



**Mount Elliott SWAN Resource  
Estimation Update Summary**

RESEVAL

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## Mount Elliott SWAN Resource Update March 2017

ResEval Pty Ltd completed a Mineral Resource estimate update for the Mount Elliott and SWAN projects focussing on the Corbould West area that contains the new discoveries of Domain 81 and the Megelli Zone.

**The total Mineral Resource estimate now stands at, using a cut-off of 0.5% ECu:**

**Indicated Mineral Resource: 174 Mt @ 0.65% Cu and 0.39 g/t Au**

**Inferred Mineral Resource: 180 Mt @ 0.55% Cu and 0.32 g/t Au**

**Table 1: Mineral Resource by area at 0.5% ECu Cut-off**

Classification	Deposit	Mt	SG t/m <sup>3</sup>	Cu %	Au g/t	ECu %	U ppm
<b>Indicated</b>	SWAN	154.5	2.91	0.60	0.37	0.89	46
	Mount Elliott	18.5	2.91	1.04	0.55	1.48	
	Corbould West	1.1	2.97	0.96	0.59	1.43	77
	<b>Total</b>	<b>174.2</b>	<b>2.91</b>	<b>0.65</b>	<b>0.39</b>	<b>0.96</b>	
<b>Inferred</b>	SWAN	163.2	2.85	0.52	0.30	0.77	43
	Mount Elliott	6.3	2.75	0.66	0.34	0.93	
	Corbould West	10.1	2.86	0.85	0.48	1.24	65
	<b>Total</b>	<b>179.6</b>	<b>2.85</b>	<b>0.55</b>	<b>0.32</b>	<b>0.80</b>	
<b>Total</b>	SWAN	<b>317.7</b>	<b>2.88</b>	<b>0.56</b>	<b>0.34</b>	<b>0.83</b>	<b>44</b>
	Mount Elliott	<b>24.8</b>	<b>2.87</b>	<b>0.94</b>	<b>0.50</b>	<b>1.34</b>	
	Corbould West	<b>11.3</b>	<b>2.87</b>	<b>0.86</b>	<b>0.49</b>	<b>1.26</b>	<b>66</b>
	<b>Total</b>	<b>353.7</b>	<b>2.88</b>	<b>0.60</b>	<b>0.35</b>	<b>0.88</b>	

*Chinova has updated the equivalent copper ECu% calculation for a higher assumed gold price with  $ECu\% = Cu\% + (0.8 \times Au\ g/t)$ .*

The new Mineral Resource estimate has changed mostly in tonnage from the previously published 2013 Mineral Resource estimate completed by Golder Associates Pty Ltd (Golder) for the Mount Elliott - SWAN (see SRK (2013) scoping study). The previous reported Mineral Resource using a cut-off of 0.5% ECu was:

Indicated: 156.8 Mt @ 0.67% Cu and 0.40 g/t Au

Inferred: 107.3 Mt @ 0.54% Cu and 0.31 g/t Au

The significant changes include;

- Update in the equivalent copper ECu% for a higher gold price significantly increases the Mineral Resource from that last published in 2013 by Golder.
- The addition of the Corbould West mineralisation also increases the overall Mineral Resource tonnage. Further definition drilling is recommended for the Domain 81 Mineralisation to enable a significant portion of the domain to be classified as Indicated and to define the total extent of the mineralisation, see Table 2.

- Minor adjustments to the original interpretations and wireframes plus the inclusion of some drill holes being drilled at the cut-off for the 2013 resource estimation also increases the tonnage.
- The resource update for 2017 reruns the previous models for Mount Elliott and SWAN and adds Domains 82 to 87 to the Corbould West area.
- The SWAN and Mount Elliott areas have had additional drilling and interpretation during interim Chinova estimates and are captured in the current estimate.

