

2 MILLION OZ GOLD & GROWING...



GRYPHON
MINERALS LIMITED

ASX:GRY

Steve Parsons
Managing Director

Beaver Creek
September 2011



S&P/ASX
200 Company



Gryphon Minerals Forward Looking Statements

This presentation may contain certain forward looking statements and projections regarding:

- estimated, resources and reserves;
- planned production and operating costs profiles;
- planned capital requirements; and
- planned strategies and corporate objectives.

Such forward looking statements/projections are estimates for discussion purposes only and should not be relied upon. They are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors many of which are beyond the control of Gryphon Minerals Limited. The forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved.

Gryphon Minerals Limited does not make any representations and provides no warranties concerning the accuracy of the projections, and disclaims any obligation to update or revise any forward looking statements/projects based on new information, future events or otherwise except to the extent required by applicable laws.

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves 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.

Information in this report from data collection to wireframe interpretation, at Nogbele and Fourkoura Prospects and geostatistical modelling calculations is based on work by Mr Sam Brooks which was reviewed by Mr Michael Fox. Mr Brooks is a full time employee of Gryphon Minerals, and a member of the AIG. Mr Fox is a full time employee of Gryphon Minerals and a member of the AIG with sufficient experience 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 consents to the inclusion in this report of the matters based on information in the form and context in which it appears.



Investment Highlights

- ✓ Dominant & strategic landholdings in Burkina Faso & Mauritania
- ✓ Inferred resource estimate of 29Mt @ 2.1g/t for 2,000,000oz gold
(ref: ASX release 31/03/11)
- ✓ Shallow, outcropping and open along strike and at depth
- ✓ Pipeline of new & exciting targets
- ✓ Engineering studies completed with a clear path to gold production
- ✓ Cashed up & aggressive exploration budget
- ✓ Experienced management with a history of discoveries & mining in West Africa



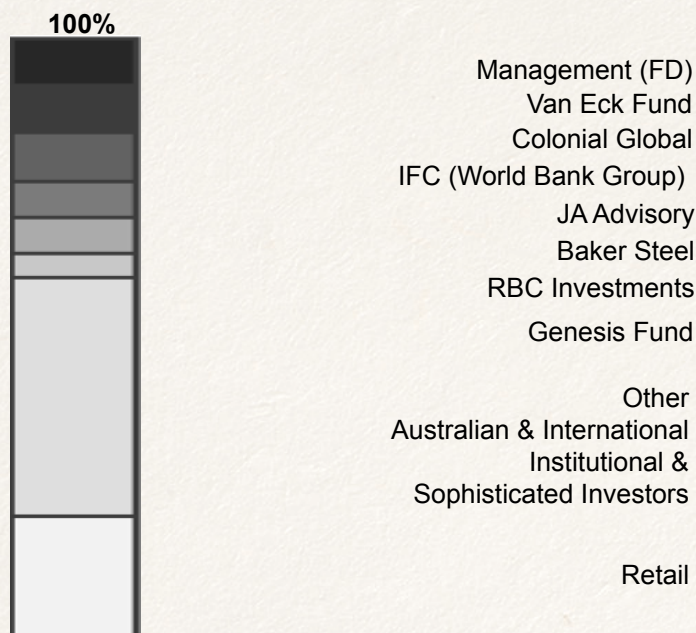
Corporate Snapshot

Capital Structure (ASX:GRY)

S&P/ASX200

Shares	300M
Cash (June '11 qtlly)	~A\$50.4M
Excellent Liquidity	1.75M+ shares/day
Current Share Price	~A\$1.75
Market Capitalisation	~A\$520M
Institutional shareholders	80%+

Major Shareholders



Board

Mel Ashton	Non-Exec Chairman B.Com, FCA, FAICD
Steve Parsons	Managing Director B.Sc (Hons) Geology, MAusIMM
Didier Murcia	Non-Exec Director LLB, BJuris Hon Consul Tanzania
Steven Zaninovich	Non-Exec Director BSc Eng
David Netherway	Non-Exec Director B.E. (Mining), C.Dip.A.F

Management

Matthew Bowles	Chief Development Officer B.Com CPA ASA
Tim Holt	Chief Financial Officer B.Com CA
Brett Dunnachie	Company Secretary B.Com CA
Michael Fox	Exploration Manager B.Sc Geology, MAusIMM

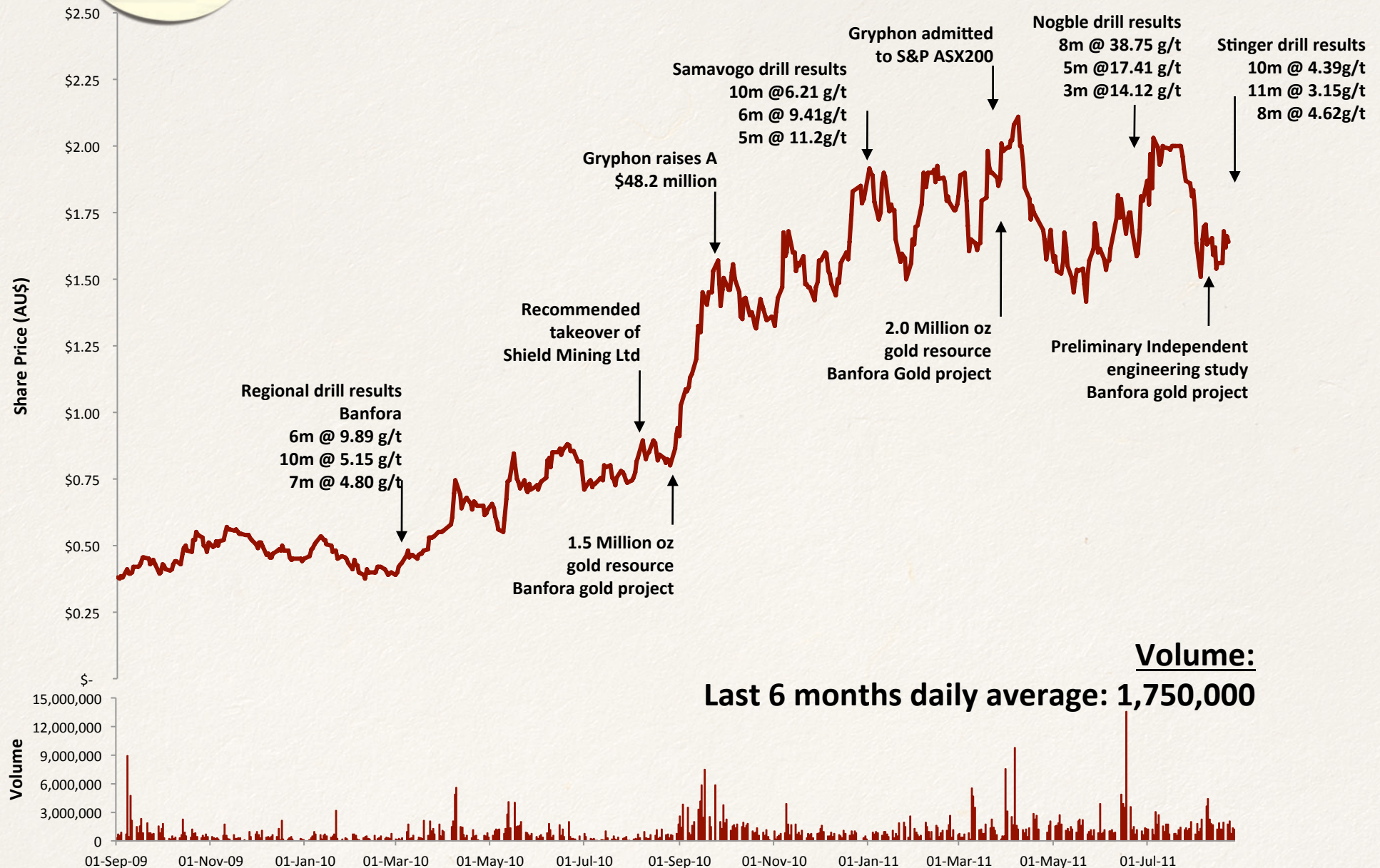
Investments

~ 16% of Renaissance Minerals Ltd (ASX: RNS)
an emerging Australian gold explorer

~ 12% of Tawana Resources Ltd (ASX: TAW)
West African gold/base metal explorer













2 Year Share Performance





Gryphon Minerals Analyst Consensus

	Institutions	Analyst	Target (AUD\$)
	Rodman & Renshaw	Alka Singh (4/10/10)	2.75
	RBC	Geoff Breen (1/3/2011)	2.60
	Paradigm Capital	Jon Case (4/4/2011)	2.45
	Austock Securities	Anna Kassianos (12/8/2011)	2.44
	RBS Morgans	James Wilson (1/9/2011)	2.36
	Investec	Geoff Muers (6/5/2011)	2.30
	Euroz Securities	Andrew Clayton (24/3/2011)	2.20
	BGF Equities	Warwick Grigor (6/5/2011)	2.20
	Credit Suisse	Michael Slifirski (20/05/2011)	2.15
	Argonaut	Troy Irvine (1/9/11)	2.15



