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15 April 2015

COPPER HILL SCOPING STUDY

- Scoping Study completed as planned
- Project outcomes support commencement of a Pre-Feasibility Study (PFS)
- Enhanced Metallurgical Recoveries for higher grade samples
- Opportunities for further project enhancements identified
- Significant exploration potential at depth

Golden Cross Resources Limited (**ASX:GCR**) is pleased to announce that further to the ASX releases on 5 and 24 March 2015, the Scoping Study for a 2 - 3Mtpa (Million tonnes per annum) development, based on the 28Mt higher grade resource is now complete.

The Production Target referred to in this announcement is based on Indicated Mineral Resources (67%) and Inferred Mineral Resources (33%). There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration will result in determination of further Indicated Mineral Resources or that the production target or preliminary economic assessment will be realised.

Outcomes from the Scoping Study are positive and the Company plans to commence a Pre-Feasibility Study as soon as possible, for this style of development at Copper Hill.

Resource Estimate

The updated Copper Hill Scoping Study is based on the updated JORC 2012 compliant Resource Estimate*, released to ASX on 24 March 2015. This estimate honours the structural controls and geology of higher grade mineralisation and is summarised below in Table 1 extracted from the 24 March 2015 report. The 28Mt higher grade resource, and its Indicated and Inferred Mineral Resource components calculated using a 0.4% copper cutoff, on which this Scoping Study is based, is highlighted in Table 1 below.

Resource	Cutoff	Volume	Tonnes	Density	Gra	des	M	etal
Category	(Cu%)	(Mm3)	(Mt)	(t/m3)	Cu %	Au (g/t)	Cu (t)	Au (oz)
	0.20	18	47	2.6	0.40	0.39	190,000	590,000
Indicated	0.30	10	27	2.6	0.52	0.52	140,000	460,000
Indicated	0.40	7.2	19	2.6	0.59	0.62	110,000	380,000
	0.50	4.4	11	2.6	0.68	0.74	78,000	270,000
Inferred	0.20	15	39	2.6	0.32	0.24	130,000	300,000
	0.30	6.1	16	2.6	0.44	0.30	71,000	150,000
	0.40	3.5	9.2	2.6	0.51	0.35	47,000	100,000
	0.50	1.5	4.0	2.6	0.59	0.37	24,000	48,000
Indicated + Inferred	0.20	33	87	2.6	0.36	0.32	310,000	890,000
	0.30	17	44	2.6	0.49	0.44	210,000	610,000
	0.40	11	28	2.6	0.56	0.53	160,000	480,000
	0.50	5.9	15	2.6	0.66	0.64	100,000	320,000

Table 1: Mineral Resources at Copper Hill Project based on 2015 updated resource estimate

Note: All volume, tonnage, density, grade and metal figures are rounded to 2 significant figures.

A summary of the main features of the Scoping Study is presented below. Details of the assumptions underlying all factors are provided in Appendix 1.

Mining Studies



Figure 1: Copper and Gold Mill Feed Grade Profiles for the 2 and 3Mtpa Strategic Schedules

Auralia Mining Consulting Pty Ltd (Auralia) completed scoping level Mining Studies based on the 24 March 2015 up-dated resource model and revised mining inputs reflecting current market conditions. Yearly strategic schedules were generated for both 2Mtpa and 3Mtpa throughput options using updated pit optimisations and provided mine lives of 13 and 9 years for the 2Mtpa and 3Mtpa options respectively. Yearly grade profiles for copper and gold are shown in Figure 1.

Extended higher grade profiles for both copper and gold in the early years of operation show the benefit of the updated resource model and geological interpretations.

Significant mineralisation remains outside the Revenue 1 Factor pit shell defined for the Scoping Study as shown in Figure 2. This highlights the potential to increase the material within the pit shell as well as at depth. These areas will be targeted as a part of the PFS drilling.



