

ASX Announcement - 20 December 2013

Marda Gold Project: Feasibility Study Review Additional Information

On 10 December 2013, Southern Cross Goldfields (ASX: **SXG** – "SXG" or "the Company") released an announcement relating to the recent revision of its feasibility study for the Marda Gold Project located in Western Australia.

Further to that announcement the Company wishes to provide the following additional information.

- a) The feasibility study update was based on a review of the study undertaken in 2012 which was documented in the announcement entitled "SXG set to open up new WA gold province with Marda Gold Development" released on 10th May 2012 ("May 2012 Announcement").
- b) As the reported Mineral Resources and Ore Reserves are consistent with, and extracted from, the May 2012 Announcement, SXG is also required to advise that: "This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported."
- c) SXG confirms that all the material assumptions underpinning the production target as stated in the May 2012 Announcement continue to apply and have not materially changed. However, in satisfaction of ASX Listing Rules 5.16 and 5.17, SXG restates these assumptions and includes other assumptions relating to forecast financial information. These are shown in Appendix 3 to the revised announcement.

The changes above have been included in the revised announcement on the following pages. No other material changes have been made to the announcement released on 10 December 2013.

SXG reiterates that the revised study delivers robust economics placing the project as one of the most attractive gold project development opportunities in Australia.

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For further details, please contact Frank Terranova, Managing Director, Southern Cross Goldfields Ltd Telephone: +61 7 3221 6022, email frankt@scross.com.au Refer to www.scross.com.au



Marda Gold Project: Feasibility Study Review **Confirms Robust Economics**

Highlights

Attractive project: IRR 90% and NPV₁₀ \$41M at A\$1,350 per oz gold price

A\$1,007 per oz

- Low establishment cost: \$24M required to fund project
- A\$784 per oz Low cash cost:
- All-in sustaining costs:
- Gold production:
 - 167,000 oz over 4 years Permitting near complete: approval expected Q2 2014
- Southern Cross Goldfields (ASX: SXG "SXG" or "the Company") has completed a revision of its feasibility study for the Marda Gold Project located in Western Australia. This indicates the potential to generate significant returns based on current Reserves.

SXG's substantial and prospective landholding in the Marda region strengthens the Project's value proposition with respect to increasing project life and scale.

"The combination of robust and sustainable economics, near-term production, and the under-explored nature of this Project makes the Marda Gold Project one of the most attractive development opportunities in Australia". Managing Director Frank Terranova said.

"The merger of SXG and Polymetals Mining Limited ("Polymetals" or "PLY") in 2013 ensured that a proven team with a successful track record in project development and asset optimisation would add value to the Marda Project. The revised feasibility study is the first step in doing this.

"The Marda region is ripe for new development activity in the form of regional consolidation and also of companies seeking access to strategically located infrastructure. The region is a compelling Australian gold province."



Project background

SXG holds approximately 1,700 km² of tenements within the highly prospective Marda-Diemals Greenstone Belt in the Southern Cross district of Western Australia (Figure 1). The Marda district is a highly prospective gold province that has neither benefited from access to a modern processing facility, nor from the intense exploration activity that has occurred in the Sandstone and Southern Cross districts.

With Mineral Reserves defined for an initial ten deposits within the district, SXG is strategically positioned in one of the most prolific Australian gold provinces as a genuine greenfield development opportunity.



Figure 1: Marda Gold Project Location and Tenements



In August 2012, SXG announced the acquisition of the Sandstone Gold Project including a 600,000 tpa gold processing facility and a 100-person camp with a view to relocating these assets to support cost effective development of the Marda Project. In August 2013, SXG completed the merger with Polymetals which brought together the advanced Marda Gold Project with Polymetals' distinctive in-house project development expertise.

Revised Feasibility Study results

Prior to the SXG-PLY merger, internal Project cost estimates had been trending adversely. The Company has since completed an extensive re-evaluation of the development methodology, operational strategy and cost estimates which has identified an improved economic outcome could be attained by configuring the process facility to treat 720,000 tpa and produce around 50,000 oz pa of gold.

The key economic results are summarised in Table 1; the key assumptions are set out in Table 2.