West Africa The Gold Hot Spot

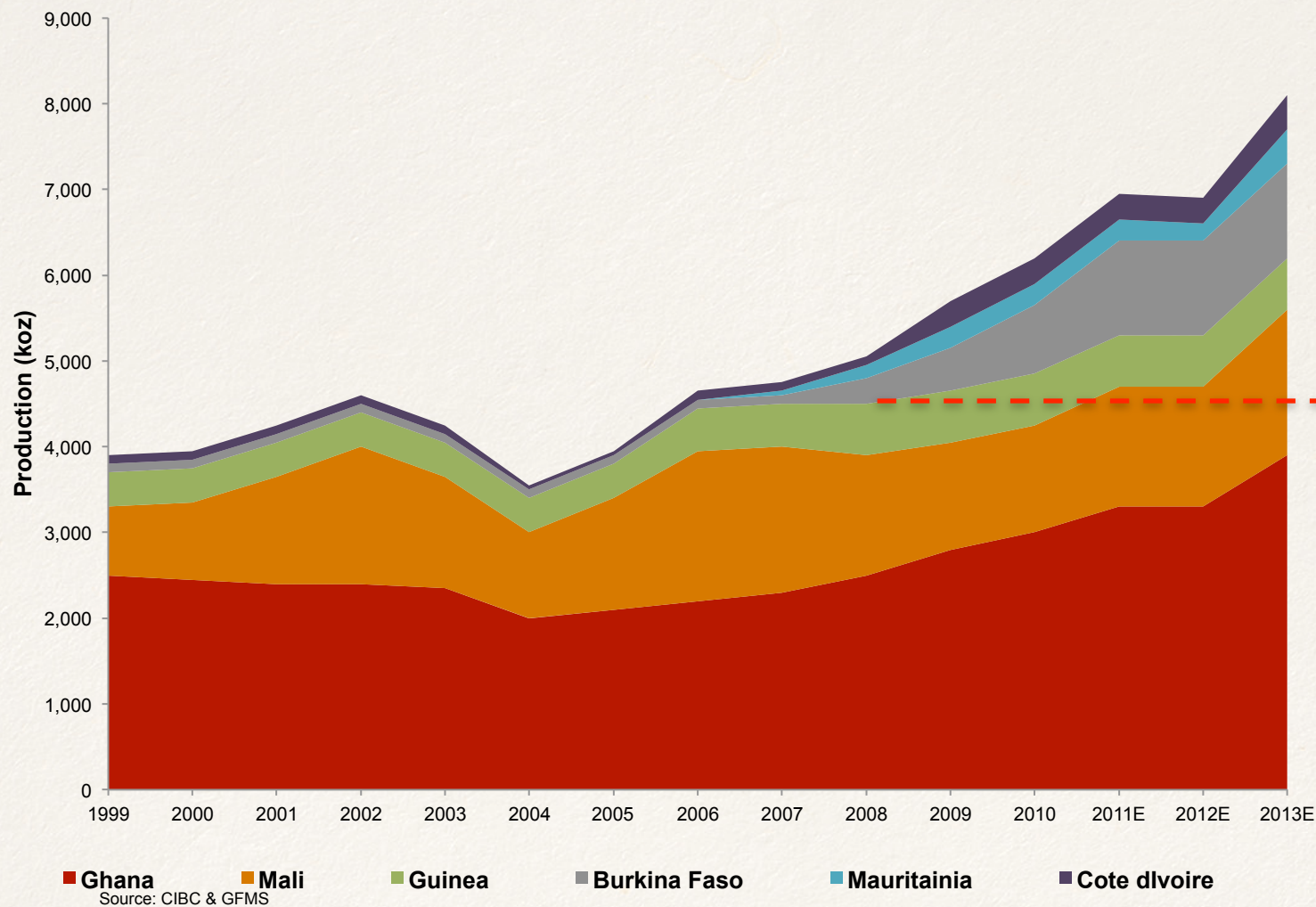


- Fastest gold growth region in the world
- Gold production set to rise +30% over next 4 years
- Host to huge +10mill oz deposits such as Obusai, Tarkwa, Syama, Ahafo, Sadiola, Loulo, Morilla, Tasiast
- Cash costs in West Africa typically 30% less than Australia and other places around the world





West African Production



Growth by Country	
2004-10	2010-13
590%	0%
1,900%	109%
1,338%	43%
64%	0%
16%	28%
60%	30%



Burkina Faso

“land of the honest & upright men”



- Under explored & highly prospective
- New modern mining code
“Burkina Faso is open for business” Dr Abdoulaye Cisse, previous Minister for Mines Burkina Faso
- Moved from zero gold production to 4th largest gold producer in Africa
- Strong government support
- Previously a French colony called Upper Volta
- 24 years of strong democratic government

Country	% Greenstone Belt (prospective for gold)	% of Gold oz (+1Moz Deposits)
Ghana	20%	60%
Mali	10%	17%
↑ Burkina Faso	22%	7% ↑
Guinea	10%	6%
Cote d'Ivoire	35%	6%
Senegal	3%	3%
Total		+168Moz



Banfora Gold Project Burkina Faso

- Substantial landholding of 1200km² owned 100% by Gryphon Minerals
- A major gold producing district
 - 4.2 Million oz gold Tongon - Randgold (30km)
 - 11.5 Million oz gold Syama - Resolute (50km)
 - 6.5 Million oz gold Morila - Randgold/Anglo Ashanti (75km)
- Interim Resource estimate **29Mt @ 2.1g/t for 2,000,000oz gold** (ASX 31/03/11)
 - majority from surface to <100m depth
 - open at depth & along strike
 - excellent metallurgical recoveries of 93% (96% oxide & 91% sulphide)
- Aiming to establish a multi-million oz gold district in the near term
- Preliminary independent engineering studies completed
- Burkina Faso is pro-mining, with grid power & water



Banfora Gold Project

Preliminary Independent Engineering Studies

- Studies completed by Lycopodium Perth:
 - 2.5mtpa open pit mining operation
 - conventional Carbon In Leach (CIL) processing plant

- Production first two years of:
 - +180,000oz gold per annum (160,000oz LOM)
 - @ 2.6g/t gold head grade (+2g/t LOM)
 - <US\$430 cash costs (US\$610 LOM)

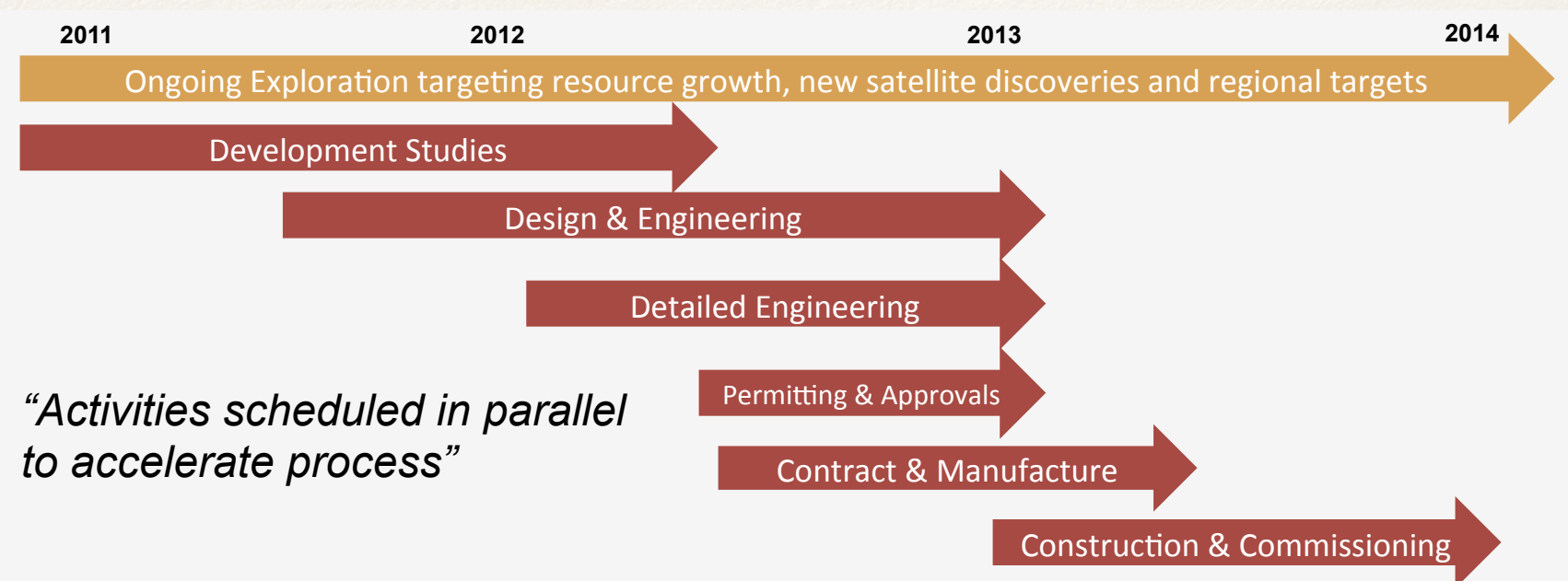
- Detailed feasibility has now commenced on:
 - +3.5mtpa open pit mining operation
 - +200,000oz gold per annum
 - in line with anticipated resource growth in 2011/12

