

Applying modern techniques to look for ancient copper and gold in Mauritania

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Important Information cont'd



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You should be aware that as an Australian company with securities listed on the ASX, the Company is required to report reserves and resources in Australia in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code 2004 Edition) ("JORC Code"). Mining companies in other countries may be required to report their mineral reserves and/or resources in accordance with other guidelines (for example, Industry Guide 7 of the U.S. Securities and Exchange Commission ("SEC")). You should note that while the Company's reserve and resource estimates comply with the JORC Code, they may not comply with the relevant guidelines in other countries, and, unless otherwise stated do not comply with (i) National Instrument 43-101 (Standards of Disclosure for Mineral Projects) of the Canadian Securities Administrators and (ii) Industry Guide 7, which governs disclosures of mineral reserves in registration statements and certain reports filed with the SEC. The JORC Code differs in several significant respects from Industry Guide 7. In particular, Industry Guide 7 does not recognise classifications other than proven and probable reserves, and, as a result, the SEC generally does not permit mining companies to disclose their mineral resources in SEC filings. Information contained in this presentation describing the Company's mineral deposits may not be comparable to similar information made public by Canadian or U.S. companies subject to the reporting and disclosure requirements of Canadian or United States securities laws.

You should not assume that quantities reported as "resources" will be converted to reserves under the JORC Code or any other reporting regime or that the Company will be able to legally and economically extract them.

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 2004 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.

The information in this report that relates to Mineral Resources is based on information compiled by Mr Dmitry Pertel, who is a member of the Australian Institute of Geoscientists. Mr Pertel is an employee of CSA Global Pty. Ltd. Mr Pertel has sufficient experience 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 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Pertel consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves has been compiled by Mr Quinton de Klerk, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr de Klerk is an employee of Cube Consulting Pty Ltd. Mr de Klerk 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 de Klerk consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

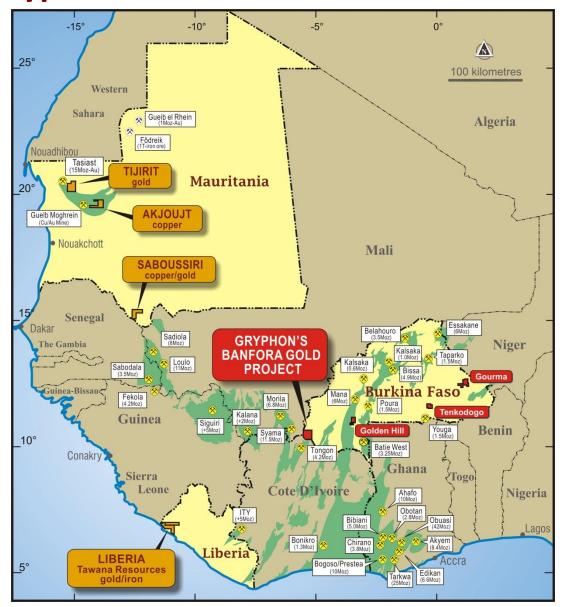
Gryphon Minerals – West Africa

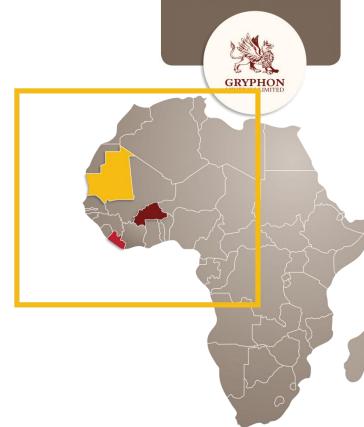


- Gryphon have been exploring in Mauritania since 2010 following the takeover of Shield Mining
- Active in other parts of West Africa, notably Burkina Faso
 - ••• Advancing the 3.6 Moz Banfora Gold Project
 - First Australian company to be granted a Mining Permit in Burkina
 - ••• Aiming for production of 70,000 oz Au /yr from Q1/2016
 - Low cost high grade (1.44 g/t) heap leach operation
 - Clear exploration upside on the property
- Joint Venture with Boss Resources, Burkina Faso
 - ••• Includes prolific Hounde Belt with high grade drill intercepts on the property from past explorers¹