Project returns	Revised study	June 2013 study
Gold price assumption (A\$/oz)	1350	1350
NPV ₁₀ (A\$M) ¹	41	13
IRR (%)	90	24
Free cashflow (A\$M)	57	27
Pre-production capital (A\$M)	24	38
Production rate (koz pa)	50	35
Mine life (years)	3.5	4.8
Payback (years)	1.2	2.7
Cash costs (A\$/oz)	784	906

Table 1: Feasibility Study Financial Outcomes (pre-tax)

Table 2: Feasibility Study Assumptions

Mill feed tonnes	Mt	2.4
Mill feed grade	g/t Au	2.29
Metallurgical recovery	%	93
Gold produced	koz	167
Treatment rate	ktpa	720
Mine life	years	3.5
Capital cost	A\$M	31.7

¹ NPV₁₀: The Net Present Value of the Project calculated using a discount rate of 10% pa.



Sensitivity to gold price

The sensitivity of the Project's financial outcomes to gold price is shown in Table 3.

	Gold Price	A\$1,200	A\$1,300	A\$1,400	A\$1,500
Pre-tax NPV ₁₀	A\$M	21.4	34.6	47.8	61.0
Pre-tax IRR	%	51	77	103	130
Payback years	years	1.7	1.3	1.0	0.8
Capital cost	A\$M	31.7	31.7	31.7	31.7
Cash requirement	A\$M	24.4	24.4	24.4	24.4
Cash costs	A\$/oz	784	784	784	784
Total costs	A\$/oz	1,004	1,006	1,009	1,011

Table 3: Sensitivity to gold price

Permitting

SXG has completed comprehensive Project baseline and supporting environmental studies and has also undertaken extensive consultation with stakeholders. The Company is now ready to submit its Mining Proposal and associated Mine Closure Plan to the WA Department of Mining & Petroleum for consideration and approval. Based on consultation to date, SXG expects the necessary approvals to commence site development works in Quarter 2, 2014.

Resources and Reserves

The production target is developed from Proved and Probable Ore Reserves. The Resources and Reserves summarised in Appendix 1 comprise ten separate deposits: four deposits surrounding the proposed "Marda Central" project hub (Dolly Pot, Dugite, Python and Goldstream), two satellite deposits within 15km of Marda Central (Golden Orb and King Brown), two satellite deposits located north of Marda Central (Die Hardy and Red Legs), and two satellite deposits located south of Southern Cross (British Hill and Battler).

Mining

All of the Marda gold deposits comprise fully weathered (i.e. oxide) ore and all are amenable to conventional open pit mining methods. Final open pit depths vary from 40m to 95m across the deposits. The overall strip ratio for the project is 6:1 (waste:ore). It is planned to undertake owner-mining using a fleet comprising a single 120t excavator, four trucks and ancillary equipment.

Mine scheduling has been developed to ensure economic equipment logistics and optimum utilisation of the fleet.



Processing

Marda ore is amenable to conventional gold processing processes comprising crushing, grinding, carbon-in-leach (CIL) and gold recovery. Gravity concentration is also planned to maximise the recovery of gold and minimise processing costs.

A 1,800 kW ball mill is to be procured and installed in the circuit to enable the required processing rate of 720,000 tpa. Otherwise, the existing Sandstone facilities provide sufficient capacity to accommodate the increased throughput rate. Water supply is to be provided by a local bore field and power is to be supplied by a diesel-fired power station relocated from Sandstone. Tailings are to be stored in a conventional paddock-style tailings dam located adjacent to the facilities at Marda Central.

Schedule

The Project schedule remains subject to the finalisation of an appropriate funding package. Assuming timely achievement of Project financing and permitting approvals, construction, comprising refurbishment and relocation of the Sandstone facilities along with installation of new equipment and infrastructure, is scheduled to commence in June 2014 and planned to be completed by December 2014.

With this schedule, mining is planned to commence in October 2014, starting at the Marda Central deposits, with first gold production achieved in Quarter 1 2015 (refer to Appendix 2).

