

# Drilling Hits Higher Grade Copper Zones at Junction and Thursday's Gossan Porphyries

Intersections of up to 1.38% copper, 0.25g/t gold and 11.8g/t silver highlight potential for attractive grades within the two major porphyry systems being tested in Western Victoria

# **Highlights**

#### SMD002 (Junction Prospect) – Assay Results

- Assay results now received for the bottom third of drill hole SMD002 have returned a well-mineralised interval of:
  - 5m at 1.38% copper, 0.25g/t gold and 11.8g/t silver
- The mineralised zone is characterised by disseminated to patchy pyrite and chalcopyrite associated with biotite alteration (potassic) and hydrothermal magnetite demonstrating the tenor of grade that the Junction porphyry system is capable of producing.
- This is the **first instance of gold being associated with copper mineralisation** at Junction and is considered highly encouraging.
- Broad zones of low-grade copper mineralisation previously reported are consistent with a peripheral location for the upper portion of the drill hole:
  - o 62m at 0.17% copper; 15m at 0.1% copper; and 44.8m at 0.15% copper.

#### SMD003 (Thursday's Gossan Prospect) – Assay Results

- Drill hole SMD003 assay results return:
  - 3m at 1.36% copper, 31.2g/t silver and 343ppm molybdenum from a 'D' vein; and
  - o 196m at 0.13% copper
- This drill-hole is a significant incremental step towards the target mineralisation in what is clearly a large porphyry system at depth.
- It has also provided an oriented 'D' vein measurement, indicating that the target zone may be to the south of and at depth below SMD003, although this may be influenced by a structural offset which is currently being further investigated.

#### SMD004 (Thursday's Gossan Prospect) – Partial Assay Results

- SMD004 has returned partial assay results from the upper ~200m with:
  - 52m at 0.23% copper associated with near-surface supergene enrichment
  - Assay results from the lower ~440m pending.



Stavely Minerals Limited (ASX Code: **SVY** – "Stavely Minerals") is pleased to advise that its search for a substantial porphyry copper-gold system at the 100%-owned **Stavely Copper Project** in Western Victoria is continuing to deliver encouraging results, with recent drilling intersecting higher grade zones at both the **Thursday's Gossan** and **Junction** prospects.

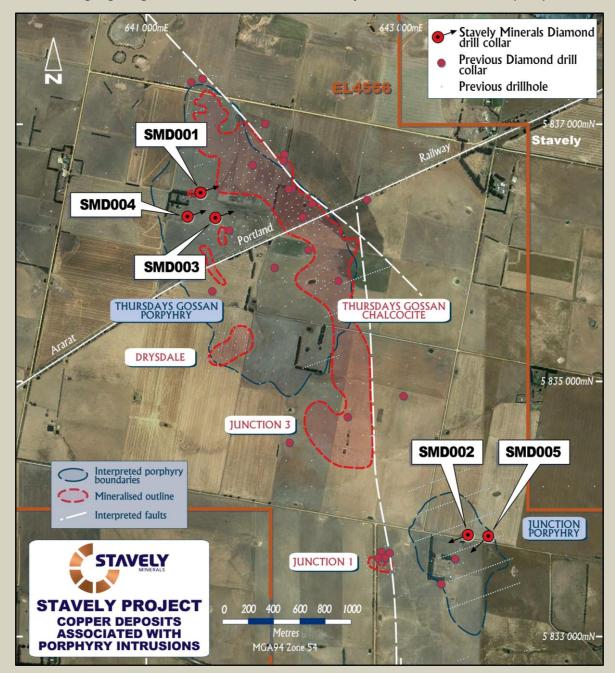


Figure 1 - Drill collar location plan for Thursday's Gossan and Junction porphyry targets.

Stavely Minerals' Managing Director, Mr Chris Cairns, said the maiden deep drilling programme at the Thursday's Gossan and Junction prospects had significantly advanced the search for porphyry copper-gold mineralisation.

"We have seen clear indications at Thursday's Gossan that our drilling is getting incrementally closer to the targeted porphyry copper-gold mineralisation at depth, however we are also the first to recognise the influence of a major low-angle fault at depth," Mr Cairns said.