Figure 2: Oblique view towards the southeast showing 2015 resource model blocks > 0.3% Cu and Revenue 1 Factor Pit Shell used for the Scoping Study Strategic Schedules

Metallurgy



Figure 3: Copper and Gold Mill Recovery Profiles for the 2 and 3Mtpa Strategic Schedules

To better represent performance of higher grade samples from Copper Hill, Golden Cross completed a review of historical metallurgical testwork results and established an updated scoping level grade/recovery relationship. This relationship honours metallurgical performance from higher grade Copper Hill samples tested in 2006 and references relevant results from other historical metallurgical testwork programs.

Figure 3 shows the yearly average copper and gold recoveries from the strategic schedules and based on applying the scoping level grade recovery relationship on a block basis as a part of the pit optimisation.

The focus on higher grade material significantly improves expected recoveries for both copper and gold, compared with the flat recoveries of 75% for copper and 45% for gold used in previous optimisations. Continued improvement in metallurgical performance is expected in the PFS as testwork programs focus on higher grade material from early in the scheduled Mine Life.

Capital Cost Estimate

CPC Engineering produced an updated Capital Cost Estimate for a 2Mtpa Concentrator Process Plant at Copper Hill. The updated Process Plant estimate from CPC Engineering was combined with Non-Process Plant or "Other" Costs from a historical project estimate (2012), to produce the overall Capital Cost Estimate Shown in Table 2.

The 3Mtpa capital cost estimate was directly factored from the 2Mtpa by Golden Cross using standard estimating methodologies.

	2Mtpa Development	3Mtpa Development	
	A\$M	A\$M	
Process Plant	73.9	94.2	
Other & Owners Costs	44.7	54.4	
Contingency	11.9	14.9	
Project Grand Total	130.5	163.5	

 Table 2: Capital Cost Estimate Summary for the 2 and 3Mtpa Development Options

The updated Process Plant estimate from CPC Engineering provided an approximate 20% saving in mechanical equipment costs compared with the previous 2012 estimate for 2Mtpa Concentrator Plant options and highlights the market shift that has occurred since the previous project estimate for similar fit-for-purpose equipment.



Figure 4:Single Stage Primary Crush, SAG Mill, Pebble Crusher and Ball Mill (SABC)



Figure 5: Flotation and Concentrate Handling Circuit Flowsheet

Golden Cross believes there is further potential to reduce capital costs in the Non-Process Plant or "Other" project areas and these will be targeted during the PFS to further reduce the total project capital requirements for the project.

Operating Cost Estimate

The average life of mine Operating Costs are shown in Table 3. Mining Costs are on a contract basis and reflect current market conditions, based on recent cost estimates received by Auralia. Process Plant Operating Costs were updated by Golden Cross based on historical manning level and operating cost estimates and updated power costs. Treatment and refining costs were benchmarked against current industry costs and include concentrate transport costs.

	2Mtpa Operating Costs	3Mtpa Operating Costs
	A\$/t of Mill Feed	A\$/t of Mill Feed
Mining (Contract Basis)	9.3	9.3
Process Plant	18.0	15.2
Concentrate Treatment & Refining	3.5	3.5
Total Operating Cost	30.8	28.0

Forward Plan and Budget

The Company has developed a nine month forward work plan for the completion of a Pre-Feasibility Study into a 2 to 3Mtpa Development at Copper Hill. Funding requirements for the PFS will include costs associated with targeted exploration and infill drilling at Copper Hill, Metallurgical Testwork and supporting Engineering Studies.

Golden Cross will be investigating options for funding of the PFS in the coming months, with the aim of commencing this study, notably deep exploration and resource drilling, as soon as possible.

Exploration Potential

The favourable geological setting of Copper Hill combined with the large size of the mineralised system have long been recognised by Golden Cross.

The Ordovician Macquarie Arc consists of several volcanic belts which host world-class porphyry copper-gold deposits currently being mined at Cadia (Newcrest), Northparkes (China Molybdenum) and Cowal (Barrack).