The information in this announcement on Mineral Resources and Ore Reserves is extracted from the announcement entitled "SXG set to open up new WA gold province with Marda Gold Development" released on 10th May 2012 and available to view on <u>www.scross.com.au</u>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that, in the case of estimates of Mineral Resources or Ore Reserves, all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

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Deposits	Measured				Indicated			Inferred		Total				
	Dry Tonnes	Gold Grade	Gold Ounces	Dry Tonnes	Gold Grade	Gold Ounces	Dry Tonnes	Gold Grade	Gold Ounces	Dry Tonnes	Gold Grade	Gold Ounces		
	(k/t)	(g/t Au)	(koz)											
Python	569	1.85	34	14	1.68	1	32	1.8	2	615	1.8	36		
Dugite	294	1.88	18	8	1.50	0	11	1.4	0	312	1.9	19		
Goldstream	100	4.36	14	63	2.59	5	74	3.0	7	238	3.4	26		
Dolly Pot	416	3.01	40	103	1.97	7	176	1.8	10	694	2.5	57		
King Brown	738	1.95	46	40	1.62	2	192	1.9	12	970	1.9	60		
Golden Orb	210	1.95	13	1	1.41	0	1	1.3	0	212	1.9	13		
Die Hardy	-		-	319	2.40	25	361	1.9	22	680	2.2	47		
Red Legs	-		-	983	1.49	47	589	1.5	28	1,572	1.5	75		
British Hill	-	-	-	970	1.88	59	951	1.5	46	1,921	1.7	105		
Battler	361	2.69	31	39	3.46	4	52	3.5	6	453	2.9	42		
TOTAL	2,688	2.27	197	2,542	1.83	150	2,437	1.70	133	7,668	1.95	480		

APPENDIX 1 – Marda Gold Project Mineral Resources and Ore Reserves SOUTHERN CROSS GOLDFIELDS - MARDA GOLD PROJECT Mineral Resources

SOUTHERN CROSS GOLDFIELDS - MARDA GOLD PROJECT

Ore Reserves

Deposits	Proved				Probable		Total				
	Dry Tonnes	Gold Grade	Gold Ounces	Dry Tonnes	Gold Grade	Gold Ounces	Dry Tonnes	Gold Grade	Gold Ounces		
	(k/t)	(g/t Au)	(koz)	(k/t)	(g/t Au)	(koz)	(k/t)	(g/t Au)	(koz)		
Python	526	2.00	34	3	1.50	0	528	2.0	34		
Dugite	210	2.00	13	0	1.50	-	210	2.0	13		
Goldstream	86	2.50	7	-	-	-	86	2.5	7		
Dolly Pot	356	1.80	21	0	1.20	-	356	1.8	21		
King Brown	85	4.70	13	12	2.90	1	97	4.5	14		
Golden Orb	262	3.30	27	9	2.10	1	271	3.2	28		
Die Hardy	-	-	-	369	1.61	19	369	1.6	19		
Red Legs	-	-	-	155	3.05	15	155	3.1	15		
British Hill	-	-	-	70	4.60	10	70	4.6	10		
Battler	130	3.90	16	6	5.90	1	136	4.0	17		
TOTAL	1,653	2.46	131	625	2.37	48	2,277	2.44	179		



Southern Cross Goldfields Ltd

APPENDIX 2 – Marda Gold Project Development Schedule

Marda Project Development and Operations Schedule

Quarte	er Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
Permitting																					
Permitting - Marda Central																					
Permitting - Red Legs / Die Hardy																					
Permitting - British Hill / Battler																					
Financing																					
Financing																					
Construction																					
Construction																					
Operations																					
Mining																					
Processing																					





Production Target Assumptions

The feasibility study revision is based on a review of the study originally undertaken in 2012 and documented in the announcement entitled *"SXG set to open up new WA gold province with Marda Gold Development"* released on 10th May 2012 ("May 2012 Announcement"). The study identified economically mineable open pit deposits from which an Ore Reserve estimate was determined using accepted industry practices. This is unchanged from the 2012 study.

The open pits for each deposit were optimised using the Whittle Four-X implementation of the Lerchs–Grossman algorithm. Ore delineation within Whittle is based upon cash flow, whereby material is first categorised by comparing the cash flow produced by processing the material to the cash flow produced by treating it as waste. Where the cash flow from processing is higher, the material is categorised as ore, otherwise it is categorised as waste. Material is defined as ore when revenue less fixed, mining, processing and realisation costs is greater than zero. In the original study, Whittle pit shell optimisations were generated using a gold price of A\$1,485/oz and this remains unchanged for the revised study.