Note1 refer ASX announcement 5/3/14

Gryphon Minerals – West Africa





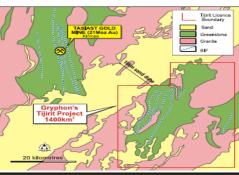
GOLD

COPPER

Gryphon Minerals – Mauritanides Talk



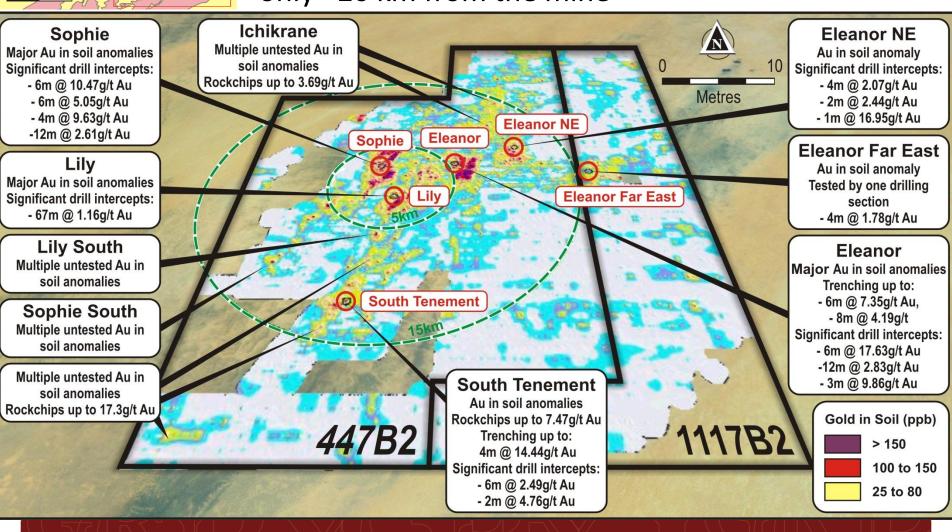
- With very limited time I can only present highlights of Gryphon's Projects in Mauritania
- Visit Booth 88 to learn more about Gryphon's projects and their upside potential
- Emphasis here on the challenges and opportunities and how new technologies aid our exploration at this difficult phase of the exploration industry
- Our industry needs more discoveries. We all benefit from them!



Tijirit Project – 1460 km²



Orogenic gold – many similarities to Tasiast, only ~20 km from the mine

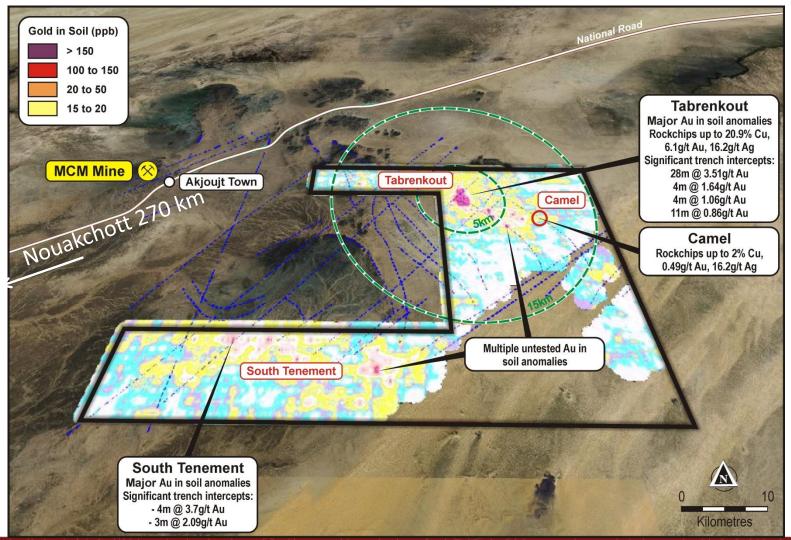


Akjoujt Project – 749 km²

GRYPHON MINERALS LIMITED

IOCG (Iron-oxide copper gold) targets.

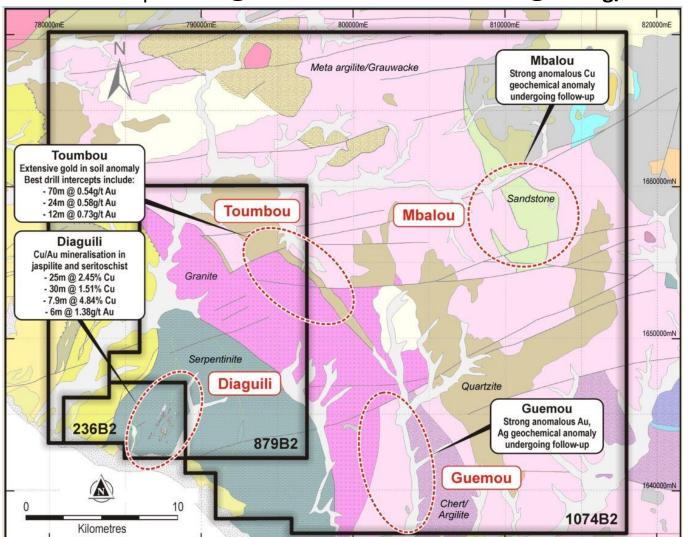
Rock chips to 20.9% Cu, 6.1 g/t Au and 16.2 g/t Ag; Best trench 28m @ 3.51 g/t Au



Saboussiri Project – 1191 km²

Copper-Gold and orogenic / intrusive gold.