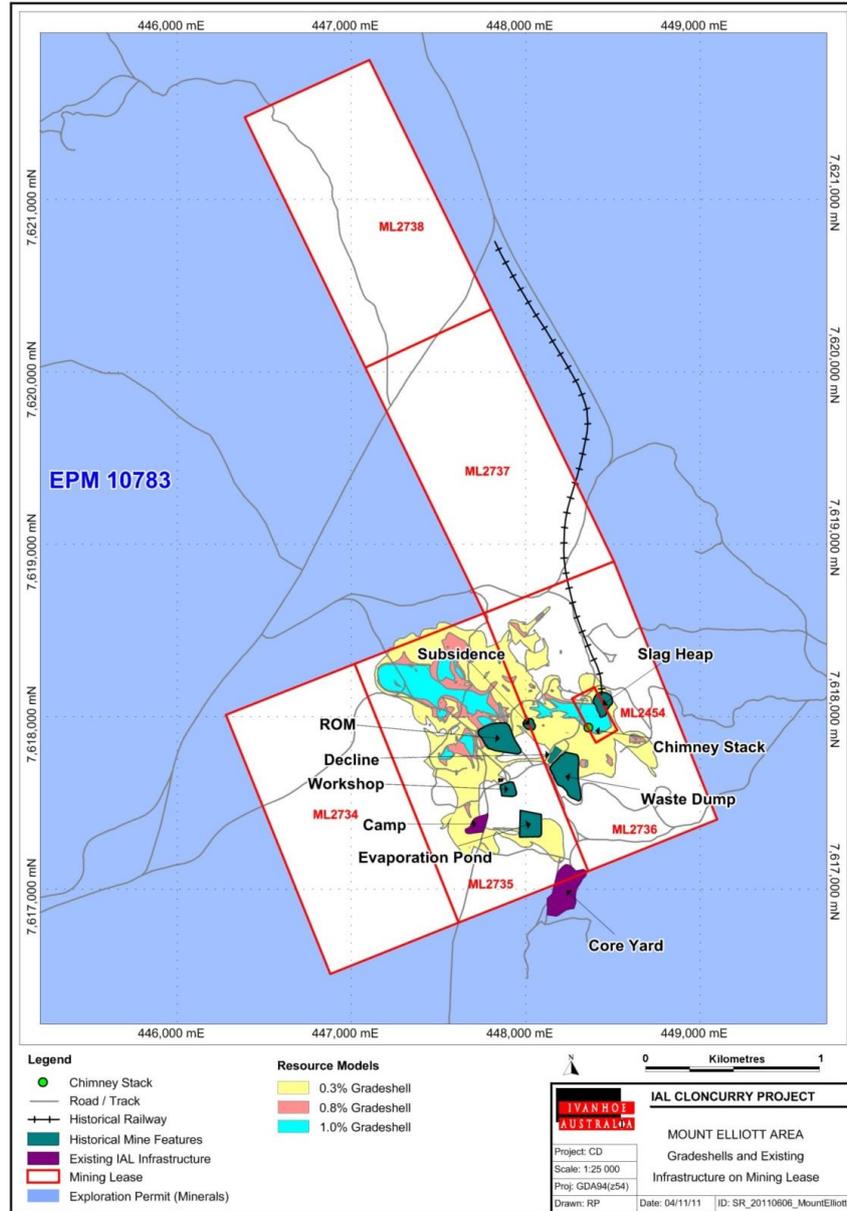
**Table 2: Corbould West Mineral Resource at 0.5% ECu cut-off**

Classification	Domain	Mt	SG t/m <sup>3</sup>	Cu %	Au g/t	ECu %	U ppm
<b>Indicated</b>	81	1.15	2.97	0.96	0.59	1.31	77.4
<b>Inferred</b>	81	7.26	2.92	0.86	0.49	1.15	75.2
	82	1.59	2.80	0.86	0.39	1.09	49.7
	83	0.26	2.52	0.46	0.32	0.65	34.4
	85	0.14	2.47	0.61	0.26	0.77	8.6
	86	0.61	2.70	1.02	0.77	1.49	27.8
	87	0.25	2.70	0.75	0.43	1.01	22.2
<b>Total</b>		<b>11.3</b>	<b>2.87</b>	<b>0.86</b>	<b>0.49</b>	<b>1.16</b>	<b>68</b>

Tenement details are outlined in Table 3 and Figure 1.