"This may go some way to explaining the lack of success of previous explorers. We are pursuing multiple technical avenues, including high-powered geophysics, to determine the direction and magnitude of this offset and we are confident we can target increasingly attractive copper-gold mineralisation below this structure.

"At the nearby Junction prospect we have, for the first instance, seen meaningful gold mineralisation and the attractive tenor of copper-gold-silver grades that this system is capable of producing.

"The next phase of drilling at Junction will be aimed at intersecting broader intervals of this higher grade mineralisation, which presents an exciting opportunity for the Company," he said.

"At Thursday's Gossan, we will apply some of the latest thinking and exploration techniques to help us vector into the deeper porphyry mineralisation at depth, which we could expect to deliver better developed copper and gold mineralisation."

#### **Detailed Discussion**

Stavely Minerals' fundamental premise has been that previous explorers did not drill deep enough to test copper-gold mineralisation associated with a porphyry intrusion at depth.

The objective of the current deep drilling programme is to provide geological vectors towards the targeted quartz-sulphide stockwork veining on the margins and apex of the porphyry intrusions at the Thursday's Gossan and Junction prospects (see Figure 5 and Appendix 1).

To this end, the Company is working closely with Corbett and Menzies Consulting Pty Ltd ("Corbett and Menzies") to validate its geological observations and assist in the progressive vectoring towards the target zones of copper-gold mineralisation.

## SMD003 (Thursday's Gossan)

#### The Objective of SMD003

This second drill hole at the Thursday's Gossan prospect was targeting the core of a geophysical IP chargeability anomaly.

The chargeability anomaly was interpreted as a response to phyllic (silica-sericite-pyrite) alteration likely to occur above, and as an overprint on, the main potassic alteration and quartz-sulphide stockwork veining of the central porphyry – which is expected to host the best developed copper-gold mineralisation within the Thursday's Gossan porphyry system.

#### What SMD003 Intersected

SMD003 has been described in some detail in a previous announcement to the ASX dated 28 August 2014 but can be summarised as having intercepted the expected silica-sericite-pyrite alteration assemblage typical of phyillic-style alteration as expected of the IP chargeability anomaly. The increased intensity of alteration relative to the first drill hole SMD001 was particularly encouraging. Further, at 340m depth an oriented 'D' vein indicated that the porphyry source may be located at a dip of 55 degrees to the south (Figures 2 & 3).





Figure 2 - Bornite in a quartz-pyrite-bornite-chalcopyrite sulphidic 'D' vein at 340.6m (bornite is the purple sulphide – hence its colloquial name 'peacock ore').



Figure 3 - Oriented 'D' vein at 340m depth in SMD003 demonstrating a 55 degree dip towards the south (to the left of picture).

However, at a depth of 399m in SMD003, 420m in SMD001 (as previously reported) and 480m in SMD004 (described below) a low-angle fault has been recognised which marks a sharp transition from well-developed phyllic alteration (interpreted as progressing proximal to the porphyry core) to more distal propyllitic alteration below the fault (Figure 4).



It is notable that low-grade copper mineralisation persists below the fault into the propylitic alteration and reinforces the potential for well-developed copper-gold mineralisation associated with the potassic core of the porphyry system. See Figure 5 for a schematic representation of the alteration zonations of a typical porphyry system.

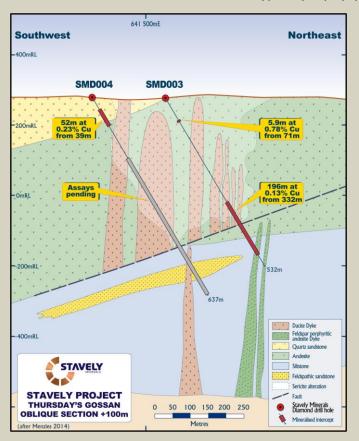


Figure 4 - Schematic cross-section of SMD003 and SMD004 from the Thursday's Gossan prospect.

