

# Latest Drilling Confirms High-Grade Mineralisation Controls at Thursday's Gossan

Up to 21m of visual massive to semi-massive sulphides intersected in 'D' veins

### **Highlights**

- First phase of drilling to test the near-surface expression of sulphide-rich 'D' veins at the Thursday's Gossan copper porphyry prospect in western Victoria has been completed.
- Drilling has intersected broad zones of visual sericite pyrite alteration with disseminated chalcopyrite and significant intervals of massive to semi-massive sulphides over a down-hole width of up to 21m.
- The latest drilling appears to support Stavely's interpretation of the high-grade copper-silver-gold mineralisation controls at Thursday's Gossan, with visual confirmation of mineralisation focused by structural controls. Recent drilling supports Stavely's conceptual model that the north-east portion of the Thursday's Gossan porphyry is the focus for copper-silver-gold related to a 'second-phase' intrusion at depth.
- Drill-hole SMD007, completed in early 2017, confirmed the 'D' vein relationship with high-grade copper-silver-gold mineralisation with assay results of up to 4.87 g/t gold, 64 g/t silver and 5.17% copper (see ASX Announcement 9 March 2017).
- Results from the recent drilling of these near-surface expressions of the sulphiderich 'D' veins has the potential to materially increase the grade of that portion of the chalcocite Mineral Resource where these veins occur, especially as gold and silver are not included in the current Mineral Resource estimate.

Stavely Minerals Limited (ASX Code: SVY – "Stavely Minerals") is pleased to advise that the first phase of drilling specifically targeting the near-surface expressions of the sulphide-rich 'D' veins at the Thursday's Gossan prospect at its 100%-owned **Stavely Copper Project** in western Victoria (Figure 1) has been completed.

Stavely's Managing Director Mr Chris Cairns said, "We feel we have finally got ourselves into the right part of the paddock to be hitting the copper-gold target we have been looking for. We like what we see visually and keenly await assay results. We believe we are very much in the hunt for a large prize at depth."

The Thursday's Gossan prospect hosts a shallow, chalcocite-enriched blanket of copper mineralisation with an Inferred Mineral Resource of **28Mt at 0.4% copper** (see Stavely Minerals' Prospectus dated 26 March 2014).

The recently completed drilling has intersected broad zones of sericite-pyrite alteration with disseminated chalcopyrite and significant intervals of massive to semi-massive sulphides over a down-hole width of up to 21 metres (see Photo 1). Similar massive to



semi-massive sulphide zones are recognised in major deposits elsewhere including the Heavy Sulphide Zone at the Grasberg copper-gold porphyry in Irian Jaya.

Visually, the intercept confirms Stavely's view that the copper, gold and silver mineralisation is focused on a structural zone in the north-eastern portion of the Thursday's Gossan porphyry, an area believed to be the focus for the 'second-phase' intrusion at depth.

The 20-hole drill programme was originally planned using only Reverse Circulation drilling, however due to the amount of groundwater encountered the Company decided to drill RC pre-collars with diamond tails to reach the target depths (Figure 2).

Eight of the diamond tails were completed prior to the heavy winter rains commencing. The remaining 12 diamond tails will be completed in spring when the ground is firm enough to move drill rigs and support vehicles around.



Photo 1. Massive sulphide mineralisation at 150m from STRC005D.

Diamond drilling completed in February 2017 as part of the Victorian Government cofunding under the TARGET exploration initiative at the Thursday's Gossan prospect confirmed the 'D' vein relationship between high-grade copper-silver-gold mineralisation at depth and its distribution and relationship to the near-surface chalcocite blanket (Figure 3). Assay results from SMD007 include:

- o 3.1m at 1.48 g/t Au, 21 g/t Ag and 1.72% Cu including;
  - 0.9m at 4.87 g/t Au, 64 g/t Ag and 5.17% Cu
- 4.3m at 0.44 g/t Au, 6 g/t Ag and 1.66% Cu including;
  - 1.3m at 0.16 g/t Au, 16 g/t Ag and 5.16% Cu

Previously recognised porphyry 'D' veins noted in drilling at depth are now believed to be responsible for the higher tenor copper, gold and silver results recorded near surface, including:

- 7.7m at 4.1% Cu and 1.1 g/t Au from 94.7m; and
   9.5m at 2.9% Cu and 0.4 g/t Au from 154.6m in drill hole SNDD001;
- o 6m at 4.23% Cu, 50 g/t Ag and 0.42 g/t Au from 32m in drill hole TGAC016;
- 33m at 0.6 g/t Au from 23m including 9m at 1.76 g/t Au from 26m in drill hole TGAC013;



- 12m at 1.08% Cu and 0.24 g/t Au from 30m in drill hole TGAC004; and
- o 32m at 0.8% Cu and 0.4 g/t Au from 22m in drill hole VSTD001.

These intercepts are located within and adjacent to the existing chalcocite blanket Mineral Resource of 28Mt at 0.4% copper.

At least two distinct north-west striking trends are evident in the near-surface expression of these two zones of sulphide-rich porphyry 'D' veins (Figure 4).

Following the completion of drill hole SMD007 – which also intersected these sulphiderich 'D' veins and the interpreted projection of these veins to surface – the Company's geological team has recognised that they coincide with zones of higher grades of copper and were also accompanied by appreciable silver and gold values.

The controls on the silver and gold mineralisation at Thursday's Gossan were not previously understood – even to the extent that more than 50 drill holes completed by previous explorers within the copper resource were not assayed for gold and many more, while assayed for copper and gold, were not assayed for silver.

The current drill programme at Thursday's Gossan has the potential to materially increase the grade of that portion of the Mineral Resource where the sulphide-rich 'D' veins occur, especially as the silver and gold grades have not previously been included in the Mineral Resource estimate and the inclusion of gold and silver has the potential to materially enhance the economics of a proposed future development.

The recognition of this relationship between high-grade copper, silver and gold mineralisation and the porphyry 'D' veins will also likely assist in the search for the 'second-phase' intrusion at depth. Current drilling has intersected the phyllic zone (sericite-pyrite alteration) with even stronger copper-gold-silver mineralisation to be expected once planned future deeper drilling intersects a predicted potassic alteration zone at depth.

Stavely Minerals remains convinced that the best portion of the Thursday's Gossan porphyry is yet to be discovered, and the evolving understanding of the copper, silver and gold distribution and 'D' veins has materially advanced this ongoing search.

Full results from the drilling will be reported once assay results are received.