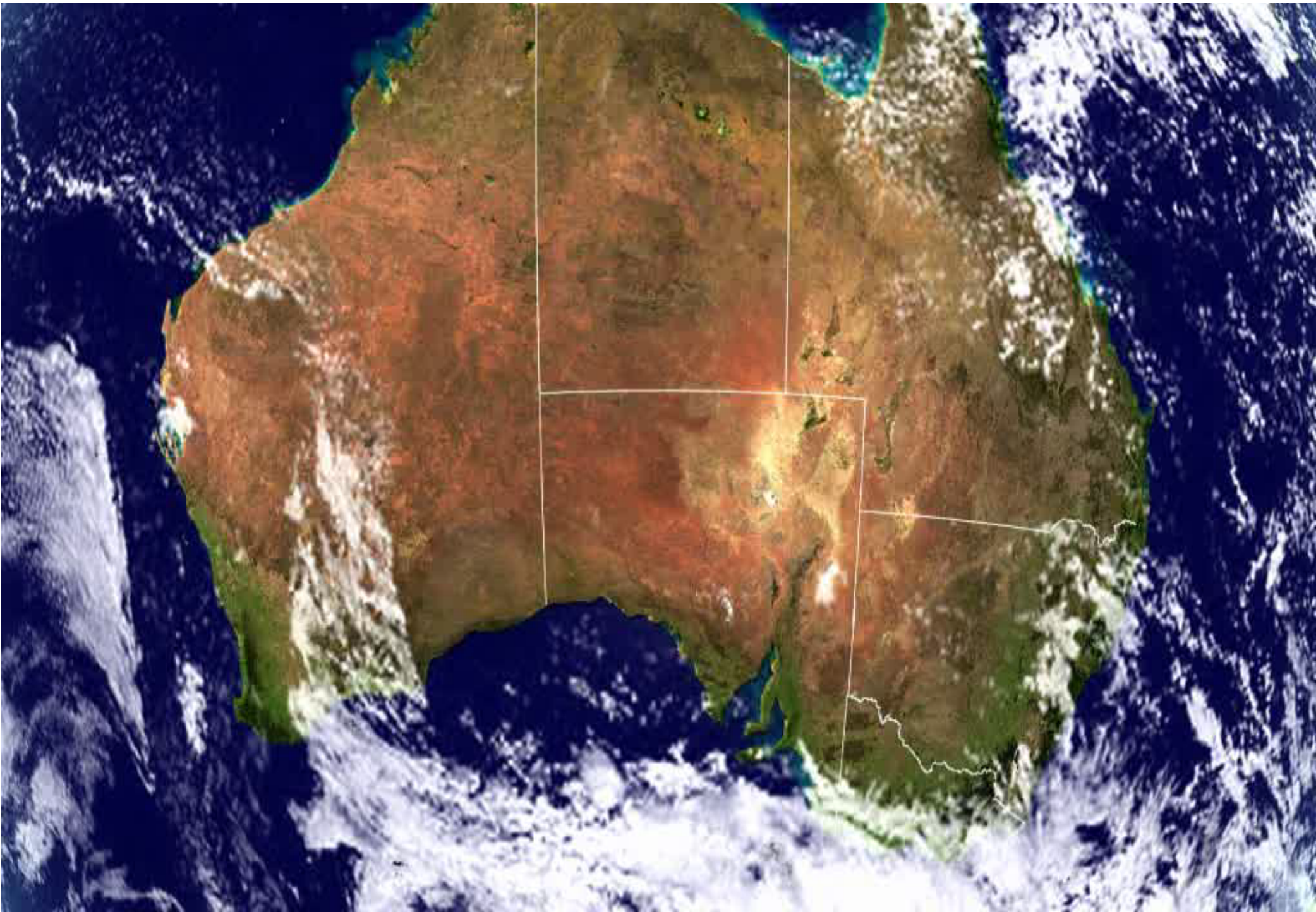


Banfora Gold Project

Preliminary Independent Engineering Studies

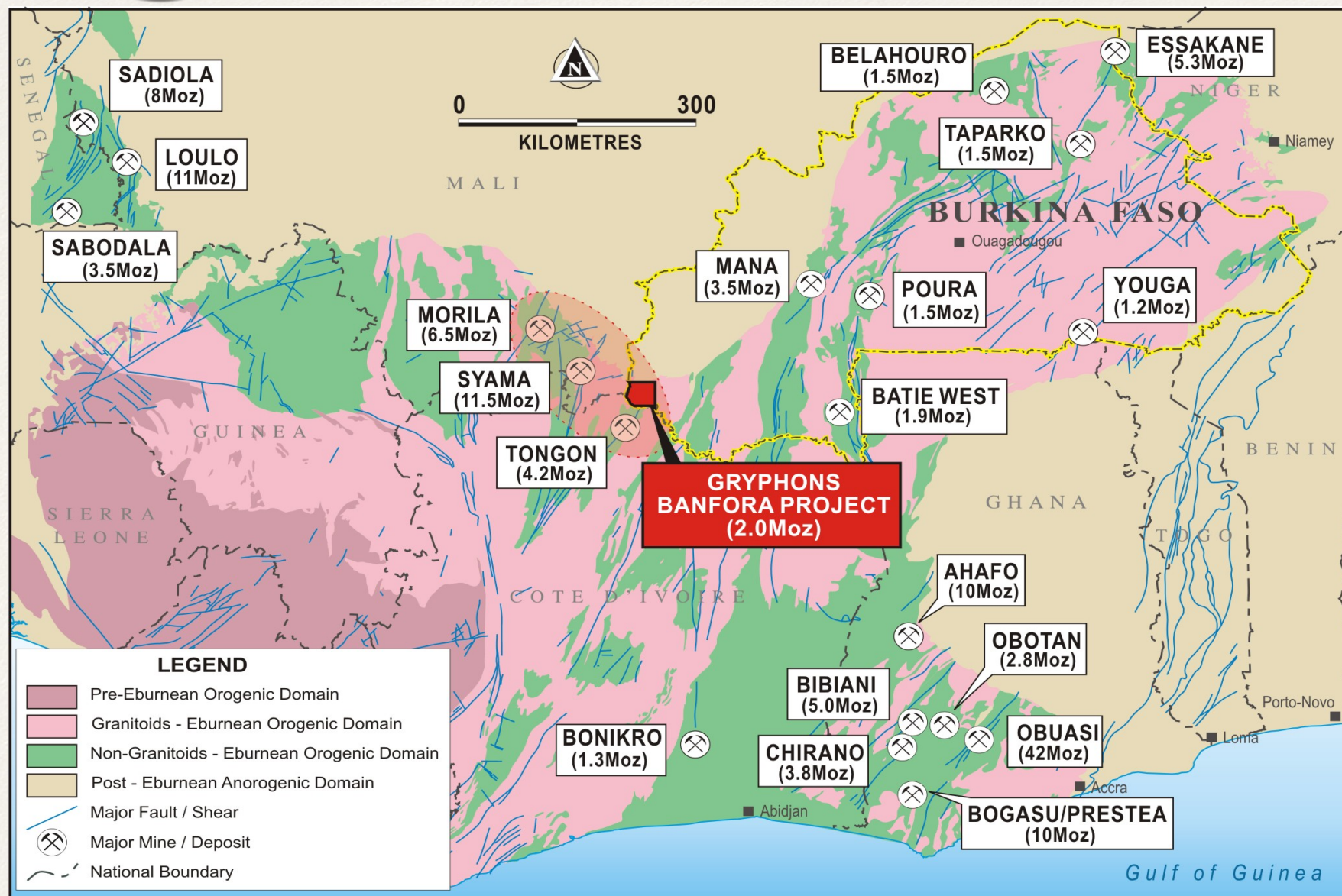
Consultant	Services
In house	Project Management, initial pit designs
Lycopodium	Process, plant & infrastructure design, project impl.
Knight Piesold	Geotechnical, tailings and infrastructure design
Orway Mineral Consultants	Circuit design
AMMTEC Perth	Metallurgical test work
Peter O'Bryan Associates	Geotechnical assessment
Cardno & KBC	Social and Environmental assessments
IFC (World Bank)	Environmental, Social studies







