ASX Announcement
29 January, 2014

154 g/t Gold in Rock Chips From New High Priority Areas Banfora Gold Project, Burkina Faso

Highlights

- 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.
- Finalisation of engineering optimization studies and mine permitting is expected in the coming weeks.

Gryphon Minerals Limited **(ASX:GRY)** is pleased to announce the delineation of nine new robust and significant gold-in-soil anomalies from the latest results of soil geochemistry, rock chipping and mapping from the southern portion of the Banfora Gold Project.

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.

Gryphon Minerals Managing Director, Steve Parsons, commented *"These results continue to demonstrate the considerable upside for further gold discovery which still remains at the Banfora Gold Project"*.

New High Priority District Targets

During 2013 Gryphon Minerals in line with its low cost exploration approach 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.

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Figure One | Gryphon soil coverage as at December 2013

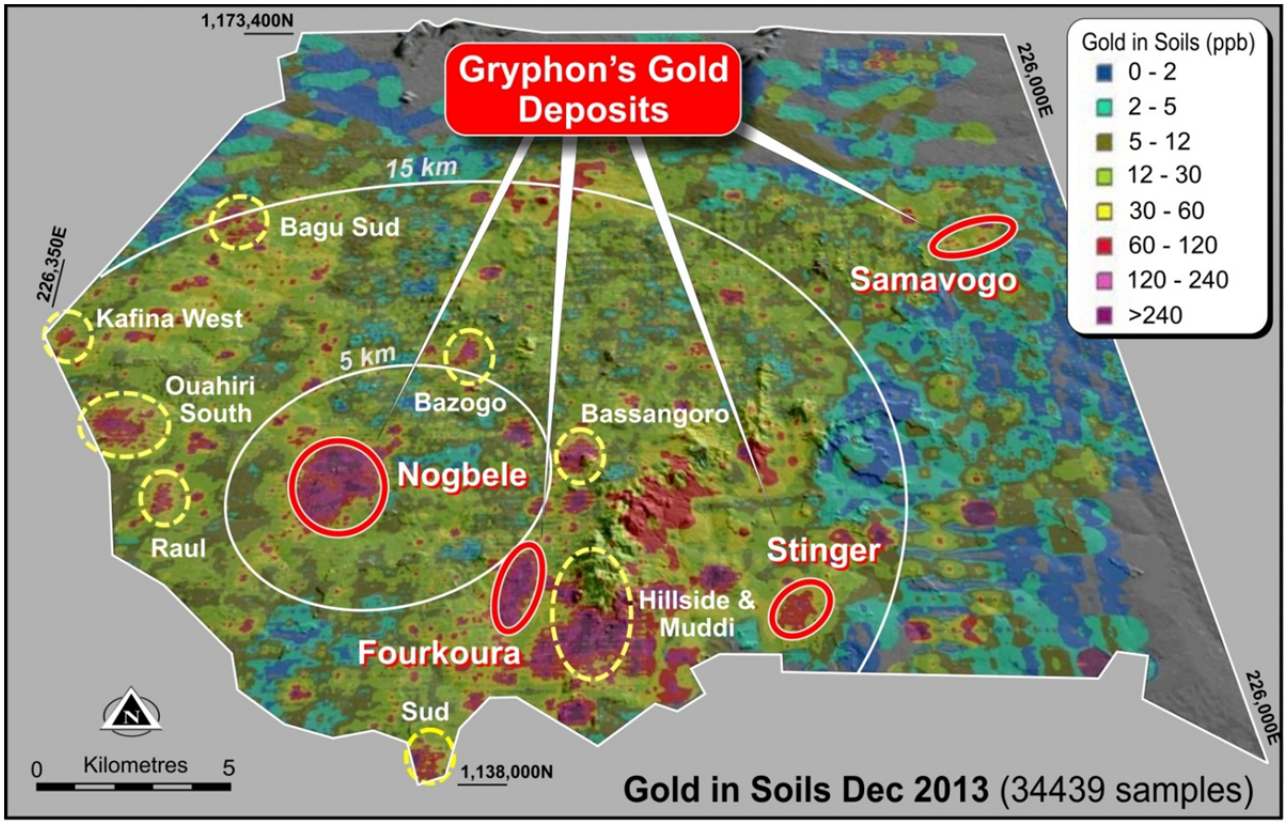
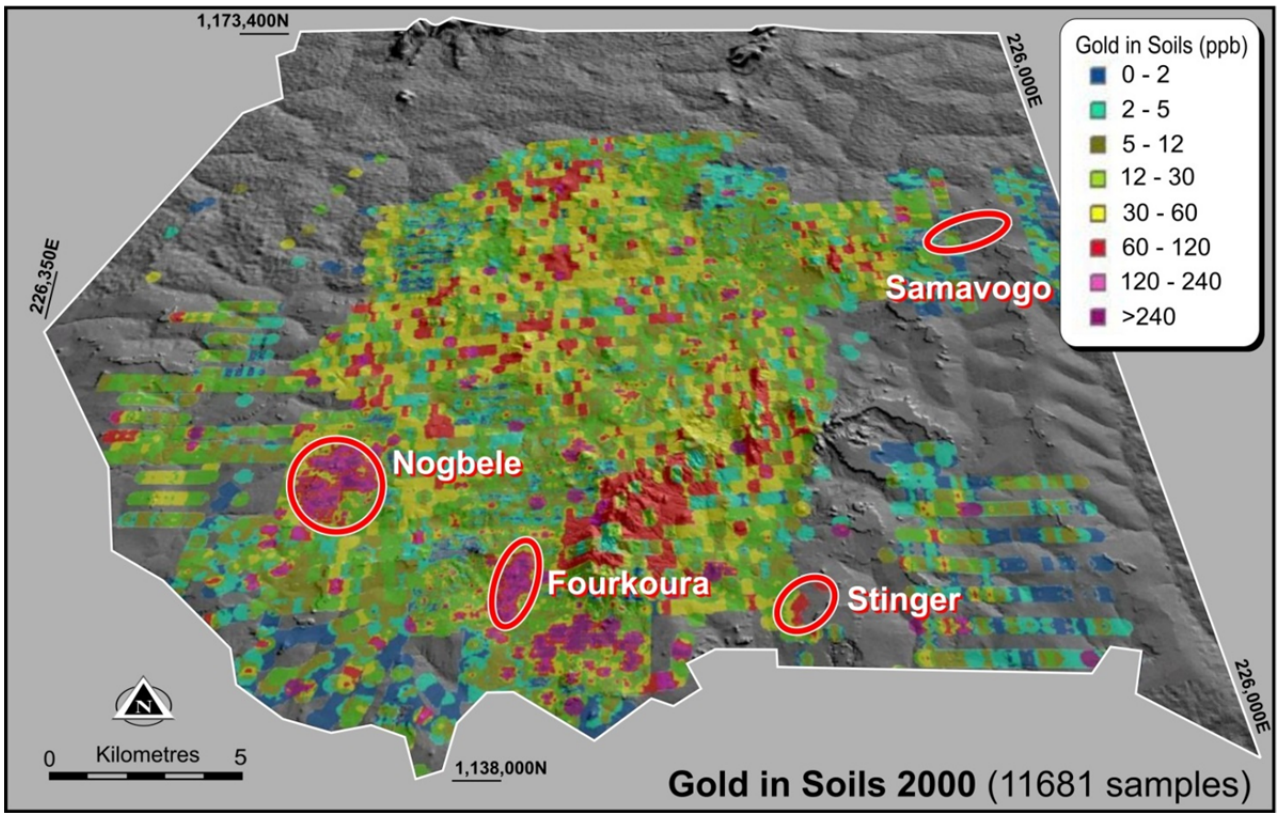


Figure Two | Soil coverage prior to Gryphon involvement



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. (Figure Three)