Yours sincerely,

**Chris Cairns** 

**Managing Director** 

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Chris Cairns, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Cairns is a full-time employee of the Company. Mr Cairns is the Managing Director of Stavely Minerals Limited, is a substantial shareholder of the Company and is an option holder of the Company. Mr Cairns



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 Cairns consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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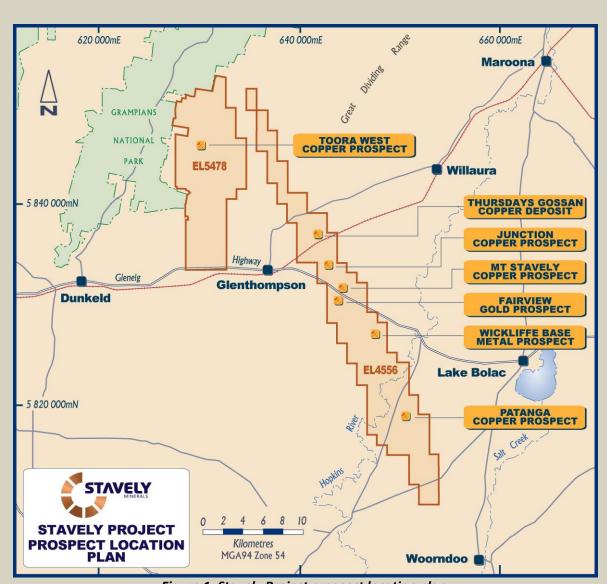


Figure 1. Stavely Project prospect location plan.



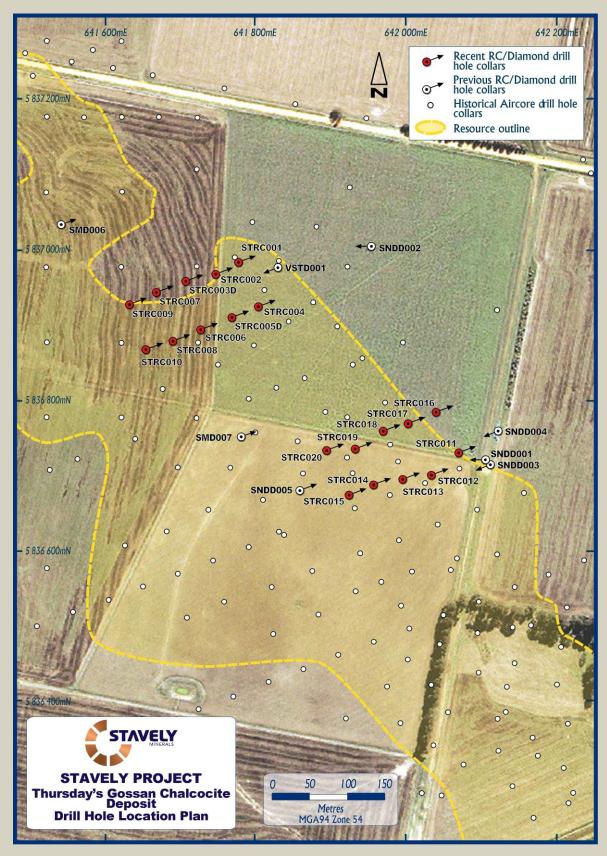


Figure 2. Thursday's Gossan Chalcocite Deposit – drill hole location plan.



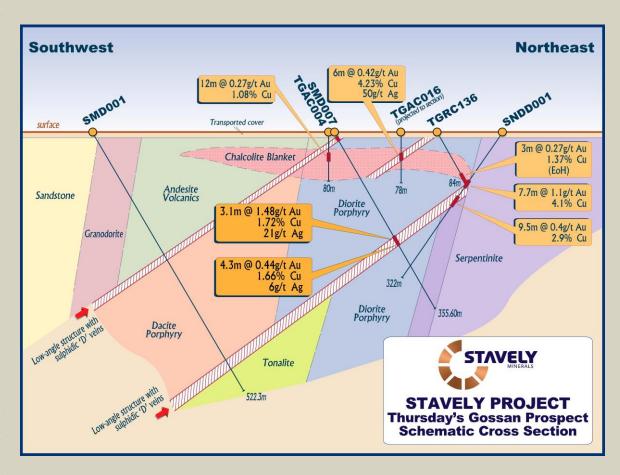


Figure 3. Schematic cross-section showing the relationship between significant copper-silver-gold mineralised drill holes and the interpreted locations of sulphidic 'D' veins in low-angle structures. Note drill hole TGAC016 is projected to section but actually intersects the western of the two low-angle structures.



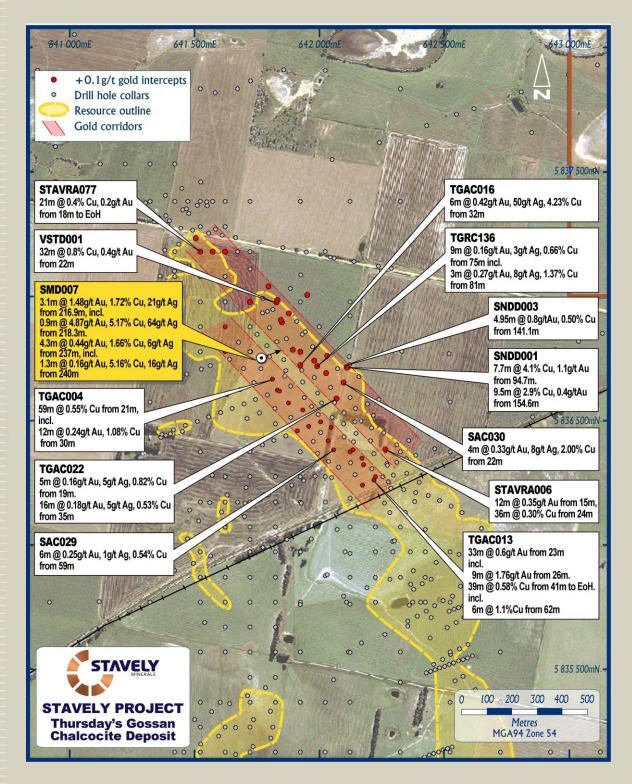


Figure 4. Thursday's Gossan drill collar plan showing the two NW trends of drill holes with +0.1 g/t gold interpreted to coincide with the near-surface expression of the sulphidic 'D' veins.



## JORC Code, 2012 Edition – Table 1

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling	Nature and quality of	Stavely Project
techniques	random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	Thursday's Gossan Prospect
		Stavely Minerals' RC Drilling
		Reverse Circulation (RC) percussion drilling was used to produce a 1m bulk sample (~25kg) which was collected in plastic bags and representative 1m split samples (12.5% or nominally 3kg) were collected using a cone splitter and placed in a calico bag. The cyclone was cleaned out with compressed air at the end of each hole and periodically during the drilling. The 1m split samples were submitted for analysis.
		Stavely Minerals' Diamond Drilling
		The diamond core for the entire hole was sampled. PQ quarter core and HQ half core was submitted for analysis. Sample intervals were based on lithology but in general were 1m. No intervals were less than 0.3m or greater than 1.8m.
		Historical Drilling
		Historical aircore hole STAVRA077 was drilled by North Limited in 1994 to a depth of 39m at the Thursday's Gossan prospect. Three metre composite samples were analysed.
		Historical diamond drill hole VSTD001 was drilled by Newcrest in 2002 to a depth of 520.7m to target the porphyry core. Two metre composite samples were taken to a depth of 62m and then one metre samples to eoh. The samples were analysed for Au, Ag, As, Bi, Cu, Mo, Pb, S and Zn.
		Historic aircore hole TGAC004 was drilled by Beaconsfield Gold Mines Pty Ltd in 2006 to a depth of 80m. Three metre composite samples were taken for the entire hole.
		Historical diamond hole SNDD001 was drilled by Beaconsfield Gold Mines Pty Ltd in 2008 to a depth of 321.9m. No sampling was done for the first 21m. From 21m to 321.9m composite samples based on lithology were analysed for Au, Ag, Co, Cu, Ni, Pb and Zn.
		Historical aircore TGAC016 was drilled by Beaconsfield Gold Mines Pty Ltd in 2008 to a depth of 78m. Sampling was done at 1m intervals, apart from when sampling the oxide zone where two metre composite samples were collected.