#### Assay Results SMD003 and SMD004 (partial)

SMD003 intersected broad intervals of low-grade copper mineralisation consistent with geological observations from the well-developed phyllic alteration. An oriented 'D' vein was intersected from 340m depth.

Assay results from SMD003 included:

- o 5.9m at 0.78% copper and 16g/t silver from 71m down-hole; and
- 196m at 0.13% copper from 332m down-hole

Assay results from SMD004 (partial) included:

o **52m at 0.23% copper** in supergene enriched mineralisation from 39m downhole.

#### What it Means

The phyllic alteration overprint with abundant 'B' and 'D' veins in drill hole SMD003 and SMD004 is typical of a mineralised porphyry system (see Figure 5 and Appendix 1).

Of particular note is the fact that the 'D' veins in SMD003 are commonly associated with chalcopyrite, bornite and molybdenite sulphides, indicating a more proximal location



relative to the target core of the porphyry system at Thursday's Gossan. Assay results demonstrating very broad intervals of low-grade copper mineralisation are consistent with this interpretation.

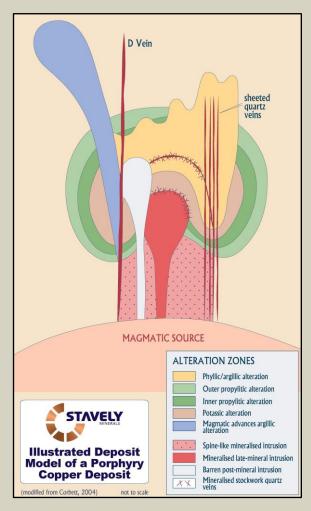


Figure 5 – Schematic section of the stylised porphyry-style mineralisation (after Corbett, 2004). The evolution of early stage prograde potassic and propylitic alteration, development of stockwork quartz-sulphide vein mineralisation and subsequent retrograde phyllic and argillic alteration in a stylised porphyry system is included as a time series graphic in Appendix 1.

The drill holes SMD001, SMD003 and SMD004 have all intersected a low-angle (~50 degrees) fault structure which appears to have laterally offset the porphyry system as evidenced by the rapid change from phyllic to propylitic alteration on the upper and lower side of the structure respectively in all three drill holes.

Recognition of this structure now allows Stavely Minerals to interpret the alteration zonation and copper mineralisation trends in all drill holes in the context that there are two domains; above and below the fault structure.

A reinterpretation of HyLogger alteration mineralogy mapping, copper and multi-element geochemistry, IP geophysics and logged geology, alteration and structure in the context of this new knowledge will be critical to focusing the deep drilling towards the potentially well mineralised copper-gold porphyry core below the fault structure.

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Stavely Minerals is confident copper-gold mineralisation remains to be targeted below the fault structure. That there are broad intervals of low-grade copper mineralisation associated with the propylitic alteration below the fault structure suggests that the potential offset is not large.

## SMD004 (Thursday's Gossan)

#### The objective of SMD004

SMD004 was targeting the IP chargeability anomaly beneath drill holes SMD001 and SMD003. The chargeability anomaly was interpreted as a response to phyllic (silica-sericite-pyrite) alteration likely to occur above, and as an overprint on, the main potassic altered core of the porphyry – which is expected to host the best developed copper-gold mineralisation within the Thursday's Gossan porphyry system. The IP anomaly has been confirmed in both SMD001 and SMD003 to relate to phyllic alteration.

#### What SMD004 intersected

SMD004 drilled through a sedimentary package of sandstones, tuffs and siltstones before intersecting a series of dacites, ?tonalities, micro granodiorites, and andesites with early propylitic (chlorite) to potassic (biotite) alteration and a later phyllic (silica-sericite-pyrite) overprint (see Figures 6 & 7). There is also some kaolin (argillic) alteration from 153m to 194m.

A zone of silica-sericite-?ankerite alteration with molybdenite and pyrite veining was intersected at 302m (see Figure 8). This zone is similar to zones in SMD003 at 263m and 340m (the zone at 340m in SMD003 had the quartz-chalcopyrite-bornite veins associated with it).

