

ASX Announcement and Media Release
Wednesday, 8 April 2009

Resource Doubles to 820,000oz Gold: Banfora Gold Project, Burkina Faso - West Africa

Highlights

- **JORC resource estimate on Nogbele & Fourkoura deposits at the Banfora Gold Project of 10.6Mt @ 2.4g/t for 820,000oz gold.**
- **Mineralization remains open at depth and along strike at both Nogbele and Fourkoura deposits.**
- **The resource is shallow with 90% above 100 meters depth.**
- **On-going 15,000 meter RC/DD drilling programme following up on high grade extensions along strike and at depth.**
- **100% increase in gold ounces & 15% increase in grade from the last resource estimate.**
- **Less than US\$10 per ounce discovery costs.**
- **Commencement of reconnaissance RAB drilling testing new high priority targets with the aim to establish a multi-million ounce gold district.**

Table 1: Summary of Banfora Gold Project Resource Estimate

Deposit	Category	Tonnage (Mt)	Grade Au (g/t)	Contained Gold (ounces)
Nogbele	Inferred	9.5Mt	2.4	720,000
Fourkoura	Inferred	1.1Mt	2.7	90,000
Total Banfora Gold Project	Inferred	10.6Mt	2.4	820,000

Note: Full details of the resource estimate are in Table 2

Gryphon Minerals Ltd (ASX: GRY) is pleased to announce a 100% increase in the gold resource estimation at the Company's flagship Banfora Gold Project in Burkina Faso - West Africa. The Banfora Gold Project is located in a major gold producing district, host to such world class gold deposits as Randgold's **Tongon** (4.2Moz) Resolute's **Syama** (5 Million oz Au mined & 6.5 Million oz Au in resources) and Anglo/Randgold's **Morila** (6.5Moz).

The Company views this resource as an **interim estimation with significant potential to define further shallow ounces** from the on-going drilling programmes. The Company is anticipating a **new resource estimate and desktop/scoping studies in the second half of 2009** at the Banfora Gold Project.

Maps are located at the end of this announcement.

Fast Facts ≈

Capital Structure	April 2009
Shares on issue	116 million
Market Cap	A\$18.5 million
Cash in bank	A\$5.2 million (Dec Qtly)

Company Directors & Management

Mel Ashton	Chairman
Steve Parsons	Managing Director
Didier Murcia	Non-Exec Director
Hamish Halliday	Consultant
Michael Fox	Expl. Mgr. Africa
Shane Hibbird	Expl. Mgr. Aust

Top Shareholders ≈

Management
Newmont Mining Corp
Genesis Fund
Macquarie Bank
Phoenix Gold Fund
Standard Bank
Top 40 ≈60%

Company Highlights

- Leverage to gold
- Aggressive exploration
- Big hitting shareholders
- Proven Management



Banfora Gold Project, West Africa

Interim Inferred Resource
10.6mt @ 2.4g/t for 820,000oz gold
Less than 100m depth & open

Recent Results include:

BNRC296: 16m @ 8.95g/t from 32m
BNDD582: 10m @ 13.0g/t from 78m
BNRC630: 12m @ 8.66g/t from 0m

Contact Details

Head Office
Freemasons Hall, 181 Roberts Road
Subiaco WA 6008
Postal Address
PO BOX 536 West Perth WA 6872
T: +61 8 9287 4333
F: +61 8 9287 4334
E: admin@gryphonminerals.com.au

Corporate Advisor

Mr Tony King
Max Capital Pty Ltd
T: +61 8 9322 7600
E: tk@maxcapital.com.au

Media Contact

Michael Mullane
Cannings Corporate Communications
T: +61 2 8284 9990
E: mmullane@cannings.net.au

The Company is immediately undertaking 15,000m RC/DD and 10,000m regional RAB drilling over the coming months which will continue to target shallow high grade gold mineralisation (≈ 100 meters vertical depth) outside of the current defined resource estimate. Further drill results will be made available at the earliest opportunity.

To date the total resource estimate is located on only two target areas, the only areas to date to have received any RC/DD drilling. The Company intends to test a further five high priority target areas within a 15 kilometre radius of the Nogbele deposit with RC/DD drilling over the coming months. Previously released reconnaissance RAB drill results from these five high priority targets have included **7m @ 3.6g/t Au** from 8m at the Ouahiri target, **8m @ 4.6g/t Au** from 16m at the Muddhi target, **1m @ 17.5g/t Au** from 1m at the Bassangoro target, **4m @ 8.2g/t Au** from the Samavogo target and **24m @ 2.7g/t Au** from 6m at the Nangolo target. The Company will also undertake a reconnaissance RAB drilling programme focussed on **new, previously untested regional targets**.