Criteria	JORC Code explanation	Commentary
		Historical reverse circulation holes TGRC110 and TGRC136 were drilled by BCD in 2009 to a depth of 78m and 84m respectively. One metre interval samples were taken for the entire length of the holes.
		Historical aircore hole TGAC078 was drilled by BCD in 2009 to a depth of 59m. Two metre composite samples were taken for the entire length of the hole.
		Historical aircore holes SAC029 and SAC030 were drilled by BCD in 2010 to a depth of 65m and 62m respectively. One metre interval samples were taken for the entire length of the holes.
		Mineral Resource Estimate
		Mineral Resource estimate underpinned by diamond drilling (DD), aircore drilling (AC), reverse air blast drilling (RAB) and reverse circulation drilling (RC) samples:  Pennzoil (1 RC, 14 RAB holes): 2m Samples selected where mineralisation observed. 13 RAB holes sampled every alternate 2m intervals. No details on sampling methods.
		North (4 DD, 1 AC, 85 RAB) and Newcrest (3 DD): Diamond holes ½ core sampled. No details on sampling of RC, RAB and Aircore holes.
		Beaconsfield Gold (2 DD, 78 AC): Diamond holes ½ core sampled. Aircore holes were sampled by spearing of material on 2m or 3m intervals where no mineralisation was observed and on 1m intervals where mineralisation was observed.
		TGM Group (26 AC): No details.
	Include reference to	Stavely Project
	measures taken to ensure sample representivity and the	Thursday's Gossan Prospect
	appropriate calibration of any measurement tools or	Stavely Minerals' Diamond and RC Drilling
	systems used.	Sample representivity was ensured by a combination of Company Procedures regarding quality control (QC) and quality assurance/ Testing (QA). Certified standards and blanks were inserted into the assay batches.
		Historical Drilling
		No information available.
	Aspects of the determination of mineralisation that are	Stavely Project
	Material to the Public Report -	Thursday's Gossan Prospect
	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In	Stavely Minerals' Diamond Drilling
		Drill sampling techniques are considered industry standard for the Stavely work programme.
		The diamond core for the entire hole has been sampled. PQ quarter core and HQ half core was submitted for analysis. Sample intervals were based on lithology but in



Criteria	JORC Code explanation	Commentary
	may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules)	general were 1m. No intervals were less than 0.3m or greater than 1.8m.
		The diamond drill samples were submitted to Australian Laboratory Services ("ALS") in Orange, NSW. Laboratory sample preparation involved:- sample crush to 70% < 2mm, riffle/rotary split off 1kg, pulverize to >85% passing 75 microns.
		Diamond core samples were analysed by ME-ICP61 – multi acid digest with HF and ICPAES and ICPMS and Au-AA23 – fire assay with AAS finish.
		Stavely Minerals' RC Drilling
		Drill sampling techniques are considered industry standard for the Stavely work programme.
		The 1m split samples were submitted to Australian Laboratory Services ("ALS") in Orange, NSW. Laboratory sample preparation involved:- sample crush to 70% < 2mm, riffle/rotary split off 1kg, pulverize to >85% passing 75 microns.
		The RC samples were analysed by ME-ICP61 – multi acid digest with HF and ICPAES and ICPMS and Au-AA23 – fire assay with AAS finish.
		Historical Drilling
	No sample preparation is available for the historical drilling.	
Drilling	Drill type (eg core, reverse	Stavely Project
techniques	circulation, open-hole hammer, rotary air blast,	Thursday's Gossan Prospect
	auger, Bangka, sonic, etc)	Stavely Minerals' Diamond Drilling
	and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Diamond drill holes were drilled by Titeline Drilling in 2014 (SMD001, SMD003 and SMD004) and 2017 (SMD006, SMD007 and SMD008). Diamond drilling was used to produce drill core with a diameter of 85mm (PQ) from surface until the ground was sufficiently consolidated and then core with a diameter of 63.5mm (HQ) was returned.
		Diamond drilling was standard tube. Diamond core was orientated by the Reflex ACT III core orientation tool.
		SMD003 was orientated at -60° towards azimuth 060° to a depth of 522.3m.
		SMD006, SMD007 and SMD008 were orientated at -60° towards azimuth 070° to depths of 353.3m, 355.6m and 240m respectively.
		Stavely Minerals' RC Drilling
		The RC holes were drill by Budd Exploration Drilling P/L. The RC percussion drilling was conducted using a UDR 1000 truck mounted rig with onboard air. A Sullair 350/1150 auxiliary compressor was used. 4" RC rods



Criteria	JORC Code explanation	Commentary
		were used and $5^{1}/_{4}$ " to $5^{3}/_{4}$ " drill bits. A Reflex Digital Ezy-
		Trac survey camera was used.
		The holes were oriented at -60° towards azimuth 070°.
		Historical Drilling
		Historical hole STAVRA077 is an aircore hole drilled by North Limited in 1994. The hole was drilled vertically. No other drilling details are known.
		Historical hole VSTD001 was drilled by Newcrest in 2002 using a diamond drill rig. The drilling was conducted by Silver City Drilling. The first 62m were drilled by aircore. HQ core was drilled between 62m and 255.7m and NQ core between 255.7m and 520.7m. The hole was oriented at -50° towards azimuth 256°.
		Historic aircore hole TGAC004 was drilled by Beaconsfield Gold Mines Pty Ltd in 2006 to a depth of 80m. The drilling was conducted by Blacklaws Drilling Services using a truck mounted Wallis Mantis rig with a 450cfm/200psi compressor.
		Historical hole SNDD001 was drilled by Beaconsfield Gold Mines Pty Ltd in 2008 using a diamond drill rig. The drilling was conducted by Silver City Drilling with a Mantis 700 rig. The hole was oriented at -50° towards magnetic azimuth 265°. HQ triple tube was drilled from 0m to 56.6m and then NQ to 321.9m.
		Historical aircore TGAC016 was drilled by Beaconsfield Gold Mines Pty Ltd in 2008 to a depth of 78m. The hole was drilled vertically by Wallis Drilling.
		Historical reverse circulation holes TGRC110 and TGRC136 were drilled by BCD in 2009 to a depth of 78m and 84m respectively. Drilling was conducted by Budd Exploration Drilling P/L using a Universal drill rig. TGRC110 was oriented at -60° towards magnetic azimuth 349°. TGRC136 was oriented at -60° towards magnetic azimuth 064°.
		Historical aircore hole TGAC078 was drilled by BCD in 2009 to a depth of 59m. Drilling was conducted by Budd Exploration Drilling P/L using a Universal drill rig. TGRC078 was oriented at -50° towards magnetic azimuth 231°.
		Historical aircore holes SAC029 and SAC030 were drilled by BCD in 2010 to a depth on 65m and 62m respectively. The holes were drilled vertically by Blacklaws Drilling Services.