The Molong Volcanic Belt hosts significant porphyry gold-copper deposits at Cadia, Cadia East, Ridgeway (Newcrest), **Cargo (GCR)**, Yeoval and **Copper Hill (GCR)**, and skarn gold \pm copper deposits at Browns Creek and Junction Reefs, as shown in Figure 6.

Porphyry copper-gold deposits of the Copper Hill area occur within the corridor formed by the WNW trending Lachlan Transverse Zone. Accordingly, Golden Cross tenements within this strongly mineralised area are regarded as highly prospective for copper – gold.



Figure 6: Regional setting of Copper Hill

The 2014-15 geological review of Copper Hill has added further to the potential of the Copper Hill mineralising system. Several areas have been identified with potential for resource expansion and discovery:

- Copper-gold mineralisation at Copper Hill as drilled to date consists of 310,000t of copper and 890,000oz. of gold (refer Table 1) hosted in a Crowded Tonalite Porphyry wall-rock. Two distinct styles of wall-rock mineralisation styles are recognised, associated with multiple intrusive phases at depth, a common characteristic of porphyry style systems.
 - The earliest mineralised phase is related to sericite-pyrite-quartz "phyllic" alteration, and has distinctive distal (away from the source porphyry intrusive) chalcopyrite mineralisation with a molybdenum-rhenium-zinc association.
 - The later stage overprinting mineralisation has distinctive and intense quartz(magnetite) "potassic" alteration and sheeted veins, being a proximal association (ie close to the source porphyry intrusive) hosting chalcopyrite-bornite mineralisation with associated high gold.

The porphyry intrusive responsible for the later stage high-grade "potassic" wall rock goldcopper mineralisation is interpreted to be younger and shallower and yet to be intersected in drill holes and provides discovery potential at depth below Copper Hill and Wattle Hill (the target being high grade "pipes" of the style being mined at Ridgeway and Northparkes). Drilling on section 6150N below Buckley's Hill confirms the presence of an early phase wallrock porphyry style copper-gold mineralised system. A nearby drill hole (GCHR190) on section 5900N also intersected copper-gold mineralisation associated with porphyry style stockwork quartz-magnetite veins with chalcopyrite. Discovery potential for high-grade gold-copper porphyry mineralisation similar to that intersected in GCHD470, exists between 5900-6150N and extending south to below Copper Hill.

While Golden Cross is currently focused on the Copper Hill Scoping Study, it is intended to assess the best options to obtain vectors to target any future exploration activities and drilling. It should be emphasised this remains a conceptual target, supported by mineralisation trends recognised in international studies of porphyry copper deposits.

Ken Hellsten Interim CEO *Further information, contact Ken Hellsten on (02) 9472 3500*

Competent Persons.

The information in this report that relates to Exploration Results is based on information compiled by Mr. Kenneth Hellsten, who co-ordinated the Scoping Study and is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Hellsten is an employee of Golden Cross Resources Limited, and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking 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. Hellsten consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The statement of Mineral Resources on which Table 1 is based, was released to the market on 24 March 2015, and was compiled by Mr James Ridley who is a Member of AusIMM and an employee of Ridley Mineral Resource Consulting Pty Ltd and a consultant to Golden Cross. Mr Ridley has sufficient experience relevant to the style of mineralisation and the type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves (JORC 2012). Mr Ridley consents to the inclusion in this report on matters based on information compiled by them in the form and context in which it appears.

