



### **Investor Presentation**

**APRIL 2016** 



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Statements regarding plans with respect to the Company's mineral properties are forward looking statements. There can be no assurance that the Company's plans for development of its mineral properties will proceed as expected. There can be no assurance that the Company will be able to confirm the presence of mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties

#### **Competent Persons Statement**

The information in the report to which this statement is attached that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Eduard Eshuys, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Eduard Eshuys has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity 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 Eshuys consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

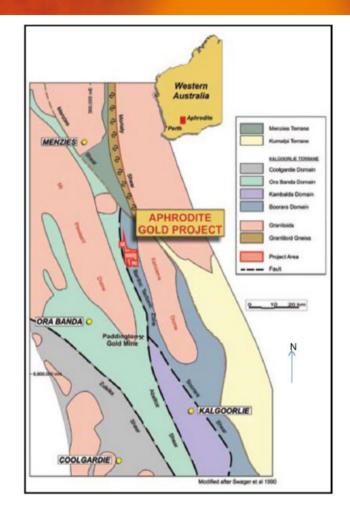
#### Notes on JORC Resource Estimate

The JORC Resource for the Aphrodite Gold Project consists of 16.40Mt @ 1.70g/t Au for 898,000 ounces (Indicated) and 12.34Mt @ 1.26g/t Au for 498,000 ounces (Inferred) totalling 28.74Mt @ 1.52g/t Au for 1.4 Million ounces of gold. This resource has been broken down into two domains; potential open pit (0 to 150m depth) and underground (below 150 to 540m depth). Potential open pit resources consist of 13.91Mt @1.21g/t Au for 542,000 ounces (Indicated) and 11.52Mt @1.00g/t Au for 369,000 ounces (Inferred) totalling 25.43Mt @ 1.11 g/t Au for 911,000ounces at a cut-off grade of 0.5g/t. Potential underground resources consist of 2.48Mt @ 4.47g/t Au for 357,000 ounces (Indicated) and 0.83Mt @ 4.79g/t Au for 128,000 ounces (Inferred) totalling 3.31Mt @ 4.55 g/t Au for 485,000 ounces at a cut off grade of 3.0g/t. Full details of the JORC resource are contained in the Company's ASX announcement of 12 June 2013.



### Summary

- Scoping Study completed by Entech Pty Ltd completed in February 2016 of open pit oxide/ supergene and transition mineralisation and released to ASX in March and April 2016.
- Open Pit possible operation of 1.1M tonnes @ 1.6g/t
   Au for 54,000 ounces outlined
- Total costs estimated, A\$1,100 per ounce including start-up, pre-strip capital of \$A15M and royalties
- Prefeasibility study to recommence with additional drilling, metallurgical testwork and other activities

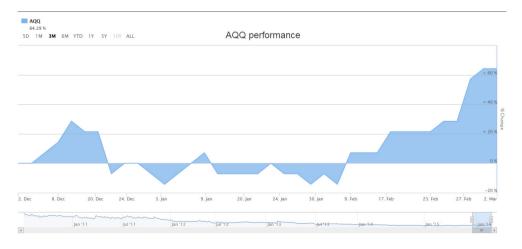




## Company Share price and Structure

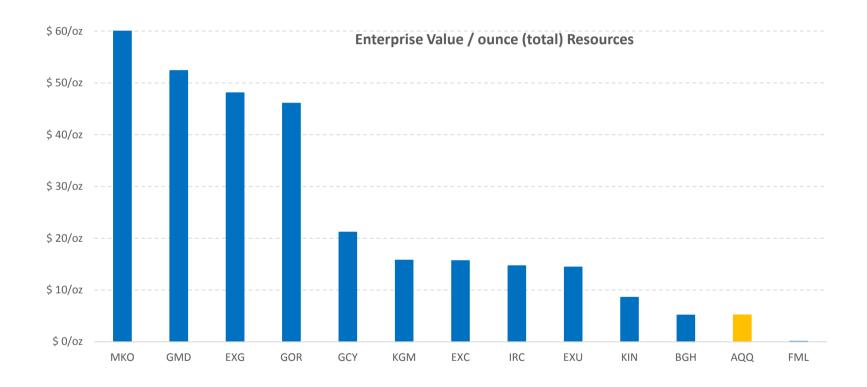
Aphrodite Gold Limited ASX: AQQ						
Share price	\$0.020					
Shares on issue	467 million					
Market capitalisation	\$9.2 million					
52 week range	\$0.006-\$0.024					
Options maturing 31/07/17 Ex. @ \$0.025	35 million					