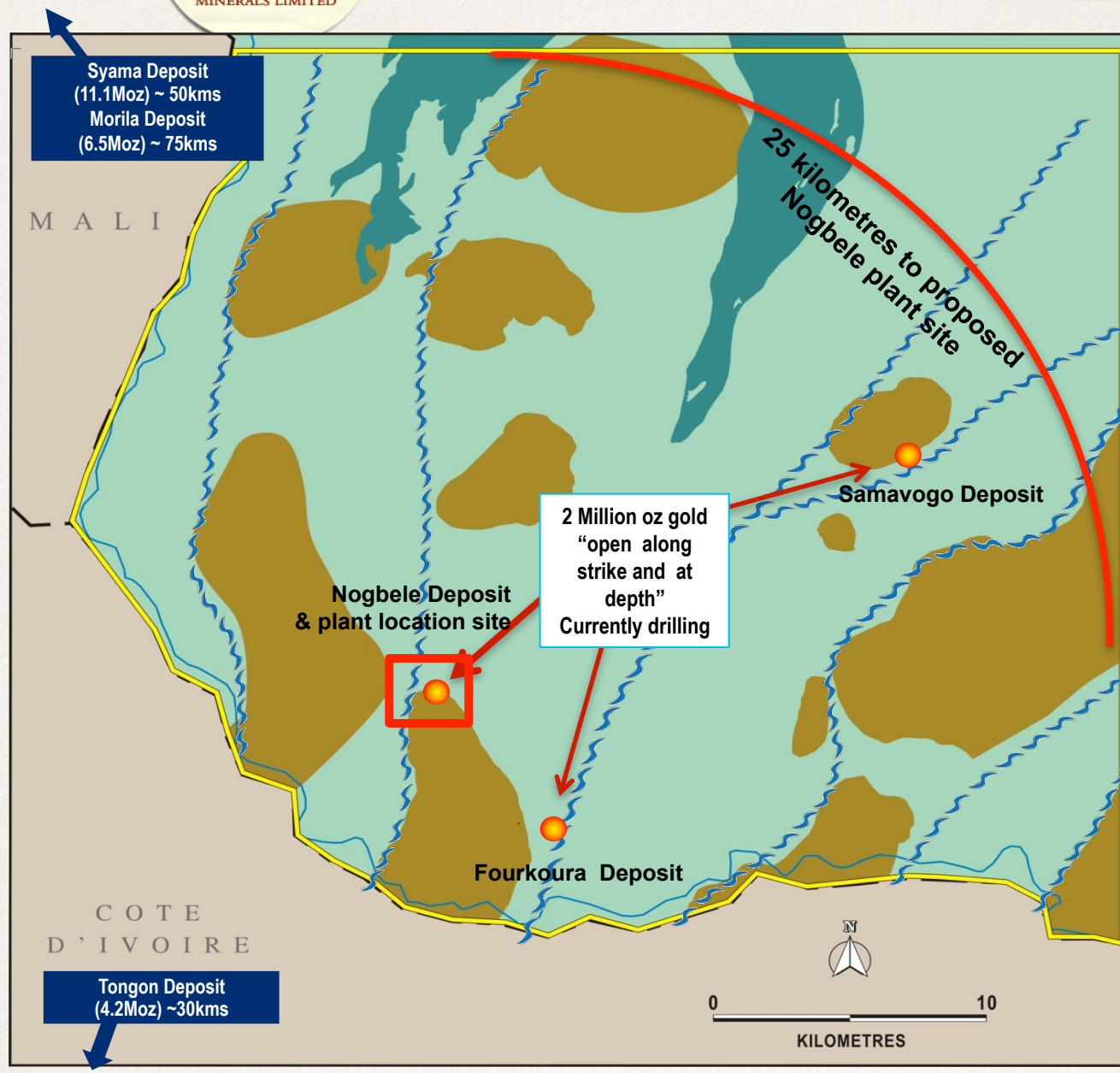
West Africa Burkina Faso





Banfora Gold Project

2 Million oz gold and growing



Banfora Gold Project Resource Estimate

Deposit	Category	Tonnage (Mt)	Grade Au (g/t)	Contained Gold (Million Ounces)
Nogbele	Inferred	16	2.2	1.2
Fourkoura	Inferred	4.4	2.1	0.3
Samavogo	Inferred	8.2	2.0	0.5
Total		29	2.1	2.0

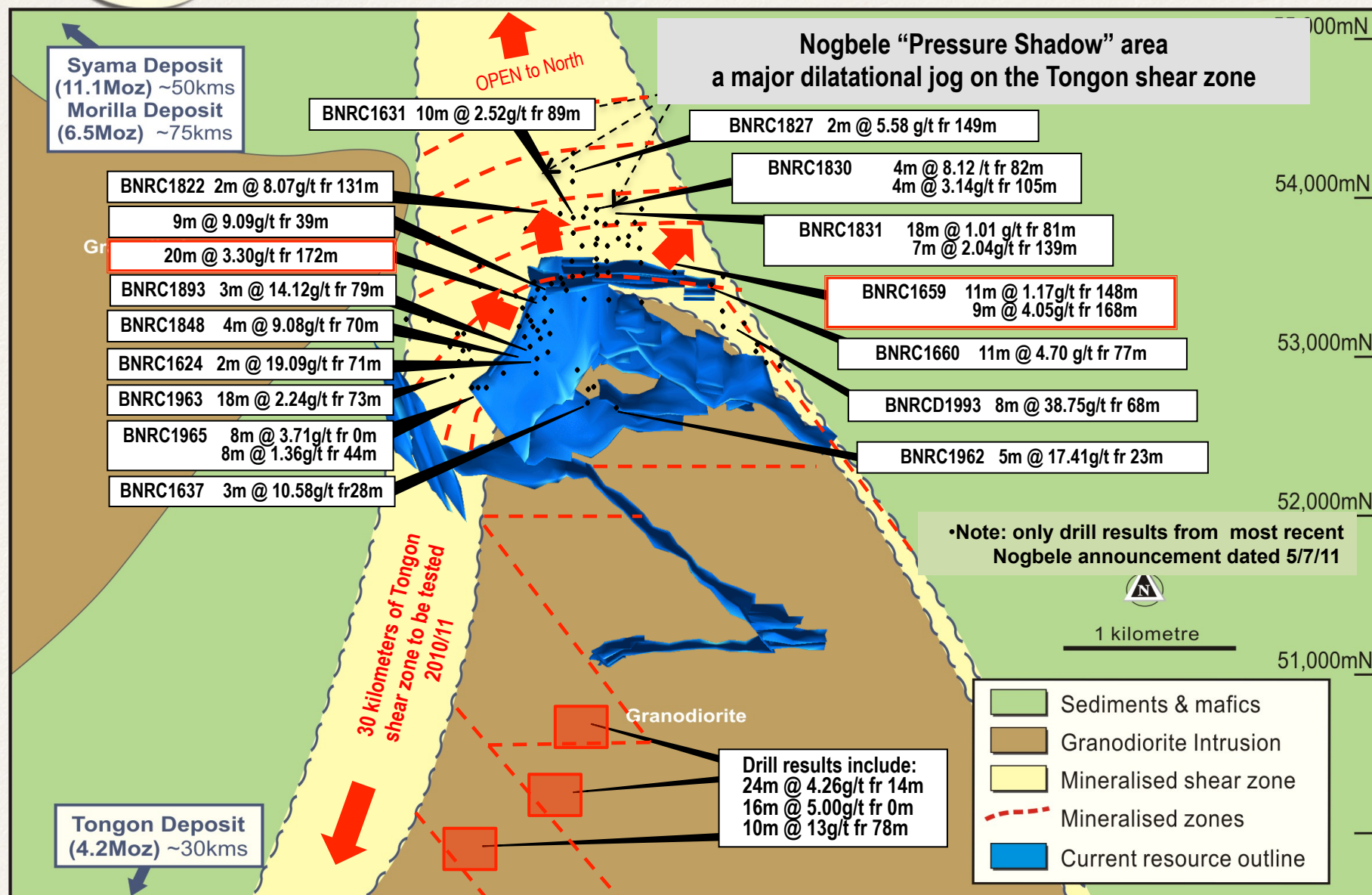
Refer to ASX release 31/03/11

- Project area +1200km²
- Over 120km of highly prospective regional shear zones
- So far less than 5% have been drill tested
- The first three prospects (Nogbele, Fourkoura & Samavogo) have inferred resource estimates totaling 2 Million oz gold