Criteria	JORC Code explanation	Comm	entarv					
- Ontonia	Site of oxplanation		Jintan y					
		Minera	ıl Resou	ırce	Estimate			
		Drilling	details	for th	e TGC res	ource drill	hole data	aset
		Drill Type	Company	Count	Av. DFrom to Min. Top (m)	Av. Dto to Min. Base (m)	Av. Min. Int Length (m)	Av. Cu (ppm)
		AC	BCD North	78	32	56	24 42	4080 3090
			TGM Group		33	62 55	22	3496
		AC Total	BCD	105 2	32 86	56 93	<b>24</b> 7	3926 23586
		DD	CRAE Newcrest	3	41 56	54 85	13 29	3237 3927
			North Pennzoil	1	37 20	63 28	26 8	3541 5250
		DD Total	North	<b>12</b> 85	<b>49</b> 31	<b>69</b> 46	20 15	<b>7070</b> 2948
		RAB RAB Total	Pennzoil	14 99	22 30	35 <b>45</b>	13 <b>15</b>	2587 <b>2897</b>
		RC	BCD Pennzoil	8	27	45 34	17 32	4498 11944
		RC Total	Il Drilling	9 225	24	43	19 20	5326 3697
		Total A	iii Drilling	225	32	51	20	3097
Drill sample	Method of recording and	Stavel	y Projec	ct				
recovery	assessing core and chip sample recoveries and results assessed.	Thurse	day's G	ossa	n Prospec	t		
		Stavel	y Miner	als' [	Diamond [	Drilling		
		Diamond core recoveries were logged and recorded in the database.						
		Core recovery for SMD001, SMD003 and SMD007 were good.						
		Stavely Minerals' RC Drilling						
		used to a signi visually	keep t ficant q	the sa uanti ked	y was goo amples dry ty of wate during	/ despite t r. RC san	he hole p	oroducing very was
		Histori	cal Dril	ling				
		Diamo	nd core	reco	overies we SNDD001.	re logged	and rec	orded for
		Mineral Resource Estimate						
		Recovery data available for 2 DD holes.						
		Generally no major sample loss or groundwater issues.						
	Measures taken to maximise							
	sample recovery and ensure	Stavely Project Thursday's Gossan Prospect						
	representative nature of the samples.	Stavely Minerals' Diamond Drilling						
	Sampioo.				constructed	_	tinuous r	ine on an
		angle checke	iron cra d again	adle ist the	for orient e depth gi nely carrie	ation mai	king. De e core bl	pths are
		Stavel	y Miner	als' F	RC Drilling	)		



Criteria	JORC Code explanation	Commentary
		The RC samples are collected by plastic bag directly from the rig-mounted cyclone and laid directly on the ground in rows of 10. The drill cyclone and sample buckets are cleaned between rod-changes and after each hole to minimise down-hole and/or cross contamination.
		Historical Drilling
		No details are available for the historical drill holes.
	Whether a relationship exists	Stavely Project
	between sample recovery and grade and whether	Thursday's Gossan Prospect
	sample bias may have	Stavely Minerals' Diamond Drilling
	occurred due to preferential loss/gain of fine/coarse	Not an issue relevant to diamond drilling.
	material.	Stavely Minerals' RC Drilling
		No analysis has been undertaken as yet regarding whether sample bias may have occurred due to preferential loss/gain of fine/coarse material and is not considered to have a material effect given the good sample recovery.
		Historical Drilling
		No details are available for the historical drill holes.
Logging	Whether core and chip	Stavely Project
	samples have been geologically and	Thursday's Gossan Prospect
	geotechnically logged to a	Stavely Minerals' Diamond and RC Drilling
	level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Geological logging of samples followed Company and industry common practice. Qualitative logging of samples including (but not limited to); lithology, mineralogy, alteration, veining and weathering. Diamond core logging included additional fields such as structure and geotechnical parameters.
		Magnetic Susceptibility measurements were taken for each 1m RC and diamond core interval.
		Historical drilling
		All holes were geologically logged.
	Whether logging is qualitative	Stavely Project
	or quantitative in nature. Core (or costean, channel, etc)	Thursday's Gossan Prospect
	photography.	Stavely Minerals' Diamond Drilling
		All logging is quantitative, based on visual field estimates. Systematic photography of the diamond core in the wet and dry form was completed.
		Stavely Minerals' RC Drilling
		All logging is quantitative, based on visual field estimates. Chip trays with representative 1m RC samples were collected and photographed then stored for future



Criteria	JORC Code explanation	Commentary
		reference.
		Historical Drilling
		All logging is quantitative, based on visual field estimates.
	The total length and	Stavely Project
	percentage of the relevant intersections logged.	Thursday's Gossan Prospect
		Stavely Minerals' Diamond Drilling
		Detailed diamond core logging, with digital capture, was conducted for 100% of the core by Stavely's on-site geologist at the Company's core shed near Glenthompson.
		Stavely Minerals' RC Drilling
		All RC chip samples were geologically logged by Stavely Minerals' on-site geologist on a 1m basis, with digital capture in the field.
		Historical Drilling
		Historical holes have been logged in their entirety.
Sub-sampling	If core, whether cut or sawn	Stavely Project
techniques and sample	and whether quarter, half or all core taken.	Thursday's Gossan Prospect
preparation		Stavely Minerals' Diamond Drilling
		Quarter core for the PQ diameter diamond core and half core for the HQ diameter core was sampled on site using a core saw.
		Historical Drilling
		For historical hole SNDD001 half core was sampled. No details are given for VSTD001.
	If non-core, whether riffled,	Stavely Project
	tube sampled, rotary split, etc and whether sampled wet or	Thursday's Gossan Prospect
	dry.	Stavely Minerals' RC Drilling
		Splitting of RC samples occurred via a rotary cone splitter by the RC drill rig operators. Cone splitting of RC drill samples occurred regardless of whether the sample was wet or dry.
		Historical Drilling
		No details are given for historical aircore and RC holes.
	For all sample types, the	Stavely Project
	nature, quality and appropriateness of the	Thursday's Gossan Prospect
	sample preparation	Stavely Minerals' Diamond and RC Drilling
	technique.	Company procedures were followed to ensure sub- sampling adequacy and consistency. These included (but were not limited to), daily work place inspections of



Criteria	JORC Code explanation	Commentary
		sampling equipment and practices.
		Historical Drilling
		No details of sample preparation are given for the historical drilling.
		Mineral Resource Estimate
		Pennzoil (1 RC, 14 RAB holes): No details on sampling and sample preparation methodology.
		North (4 DD, 1 AC, 85 RAB) and Newcrest (3 DD): No details on sample preparation methodology.
		Beaconsfield Gold (2 DD, 78 AC): No information on sample preparation methodology.
		TGM Group (26 AC): No details.
	Quality control procedures	Stavely Project
	adopted for all sub-sampling stages to maximise	Thursday's Gossan Prospect
	representivity of samples.	Stavely Minerals' Diamond and RC Drilling
		Blanks and certified reference materials are submitted with the samples to the laboratory as part of the quality control procedures.
		Historical Drilling
		No details of quality control procedures are given for the historical drilling.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Stavely Project
		Thursday's Gossan Prospect
		Stavely Minerals' Diamond and RC Drilling
		No second-half sampling of the diamond core or field duplicates for the RC drilling has been conducted at this stage.
		Historical Drilling
		No details are given for the historical drilling.
	Whether sample sizes are	Stavely Project
	appropriate to the grain size of the material being	Thursday's Gossan Prospect
	sampled.	Stavely Minerals' Diamond and RC Drilling
		The sample sizes are considered to be appropriate to correctly represent the sought mineralisation.
		Historical Drilling
		The sample sizes are considered to be appropriate to correctly represent the sought mineralisation.