No of Shares (m)	% of total
203	44.25
30.0	6.53
28.0	5.97
	1.38
	1.25
	203





### Market cap per ounce



Based on the company's market capitalisation of \$9.2M the resource ounces are valued at \$6.60 per resource ounce



### JORC 2012 Mineral Resource Estimate (See Appendix)

- Open Pit Resource
  - 25.4M tonnes @ 1.1 g/t gold for 900,000 ounces
- Underground Resource
  - 3.3M tonnes @ 4.6 g/t gold for 485,000 ounces
- Total Resource
  - 28.7M tonnes @ 1.5 g/t gold for 1.4M ounces



### Entech 2016 Scoping Study of Oxide & Transitional Material

- Geology- the block model is a diluted and recovered resource model, which takes into
  account mining dilution as well as ore recovery
- Processing- metallurgical recovery of oxide/transition mineralisation 93%
- Geotechnical- no detailed geotechnical information is available. Entech used the knowledge of similar scale gold open pit operations in Eastern Goldfields WA to determine open pit slope angles.
- Hydrology- no detailed hydrological information was available. Entech estimated water pumping requirements to control any water inflows into the open pits.



### Entech 2016 Scoping Study Economic Parameters

- Processing cost of \$18.00/ $t_{ore}$ , additional cost of \$4.00/ $t_{ore}$  for general/administration and \$1.00/ $t_{ore}$  for grade control activities, resulting in a total processing input cost of \$23.00/ $t_{ore}$ .
- Open pit mining costs ranged from \$1.94 to \$2.42 per bcm for mineralized material and \$1.84 to \$2.31per bcm for waste from surface to depth of 100m respectively.
- Provisional capital costs for clearing and land disturbance of the open pit, allowance for on-site offices and laydown areas, and rehabilitation of the surface waste dumps are included
- Thus mining cost per tonne of mineralized material is estimated at \$25 per tonne, processing and other charges \$23 per tonne, royalties (State Government and Franco Nevada) \$3.85, for a total cost of **\$51 per tonne of ore**;