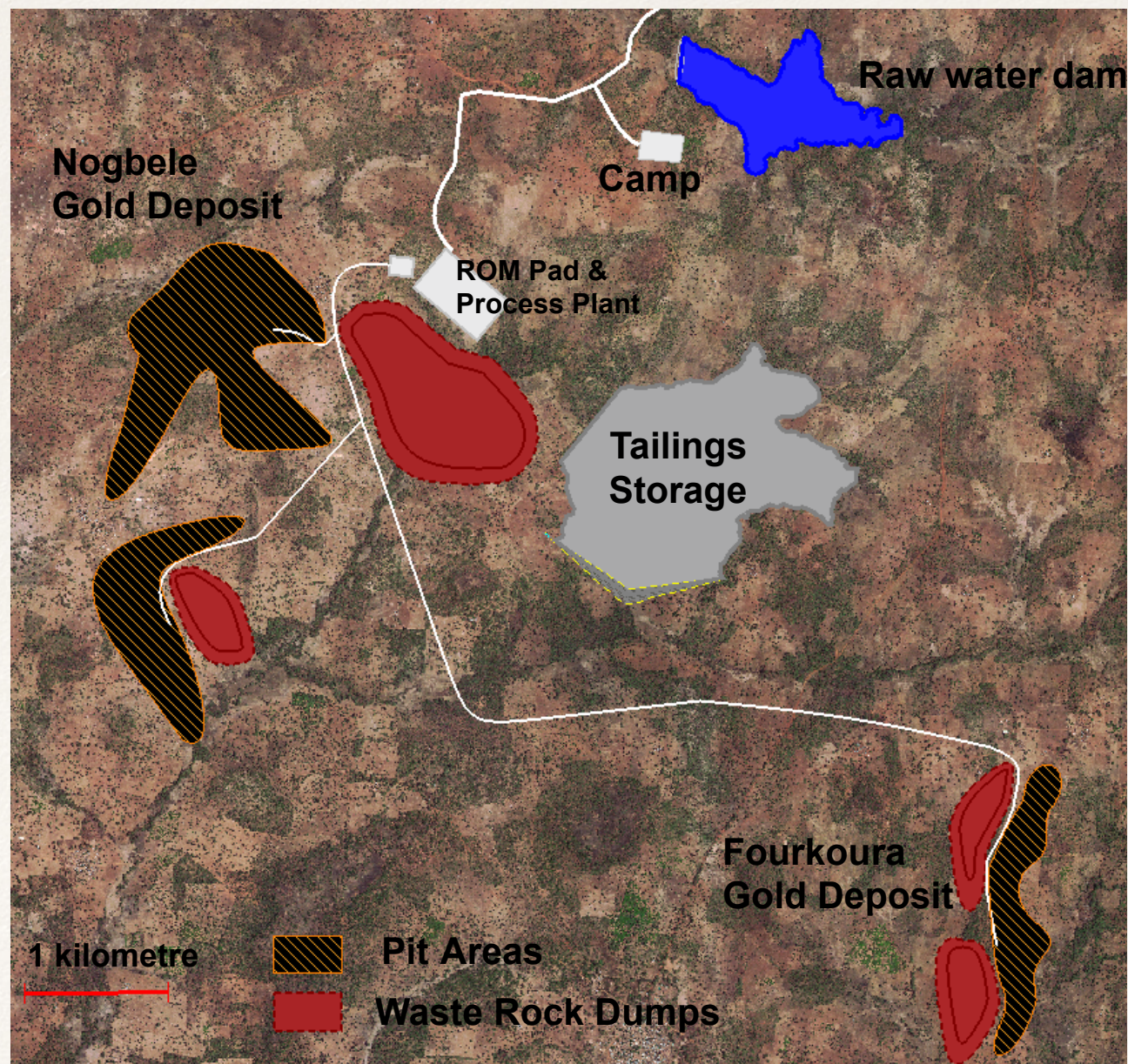
Nogbele Deposit

1.2 Million ounces & growing



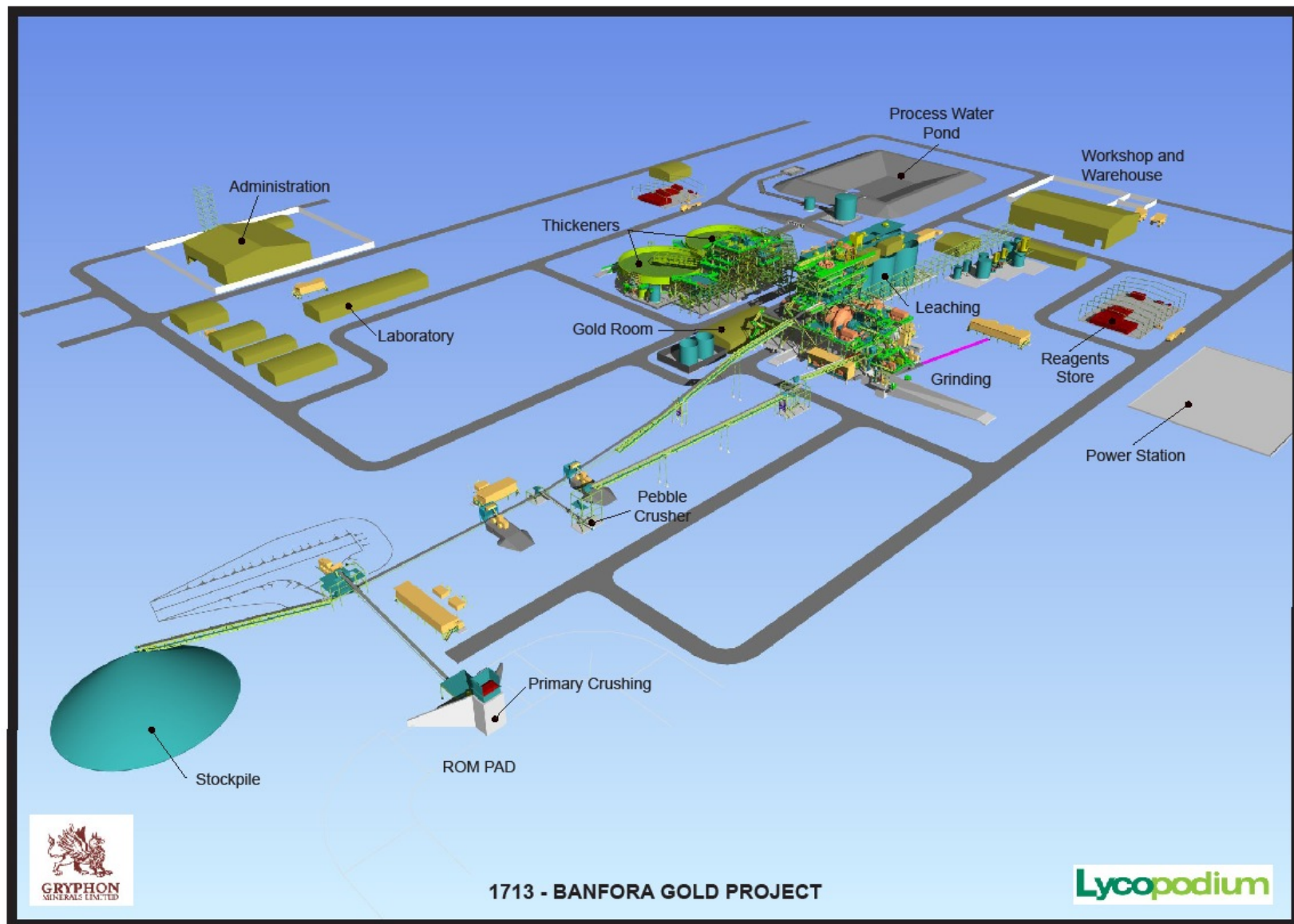


Banfora Gold Project Plant Location - Nogbele Deposit





Banfora Gold Project Plant Layout Design

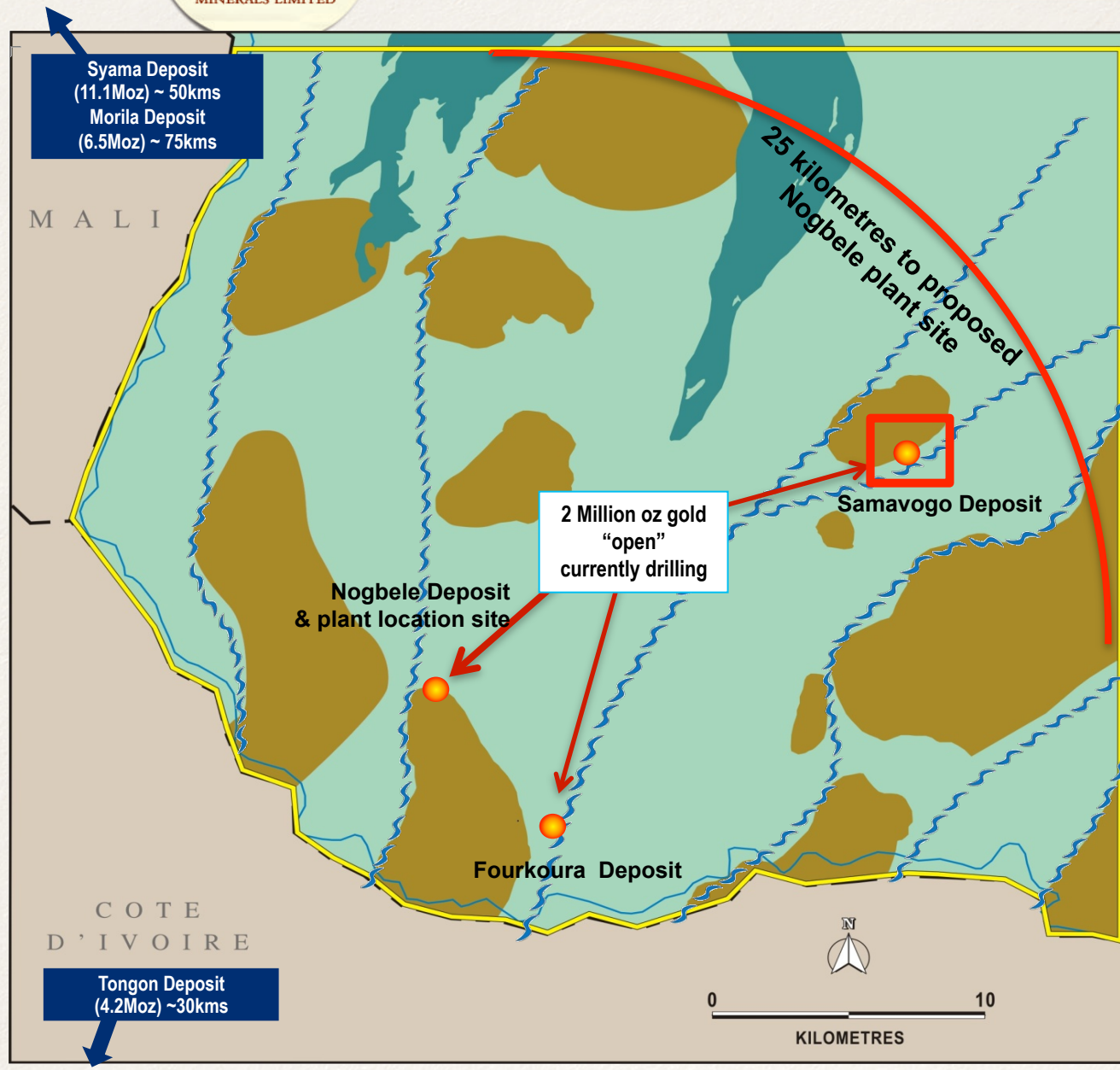


Lycopodium



Banfora Gold Project

2 Million oz gold and growing



Banfora Gold Project Resource Estimate

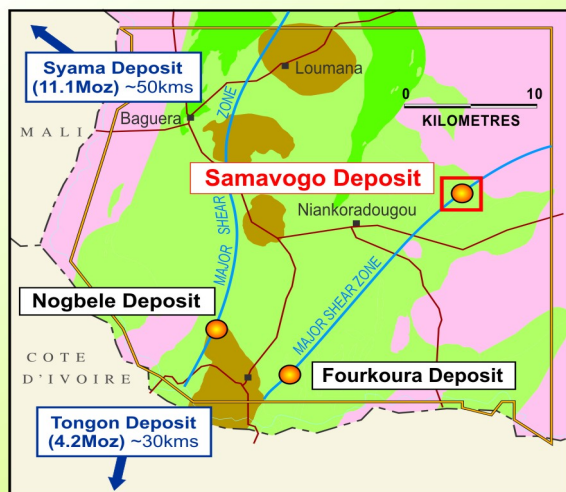
Deposit	Category	Tonnage (Mt)	Grade Au (g/t)	Contained Gold (Million Ounces)
Nogbele	Inferred	16	2.2	1.2
Fourkoura	Inferred	4.4	2.1	0.3
Samavogo	Inferred	8.2	2.0	0.5
Total		29	2.1	2.0

Refer to ASX release 31/03/11

- Project area +1200km²
- Over 120km of highly prospective regional shear zones
- So far less than 5% have been drill tested
- The first three prospects (Nogbele, Fourkoura & Samavogo) have inferred resource estimates totaling 2 Million oz gold



Samavogo Deposit Open along strike



Mafics / sediments

Stepout drilling 5 kilometres
along strike