	Criteria	JORC Code explanation	Commentary
(	Quality of	The nature, quality and	Stavely Project
	laboratory tests procedures used and whether the technique is considered partial or total.	Thursday's Gossan Prospect	
li		Stavely Minerals' Diamond and RC Drilling	
		The core samples and 1m RC split samples were analysed by multielement ICPAES Analysis - Method ME-ICP61. A 0.25g sample is pre-digested for 10-15 minutes in a mixture of nitric and perchloric acids, then hydrofluoric acid is added and the mixture is evaporated to dense fumes of perchloric (incipient dryness). The residue is leached in a mixture of nitric and hydrochloric acids, the solution is then cooled and diluted to a final volume of 12.5mls. Elemental concentrations are measured simultaneously by ICP Atomic Emission Spectrometry. This technique approaches total dissolution of most minerals and is considered an appropriate assay method for porphyry copper-gold systems.	
			The core samples and 1m RC split samples were also analysed for gold using Method Au-AA23. Up to a 30g sample is fused at approximately 1,100°C with alkaline fluxes including lead oxide. During the fusion process lead oxide is reduced to molten lead which acts as a collector for gold. When the fused mass is cooled the lead separates from the impurities (slag) and is placed in a cupel in a furnace at approximately 900°C. The lead oxidizes to lead oxide, being absorbed by the cupel, leaving a bead (prill) of gold, silver (which is added as a collector) and other precious metals. The prill is dissolved in aqua regia with a reduced final volume. Gold content is determined by flame AAS using matrix matched standards. For samples which are difficult to fuse a reduced charge may be used to yield full recovery of gold. This technique approaches total dissolution of most minerals and is considered an appropriate assay method for detecting gold mineralisation.
			Historical Drilling
			Samples from historical diamond hole SNDD001 were analysed at Amdel Laboratory. Gold was analysed by Fire assay and the multi-elements by aqua regia with ICPOES finish.
			Samples from TGRC110, TGRC136 and TGAC078 were submitted for the analysis of Au, Ag, As, Cu, Co, Fe, Ni, Pb, S and Zn. All elements except Au were assayed by ICP/OES methods. Gold was analysed using the Fire Assay method. Samples were submitted to either Genalysis Laboratory Services Pty Ltd (Amdel) in Adelaide or to Aminya Laboratories Pty Ltd (Onsite Laboratory Services) in Bendigo for analysis.
L			Samples from TGAC016 were submitted to Amde

STAVELY
MINERALS

Criteria	JORC Code explanation	Commentary
		Laboratory for Au by Fire assay and Ag, As, Cu, Fe, S, Pb and Zn by ICP/OES.
		Samples for TGAC004 were submitted to Onsite Laboratory Services in Bendigo for Au analysis by Fire Assay and Cu by ICP/OES.
		Holes SAC029 and SAC030 were submitted to Onsite Laboratory Services in Bendigo. Au was analysed by Fire assay, Hg by cold vapour and Ag, As, Bi, Cu, Pb, S and Zn by ICP/OES.
		Mineral Resource Estimate
		Pennzoil (1 RC, 14 RAB holes): A base metal suite was assayed via AAS (digestion not specified) and Au was assayed via fire assay.
		North (4 DD, 1 AC, 85 RAB) and Newcrest (3 DD): A base metal suite was assayed via Mixed Acid digest, AAS detection and Au was assayed via fire assay.
		Beaconsfield Gold (2 DD, 78 AC): OnSite Laboratory Services (Bendigo) analysed all samples for Cu by aqua regia digest ICP-OES detection and repeated assays for samples returning greater than 5000ppm Cu by Mixed Acid Digest ICP-OES detection. Au was assayed via fire assay.
		TGM Group (26 AC): No details. "Cherry-picking" of best assays from reassayed samples (85 of 160 substituted) has introduced a +10% relative bias for 9 holes used in the Mineral Resource estimate.
		No QC samples were inserted into any of the sample batches from the Thursday's Gossan drilling. No laboratory QC data was made available for assessment as part of this Mineral Resource estimate.
		Beaconsfield Gold undertook a limited (selective) umpire laboratory programme (29 samples), entire residual material assaying (94 intervals) and 66 sub-sample assays of residual material (66 intervals). These projects provide limited insight into sampling and assay reliability. This data indicates that:
		Both significant bias and precision issues are suspected in the Beaconsfield Gold dataset (OnSite Laboratory) and that there appears to be a period of instrument malfunction or systems/procedural breakdown at grades greater than 3,000ppm Cu at the laboratory.
		The spear vs total sample dataset shows a significant relative bias in favour of the spear sample, manifesting greatest within samples containing higher copper grades.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the	N/A



Criteria	JORC Code explanation	Commentary
	parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Stavely Project Thursday's Gossan Prospect Stavely Minerals' Diamond and RC Drilling Laboratory QAQC involved the submission of standards and blanks. For every 20 samples submitted either a standard or blank was submitted.  The analytical laboratory provide their own routine quality controls within their own practices. The results from their own validations were provided to Stavely Minerals.  Results from the CRM standards and the blanks gives confidence in the accuracy and precision of the assay data returned from ALS.  Historical Drilling
		No quality control data available for historical drilling.
Verification of	The verification of significant	Stavely Project
sampling and assaying	intersections by either independent or alternative company personnel.	Thursday's Gossan Prospect
		Stavely Minerals' Diamond and RC Drilling
		Either Stavely Minerals' Managing Director or Technical Director has visually verified significant intersections in the core at Thursday's Gossan.
		Historical Drilling
		Stavely Minerals' Managing Director has visually verified the significant intersections in historical diamond hole SNDD001.
		Mineral Resource Estimate
		Beaconsfield Gold undertook a limited (selective) umpire laboratory programme (29 samples), entire residual material assaying (94 intervals) and 66 sub-sample assays of residual material (66 intervals). These projects provide limited insight into sampling and assay reliability.
	The use of twinned holes.	No twinned holes have been drilled.
	Documentation of primary data, data entry procedures, data verification, data storage	Stavely Project Thursday's Gossan Prospect
	(physical and electronic) protocols.	Stavely Minerals' Diamond Drilling
	p. 0.0000	Primary data was collected for drill holes using the OCRIS logging template on Panasonic Toughbook laptop computers using lookup codes. The information was sent