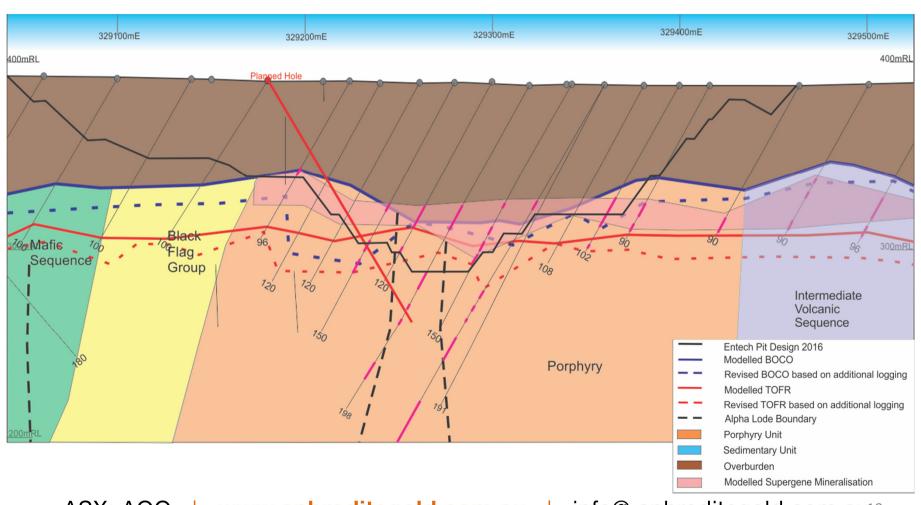


# Scoping Study February 2016 Parameters

- Processing at an onsite conventional carbon in pulp/ leaching processing plant
- Entech used current mining, labour and services costs prevailing in the industry
- Australian gold price of \$1,600 per ounce assumed
- Cut of grade for the geological block model of 0.5g/t
- Comprehensive internal review of the depth extent of the transition zone mineralisation was completed as shown on next slide



# Depth Extent to transition zone





# Stage 1 Oxide/Transition Starter Pit- Design

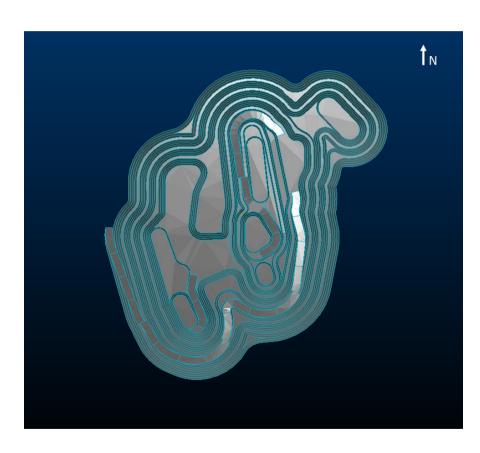
- The pit extends approximately 450m in the north-south direction and approximately 400m in the east-west direction and to a maximum depth of approximately 100m.
- The use of 15m wide single lane ramps at a gradient of 1:10
- 15:1 waste to mineralised material strip ratio
- Pit wall angles

Deposit	Wall Location	Oxide	Transitional	Fresh
	North	32	40	52
Anhrodita Cold	East	32	40	52
Aphrodite Gold	South	32	40	52
	West	32	40	52

 The large extent of the proposed open pit, and the oxide overburden material, allow utilization of a large equipment fleet achieving high material movement rates. The mineralised zones are predominantly toward the base of pit, further allowing increased waste material movement rates in the upper benches of the mineralised zones



## Stage 1 Oxide/Transition Starter Pit



Open Pit Mine Design (isometric view Showing ore > 0.7g/t Au)

Open Pit Plan View



## Entech Scoping Study Results of Proposed Stage 1

- Open pit possible operation of 1.1Mt of ore grading 1.6g/t for 54,000 recoverable gold ounces
- Move a total of 7.9 bcm of waste and mineralised material. Waste to mineralised material ratio 15: 1
- 7 months to cash positive flow from start date. All mining and processing completed within 17 months of start up
- Mined to depth of 100 meters.
- Maximum cash outlay of A\$15M to remove overburden prior to gold production
- Total cash costs including royalties A\$1,100 per ounce



# Entech Scoping Study Results of Proposed Stage 1

Summary of Physicals and Costs		Total	2017	2018
Surface Mining				
Waste Mined	BCM	7,402,572	6,740,681	661,891
Ore Mined	BCM	506,241	259,319	246,922
Total Movement	BCM	7,908,813	7,000,000	908,813
Ore Mined	t	1,123,845	544,840	579,005
Strip Ratio	Waste:Ore	14.6	26	3
Grade Mined	g/t	1.6	1.5	1.7
Processing				
Processed Tonnes	t	1,123,845	447,844	676,001
Processed Grade	g/t	1.6	1.5	1.7
Recovery	%	90.8%	94%	89%
Recovered Grade	g/t	1.5	1.4	1.6
Recovered Metal	oz	54,085	20,328	33,757
Costs				
Mining	\$	28,256,730	23,513,926	4,742,803
Processing	\$	20,229,206	8,061,185	12,168,021
General Administration	\$	4,495,379	2,179,358	2,316,021
Open Pit Infrastructure Capital	\$	1,308,204	1,308,204	-
Total Project Costs	\$	54,289,519	35,062,674	19,226,845