4m @ 6.1g/t Au
OPEN

Randgold's
Tongon Deposit
4.2 million ozs
(~50kms)

Rockchips
with
visible gold

**12 kilometres
to be tested**

SAMAVOGO DEPOSIT
8.2Mt @ 2g/t for
520,000oz gold

Stepout drilling
7m @ 2.60g/t Au
3m @ 3.20g/t Au
4m @ 2.43g/t Au
OPEN

10m @ 6.2g/t Au fr 93m
4m @ 13.9g/t Au fr 131m
OPEN

Rockchips with
visible gold

Stepout drilling
2m @ 7.1g/t Au
OPEN

7m @ 4.9g/t Au fr 131m
OPEN

5m @ 11.2g/t Au fr 102m
OPEN

9m @ 5.7g/t Au fr 67m
OPEN

Mafics / sediments

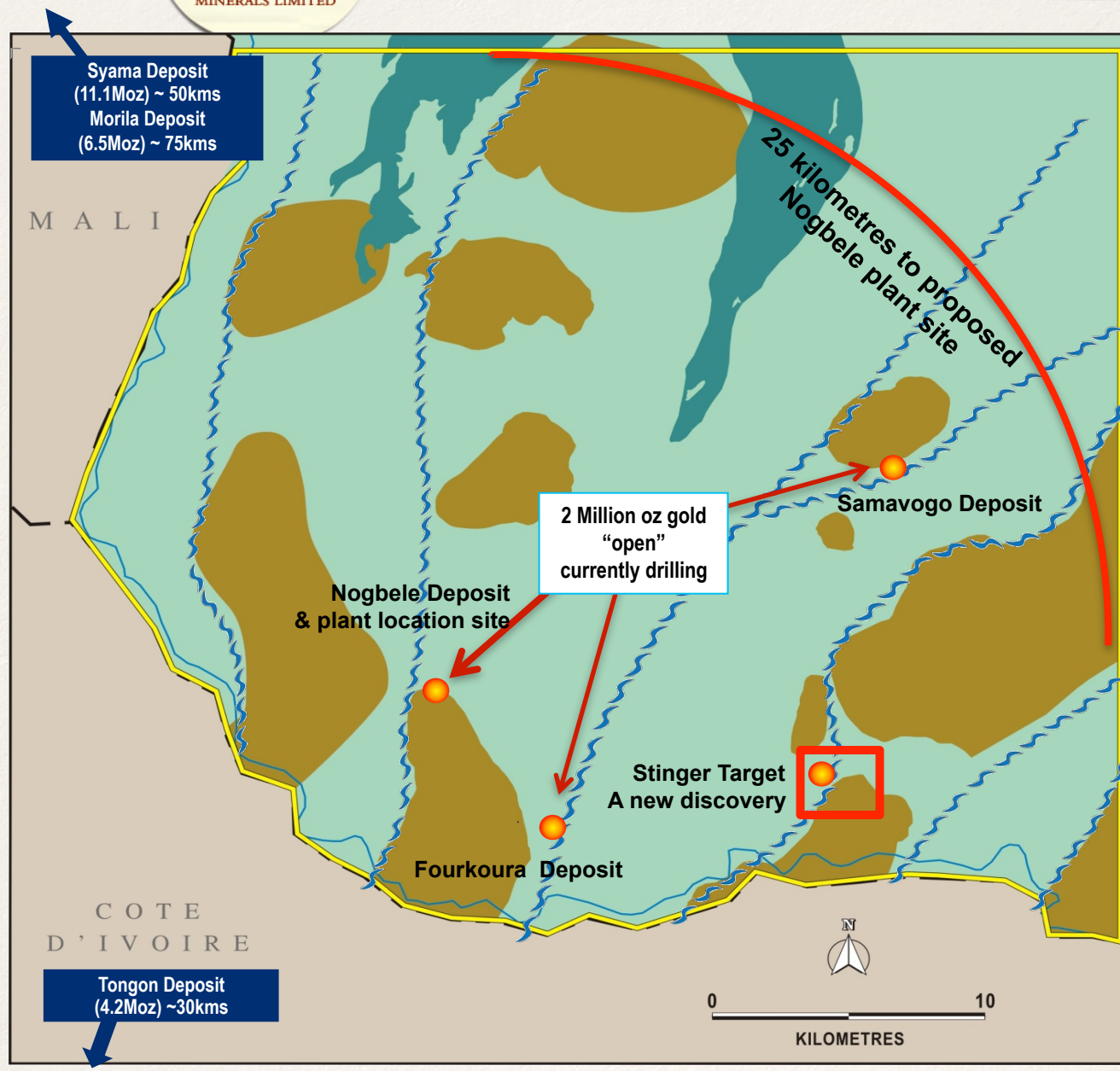


- Mafic volcanics/sediments
- Granite
- Soil geochem anomaly
- RC/DD drill holes
- Reconnaissance stepout drillholes
- Resource wireframe
- Outside resource, further drilling required



Banfora Gold Project

2 Million oz gold and growing



Banfora Gold Project Resource Estimate

Deposit	Category	Tonnage (Mt)	Grade Au (g/t)	Contained Gold (Million Ounces)
Nogbele	Inferred	16	2.2	1.2
Fourkoura	Inferred	4.4	2.1	0.3
Samavogo	Inferred	8.2	2.0	0.5
Total		29	2.1	2.0