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 Four)

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 Four)

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 Three | Bazogo Prospect, Banfora Gold Project

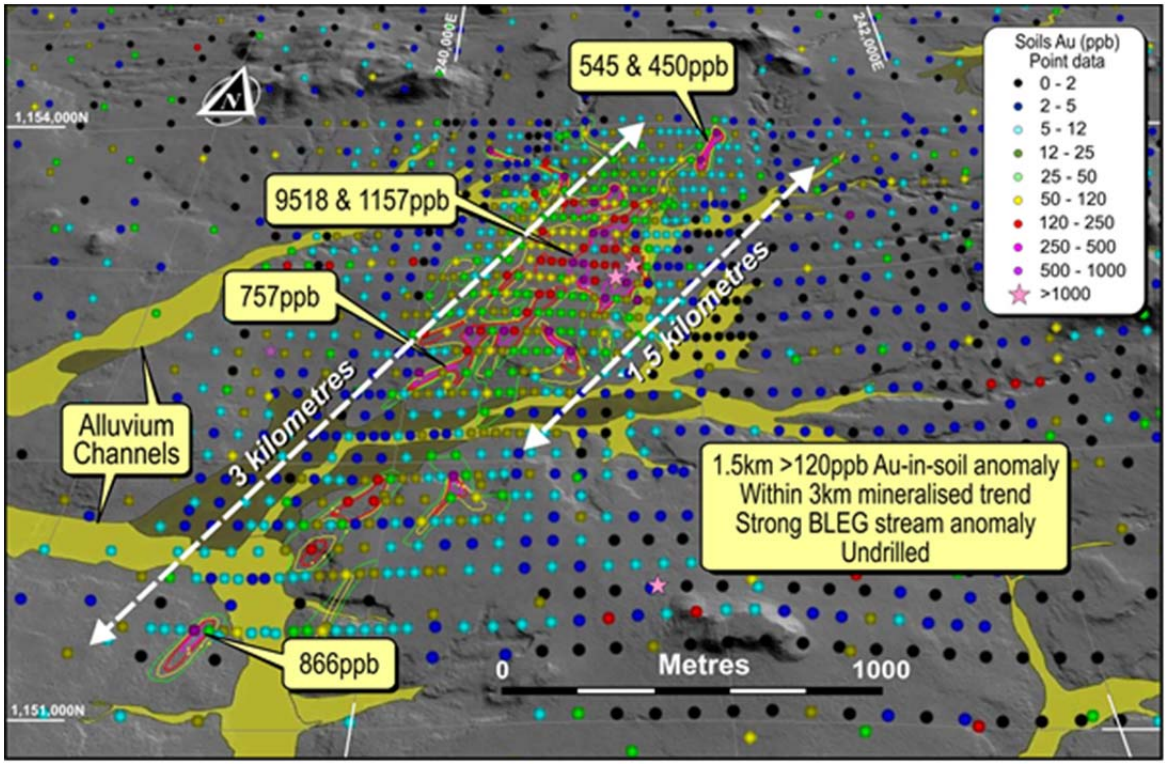
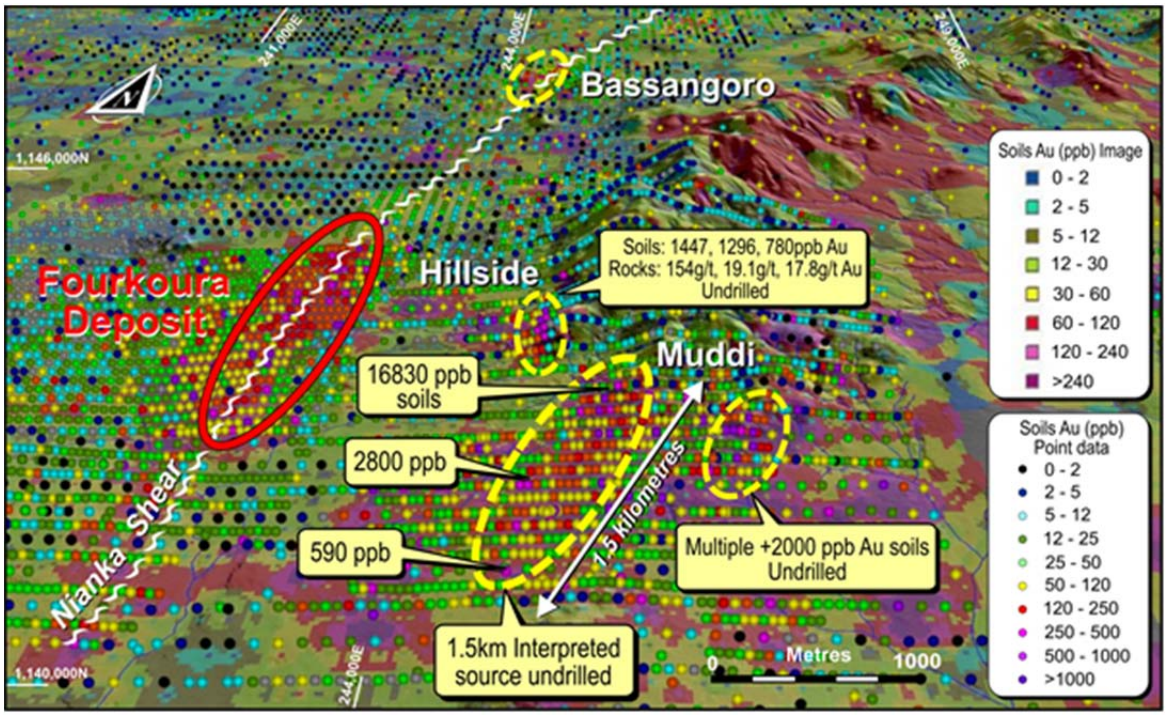