<u>Capital</u>	Summary of the capital cost estimates (+/-35%):		
		2Mtpa A\$m	3Mtpa A\$m
	Process Plant	53.9	68.8
	Process Plant direct costs	3.7	4.7
	Non Process Plant direct costs	16.2	20.7
	Process Plant indirect costs		
	Process Plant sub-total	73.9	94.2
	Other Costs		
	Mine Development	2.2	2.9
	HV Power Supply	2.3	2.9
	Mine Access Road	0.8	0.8
	Port Concentrate Facility	0.3	0.3
	Construction Camp	9.1	9.1
	TSF, Evaporation Ponds, Water Supply	19.7	25.1
	Other Costs sub-total	36.3	41.0
	Owners Costs	10.5	13.4
	Project Total	118.6	148.6
	Contingency 10%	11.9	14.9
	PROJECT TOTAL	130.5	163.5
<u>Resources</u>	As disclosed in the body of the announcement (Table 1) Inferred Mineral Resources of 28M tonnes have been m the mine plans optimised for, and scaled to provide 12 t with mining rate of 2Mtpa to 3Mtpa. The overall tonnes the two mining scenarios are shown in Figure 1, and JO addressed in the GCR announcement dated 24 March 2), the Indica nodelled bas o 9 year mir / grade prof PRC-complia 2018.	ted and sed on ne life file for ancy is
	As disclosed in the body of the announcement, the mineral resource contains 67% Indicated Resources and 33% Inferred Mineral Resources. At the current level of study, the Company is unable to ascertain precisely when the Inferred Mineral Resource material will be mined. However, it is likely to be mined throughout the life of the Project. With this proportion of Inferred Mineral Resources, Company modelling indicates that their inclusion is not the determining factor in project viability.		
	A review of the drill hole database, surface mapping and and an assessment of the available QAQC data for the that the majority of data is of sufficient quality for use as estimation. Data for 753 diamond and reverse circulation a total of 89,921 metres of drilling was incorporated into for resource modelling, including 61,022m of RC drilling percussion pre-collar drilling and 28,705m of diamond d	d topograph project dete input to res on (RC) drill the databas , 194m of o rilling.	y data rrmined source holes for se used pen hole

Appendix 1: Disclosure of Additional Assumptions

<u>Mining</u>	The mining method is based on conventional open pit mining on 4m benches with the use of diesel hydraulic excavators and front-end whee loaders as the main equipment for loading 90t off-highway rear-dump tr				
	 The pits typically comprise 10-40m overburden waste (mined without grade control, use exploration drilling data), a horizontal ore thickness of 20-100m with good visual ore cut-off ("spotters" to use hand-held XRF for in-pit decisions). There is no facilitation of waste back-fill, due to potential future underground operations (block or panel cave) following cessation of open pit mining. The mine design nonetheless aims to minimize the mine footprint. The mined material requires drilling and blasting. The integrated mine plan commences with mining shallow high grade zones. 				
		2Mtpa	3Mtpa		
	Pit Assumptions				
	Mining dilution	5%	5%		
	Mining recovery	95%	95%		
	Pit slope	42.5 ⁰	42.5 ⁰		
	Total ore mined (Mt)	24.0	224.0		
	Total waste mined (Mt)	45.4	45.4		
	Strip ratio	1.9:1	1.9:1		
	Life of Mine schedule (years)	13	9		
	The mining cost assumptions are based on contract mining:				
		2Mtpa	3Mtpa		
	Mining				
	Contract unit cost A\$/t (ore and waste)	2.86	2.86		
	Grade control incl geology A\$/t ore milled	1.20	1.20		
	Mining Opex Total	4.06	4.06		
Processing	Direct feed ore (currently three dominant geo-metallurgi	cal types) a	re		
<u></u>	separately stockpiled on the ROM pad. Blending option investigated during future PFS programs.	s will be	in the		
	table below.	are shown			
		2Mtpa A\$/t	3Mtpa A\$/t		
	Process Operating Cost				
	Process Plant variable costs	8.97	8.96		
	Maintenance materials	1.79	1.41		
	Labour (excluding mining)	5.86	3.90		
	General and Administration	1.41	0.94		
	Process Plant Opex Total	18.02	15.20		
	Multiple options exist for concentrate transport and refining within and outside the Lachlan Fold Belt of NSW.				
	concentrate material is available from planned bulk meta	allurgical tes	st work.		