Criteria	JORC Code explanation	Commentary
		to a database consultant for validation and compilation into a SQL database.
		Historical Drilling
		No details provided for historical drilling.
	Discuss any adjustment to assay data.	No adjustments or calibrations were made to any assay data used in this report.
Location of	Accuracy and quality of	Stavely Project
data points	surveys used to locate drill holes (collar and down-hole	Thursday's Gossan Prospect
	surveys), trenches, mine workings and other locations	Stavely Minerals' Diamond and RC Drilling
	used in Mineral Resource estimation.	Drill collar locations were pegged before drilling and surveyed using Garmin handheld GPS to accuracy of +/- 3m. Collar surveying was performed by Stavely Minerals' personnel. This is considered appropriate at this early stage of exploration.
		For the diamond holes down-hole single shot surveys were conducted by the drilling contractor. Surveys were conducted at approximately every 30m down-hole.
		Historical Drilling
		No details provided for drill collar locations for historical drilling.
		Downhole surveying was conducted for SNDD001 and VSTD001.
		Mineral Resource Estimate
		Holes within the Thursday's Gossan area are recorded as being surveyed under three systems: AMG66 zone 54S, MGA zone 54 and GDA94 zone 54S. All coordinates were converted to GDA94 zone 54S by previous workers. These conversions have not been checked by NPT or HA. The August 2013 estimate is undertaken using the supplied GDA94 54S grid references.
		Beaconsfield Gold holes were located by hand held GPS.  No information on survey methods for other workers.
	Specification of the grid system used.	The grid system used is GDA94, zone 54.
	Quality and adequacy of topographic control.	At the Thursday's Gossan prospect topographic control is achieved via use of DTM developed from a 2008 airborne magnetic survey conducted by UTS contractors measuring relative height using radar techniques.
		For Stavely Minerals' exploration, the RL was recorded for each drill hole and soil sample location from the GPS. Accuracy of the GPS is considered to be within 5m.
Data spacing and	Data spacing for reporting of Exploration Results.	The drill hole spacing is project specific, refer to figures in text.



Criteria	JORC Code explanation	Commentary
distribution	Whether the data spacing	Mineral Resource Estimate
	and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Area showing the thickest and highest tenor of mineralisation tested at nominal 50m centres by predominantly vertical holes.  Areas less well mineralised tested mostly at 100m centres by vertical drill holes.
	Whether sample compositing	Stavely Project
	has been applied.	Thursday's Gossan Prospect
		Stavely Minerals' Diamond Drilling
		Sample intervals were based on lithology but in general were 1m. No intervals were less than 0.3m or greater than 1.8m.
		Stavely Minerals' RC Drilling
		No sample compositing has been applied.
		Historical Drilling
		Sample compositing based on lithology was applied for historical drill hole SNDD001.
		Three metre compositing was applied for historical drill holes STAVRA077 and TGAC004.
		Two metre compositing was applied for historical drill hole TGAC078.
		TGRC110, TGRC136, SAC029 and SAC030 were sampled on a one metre basis.
		A combination of one metre and two metre composite sampling was applied for VSTD001.
Orientation of data in	Whether the orientation of sampling achieves unbiased	Stavely Project
relation to	sampling of possible	Thursday's Gossan Prospect
geological structure	structures and the extent to which this is known,	Stavely Minerals' Diamond and RC Drilling
	considering the deposit type.	The RC pre-collars and diamond tails were orientated at $60^{\circ}$ toward $070^{\circ}$ to perpendicularly intercept the sulphide rich 'D' veins within the low angle structure.
		Mineral Resource Estimate
		Drill orientation appropriate for testing of flat-lying mineralisation.
		Underlying geology indicates that primary mineralisation may be sub vertical. Supergene mineralisation is controlled by pre-existing geology, groundwater movement and surface/weathering events. It is unknown from the current dataset if there is any sub-vertical fabric within the supergene mineralisation and if so then vertical holes will not adequately sample this feature of the



Criteria	JORC Code explanation	Commentary
		mineralisation.
	If the relationship between	Stavely Project
	the drilling orientation and the orientation of key mineralised	Thursday's Gossan Prospect
	structures is considered to have introduced a sampling	Stavely Minerals' Diamond and RC Drilling
	bias, this should be assessed	There is insufficient drilling data to date to demonstrate
	and reported if material.	continuity of mineralised domains and determine if any
0	The second of the fee	orientation sampling bias can be identified in the data.
Sample security	The measures taken to ensure sample security.	Stavely Project
		Thursday's Gossan Prospect
		Stavely Minerals' Diamond and RC Drilling
		Samples in closed poly-weave bags were collected from the Company's Glenthompson shed by a contractor and delivered to Hamilton from where the samples are couriered to ALS Laboratory in Orange, NSW.
		Historical Drilling
		No available data to assess security.
		Mineral Resource Estimate
		No available data to assess security.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of the data management system has been carried out.
	techniques and data.	Mineral Resource Estimate
		Basic checking of data integrity.



## **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
tenement and land tenure status name/num ownership agreement with third p ventures, p overriding interests, h wilderness and enviro  The securi held at the along with impediment	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Stavely Project  The diamond drilling at Thursday's Gossan and Moun Stavely prospects and the IP survey conducted at the Fairview prospect are located on EL4556, which forms the Stavely Project.  The mineralisation at Thursday's Gossan is situated within exploration licence EL4556.  The Stavely Project was purchased by Stavely Minerals (formerly Northern Platinum) from BCD Resources Limited in May 2013. Stavely Minerals hold 100% ownership of the Stavely Project Tenements. The Stavely Project is or freehold agricultural land and not subject to Native Title claims.  New Challenge Resources Pty Ltd retains a net smelter return royalty of 3% in EL4556, although there is an option
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	to reduce this to 1% upon payment of \$500k.  Stavely Project  A retention licence – RL2017 was applied for over the majority of EL4556 in May 2014.  The tenement is in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Thursday's Gossan Prospect  Exploration activity became focused on Thursday's Gossan and the Junction prospects following their discovery by Pennzoil of Australia Ltd in the late 1970's. North Limited continued to focus on Thursday's Gossan in the 1990s. North's best drill result at Thursday's Gossan came from VICT1D1 which gave 161m of 0.26% Cu from 43m, including 10m of 0.74% Cu from 43m from a supergene-enriched zone containing chalcocite.  The tenement was optioned to CRA Exploration between 1995 and 1997. CRAE drilled several deep diamond drill holes into Thursday's Gossan, including DD96WL10, which intersected 186m from 41m of 0.15% Cu and DD96WL11, which intersected 261.7m from 38.3m of 0.13% Cu.  EL4556 was further explored by Newcrest Operations Limited under option from New Challenge Resources Ltd between 2002 and 2004. Their main focus was Thursday's Gossan in order to assess its potential as a porphyry copper deposit. One of their better