# Entech Scoping Study Results of Proposed Stage 1

			Total	2017		2018	
Unit Cost Analysis (\$/t ore processed)							
Mining Costs (Ore and Waste)	\$/t processed	\$	25.14	\$	52.50	\$	7.02
Concentrate Costs	\$/t processed	\$	18.00	\$	18.00	\$	18.00
Administration	\$/t processed	\$	4.00	\$	4.87	\$	3.43
C1 cash costs	\$/t processed	\$	47.14	\$	75.37	\$	28.44
				_			
Depreciation	\$/t processed	\$	-	\$	-	\$	-
C2 cash costs	\$/t processed	\$	47.14	\$	75.37	\$	28.44
Davidea	¢/	_	2.05	ф	2.02	Φ.	2.00
Royalties C3 cash costs	\$/t processed	\$	3.85	\$ <b>\$</b>	3.63	\$	3.99
C3 cash costs	\$/t processed	Þ	50.99	<b>\$</b>	79.00	Ъ	32.44
All in Sustaining Costs	\$/t processed	\$	50.99	\$	79.00	\$	32.44
Unit Cost Analysis (\$/oz)							
Mining Costs (Ore and Waste)	\$/Rec oz	\$	522.45	\$	1,156.70	\$	140.50
Other Costs	\$/Rec oz	\$	398.21	\$	460.90	\$	360.46
Administration	\$/Rec oz	\$	83.12	\$	107.21	\$	68.61
C1 cash costs	\$/Rec oz	\$	1,003.78	\$	1,724.81	\$	569.57
Depreciation	\$/Rec oz	\$	-	\$	-	\$	_
C2 cash costs	\$/Rec oz	\$	1,003.78	\$	1,724.81	\$	569.57
Royalties (Government & Franco-Nevada)	\$/Rec oz	\$	80.00	\$	80.00	\$	80.00
Corporate Costs	\$/Rec oz	\$	-	\$	-	\$	-
C3 cash costs	\$/Rec oz	\$	1,083.78	\$	1,804.81	\$	649.57
Sustaining Capex	\$/Rec oz	\$	_	\$	_	\$	_
All in Sustaining Costs	\$/Rec oz	\$	1,083.78	\$	1,804.81	\$	649.57



## Future Pre-feasilbilty Study Activities

- The integration of the 2012 and 2016 scoping studies to facilitate a new prefeasibility study as the next step, which will incorporate:
  - Drilling for geotechnical purposes to assist with cost estimates of mining the overburden and confirm the overall open pit wall angles.
  - Infill drilling to improve the understanding of gold grade distribution of the oxide/supergene and transition zone.
  - Additional metallurgical testwork on the transitional zone mineralisation.
  - Additional work on selecting the optimal process to treat the primary ores.



## Pre-feasibility Study Metallurgy

- Strategic Metallurgy Pty Ltd engaged and provided scope of work for metallurgical testwork to produce a gold concentrate to be processed by Pressure Oxidation (POX) on site or toll treated
- 3 phase test work programme
  - To confirm metallurgical response of a composite of the mineralisation and flow sheet development.
  - To determine spatial/ lithological variability of mineralisation types
  - Process engineering and economic assessment
- The 3 phases will provide details of the OPEX and CAPEX required for processing the oxide, transition and primary refractory. This will build on previous metallurgical work
- Testwork indicates that oxidation of arsenopyrite releases gold prior to pyrite during POX
- Testwork to be completed for a total cost of \$120,000 in 3 months after drilling completed