		2Mtpa	3Mtpa		
	Concentrate Charges				
	Concentrate Transport, Treatment A\$/dmt	144.30	144.30		
	Copper refining charges US\$/lb	0.082	0.082		
	Gold refining charges US\$/oz	5.00	5.00		
	General and Administration	1.41	0.94		
<u>Metallurqv</u>	Previous metallurgical work had poor geo-metallurgical control, such that variable grade-recovery relationships were restricted to material likely to occur within the optimized pit and at "run-of-mine" grades. Based on this data, recovery algorithms were developed based on ore feed grade (with copper range 80-84% with algorithm plateau at approximately 90% and gold range 54-78% with algorithm plateau at approximately 85%. Further batch testwork plus detailed information of the ore types to be mined is required to improve confidence during the next stage of study on the assumed copper and gold extraction achievable. Recoveries are differentiated by ore type. For the purposes of this level of study, differences are not addressed nor ramp up. Ramp ups in recovery				
	would normally be assumed over the first two years of operation, with steady state thereafter.				
	Modelling CL Grade V3 Recovery 100 90 90 90 90 90 90 90 90 90	y=85.92783*(1-exp(-3 y=85.92783*(1-exp(-3 1.00 1.50 Au Grade g/t	.0206318x) 2.00 2.50		
Infrastructure	The project is well served by infrastructure. The townsh	ip of Molon	g,		
	population 1,629 (2011 census) is 5km to the south of the along with major centres Orange, Dubbo, Parkes and Ba sources of personnel (drive-in drive-out) and services and The Mitchell Highway, which forms part of the National H corridor, runs through the project area. The main Broke passes through Molong, and the disused (but still gazett Dubbo railway line runs past the project area to Molong upgraded to satisfy the requirements of a mining operation	ne project a athurst, rea re nearby. Highway A3 n Hill to Syd red) Molong and can be on if require	rea, and dy 2 dney rail 1 to ed.		
	The electrical requirements of the project can be serviced by a 132Kv electrical sub-station 4.5km to the south-east.				
	Concentrate shipping ports exist at Newcastle, Port Bota Kembla. Concentrates are currently shipped from opera immediate region at Cadia, Parkes and Tritton.	any and Po ations withir	rt 1 the		
<u>Economic</u>	Cash flows and internal rates of return are not disclosed documentation. Where a financial estimate was require	in the prec d for model	eding ling:		
	 Unless otherwise stated, all cash flows are in Au undiscounted and are not subject to inflation/esc all years are financial years. All cash flows are u A flat exchange rate of 0.75 A\$ / US\$ has been e Copper price US\$3.25/lb, gold price US\$1200/oz Concentrate grades 25% Cu, 10% moisture. 	stralian dol alation facto inleveragec employed. z.	lars, are ors, and I.		

	These prices are above current copper spot prices of US\$2.73/lb and close to current gold spot prices US\$1207/oz.			
	No revenue has been attributed to silver, molybdenum or rhenium, all of which occur at economic levels within various specific Copper Hill geo- metallurgical types, but their final reporting or otherwise to concentrates requires PFS level metallurgical assessment and was not considered in the current study.			
Marketing	NSW royalty is 4%.			
	Payable metal assumed to b	be 97%.		
	The concentrate consists of sought by smelters.	chalcopyrite(-bornite) and	d is expected to be	
	No penalty elements have been identified in assaying to date. Detailed multi-element analyses were completed in 2014 on 2,746 drill samples (1-4m lengths):			
	Element	Mean (ppm)	Maximum (ppm)	
	Antimony	1.6	108.0	
	Arsenic	23	668	
	Bismuth	0.3	5.0	
	Tellurium	0.7	00.0 5 7	
	Thallium	0.9	<u> </u>	
	Thorium	1.7	10.7	
	Uranium	1.1	5.1	
<u>Legal</u>	All Mineral Resources which are the subject of the Production Target are held 100% by Golden Cross on granted Exploration Licence 6391, which is current to 10 March 2016.			
Environment	Independent environmental assessments were undertaken as part of			
	previous studies in 2006 including baseline environmental reviews (vegetation, flora and fauna, and groundwater studies).			
	A weather station has been recording data within 3km of the proposed Copper Hill pits since October 2011.			
	Measurement in drill holes of depth to water level, temperature, pH and Eh commenced in November 2010 and is ongoing for selected water bores and water courses around the project area. No further environmental assessments have been undertaken as part of the recent Scoping Studies.			
<u>Social</u>	Active community and stakeholder programs have been underway since 2000. Relationships with key stakeholders are positive and constructive. The area is partially covered by the Wellington Valley Wiradjuri Native Title Claim dated 24 Aug 2009. Copper Hill is located on freehold land and access arrangements as required under the Mining Act 1992 are in place and respected by all parties.			
<u>Government</u>	The current study assumes all permits, licences, approvals and other regulatory requirements can be met. These will be further examined in the PFS.			

