup> Refer to how the mineral resource estimates were derived in Appendix 3 of the Company's ASX announcement dated 4 February 2014. Gryphon is not aware of any new information or data that materially affects the information included in said announcement. The mineral resources estimates in relation to Stinger and Samavogo deposits have not been updated to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported in the ASX announcement dated 31 January 2013.

<sup>4</sup> All material assumptions and technical parameters underpinning the mineral resource estimates in the ASX announcement dated 4 February 2014 continue to apply and have not materially changed since it was last reported.

<sup>5</sup> For full details of these exploration results refer to ASX announcement dated 29 January 2014. Gryphon is not aware of any new information or data that materially affects the information included in the said announcement.

<sup>6</sup> For full details of these exploration results refer to ASX announcement dated 5 March 2014. Gryphon is not aware of any new information or data that materially affects the information included in the said announcement.

<sup>7</sup> For full details of these exploration results refer to ASX announcement dated 5 August 2013. Gryphon is not aware of any new information or data that materially affects the information included in the said announcement.

<sup>8</sup> For full details of these exploration results refer to ASX announcement dated 27 May 2013. Gryphon is not aware of any new information or data that materially affects the information included in the said announcement.

## Competent Persons Statement

The information in this report that relates to the Exploration Results and Exploration Targets at the Banfora Gold Project, Burkina Faso and the Tijirit Gold Project, Mauritania is based on and fairly represents information which has been compiled by Mr Sam Brooks who is a member of the Australian Institute of Geoscientists. Mr Brooks has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person, as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Brooks is a full time employee of Gryphon Minerals and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears. This information was prepared and first disclosed under JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

The information in this report that relates to the Mineral Resources at the Stinger and Samavogo Deposits, is based on information compiled by Mr Dmitry Pertel who is a member of the Australian Institute of Geoscientists. Mr Pertel has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Pertel is a full time employee of CSA Global Pty Ltd and has consented to the inclusion of the matters in this report based on his information in the form and context in which it appears. This information was prepared and first disclosed under JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

## Forward-Looking Statements

This announcement may contain "forward-looking statements". Forward-looking statements are based on assumptions regarding Gryphon's expected activities, events and/or strategic plans. Statements which are not based on historic or current facts may be forward-looking statements.

Forward-looking statements are based on current views, expectations and beliefs as at the dates they are expressed and which are subject to various risks and uncertainties. Actual results or performance could be materially different from those expressed in, or implied by, these forward-looking statements. The forward-looking statements contained in this presentation are not guarantees or assurances of future performance and involve known and unknown risks, uncertainties and other factors, some of which are beyond the control of Gryphon, which may cause the actual future activities, events or strategic plans to deliver results materially different from those expressed or implied by the forward-looking statements.

Gryphon disclaims any responsibility for the accuracy or completeness of any forward-looking statement. Gryphon disclaims any responsibility to update or revise any forward-looking statement to reflect any change in Gryphon's financial condition, status or affairs or any change in the events, conditions or circumstances on which a statement is based, except as required by law. Investors must not place undue reliance on these forward-looking statements.

## Appendix 1 | Gryphon Minerals Tenements

### Mining Tenements held

Project	Tenement	Location
<b>Banfora</b>	Nogbele	Burkina Faso
	Nianka	Burkina Faso
	Dierisso	Burkina Faso
	Nianka Nord	Burkina Faso
	Zeguedougou	Burkina Faso
	Nogbele Sud	Burkina Faso
<b>Gourma Project</b>	Boutouanou	Burkina Faso
	Diabatou	Burkina Faso
	Tyara	Burkina Faso
	Foutouri	Burkina Faso
<b>Golden Hill Project</b>	Baniri	Burkina Faso
	Intiedougou	Burkina Faso
	Mougue	Burkina Faso
<b>Tenkodogo Project</b>	Bassare	Burkina Faso
	Kassougou	Burkina Faso
<b>Saboussiri</b>	EL236	Mauritania
	EL879	Mauritania
	EL1074	Mauritania
<b>Tijirit</b>	EL447	Mauritania
	EL1117	Mauritania
<b>Akjoujt</b>	EL448	Mauritania

### Mining Tenements acquired\*\*

<b>Gourma Project</b>	Boutouanou	Burkina Faso
	Diabatou	Burkina Faso
	Tyara	Burkina Faso
	Foutouri	Burkina Faso
<b>Golden Hill Project</b>	Baniri	Burkina Faso
	Intiedougou	Burkina Faso
	Mougue	Burkina Faso
<b>Tenkodogo Project</b>	Bassare	Burkina Faso
	Kassougou	Burkina Faso

\*\* Contractual interest only (opportunity to initially earn 51% interest, increasing up to 80%)

# Review of the Quarter ended 31 March 2014

## **Mining Tenements disposed**

Nil

## **Beneficial percentage interests held in farm-in or farm-out agreements**

Nil

## **Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed**

Nil



**GRYPHON**  
MINERALS LIMITED

**Non-Executive Chairman**  
Mel Ashton

**Managing Director**  
Stephen Parsons

**Non-Executive Director**  
Didier Murcia

**Company Secretary**  
Candice Donnelly  
Carl Travaglini

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SUBIACO WA 6008

**Bankers**  
National Australia Bank  
50 St Georges Terrace  
PERTH WA 6000

St George Bank  
167 St Georges Terrace  
PERTH WA 6000

**Solicitors**  
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PERTH WA 6000

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**Code: GRY**

**Website Address**  
[www.gryphonminerals.com.au](http://www.gryphonminerals.com.au)