A number of 'D' veins were intersected throughout the hole with two major zones at 401m to 405.5m and 451.4m to 475m (see Figure 9). Both zones had massive pyrite with molybdenite and weak chalcopyrite. The zone at 401m also has trace bornite associated with it (see Figure 10).

The major zone at 451m-475m, which comprises massive sulphide-quartz veining and late stage dykes, is part of the fault which cuts off the phyllic alteration. Once through this zone the hole intersected tuffs and siltstones with propylitic alteration. Towards the end of the hole there was a slight increase in chalcopyrite and some quartz-molybdenite sulphide veins.





Figure 6 - ?Tonalite with stockwork quartz pyrite veining at 182m.



Figure 7 - Brown hydrothermal biotite at 369m.





Figure 8 - Silica flooded zone at 302m with silica-pyrite-?ankerite alteration and quartz-pyrite-molybdenite veining. Similar to zones in SMD003 at 263m and 340m.



Figure 9 -Part of the massive sulphide zone at 451.4m to 475m. This zone, which comprises massive sulphide-quartz veining and late stage dykes is part of the fault which offsets the phyllic alteration over the propylitic alteration.



Figure 10 - Bornite in 'D' vein at 402.3m.



#### SMD002 (Junction)

#### The Objective of SMD002

This first deep diamond drill hole at the Junction prospect (see Figure 1) was designed to test the northern end of a magnetic high surrounded by a magnetic low annulus and a copper soil / auger geochemical anomaly coincident with the magnetic high.

The magnetic high was interpreted as potentially resulting from hydrothermal magnetite associated with potassic alteration while the surrounding magnetic low was interpreted as possibly related to overprinting phyllic alteration destroying the early-stage magnetite alteration on the margins of the mineralised system.

#### What SMD002 Intersected

SMD002 has previously been described in detail in an announcement to the ASX dated 28 August 2014. In summary, SMD002 intercepted zones of patchy potassic (biotite) alteration and some potassium feldspar alteration selvedges around porphyry 'B' veins (see Figures 11 & 12).



Figure 11 - Pervasive biotite (potassic) alteration (dark brown groundmass).



Figure 12 - K-spar selvedges (pink) to quartzchalcopyrite 'B' veins (HQ diameter drill core).

Sulphide mineralisation is expressed as early 'A' veins of quartz-K-feldspar-chalcopyrite which are cut by later quartz-actinolite-chalcopyrite 'B' veins. Quartz-pyrite ± chalcopyrite ± molybdenite 'D' veins are the most common vein type in phyllic altered zones, while chalcopyrite mineralisation occurs in greatest abundance proximal to biotite alteration associated with diorite dykes indicative of leakage from a deeper porphyry source.



#### **Assay Results**

SMD002 intersected broad intervals of low-grade copper mineralisation consistent with geological observations that well developed phyllic alteration observed near the top of the drill hole is associated with common 'D' veins and observed chalcopyrite abundances up to 1% associated with locally pervasive biotite (potassic) alteration which are proximal to the target porphyry-style quartz-sulphide stockwork veining copper-gold mineralisation (see Figure 13).

SMD002 also intercepted a small interval of disseminated to patchy pyrite-chalcopyrite-magnetite mineralisation associated with potassic biotite and potassium feldspar alteration (see Figure 14). This interval returned a high-grade zone of:

5.0m at 1.38% copper, 0.25g/t gold and 11.8g/t silver

Significantly, this is the first instance of meaningful gold mineralisation in association with copper yet seen at the Junction prospect. Given that this interval is not a 'D' vein, it is particularly encouraging as an example of the attractive tenor of copper-gold-silver grade the Junction system is capable of in the potassic altered zone.

Broad intervals of low-grade copper mineralisation from SMD002 included:

- 62.0m at 0.17% copper from 35.2m down-hole;
- 15m at 0.10% copper from 89m down-hole; and
- 44.8m at 0.15% copper from 193.2m down-hole.