**Table 3: Mount Elliott - SWAN tenements held by Chinova Resources Cloncurry Mines Pty Ltd**

ML	Name	Company	Area (ha)	Date Granted	Date Expires
2454	Reward Claim	Ivanhoe Cloncurry Mines Pty Ltd	3.966	22/11/1973	30/11/2025
2734	SWAN No 1	Ivanhoe Cloncurry Mines Pty Ltd	129.4	21/6/1990	30/6/2031
2735	SWAN No 2	Ivanhoe Cloncurry Mines Pty Ltd	129.4	21/6/1990	30/6/2031
2736	SWAN No 3	Ivanhoe Cloncurry Mines Pty Ltd	125.434	21/6/1990	30/6/2031
2737	SWAN No 4	Ivanhoe Cloncurry Mines Pty Ltd	129.3	21/6/1990	30/6/2031
2738	SWAN No 5	Ivanhoe Cloncurry Mines Pty Ltd	129.4	21/6/1990	30/6/2031



**Figure 1: Mining Leases and deposits at Mount Elliott and SWAN**

## Competent Person Statements

The information in this report that relates to Exploration Results and deposit geological data is based on information compiled by Mark McGeough, and a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy and a full time employee of Chinova Resources. Mr McGeough has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

The Mineral Resource estimate was undertaken or supervised by Mr John Horton, Principal Geologist, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and an associate at ResEval Pty Ltd. Mr Horton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

## APPENDIX A      JORC 2012 TABLE 1

### Section 1: Sampling Techniques and Data

Criteria	Explanation
<i>Sampling techniques</i>	<p>The majority of drilling is by HQ diamond drill core which was half core sampled.</p> <p>Modern RC drilling used for pre-collar drilling used standard face sampling hammers, high pressure and riffle splitting methods. Older percussion drill hole sampling was undertaken using a variety of methods and used to test near surface areas or for pre-collars. These older methods only have a small influence on the SWAN oxide resource area.</p> <p>Underground drill sludge sampling was undertaken during mining at Mount Elliott and Corbould by Selwyn Mines. This sampling informs areas not otherwise sampled or areas not selectively mined and as such cannot be excluded for estimating remnant areas. Sampling is likely to be relatively poor but this is partially offset by the density of data provided. Previous workers quantified the sampling bias in comparison with diamond drilling. This downwards correction is applied to all sludge sampling.</p>
<i>Drilling techniques</i>	<p>Diamond drilling provides the majority of the drilling and sampling data. This is predominantly HQ size drilling though PQ and NQ core was used by Chinova for deep SWAN drilling. Modern RC drilling using face sampling hammers was used for pre-collars for drilling completed since about 2000. Previous percussion drilling used for pre-collars and near surface drilling at SWAN is not well documented but included cross over sub drilling that can result in down hole contamination. Underground production drilling and sludge sampling was used by Selwyn Mines for near mining definition. This involves catching the sludge from an open production hole.</p>
<i>Drill sample recovery</i>	<p>Chinova have averaged 98% core recovery across all SWAN diamond drilling (59 km core recovery records). Previous diamond drilling recovery averages 98% (80 km core recovery records). No record of percussion or RC sample recovery is available. Chinova indicate visual inspection of sample recovery is generally good.</p>
<i>Logging</i>	<p>For all diamond drill core Chinova record core recovery, core orientation, core photography, magnetic susceptibility measurements, density measurements (generally every 10 m) and logging of geology, alteration, minerals, structures, and weathering. Where practical, similar measurements are made for RC chips. Previous operators have recorded similar features for drill core, often including density samples on a one meter interval.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>Diamond core has generally been half core sampled. Chinova mark a cut line to ensure regular sampling of the same side of the core. RC chips are riffle split by Chinova to 5 kg at the drill rig. This process provides similar sample size across drilling methods for the usual 2 m intervals. At Mount Elliott previous operators have generally sampled core at 1 m intervals more appropriate to the narrow higher-grade target mineralisation zones.</p>