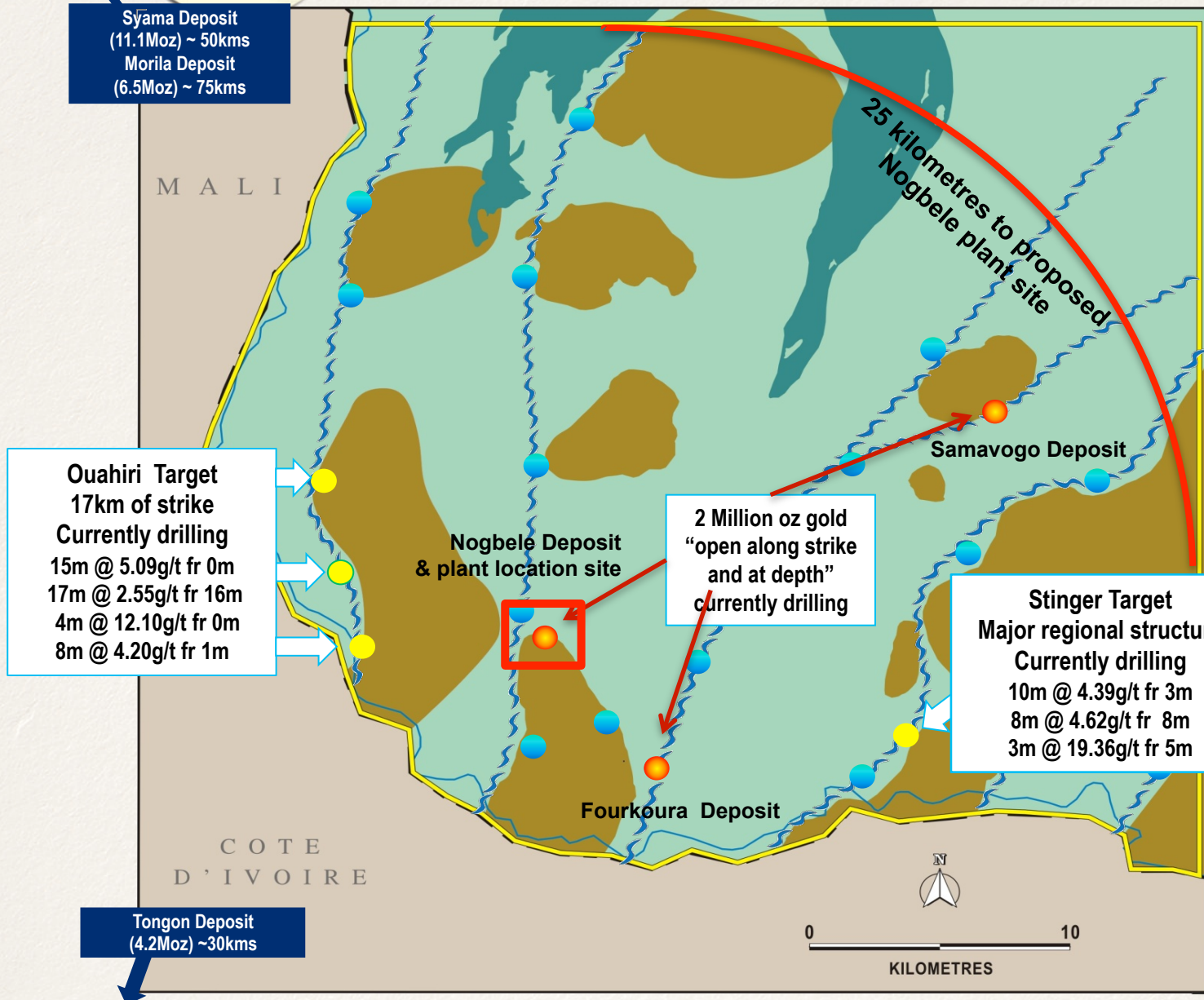
Refer to ASX release 31/03/11

- Project area +1200km²
- Over 120km of highly prospective regional shear zones
- So far less than 5% have been drill tested
- The first three prospects (Nogbele, Fourkoura & Samavogo) have inferred resource estimates totaling 2 Million oz gold



Gryphon Minerals

Multi million oz gold potential



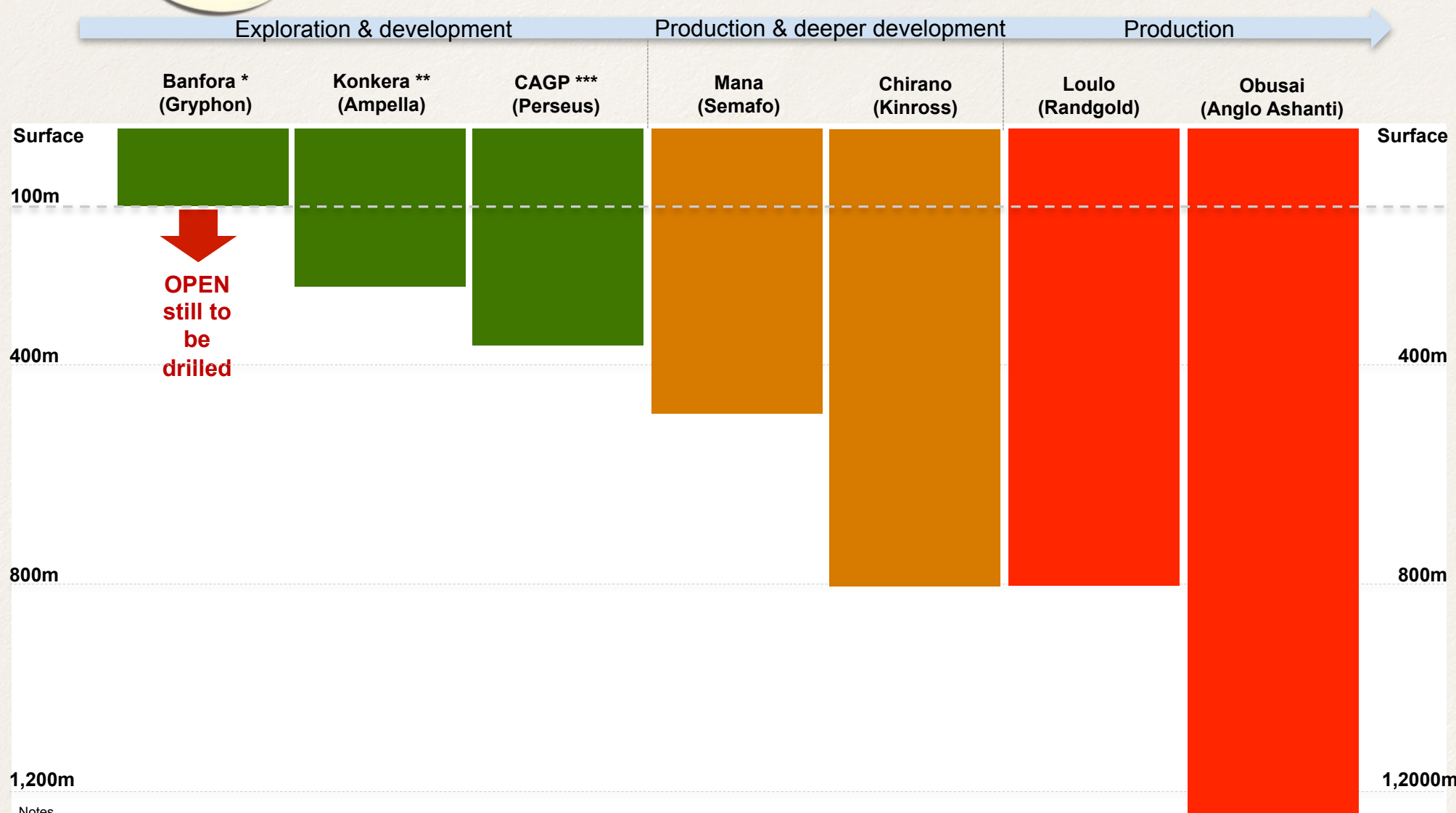
- Over 120km of highly prospective regional shear zones
- So far less than 5% have been drill tested
- Currently only 3 prospects (Nogbele, Fourkoura & Samavogo) have inferred resource estimates totaling 2 Million oz gold
- A further 20 high priority walk up regional targets for testing in 2011

- Resource growth
- Aiming for next resource growth
- High Priority walk up drill targets

Plant location site



Depth Potential - West Africa



Notes

* Majority in top 100m (ASX GRY: 31/3/2011)

** Principally contained within top 200m (ASX:AMX 10/2/2011)

*** - 220m RL (360m vertical) below that depth the resource is constrained by lack of drill date (ASX: PRU 23/12/2010)



Banfora Gold Project Burkina Faso



“Clear path to becoming the first Australian gold producer in Burkina Faso with strong government & local community support “



West Africa Mauritania

Tasiast Gold Discovery

- “Tasiast is unfolding into one of the gold sectors best discoveries this cycle”
 - Paradigm Capital
- “shaping up to be one of the best global gold discoveries in many many years”
 - RBC Capital Markets
- “the potential to be one of the worlds great gold mines”
 - Kinross Mining