# **Pre-feasibility Study Costs**

	TOTAL	\$1.85M
Contingency		\$200,000
Consultants & Management		\$250,000
Open Pit optimisation- Entech		\$75,000
Resource Modelling		\$50,000
Environmental and Government Approvals		\$300,000
Metallurgical Testwork		\$120,000
Drilling- resource definition, metallurgical, geotechnical		\$850,000



### Pre-feasibility study timeline

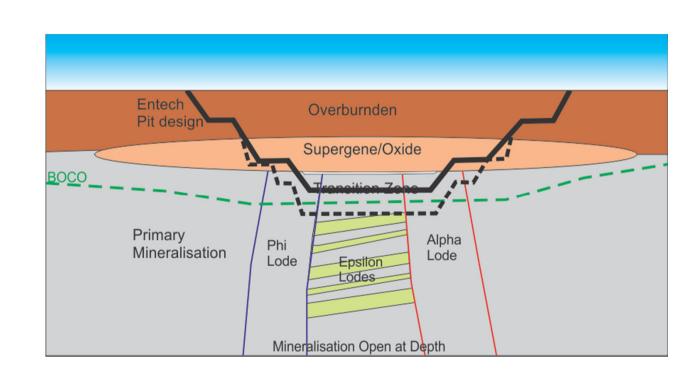
- Drilling commences 1st August
- Environmental approvals occurs concurrently from 1<sup>st</sup> August
- Metallurgical testwork starts 1<sup>st</sup> September
- Resource Modelling- 1<sup>st</sup> November
- Open pit optimisation follows resource modelling- 1st December
- All work completed by **February 2017**



### **Future Development Strategy Summary**

#### **3 Stage Development**

- Open Pit oxide and transition zone, CIP/CIL plant or toll milling
- Open Pit transition and primary refractory ore POX processing
- 3. Underground primary mineralisation





### Stage 2- Open Cut Transition and Primary Mineralisation

The completion of pre-feasibility study as **Stage 1**, the company may then proceed to

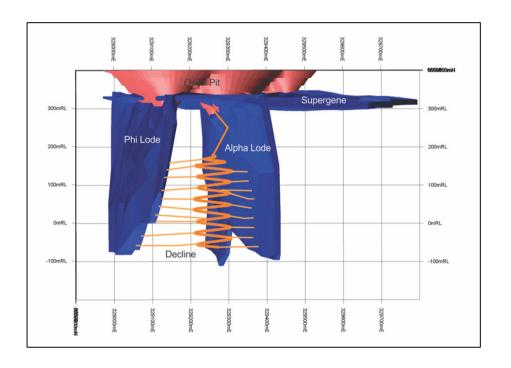
- Investigate an open pit depth extension to approximately 170 meters to mine the refractory mineralisation below the transition zone which may include a cut back of the Stage 1 pit
- Optimise the depth to change from open pit mining to underground mining



### Stage 3 Underground Mining of Primary Mineralisation

Underground Indicated and inferred mineral resource of 3.3M tonnes @ 4.6 g/t gold ,
 485,000 ounces using a 3.0 g/t cut-off grade

 Scoping Study 2012 estimated operating costs, underground mining @ \$50/tonne and POX processing @ \$28/tonne

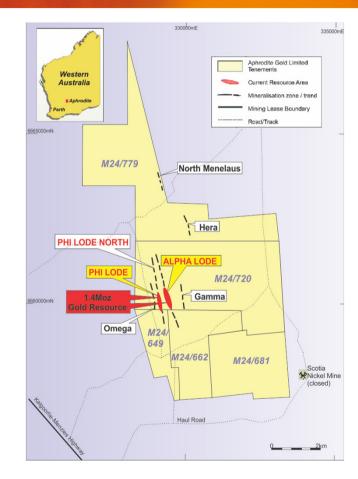


The scoping study referred to in this report is based on low level technical and economic assessments and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the scoping will be realised.