The Company believes that the drill results released to date confirm the potential for the Banfora Gold Project to host world class gold mineralization similar to other major deposits in West Africa.

Nogbele Prospect

The resource estimate within the Nogbele Prospect incorporates primarily two mineralization orientations, east-west trending zones and northwest-southeast trending zones. The east-west mineralized zones consist typically of multiple parallel and sub-parallel zones of broad hematite and / or magnetite, silica and pyritic alteration, sericitic schist's and lode quartz veins within a granodiorite intrusion.

The northwest-southeast mineralized zones are shear hosted with **little or no quartz veining** and strong to moderate hematite, carbonate, sericite and pyritic alteration. These zones are typically higher grade and have produced some of the highest gram meter intercepts to date at the Banfora Project including 10m @ 13.0g/t gold (**130 gram meters**), 24m @ 4.60g/t gold (**110 gram meters**) & 16m @ 5.60g/t gold (**90 gram meters**).

A major shear zone on the western margin of the Nogbele granodiorite continues south for **30 kilometres to Randgold's world class 4.2 Million ounce Tongan gold deposit**.

The current combined strike length of the mineralized zones is in excess of 5,800 meters and remains open both along strike and down dip and requires further step out drilling (refer to maps).

Fourkoura Prospect

The Fourkoura Prospect is **only 7 kilometres from the Nogbele Prospect** and is located on the intersection of a major shear corridor and a zoned dolerite intrusive believed similar in style to the Golden Mile dolerite in Western Australia. A large historical soil geochemical anomaly extends over 2500 meters in strike length with several peak values over 1000ppb gold that coincides with the dolerite. Gryphon Minerals Ltd has only drilled 500 metres (20%) of the soil anomaly with all drill lines intersecting significant gold mineralization, including **16 meters at 8.95g/t gold from 30 meters**.

At Fourkoura gold mineralization is associated within single and multiple sub parallel shears with intense silica, magnetite and pyrite alteration and quartz veining within a felsic intrusive and the dolerite intrusive. Mineralization remains open and requires further step out drill testing.

Table 2: Banfora Gold Project Resource Estimate

Deposit	Category	Tonnage (Mt)	Grade Au (g/t)	Contained Gold (ounces)
Nogbele	Inferred	9.5Mt	2.4	720,000
Fourkoura	Inferred	1.1Mt	2.7	90,000
Total Banfora Gold Project	Inferred	10.6Mt	2.4	820,000

Note: 0.9g/t Lower Cutoff Grade & Top Cut of 30g/t Au

Resource Estimation Parameters

The second gold resource estimate completed at Banfora Gold Project includes the following parameters and considerations.

- For comparison with the previous resource please refer to the ASX announcement dated 17th August 2007 of Gryphon Minerals Maiden Resource.
- Resource has been allocated entirely to Inferred category and satisfies a 0.9 g/t cutoff grade as new drilling has been step out on similar grid to the previous resource, 100m by 50m, versus infill drilling.
- Reported tonnes, grade and contained ounces are rounded to two significant figures. Rounded total ounces errors may occur in figures reported above.
- The Nogbele resource occurs as multiple zones within the Nogbele Granodiorite pluton and adjacent mafic to the west. Zones vary from sericite pyrite altered quartz vein zones and hematite, sericite, pyrite, iron carbonate, altered zones with little quartz veining. The strike length as defined by the resource is over 5,800m with stacked parallel zones making this less relevant at Nogbele.
- The Fourkoura mineral resource occurs within single and multiple sub-parallel shears with iron carbonate, pyrite alteration in the felsic intrusive adjacent to the Fourkoura Dolerite. The strike length as defined by the resource is 500m.
- The Nogbele resource is based on 484 RC holes plus 43 RC pre-collars for 42,200m, 47 diamond holes for 5,600m, also 23,455m aircore drilling contributed to geological interpretation and wireframes while only 23 aircore holes contributed to grade and ounces calculations.
- The Fourkoura resource is based on 37 RC holes for 3,605m and one diamond hole for 125m.
- Additional bottle roll sample results are pending with recoveries from previous bottle roll samples at Nogbele showing 90% with greater than 92% recovery.
- 98% of resource estimate at Fourkoura is above 100m depth and 88% of resource estimate at Nogbele is above 100m depth.
- All drill holes used in the resource estimate were completed by Burkina Faso drilling contractors, WADS and Boart Longyear for Gryphon Minerals Ltd with no legacy drilling information.
- RC drill spacing is mostly at 100m by 50m some small areas 50m by 50m. Diamond drilling is not on regular layout but has been drilled for geological interpretation.
- Drilling includes RC face sample bit methods with 60 degree inclined holes. Oriented diamond drilling with RC pre-collars, has been completed at Nogbele prospects and Fourkoura prospect. Shallow aircore drilling results are included, with very minor contribution to Resource calculations.
- Sample weights are measured every 1m drilled, showing acceptable sample recoveries and grade no bias related to sample weight.
- Samples have also been collected at the drill as 4m field composites with the 1m samples submitted based on composited assay results. The 1m sampling was taken and stored at the same time as the composite sampling. Sample bags are sealed after preparation with laboratory first opening 1m sample bags. All samples split with single tier riffle splitter, were submitted at nominal sample weights between 3 and 4kgs.
- Diamond core was sawn in half with half core submitted for assay mostly at 1m samples.
- Blind QAQC samples were inserted every 10th drill sample, including in rotation Blanks, Field Duplicates and Certified Standards.
- Selected RC holes with QAQC issues have been included for interpretation but the assays have been excluded from the grade and metal calculations.
- All resource assays by 50g Fire Assay method with AAS finish at Transworld in Ghana and SGS, Abilabs and Biggs laboratories in Burkina Faso. All Lab rejects have been retained in storage.
- Top Cut 30g/t selected within a clearly discernible gap in data on a cumulative frequency plot.