Criteria	JORC Code explanation	Commentary
		northern edge of the deposit which gave 32m at 0.41 g/t Au and 0.73% Cu from 22m in supergene-enriched material.
		The Stavely Project was optioned to Beaconsfield Gold Mines Pty Ltd in 2006 who flew an airborne survey and undertook an extensive drilling programme focused on several prospects including Thursday's Gossan. One of their diamond drill holes at Thursday's Gossan, SNDD001, encountered zones with quartz-sulphide veins assaying 7.7m of 1.08 g/t Au and 4.14% Cu from 95.3m and 9.5m of 0.44 g/t Au and 2.93% Cu from 154.6m along silicified and sheared contacts between serpentinite and porphyritic intrusive rocks.
		Once Beaconsfield Gold Mines Pty Ltd had fulfilled their option requirements, title of EL4556 passed to their subsidiary company, BCD Metals Pty Ltd, who undertook a gravity survey and extensive drilling at prospects including Thursday's Gossan. They also commissioned a maiden Mineral Resource estimate for Thursday's Gossan.
		All work conducted by previous operators at Thursday's Gossan is considered to be of a reasonably high quality.
		Mineral Resource Estimate
		Pennzoil: 1 RC, 14 RAB holes
		North: 4 DD, 1 AC, 85 RAB holes
		TGM Group: 26 AC holes
		Beaconsfield Gold: 2 DD, 78 AC holes
		Beaconsfield Gold: Mineral Resource Estimate undertaken by Coffey Mining Pty Ltd (2008)
Geology	Deposit type, geological setting and style of	Stavely Project
	mineralisation.	Thursday's Gossan Prospect
		The Thursday's Gossan and Junction prospects are located in the Mount Stavely Volcanic Complex (MSVC). Intrusion of volcanic arc rocks, such at the Mount Stavely Volcanic Complex, by shallow level porphyries can lead to the formation of porphyry copper ± gold ± molybdenum deposits.
		The Thursday's Gossan Chalcocite deposit (TGC) is considered to be a supergene enrichment of primary porphyry-style copper mineralisation. Mineralisation is characterised by chalcopyrite, covellite and chalcocite copper sulphide mineralisation within a sericite, illite and kaolin clay alteration assemblage. Copper mineralisation is within a flat lying enriched 'blanket' of overall dimensions of 4 kilometres north-south by up to 1.5 kilometres east-west by up to 60 metres thick with an



Criteria	JORC Code explanation	Commo	entary					
		approxi Mineral approxi	ncing at mately 30 Resourd	ness of an ave O metres. ces residen nensions	erage de The ma e within	ajority (ci a higher	ow surfa rca 60%) grade z	) of the zone of
		alteration 10 kilor defined geoche Mineral significa	on system netre long by a coil mistry, F s believes ant porph	Gossan and with congression control of the control	pper-gol . The Ju nagnetic ng copp nnical evi er-gold m	d minera nction po high, streer eer anon idence in	alisation orphyry ta ong soil nalism. S dicates t	over a arget is copper Stavely there is
		Minera	l Resour	ce Estim	ate			
		rocks,	where fin	chment on the grained are grai	d chalco	cite and	covellite	
Drill hole	A summary of all information material to the understanding of the exploration results	Minera	l Resour	ce Estim	ate			
Information		225 hol	es drilled	in the pro	ospect.			
including a tabulation following information Material drill holes:  o easting and not the drill hole o	including a tabulation of the following information for all Material drill holes:  o easting and northing of the drill hole collar o elevation or RL (Reduced Level –	surface Downho	ole surve is availab	s not reals from ys for depote for 4 co	escribing	hole tra	ce and	-
	elevation above sea level in metres) of the drill hole collar o dip and azimuth of the	mineral	isation.	ed interva		ed with v	visible s	ulphide
	hole	Sampiir	ng interva	ıl breakdo	own:			
	<ul> <li>down hole length and interception depth</li> </ul>	Drill Type	Company	0 to 1m	Count o	f Sample Ler 2 to 3m	ngths 3 to 5m	Total
	o hole length.		BCD	833	258	177	1	1269
		AC	North		21	407		21
		AC Total	TGM Group	833	279	187 364	1	187 <b>1477</b>
			BCD	3	4	1	1	9
			CRAE	1	10	2		13
		DD	Newcrest	38 96	25			100
			North Pennzoil	8	4			100
		DD Total		146	43	3	1	193
		RAB	North		1	436	2	439
			Pennzoil	1 1	92	426		93 <b>532</b>
		RAB Total	BCD	136	93	436	2	137
		RC	Pennzoil		16			16
			Pennzon					
		RC Total	otal	136	16 431	1 804	4	153 2355