Recent Mergers & Acquisitions

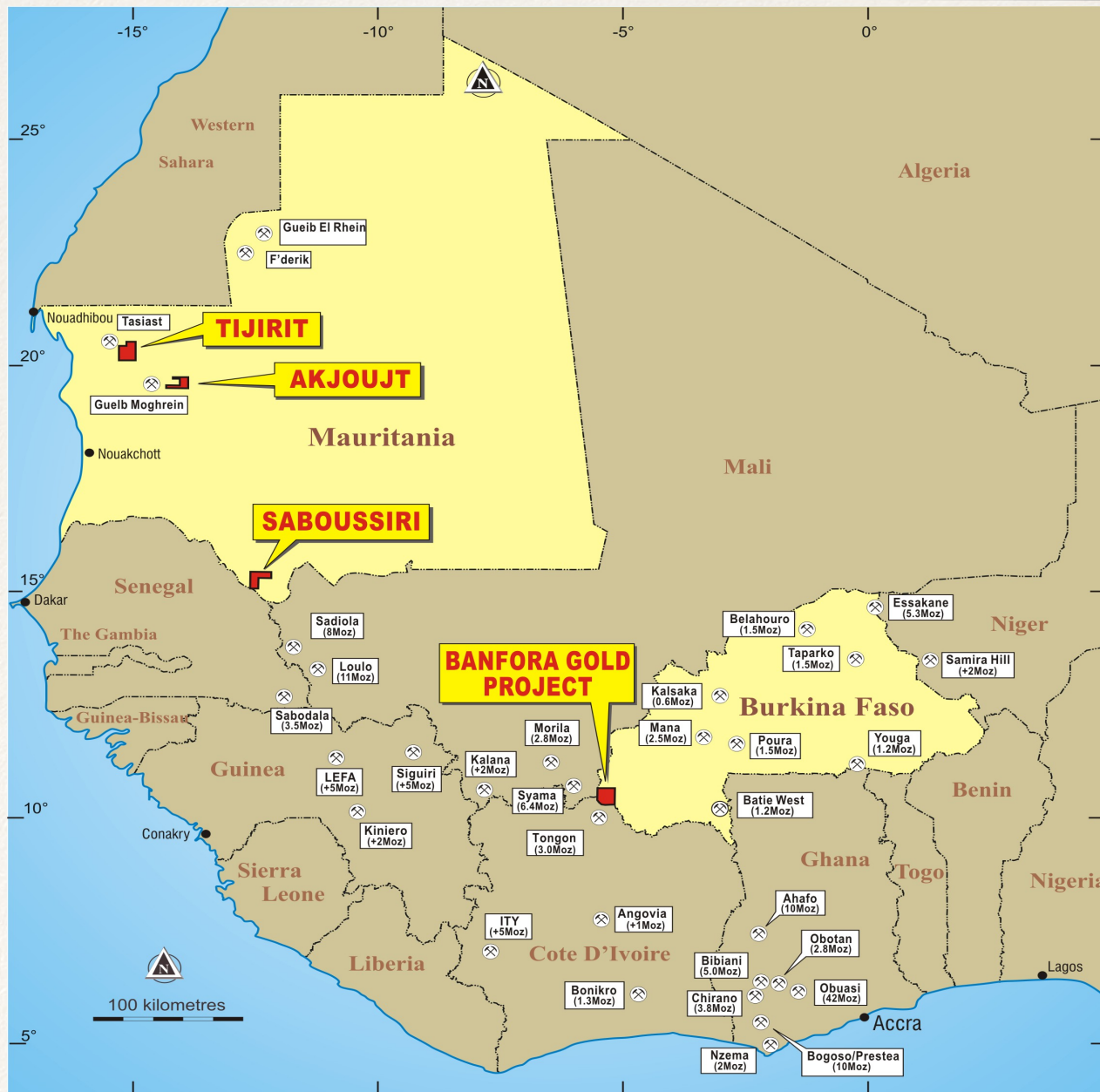
- | | |
|--------------------------------------|------------------|
| Kinross takeover of Redback Mining | \$A8,000 Million |
| Xstrata takeover of Sphere Resources | \$A 450 Million |
| Gryphon takeover of Shield Minerals | \$A 27 Million |







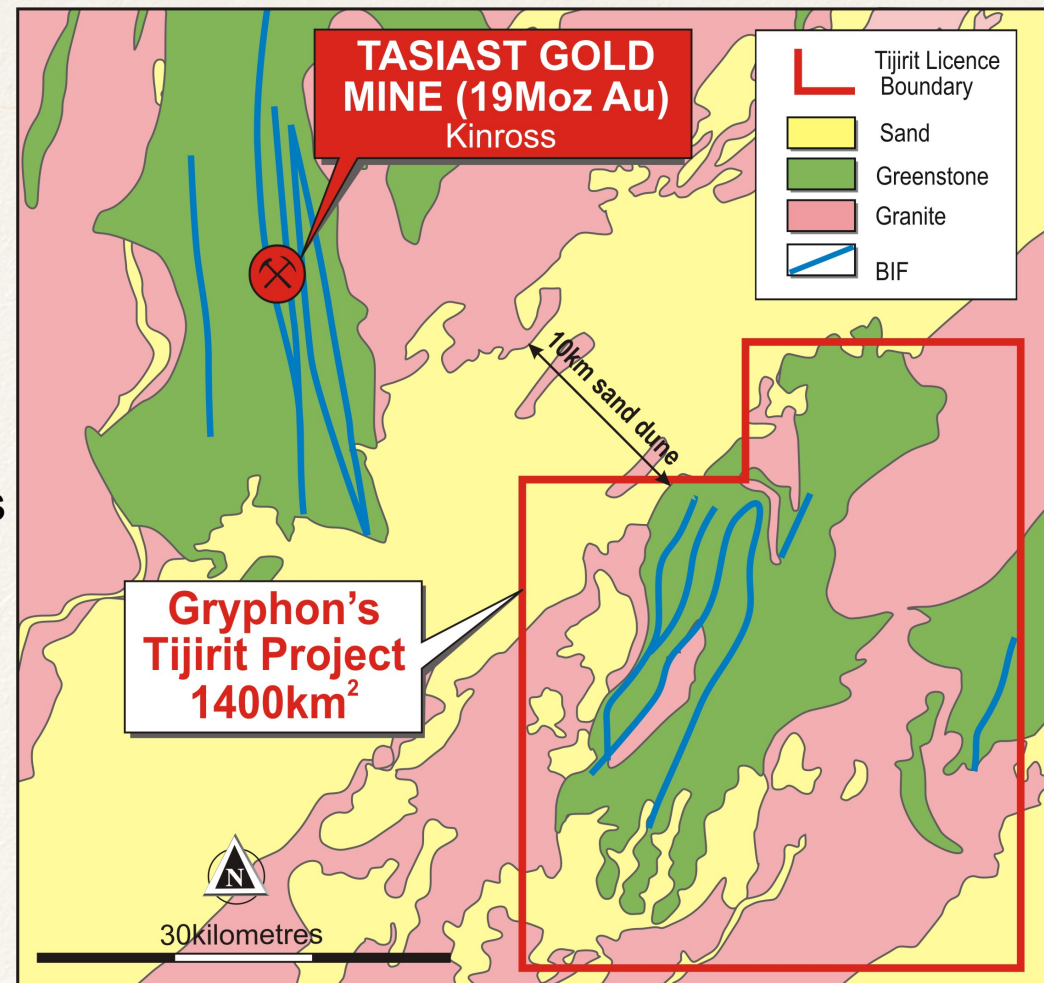
West Africa Mauritania





Tijirit Gold Project Mauritania

- 1400km² of under explored tenure
- Same geology, rock types and structures as Tasiast
- Only a sand dune separates Tasiast & Tijirit Gold Project
- To date only 1% of Tijirit Gold Project has had any drilling
- Historical Shield Mining reconnaissance drill results incl:
 - 6m @ 17.63g/t Au from 10m
 - 6m @ 10.47g/t Au from 16m
 - 2m @ 24.90g/t Au from 56m
- 30,000m drilling underway Q3/Q4 2011





Banfora Gold Project

- Step out & deeper drilling on current resource - underway
- Discovery drilling on satellite targets (20 high priority targets) - underway
- New regional exploration (mapping, geophysics, auger/recon drilling) - underway
- Resource upgrades - Q1 2012
- Detailed feasibility studies +3.5mtpa operation – Q2 2012

Mauritania

- Geological targeting (geophysics/ surface geochem/ diamond drilling) - ongoing
- Drill testing Tijirit - Q3/Q4 2011
- Drill testing Akjoujt - Q4 2011



Gryphon Minerals Value Drivers

Cash
A\$50m
June Q'tly 2011

Investments
ASX: RNS & TAW

Mauritania
Exploration pipeline

Banfora Regional
Multi-million oz gold district in 2011

Banfora Gold Project
2 million oz gold resource and growing

- ✓ **Focused West African gold explorer**
- ✓ **Dominant & strategic landholdings in Burkina Faso & Mauritania**
- ✓ **Significant resource base that continues to grow**
- ✓ **Aggressive and focused exploration in 2011**
- ✓ **Experienced team with a history of major discoveries in West Africa**



GRYPHON
MINERALS LIMITED

ASX:GRY

181 Roberts Road Subiaco Western Australia
Telephone: +61 8 9287 4333
Facsimile: +61 8 9287 4334
e. admin@gryphonminerals.com.au
www.gryphonminerals.com.au



**An S&P/ASX
200 Company**



Appendix One Biographies



Mel Ashton
Non Executive Chairman
Chartered Accountant
Ex Chairman of Institute of
Chartered Accountants



Steve Parsons
Managing Director
Geologist
ex Placer Dome, Platinum
Australia, CRAE



Didier Murcia
Non Executive Director
Lawyer
French speaking
& French legal system
Honorary Consul for Tanzania
Non-Exec Director Gindalbie Metals



Steven Zaninovich
Non Executive Director
Mining Engineer,
Numerous
West African mines
Senior BDO Lycopodium



David Netherway
Non Executive Director
Mining Engineer over 30yrs,
Wealth of Board experience with
gold mining companies including;
Afcen, Ashanti, Semafo, Orezone,
Equigold



Matthew Bowles
**Chief Development
Officer**
Ex Executive Director of
Ernst Young M&A
Ex Rio Tinto



Tim Holt
Chief Financial Officer
Ex Director Finance
Xstrata Nickel Sudbury
Operations
Ex Vice President
Finance BHP Billiton
Ekati Diamond Mine



Brett Dunnachie
Chief Financial Officer
Chartered Accountant
Ex-Audit Manager of
PricewaterhouseCoopers
Over 10yrs exp. corporate &
secretarial experience



Elliot Grant
Geologist

Steve Parsons
Managing Director

Daouda Souge
Sr. Burkina Faso Geologist

Sam Brooks
Senior Geologist

Michael Fox - Exploration Mgr Africa
ex Gallery Gold, IAMgold, African Gold Resources, WMC
ex Bank of West Australia resource project funding