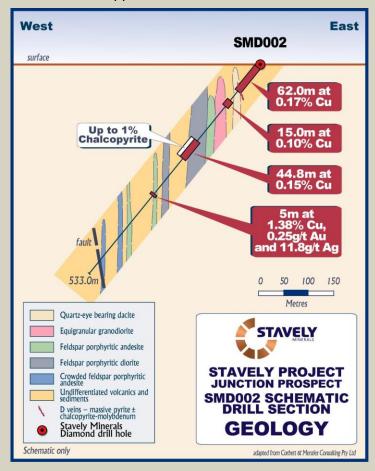


Figure 13 – Factual geology observed in SMD002 (modified figure by Corbett and Menzies).





Figure 14 – Patchy to disseminated pyrite and chalcopyrite sulphide mineralisation associated with biotite and potassium feldspar (potassic) alteration in SMD002 – 335m.

#### **Forward Programme at the Stavely Project**

Stavely Minerals plans to compile the geology, geochemistry, geophysics and alteration mineralogy into a 3-dimensional model now incorporating the low-angle structure to identify vectors towards the offset potassic core of the Thursday's Gossan system and Junction porphyry system to determine where the next deep drill holes should be targeted.

This outcome is consistent with Stavely's objectives for this initial successful phase of drilling.

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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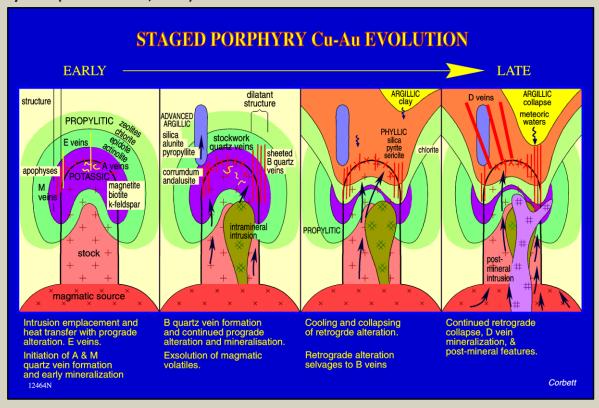
#### **Intercept Table**

				Sta	vely Pro	ject							
		MGA 94 zone 54			Intercept								
Hole id	Hole Type	East	North	Dip/ Azi	RL (m)	Total Depth (m)	From (m)	To (m)	Width (m)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (ppm)
				TI	hursday	's Gossan	Prospect						
SMD003	DD	641570	5836277	-60°	270	531.6	71.0	76.9	5.9	0.78		16.0	
				/060		Incl.	73.9	76.9	3.0	1.36		31.2	343
							197.0	198.0	1.0	1.22		9.8	
						Incl.	332.0	528.0	196.0	0.13			
						inci.	340.0	341.0	1.0	3.88	0.11	20.6	
SMD004	DD	641370	5836280	-60°	270	636.6	39.0	91.0	52.0	0.23			
31010004	DD	041370	3630260	/060		030.0	196.7	636.6		Assa	ys Pendi	ing	
					Juno	tion Pros	pect						
SMD002	DD	643549	5833804	-50°	270	533.0	3.0	65.0	62.0	0.17*			
				/250			89. 0	104.0	15.0	0.10*			
							113.0	123.0	10.0	0.10*			
							138.0	148.0	10.0	0.10*			
							176.0	270.0	93.0	0.11*			
						Incl.	193.2	238.0	44.8	0.15*			
						Incl.	329.0	337.0	8.0	0.96	0.17	7.9	
						IIICI.	332.0	337.0	5.0	1.38	0.25	11.8	

<sup>\*</sup>Previously Released results – ASX Release 28<sup>th</sup> August 2014

Cu — intercepts quoted  $\geq$  10m @ 0.1% Cu (except for high –grade veins)

Appendix 1 – Stylised time sequence evolution of a mineralised porphyry copper-gold system (after Corbett, 2009)