Cautionary Statements:

In accordance with ASX listing rules, the Company advises that this Scoping Study prepared by GCR and its consultants is an order of magnitude technical and economic study of the potential viability of Mineral Resources, and is based on low-level technical and economic assessments. As noted by Auralia Mining Consulting the Study 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 Study will be realised. The assumptions underlying the Modifying Factors reviewed in this Study are described in Appendix 1 and based on previous studies which have been updated for current market conditions together with other relevant operational factors that are necessary to demonstrate at the time of reporting that progress to a Pre-Feasibility Study can be reasonably justified.

This Scoping Study is the second economic evaluation of the Copper Hill project undertaken and is based on a combination of directly gathered project data together with assumptions taken from similar deposits or operations to the case envisaged and from the 2012 Copper Hill independent Scoping Study. This current Scoping Study is to be used internally by GCR for comparative and planning purposes.

In relation to Mineral Resources on which the Production Target is based, the information is extracted from the report released to the market by GCR on 24 March 2015, and the JORC 2012 compliancy statement should be referred to, notably Annexures 1-3. 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 all material assumptions and technical parameters in the market announcement dated 24 March 2015 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.

A component of resources have been classified as Inferred Mineral Resources according to criteria in the Resource Statement released to the market by GCR on 24 March 2014, Annexure 3- JORC 2012 Edition Table 1, Section 3 "Estimation and reporting of Mineral Resources": The Production Target reported in this Study is based partly on these Inferred Mineral Resources. The Company is satisfied it has reasonable grounds for reporting a production target that is based on a portion of Indicated and Inferred Mineral Resources because the proportion of production attributable to Inferred Mineral Resources are not the determining factors in project viability and the Inferred Mineral Resources do not feature as a significant proportion early in the mining plan. The Company has a reasonable expectation that a significant proportion of the Inferred Mineral Resources (ie more certainty) by the drilling planned as part of the proposed Pre-Feasibility Study.

Auralia Mining Consulting Pty Ltd: The open pit mining study carried out by Auralia Mining Consulting Pty Ltd referred to in this document is classed as low level only, and although constitutes a scoping study it does not meet the criteria of a pre-feasibility or feasibility study. Due to this, the subsequent material inventories resulting from this work do not constitute or imply Ore Reserves. The estimates and beliefs applied in undertaking the scoping study, either stated or implied, by the Company and its consultants are based on a combination of quoted data, industry best practise and assumptions that may involve known and unknown risks and uncertainties which may result in future outcomes that differ to any expressed or implied estimates or projections derived from this Scoping Study. Given the level of study, any data resulting from this Scoping Study refers solely to potential and does not guarantee that future work will result in the determination of Ore Reserves. This document describes references to JORC classified Indicated and Inferred Mineral Resources. Inferred Mineral Resources have a greater amount of uncertainty as to their existence and greater uncertainty as to their economic feasibility. It cannot be assumed that any, or all, parts of the Inferred Mineral Resource will be upgraded to a higher Mineral Resource category or converted to Proven or Probable Ore Reserves.

Forward-Looking Statements: This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although Golden Cross Resources Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.