The deposits will be mined using conventional drill and blast and excavator and truck mining methods. The mining fleet will consist of a 120t excavator, four 40t off-highway trucks, a top hammer drill rig, dozer, grader and ancillary equipment.

The production target mill feed mined includes a global dilution factor of 5% @ 0.3g/t Au and a mining recovery of 100%. This reflects the degree of selectivity (the SMU) expected for the proposed mining method practically achievable with the mining fleet utilised, and a plan to maximise ore recovery during mining.

Geotechnical inputs for the optimisation and mine design process have been based on geotechnical evaluations. The pit slopes are variable by deposit, depending on pit depth.

Whittle Open Pit Optimisation Inputs

Item	Input			
Gold Price	AUD\$1,485 per ounce			
Metallurgical Recovery	95%			
State Government Royalty	2.5%			
Unit Processing Operating Cost	\$35 per tonne of ore treated			
Pit Wall Angles	45 degrees overall average			
Unit Mining Cost (ore and waste)	\$4.00 per tonne increasing by \$0.10 per tonne every 10 vertical metres below			
	surface			
Unit Mining Cost (grade control)	\$2.50 per tonne of ore			
Ore haulage	Distance*\$0.067/t.km plus \$3.70/t			
Smallest Mining Unit (SMU)	2.0 to 2.5 metres wide, 5 metres along strike, 2.5 metres deep.			

Operating costs and other parameters used in the Whittle open pit optimisations are shown in the table below.

Processing inputs

Metallurgical recovery is based on metallurgical testwork conducted to date including confirmatory metallurgical testwork conducted in early 2012 on samples taken from the deposits from selected metallurgical diamond drilling core.

Unit processing costs have been estimated from first principles and include labour, maintenance, reagents, consumables, power, administration and miscellaneous components.



Mining inputs

Pit wall angles have been estimated based on geotechnical drilling and assessment conducted to date including geotechnical analysis conducted by Mike Turner and Associates conducted in early 2012 and based on geotechnical specific diamond drilling conducted at deposits in 2011.

Unit mining costs have been estimated from first principles and include mobile equipment ownership costs, labour, administration, flights, accommodation, explosives, blasthole drilling, grade control, geology, mining engineering, maintenance, fuel, consumables, dewatering and miscellaneous. Ore haulage costs have been estimated using accepted industry benchmarks. The SMU selected is considered appropriate to the size of equipment selected for mining of the proposed open pits.

Capital Cost Estimate

Pre-production capital costs were estimated on the basis of using a combination of new and second-hand equipment for infrastructure and the Sandstone gold processing plant. The capital cost estimates include a contingency of 10%. A summary of the anticipated capital cost is shown in the table below.

ltem	Description	Estimate (A\$M)	
Infrastructure	Gold ore processing plant, ROM pad, tailings dam, offices, workshops, accommodation camp, airstrip, power station, fuel storage facilities, bore field, explosives magazine, access roads, ore haulage roads, construction earthworks, construction overheads.	21.6	
Pre-production operating costs	Mining and administration costs incurred prior to first gold production	2.8	
Total		24.4	

An additional \$7.2M of sustaining (post-production) capital cost, to be funded from project cash flows, is also required to establish and maintain site roads during the production phase of the operation.

Operating Cost Estimate

Unit operating costs have been estimated from first principles and are summarised in the table below.

Item	Unit Rate	Unit Rate
	(A\$/t ore*)	(A\$/oz of recovered gold)
Mining *	19.07	323
Processing	26.14	382
Administration	5.42	79
Total	50.63	784

*The mining unit cost is calculated by dividing the total mining operating costs by the total tonnes of ore mined.

The unit mining operating cost per tonne of ore and waste mined is \$3.27 per tonne.

Escalation has not been applied to capital and operating costs in the financial analysis of the project.

Gold Price used in the Feasibility Study

A gold price of A\$1,350/oz has been used to estimate revenue from gold sales in this revision of the study based on a conservative approximation of recent spot prices. Should hedging be undertaken as part of a funding or risk mitigation strategy, higher gold prices and resultant revenues could be expected.