# 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	Thursday's Gossan Prospect
techniques	sampling (eg cut channels, 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.	Diamond drill hole, SMD001 was drilled at the Thursday's Gossan prospect. Diamond drilling was used to produce drill core with a diameter of 85mm (PQ) from surface to a depth of 302.5m and then 63.5mm (HQ) from 302.5m to 522.3m (eoh). SMD001 was orientated at 60° toward 060° to intercept and drill beneath an IP chargeability anomaly interpreted as representing the phyllic alteration of a porphyry system.  Diamond drill hole, SMD003 was drilled at the Thursday's Gossan prospect. Diamond drilling was used to produce drill core with a diameter of 85mm (PQ) from surface to a depth of 260.4m and then 63.5mm (HQ) from 260.4m to 531.6m (eoh). SMD003 was orientated at 60° toward 060° to intercept and drill beneath an IP chargeability anomaly interpreted as representing the phyllic alteration of a
		porphyry system.  Diamond drill hole, SMD004 was drilled at the Thursday's Gossan Prospect. Diamond drilling was used to produce drill core with a diameter of 85mm (PQ) from surface to a depth of 190m and then 63.5mm (HQ) from 190m to 637m (eoh). SMD004 was orientated at 60° toward 060° to intercept and drill beneath an IP chargeability anomaly interpreted as representing the phyllic alteration of a porphyry system.
		Junction Prospect
		Diamond drill hole, SMD002 was drilled at the Junction Prospect. Diamond drilling was used to produce drill core with a diameter of 85mm (PQ) from surface to a depth of 173.0m and then 63.5mm (HQ) from 173.0m to 533m (eoh). SMD002 was orientated at -50° toward 239° under the northern edge of a magnetic high, under elevated Cu in surface soil samples and towards a massive chalcopyrite bearing 'D' vein intersected in a historical aircore drill hole.
	Include reference to measures taken to ensure sample representivity and the	Sample representivity was ensured by a combination of Company Procedures regarding quality controls (QC) and quality assurance/ testing (QA).
	appropriate calibration of any measurement tools or systems used.	Examples of QC include (but are not limited to), daily workplace and equipment inspections, as well as drilling and sampling procedures.
		Examples of QA include (but are not limited to), collection of drilling duplicates ("field duplicates"), the use of certified standards and blank samples.
	Aspects of the determination of mineralisation that are Material to the Public Report - In cases where 'industry standard' work has been	Drill sampling techniques are considered industry standard for the Stavely work programme.





Criteria	JORC Code explanation	Commentary
	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 other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Thursday's Gossan and Junction Prospects  For the diamond core the entire hole has been sampled. For the PQ core - quarter core and for the HQ - half core was submitted to the laboratory 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.  The diamond drill samples were submitted to Australian Laboratory Services ("ALS") in Orange, NSW. Laboratory sample preparation involved:- sample crushed to 70% < 2mm, riffle/rotary split off 1kg, pulverize split 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.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	Thursday's Gossan and Junction Prospects  Diamond drilling used PQ (85mm internal diameter) and HQ (63.5mm internal diameter) drill bits. Diamond drilling was standard tube. Diamond core was orientated by the Reflex ACT III core orientation tool.
Drill sample recovery	ample Method of recording and	Diamond core recoveries were logged and recorded in the database.  Greater than 83% of SMD001 hole had 100% core recovery, with only 0.4% of the hole recording 0% recovery.  A total of 92% of SMD002 had in excess of 95% recovery, with less than 0.5% of the hole recording less than 50% recovery.  A total of 86% of SMD003 had in excess of 95% recovery, with 2.2% of the hole recording less than 50% recovery.  A total of 95% of SMD004 had in excess of 95% recovery, with 0.3% of the hole recording less than 75% recovery, with 0.3% of the hole recording less than 75% recovery.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the driller.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	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 competent nature of the drill core.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support	Geological logging of samples following 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