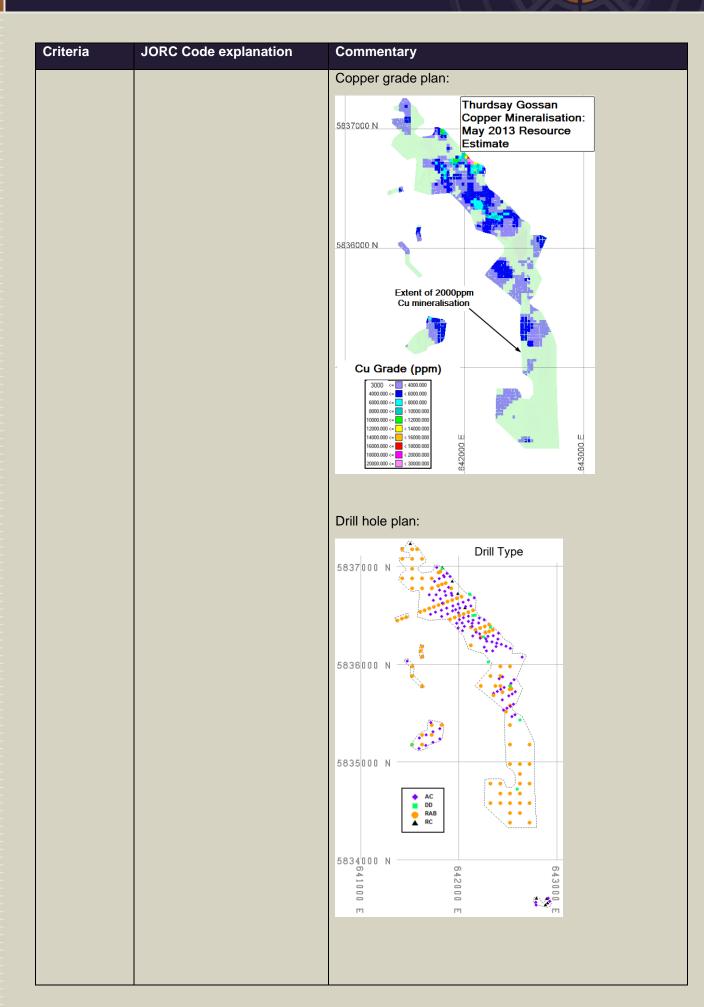


Criteria	JORC Code explanation	Commentary
		Incomplete oxidation-state and interval colour logging (utilised to determine base of supergene zone).
		Summary moisture data available for 28 AC/RC holes show that all bar one hole encountered water through the mineralised interval.
		Recovery data available for 2 DD holes.
		SG measurements taken from Beaconsfield Gold hole TGDD46. No mention of drying samples. May be more akin to bulk density measurements than dry bulk density measurements.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No material drill hole information has been excluded.
Data aggregation	In reporting Exploration Results, weighting averaging	Stavely Project
methods	techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	Thursday's Gossan Prospect
		Exploration results are nominally reported where copper results are greater than 1% Cu over a down-hole width of a minimum of 1 metre.
		No top-cutting of high grade assay results have been applied, nor was it deemed necessary for the reporting of significant intersections.
		Mineral Resource Estimate
		Assays composited to 3m for resource estimation.
	Where aggregate intercepts	Stavely Project
	incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Thursday's Gossan Prospect
		In reporting exploration results, length weighted averages are used for any non-uniform intersection sample lengths. Length weighted average is (sum product of interval x corresponding interval grade %) divided by sum of interval length.
		Historical Drilling
		In reporting exploration results, length weighted averages are used for any non-uniform intersection sample lengths. Length weighted average is (sum product of interval x corresponding interval grade %) divided by sum of interval length.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are used for reporting exploration results.



Criteria	JORC Code explanation	Commentary			
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Thursday's Gossan Prospect  There is insufficient drilling data to date to demons continuity of mineralised domains and determine relationship between mineralisation widths and interlengths.  Mineral Resource Estimate  No obvious association other than, as expected supergene mineralisation, globally thicker mineralisation has higher tenor of copper.			
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	Refer to the Tables and Figures in the text.			
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to Figures in the text.  A plan view of the drill hole collar locations is included.  Mineral Resource Estimate  No historic or client produced diagrams available for review.  Thickness plan:  TGC - Resource Model Thickness Contours  TGC - Resource Model Thickness Contours  Thickness Contours  Thickness Contours  Thickness Contours			







Criteria	JORC Code explanation	Commentary
Balanced	Where comprehensive	Stavely Project
reporting	reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be	Thursday's Gossan Prospect
		All Cu values greater than or equal to 1m at >1% have been reported for SMD007.
	practiced to avoid misleading	Mineral Resource Estimate
	reporting of Exploration Results.	Selective sampling of holes where mineralisation observed considered acceptable for estimating sulphide resources.
		Alternative sampling and "cherry picking" practices assessed as having negligible effect on global estimate but will be a limiting factor in lifting local resources to higher than Inferred classification under the JORC Code (2012 Edition).
		66 of the 225 holes terminate within mineralisation; however surrounding holes adequately define the base of mineralisation.
Other substantive	ubstantive meaningful and material, should be reported including	All relevant exploration data is shown on figures and discussed in the text.
data		Mineral Resource Estimate
		A further 683 holes within and surrounding the prospect area were utilised for defining the resource mineralisation.
Further work	The nature and scale of planned further work (eg tests	Stavely Project
	for lateral extensions or depth	Thursday's Gossan Prospect
	extensions or large-scale step-out drilling).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Subsequent to the logging, sampling and receipt of assays from the three recently completed diamond drill holes (SMD006, SMD007 and SMD008) the new data will be interpreted and modelled in conjunction with the previous drilling to gain a better understanding of the mineralisation.
		The diamond tails for the outstanding 12 holes drilled to test the near-surface expressions of the sulphide-rich 'D' veins will be completed in Spring 2017.
		Mineral Resource Estimate
		Evaluation of area for discovery of styles of mineralisation other than the defined supergene mineralisation.



## **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.  Data validation procedures used.	Data management protocols and provenance unknown.  Limited cross checks with paper records of drill hole and assay data.  Relational and spatial integrity assessed and considered acceptable.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.  If no site visits have been undertaken indicate why this is the case.	Not undertaken by CP.  CP has viewed photos of chip trays with mineralisation taken by Stavely Minerals' Personnel.
Geological interpretation	Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.  Nature of the data used and of any assumptions made.  The effect, if any, of alternative interpretations on Mineral Resource estimation.  The use of geology in guiding and controlling Mineral Resource estimation.  The factors affecting continuity both of grade and geology.	Single planar flat-lying horizon of supergene mineralisation containing areas where mineralisation thickens and copper grade tenor increases. A 0.2%Cu cut was utilised to domain the extents of the better mineralisation and this domain used as a hard boundary for grade interpolation.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	Extends intermittently for a strike length of 4,000m (NS) a breadth of 1,500m and vertically up to 60m thick. The model includes prospects known as Thursday's Gossan Chalcocite Copper, Junction and Drysdale.  The block model and grade estimate encompasses the extent of the mineralisation.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted	Copper grades were interpolated into a Vulcan <sup>TM</sup> non-regular block model with 20x20x10 metre parent blocks – subblocked to 2.5x2.5x2.5 metre minimum block dimensions.  3m composite intervals utilised.  No high grade sample treatment applied.  Single pass ID2 interpolation run employed utilising 200m



Criteria	JORC Code explanation	Commentary
	estimation method was chosen include a description of computer software and parameters used.  The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.  The assumptions made regarding recovery of byproducts.  Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).  In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.  Any assumptions behind modelling of selective mining units.  Any assumptions about correlation between variables.  Description of how the geological interpretation was used to control the resource estimates.  Discussion of basis for using or not using grade cutting or capping.  The process of validation, the checking process used, the comparison of model data to drill hole data, and use of	sample search within the plane of mineralisation (97.8% of blocks within the TIN domain estimated).  Minimum of 10 and maximum of 20 composites utilised to estimate grade.  The Mt Ararat Mineral Resource is classified as Inferred under the guidelines set out in the 2012 JORC Code.
Moisture	reconciliation data if available.  Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content	27 of 28 AC/RC holes with moisture information recorded wet drilling conditions through the mineralisation. It is unknown if the wet conditions has introduced bias or contamination into the dataset as relevant/detailed information is not available.  Available core recovery data suggests that biases caused by both loss and enrichment may be affecting the resource dataset.
Cut-off parameters	The basis of the adopted cut- off grade(s) or quality	The Mineral Resource estimate is reported at 0.2%, 0.3% and 0.5% Cu cuts and by three mineralised thicknesses





Criteria	JORC Code explanation	Commentary
	parameters applied.	domains - <10m, 10-20m and >20m thick. These breakdowns and grade tonnage plots are reported to allow differing economic assessment on the project.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Not applied, however resource is reported at three thicknesses for input into this discipline.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Not evaluated as risks associated with historic data over- riding feature affecting the confidence of the estimate.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of	Not evaluated as risks associated with historic data over- riding feature affecting the confidence of the estimate.



Criteria	JORC Code explanation	Commentary
	early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	A single tonnage factor of 2.10 tonnes/m3 was applied to all mineralisation.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The estimate is classified as Inferred under the JORC Code (2012 Edition). Absence of QA/QC, the indicated sampling and assaying issues and absence of important data for evaluating other risks to the estimate (such as
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	recover and moisture versus grade) are key factors in assigning an Inferred Classification.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No audit or review of Mineral Resource estimate undertaken.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or	Not undertaken other than that stated under the classification section.





Criteria	JORC Code explanation	Commentary
	procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	