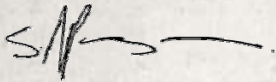
Resource Estimation Parameters (continued)

- Bulk Density based on 860 diamond core measurements, with very minor variations between mineralised and un-mineralised material only relevant to the second decimal place.
 - 1.8 t/cu.m for oxidised
 - 2.5 t/cu.m for transition
 - 2.7 t/cu.m for fresh granitic rocks
 - 2.8 t/cu.m for fresh mafic rocks
 - Oxidation boundaries were wire framed and included in modeling.
- All drill hole collars originally surveyed by GPS. Most drill hole collars surveyed with DGPS control. Early drillholes where collars no longer available were draped over DGPS defined topography for more accurate RL. DGPS topographic survey completed over resource areas for this purpose. All drillholes since have been DGPS surveyed on hole completion.
- Most drillholes have down hole surveys and all holes have been resurveyed at collar where down hole surveys were not taken for dip and azimuth.
- Drill hole samples were composited to even 1m intervals.
- Modeling included sub-blocking. Variograms were inconclusive due to the common grid spacing (100m by 50m). Oriented search ellipsoids were defined for each of the 16 domains modeled.
- Inverse Distance Cubed estimate within wireframes interpreted from cross sections has been reported. Wireframes based on a nominal low grade mineralised outline, 0.2g/t drill cutoff grade, combined with significantly improved geological interpretation honoring oriented diamond core information and surface structural work from trenching.
- Geological logging of percussion drilling includes lithology, oxidation, alteration and shearing intensity. Diamond core logging includes oriented structural logging. New and existing RC drilling has been logged and re-logged applying the updated alteration legend determined from diamond drilling, further improving mineralised wireframe interpretations.
- Wireframes extended nominal 35m beyond unbounded drill intersections, with some weaker unbounded intersections further restrained, particularly at depth.
- Wireframe interpretations and resource modeling completed using Micromine software.
- No assumptions have been made about mining or processing methods.

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

This announcement effectively lifts the trading halt that the Company requested on Tuesday, 7 April 2009. The Company is not aware of any reason why the ASX would not allow trading to recommence immediately.

Yours faithfully



Steve Parsons
Managing Director

The information in this report from data collection to interpretation wireframes, which relates to Nogbele and Fourkoura Inferred Mineral Resources, is based on information compiled by or under the supervision of Mr Michael Fox. Mr Fox is a full time employee of Gryphon Minerals and has sufficient experience to the style of mineralisation and type of deposit. The information in this report related to geostatistical modelling calculations is based on work by Mr Sam Brooks which was reviewed by Mr Dmitry Pertel. Mr Brooks is a full time employee of Gryphon Minerals, a member of the AIG. Mr Pertel is a full time employee of Micromine Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit to qualify as competent person defined by the 2004 Edition of the "Australian Code for Reporting of Mineral Resources and Ore Reserves". Mr Fox and Mr Pertel consent to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled by Mr Stephen Parsons, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Stephen Parsons is a full-time employee of the company. Mr Stephen Parsons has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which 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 Stephen Parsons consent to their inclusion in the report of the matters based on his information in the form and context in which it appears.