Figure Four | Hillside and Muddi Prospects – Banfora Gold Project



Drilling is expected to commence in the coming weeks on the first drill ready targets. There are also further areas of significant interest the team will be applying the same rigour and approach to which they consider have excellent potential to develop into robust prospects and eventually compelling drill targets at the Banfora Gold Project.

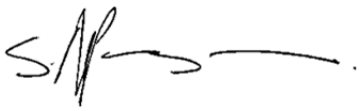
Background | Banfora Gold Project - Burkina Faso, West Africa

The Banfora Gold Project at 4.9 million ounces (resource estimate) of gold, is one of the largest undeveloped gold projects in West Africa and certainly growing in scale on the world stage. The project is located in the south-west of Burkina Faso, West Africa, in a major gold producing district host to such world class gold deposits as Tongon (4.2Moz) Syama (6.5Moz) and Morila (6.5Moz) (Figure Five). The project is owned 100% by Gryphon and contains continuous exploration licenses covering approximately 1,200 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. Grid power is located approximately 30 kilometres from the eastern boundary of the project

Detailed information on all aspects of Gryphons' projects can be found on the Company's comprehensive website **www.gryphonminerals.com.au**.

For further information in relation to the group's activities please visit our website www.gryphonminerals.com.au.

Yours faithfully



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Competent Persons Statement
The information in this report that relates to Exploration Results is based on information compiled by Mr Sam Brooks who is a member of the Australian Institute of Geoscientists. Mr Brooks is a full time employee of Gryphon Minerals. Mr Brooks has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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 Brooks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix One