### Stage 4 Further Discovery Potential

- Aphrodite resource remains open at depth historic high grade intersections occurred between 440m and 600m depth of 24m@7.1g/t Au and 18m@5.6 g/t Au
- Along Strike drilling doubled the mineralised strike length of Phi lode; 4m@3.7g/t Au incl. 1m@13.5g/t Au, 52m @ 1.4g/t Au from 308m
- Epsilon Lodes Prospective high grade lodes occur between Alpha and Phi lodes with intersections of; 12m@10.9g/t Au and 2m@31.0g/t Au
- Other Exploration targets include:
   North Menelaus Prospect; with best result 4m@11.4g/t Au





### Conclusions

- Aphrodite resource of 1.4M ounces is favorably located close to Kalgoorlie and valued at only \$6.50 per resource ounce
- Improvement in gold price to A\$1,600 per ounce and reduction in operating costs has occurred
- February 2016 Scoping Study results include total cash cost of A\$1,100 per ounce, possible mining operation producing 54,000 recovered ounces, maximum capital outlay of \$15M
- Pre-feasibility Study and additional drilling to lead way to the potential three stage development of Aphrodite at a cost \$1.8M
- Potential remains to expand the current mineral resources along strike and at depths below 400 meters



### **Board and Management**

### Peter Buttigieg Non-Executive Chairman

Peter is an IT Professional with over 30 years industry & business management experience. He is Founder and Managing Director of RMS (Aust.) Pty Ltd – a successful and widely used business that designs IT Systems for the global hospitality, mining, defence and shopping centre industries.

#### **Roger Mitchell**

#### **Non-Executive Director**

Roger has extensive experience across Australia and South East Asia including 15 years experience in developing substantial media projects in Singapore and Japan.

#### Angus Middleton

#### **Non-Executive Director**

Angus brings extensive experience in equity markets and minerals exploration companies.

#### **Paul Buttigieg**

#### Non-Executive Director

Paul assisted Aphrodite raise its pre-IPO funds in 2009 and also assisted in subsequent capital raisings. Paul is experienced in developing and maintaining shareholder / stakeholder business relationships.

#### **Eduard Eshuys**

#### Consultant

Eduard is a geologist with over 40 years of experience in minerals exploration, development and operation of gold and nickel mines in Australia. He led the exploration teams that discovered several major Australian gold deposits, including Plutonic, Bronzewing and Jundee.

#### **Michael Beer**

#### **Company Secretary**

Michael is a Chartered Accountant and Chartered Secretary who has also floated and run a gold exploration company as MD and Company Secretary, and taken that company from a grass roots explorer to a gold producer within 4 years of listing.



## Appendix- JORC Resource estimate – 1.4 Mozs

Resource Summary at cut off of 0.5 g/t gold applied to potential open pit (OP) mineable resources and 3.0 g/t for the underground (UG) mineable resources.

	Indicated				Inferred			Indicated & Inferred		
Domain	Cut Off (g/t)	Tonnes (Mt)	Grade (g/t)	Gold (koz)	Tonnes (Mt)	Grade (g/t)	Gold (koz)	Tonnes (Mt)	Grade (g/t)	Gold (koz)
O/P	0.5	13.91	1.21	542	11.52	1.00	369	25.43	1.11	911
U/G	3.0	2.48	4.47	357	0.83	4.79	128	3.31	4.55	485
Total		16.4	1.7	898	12.34	1.26	498	28.74	1.52	1,396

#### Resource Notes:

- All resource estimates are undiluted
- Resources estimated by Ordinary Kriging (OK)
- Density factors applied: Oxide = 1.75, Transitional = 2.4, Primary = 2.75
- All errors are due to rounding
- Aphrodite Gold has completed 305 RC holes for an aggregated length of 47,589m out of a total of 953 RC and DDH holes for 159,147m. The revised resource is based on 788 of these holes
- Announced to ASX in June 2013



# Drilling metres

•Resource definition drilling 3000m for 17 holes

•Geotechnical Drilling 400m for 4 holes

•Metallurgical Drilling 500m for 5 holes



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