Criteria	JORC Code explanation	Commentary
	appropriate Mineral Resource	geotechnical parameters.
	estimation, mining studies and metallurgical studies.	Due to the fractured nature of the core returned in SMD001 there was a low confidence in the orientations and consequently only limited structural measurement could be taken.
		The quality of core from SMD002, SMD003 and SMD004 was much better than for SMD001 and consequently the confidence in the orientations was higher and structural measurements could be taken.
		Magnetic Susceptibility measurements were taken for each 1m diamond core interval.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All logging is quantitative, based on visual field estimates. Systematic photography of the diamond core in the wet and dry form was completed.
	The total length and percentage of the relevant intersections logged.	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.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Quarter core for the PQ diameter diamond core and half core for the HQ diameter core was sampled on site using a core saw.
preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Company procedures were followed to ensure sub- sampling adequacy and consistency. These included (but were not limited to), daily work place inspections of sampling equipment and practices.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Blanks and certified reference materials are submitted with the samples to the laboratory as part of the quality control procedures.
	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.	No second-half sampling has been conducted at this stage.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered to be appropriate to correctly represent the sought mineralisation.



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Thursday's Gossan and Junction Prospects  The core 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 were also analysed for gold using Method Au-AA23. Up to a 30g sample is fused at approximately 1100°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.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No results have been reported using geophysical tools, spectrometers, handheld XRF instruments, 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.	Thursday's Gossan and Junction Prospects  Laboratory QAQC involved the submission of standards and blanks. For each 60 samples, two Certified Reference Material (CRM) standards and one blank were submitted.  The analytical laboratory also 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



Criteria	JORC Code explanation	Commentary
		data returned from ALS.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Either Stavely Minerals' Managing Director or Technical Director have visually verified significant intersections in the core at Thursday's Gossan and Junction prospects.
	The use of twinned holes.	No twinned holes have been drilled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data was collected for drill holes using the OCRIS logging template on Panasonic Toughbook laptop computers using lookup codes. The information was sent to a database consultant for validation and compilation into a SQL database.
	Discuss any adjustment to assay data.	No adjustments or calibrations were made to any assay data used in this report.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource	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.
	estimation.	For the diamond holes down-hole single shot surveys were conducted by the drilling contractor. Surveys were conducted at approximately every 30m down-hole.
	Specification of the grid system used.	The grid system used is GDA94, zone 54.
	Quality and adequacy of topographic control.	At Thursday's Gossan and Junction prospects 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.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The drill hole spacing is project specific, refer to figures in text.
	Whether the data spacing 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.	The paucity of deep drilling at the Thursday's Gossan and Junction prospects does not provide sufficient data distribution and spacing appropriate for Mineral Resource or Ore Reserve Estimations.
	Whether sample compositing	Thursday's Gossan and Junction Prospects
	has been applied.	Sample intervals were based on lithology but in general were 1m. No intervals were less than 0.3m or greater than 1.8m.
Orientation of	Whether the orientation of	Thursday's Gossan Prospect
data in relation to geological structure	sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	At Thursday's Gossan, diamond drill holes SMD001, SMD003 and SMD004 were orientated at 60° toward 060° to intercept and drill beneath an IP chargeability anomaly interpreted as representing the phyllic alteration of a porphyry system.



Criteria	JORC Code explanation	Commentary
		Junction Prospect
		At Junction, SMD002 was orientated at -50° toward 239° under the northern edge of a magnetic high, under elevated Cu in soil samples and towards a massive chalcopyrite bearing 'D' vein intersected in a historical aircore drill hole.
	If the relationship between	Thursday's Gossan and Junction Prospects
	the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	There is insufficient drilling data to date to demonstrate continuity of mineralised domains and determine if any orientation sampling bias can be identified in the data.
Sample security	The measures taken to ensure sample security.	Samples are delivered in closed poly-weave bags to the courier in Ararat by Stavely Minerals' personnel. The samples are couriered to ALS Laboratory in Orange, NSW.
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.