Drilling and Sampling Techniques	• BLEG streams collected from active drainage channels and over bank deposits collecting ~600g of sediment. • Soil samples were collected from 5-30cm depth, with coarse fragments removed but no further sieving • Rock chips have been collected from both mullock and out crop. 3-5 kg of material was sampled.
Drill Sample Recovery	• Not applicable to surface geochemistry
Logging	• All soil and stream sediment samples logged at the collection site recording pertinent information such as soil texture, rock fragments and regolith terrain parameters. .
Sub-sampling techniques and sample preparation	• Assaying and sample preparation conducted at BIGS Laboratory, Ouagadougou for rock and soil samples. Stream sediment samples analysed by UltraTrace laboratory in Perth. • Rock chip samples of between 2-4 kg samples as received from Gryphon Minerals are dried and crushed to 6mm before being quartered using a Rocklabs splitter. • 1 quarter is then pulverised by ring mill to 70-75 microns and 200g recovered as the master pulp for 50g fire assay. • Stream sediment samples were pulverised to <75 microns, with 500g analysed by CN Leach for Au and Ag with 40g analysed by Aqua Regia digest for a suite of commodity and path finder elements.
Quality of Assay and laboratory tests	• All drill assaying conducted by fire assay with an AAS finish on a 50g charge. • Soils analysed by CN leach of 500g sample • Blind standards, blanks and field duplicates inserted at a rate of approximately 6% in the field and results analysed in the Gryphon Minerals database system. Acceptable accuracy and precision have been established for all samples reported.
Verification of sampling and assaying	• All sampling data is recorded in hardcopy format before data entry on site. Data is integrated into the Gryphon Minerals Database where it is validated to confirm referential integrity.
Location of Data points	• Soil, rock and stream samples were located in the field using conventional (non-differential) hand held GPS. All data is collected and presented in WGS 84 Zone 30N
Data Spacing and Distribution	• Variable grid densities used for soil surveys. BLEG streams had a target of 1 sample per 10km sq
Orientation of data in relation to geological structure	• Samples collected on regular grid
Sample Security	• All samples are stored in a secure and gated compound at Gryphon Minerals Camp facility until handover to the independent laboratory for transport to Ougadougou
Audits or Reviews	• Field duplicates samples are reviewed periodically by Gryphon Minerals technical staff and confirm the validity of the current sampling practice.
Mineral tenement and land tenure status	• All work has been conducted on the the Banfora Gold Project, which comprises 6 exploration tenements, namely Nogbele (Arrete No. 2004 00-085/MCE/SG/DGMC), Nianka (Arrete No. 2004-00-086/MCE/SG/MGC), Dierisso (Arrete No. 2005 05-096/MCE/SG/DGMGC), Nianka Nord (Arrete No. 2005/5-094/MCE/SG/DGMGC), Zeguedougou (Arrete No. 2005/ 05-095/MCE/SG/DGMGC), Nogbele Sud (Arrete No. 2012-000322/MCE/SG/DGMGC). • Gryphon Minerals is 100% holder of the Banfora Gold Project.
Exploration done by other parties	• No other parties have been involved in the current release
Geology	• The Banfora Gold Project covers greenstone belts and intra belt granitoids of the Proterozoic Birimian Shield. The oldest rocks within the concession are interpreted to be tholeitic to calc-alkaline basalts, andesites and volcaniclastic sediments. Predominately mafic, volcano-sedimentary packages dominate the younger parts of the local stratigraphy. Numerous phases of plutonic activity have intruded the earlier sequences ranging from gabbroic to granitic in composition. Known mineralisation is structurally controlled and widely associated with hematite, iron carbonate, sericite, pyrite and locally albitic alteration. Both the mafic volcano-sedimentary packages and the coarse grained intrusive rocks host significant mineralisation in the project area.
Data Compositing	• Not applicable to surface geochemistry
Relationship between mineralisation widths and intercept lengths	• Not applicable to surface geochemistry
Balanced reporting	• All soil locations are presented graphically as gridded images and sample points. • Only significantly mineralised rock chips have been quoted. Rock chipping is a reconnaissance exploration technique and only mineralised results are considered material to the report as presented.
Other substantive exploration data	• Refer to previous ASX releases by Gryphon Minerals dated 13/11/2012, 2/07/2012, 16/02/2012, 31/01/2013
Further Work	• To be assessed

Figure Five | Banfora Gold Project Location – West Africa