Diaguili: Best intercepts 25m @ 2.49% Cu Toumbou: 70m @ 0.54 g/t Au – sheared granitoid





Gryphon – "add value, get ready" approach



- Exploring at a time of challenging financial market and security conditions.
 - ••• Drastic cuts to exploration budget, but still want to retain our smaller exploration team and keep projects moving forward
 - Security concerns restrict field access by western staff
- Large land holdings (Gryphon Mauritania = 3400 km²)
 - •••• If we retain ground then we need to also explore it.
 - ••• High cost to cover with blanket geochemistry and geophysics
 - ••• Need to be smarter about where to focus and eventually drill

Time to get more efficient and tap into new technologies and alternative ways to explore our large prospective tenure

Satellite Technologies



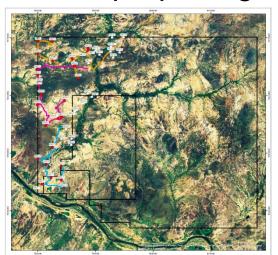
- ••• Knowing the ground we explore better through use of high resolution satellite imagery and elevation models
- ••• 50cm WorldView 2 / GeoEye take us to the field from the office an essential dataset
- Excited about DigitalGlobe's "WorldView-3" potential
 - SWIR imagery alteration mapping from a commercial satellite at 7.5m resolution
 - 30 cm resolution

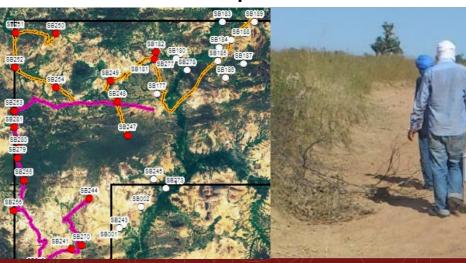


Variable geochemical techniques



- Drainage geochemistry
- Lateritic lag geochemistry
- Portable XRF (copper and gold exploration)
- Plus conventional prospecting / field mapping
- Which technique we use where and at what sample interval requires a regolith terrain assessment and then chose fit-for-purpose geochemical techniques

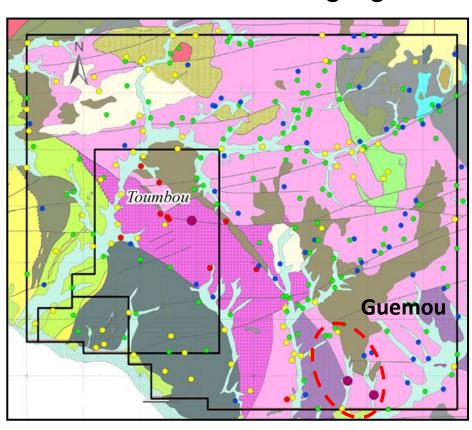


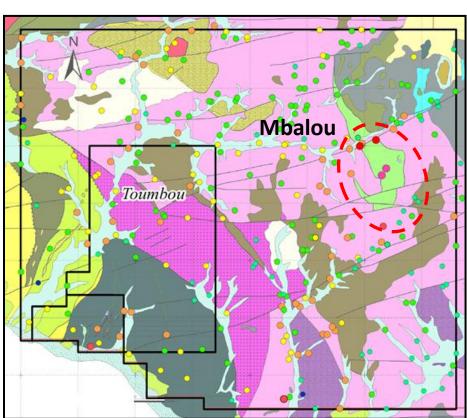


Variable geochemical techniques - drainage



Saboussiri drainage geochemistry – does it work?





Gold results – peak >10x back ground Confirmed Toumbou, identified new AOI

Copper results – peak >30x back ground Confirmed Diaguili, but also made Mbalou a Clear area of interest

Variable geochemical techniques - pXRF



- •••• pXRF usage at Saboussiri and Akjoujt Cu-Au Projects
- Soils and rocks
- Purchase breakeven point <1500 samples</p>
- Not a substitute for commercial analysis but it does enable us to undertake 'saturation multi-element geochemistry'





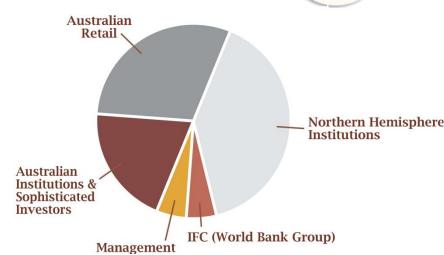
Adding picture of equipment being used to analyse pulps

1 year share price

Capital Structure & Cash Position

Shares	401M
Current Share Price ¹	\$0.13
Market Capitalisation	\$52M
Excellent Liquidity	+2M shares/day
Top 20 Shareholders	53%
Cash & Investments ²	\$37M

World Class Shareholder Base



1 year share price



Note¹ share price at 10 /10/2014 Note² refer ASX qtly report 21/7/14

Conclusions



- Despite significant budget cuts we are advancing the exploration in Mauritania through the application of new technologies in a low cost manner
- ••• Identifying new targets and working on these steadily through to drill ready status
- Expecting to come out the downturn stronger than we went into it in terms of project pipeline and personnel skills
- Our pipeline of projects here in Mauritania is robust with some exciting targets ready for drilling building off a solid foundation
- ••• Would having more money advance these projects more rapidly? Definitely!