# **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral	Type, reference	Thursday's Gossan and Junction Prospects
tenement and land tenure status	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.	The diamond drilling at Thursday's Gossan and Junction is located on EL4556, which forms the Stavely Project. 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 on 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 to reduce this to 1% upon payment of \$500k.
	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.	Thursday's Gossan and Junction Prospects
		A retention licence – RL2017 was applied for over the entire extent of EL4556 in May 2014.
		The tenement is in good standing and no known impediments exist.
Exploration	Acknowledgment and	Thursday's Gossan Prospect
done by other parties	appraisal of exploration by other parties.	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





Criteria	JORC Code explanation	Commentary
		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 intersections came from drill hole VSTD01 on the 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 program 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 the Thursday's Gossan is considered to be of a reasonably high quality.
		Junction Prospect
		The Junction porphyry target is defined by a coincident magnetic high, strong soil copper geochemistry, RAB drilling copper anomalism and has been tested by only two diamond drill holes to date. Copper mineralisation to 0.54% from 85-86m down hole was intercepted in diamond drill hole PEND6J.
		Junction 1 is associated with the Junction Porphyry. Significant intersections of supergene copper mineralisation were encountered in drilling by Pennzoil, including 16.5m of 0.86% Cu from 20m and 16m of 0.99% Cu from 42m in DDH Junction 3 drilled at the Junction 1 prospect. More recent aircore and reverse



Criteria	JORC Code explanation	Commentary
		circulation drilling by Beaconsfield Gold Mines Pty Ltd includes 35m at 3.69% Cu from 24m (TGAC078), 12m of 1.61% Cu from 33m (TGRC087) and 7m of 1.59% Cu from 71m (TGRC110).  All work conducted by previous operators at the Thursday's Gossan is considered to be of a reasonably high quality.
Geology	Deposit type, geological	Thursday's Gossan and Junction Prospects
Geology	setting and style of mineralisation.	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 Thursdays 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 average thickness of approximately 20 metres commencing at an average depth below surface of approximately 30 metres. The majority (circa 60%) of the Mineral Resources reside within a higher grade zone of approximate dimensions of 1 kilometre x 300 metres by 35 metres thick.
		The Thursday's Gossan area hosts a major hydrothermal alteration system with copper-gold mineralisation over a 10 kilometre long corridor. The Junction porphyry target is defined by a coincident magnetic high, strong soil copper geochemistry, RAB drilling copper anomalism. Stavely Minerals believes the technical evidence indicates there is significant porphyry copper-gold mineralisation potential at depth at Thursday's Gossan and Junction.
Drill hole Information	A summary of all information material to the understanding of the exploration results 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 – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and	A table of all drill hole significant exploration results are provided for the Thursday's Gossan and Junction prospects in the body of the text.  The table includes:-  Collar coordinated in GDA94 Zone 54,  RL,  Dip and azimuth of hole,  Total hole depth,  Length weighted average grade for Cu%, Au g/t Ag g/t & Mo ppm .



Criteria	JORC Code explanation	Commentary
	interception depth  o hole length.	
	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 methods	In reporting Exploration Results, weighting averaging 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 and Junction Prospects  Exploration results are nominally reported where copper results are greater than 0.1% Cu, significant intersections have a minimum down-hole width of 10 metres, internal dilution of up to 3 metres has been incorporated to allow continuity of significant intercepts while additional intervals may be included if they are considered to form part of the overall mineralised zone.  No top-cutting of high grade assay results has been applied, nor was it deemed necessary for the reporting of significant intersections.
	Where aggregate intercepts 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 and Junction Prospects  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.
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 and Junction Prospects  There is insufficient drilling data to date to demonstrate continuity of mineralised domains and determine the relationship between mineralisation widths and intercept lengths.
	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	Refer to Figures in body of text.  A plan view of the drillhole collar locations is included.



Criteria	JORC Code explanation	Commentary
	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.	Schematic sections for SMD001 and SMD002 with significant intercepts are presented in the body of text.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Thursday's Gossan and Junction Prospects  All Cu values greater than or equal to 10m at >0.1% have been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All relevant exploration data is shown on figures and discussed in the text.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth 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.	Thursday's Gossan and Junction Prospects.  Detailed logging of the diamond drill core by expert porphyry consultants to refine interpreted alteration zones and structural controls, Infra-red spectrometry will be used to make semi-quantitative alteration mineralogy determinations and multi-element litho-geochemistry analysis will all be used as a vector to the target porphyry mineralisation.  Further diamond holes will be drilled to systematically vector towards the expected well-developed copper-gold mineralisation at Thursday's Gossan.