<p><i>Quality of assay data and laboratory tests</i></p>	<p>All available QAQC data has been assessed. Previous operators have minimal QAQC information, but sufficient check sampling data and mine production information to indicate no significant assaying issues. Chinova drilling has considerable QAQC data which include 24% QAQC samples with a full range of blanks, duplicates, standard reference material and check samples. Regular internal reviews by a Chinova QAQC expert have ensured regular monitoring, correction and continuous improvement in sampling and assaying quality. Regular duplicate assaying with geochemical and ore grade AAS assay methods and copper sequential assays has also been added to QAQC database.</p>
<p><i>Verification of sampling and assaying</i></p>	<p>Both Mount Elliott and SWAN have been explored by a series of operating companies which include Cyprus, Arimco, Selwyn Mines and Chinova. No significant differences between the exploration results from the different operators are noted. Reconciliation was not a significant issue during mine production by Selwyn Mines in the late 1990's. No significant twin drilling programs have been completed to date. Comparison of sludge and diamond core grade distribution indicates a not unexpected sampling bias for high grade copper that is corrected for the resource estimate.</p>
<p><i>Location of data points</i></p>	<p>Drilling by previous operators was largely surveyed at the time. This included the majority of drilling completed by Selwyn Mines during the previous mining operations. Survey locations were undertaken by the mine surveyor. Chinova undertook to resurvey some previous Chinova drill hole collars by an independent surveyor in 2009. Subsequently Chinova surveys have been completed by an internal registered surveyor. Topography data is provided by a detailed LiDAR survey completed by Chinova in 2004. This provides sub-meter topography accuracy implemented in a topography surface model using 1 m contours. The local grid system is the same used during previous mining operations in the later 1990's and has good ground control. The local grid was reviewed by Chinova before readopting it for the current study.</p>
<p><i>Data spacing and distribution</i></p>	<p>The drill hole data was composited to 2 m (Mount Elliott and Domain 81) and 4 m (SWAN) intervals by geological domain for use in estimating grades into the block model.</p>
<p><i>Orientation of data in relation to geological structure</i></p>	<p>At Mount Elliott the surface drill holes are on average oriented 74° toward 230° local grid while the underground drilling (77% of drilling) is on average oriented 15° toward 163° local grid. At SWAN the drill holes are oriented 80° toward 275° local grid. The surface drilling is oriented oblique, approximately 40° (50° off normal), to the mineralisation.</p>
<p><i>Sample security</i></p>	<p>Chinova were listed on the TSX until November 2013 and continue to treat sample security seriously, in keeping with NI43-101 compliance. A Canadian QAQC specialist has reviewed the exploration processes regularly and made ongoing changes to improve sample dispatch and security. All samples are dispatched with tamper proof seals and locks and only opened when supervised by the laboratory manager along with the dispatch sheet that is issued separately. Chinova sample security processes go beyond normal Australian exploration practise.</p>
<p><i>Audits or reviews</i></p>	<p>Mount Elliott underwent a number of reviews and audits between 1990 and 2003 during the process of feasibility study, funding and construction of the mine. Also several phases of insolvency and mergers also instigated due diligence reviews during this period. Subsequent reviews of Mount Elliott and SWAN drilling were undertaken, often accompanied by independent resource evaluation that include:</p> <ul style="list-style-type: none"> <li>• 2000 to 2003 Snowden resource estimate and major review of drilling database.</li> <li>• 2005 independent geologist review by Mayes.</li> </ul>

	<ul style="list-style-type: none"> <li>• 2008 database audit of 8% of all data by an internal independent QAQC expert.</li> <li>• 2009 site visit and resource estimate by Quantitative Group.</li> <li>• 2010 site visit and resource estimate by AMC.</li> <li>• 2009 survey review by Lodewyke.</li> <li>• Golder undertook a site visit and database audit in 2013, this included a manual audit of 2.5% of the drilling data and site survey of 33 drill holes.</li> <li>• 2014 site visit and high level review by Cornubian Resources.</li> </ul>
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**Section 2: Reporting of Exploration Results**

<i>Mineral tenement and land tenure status</i>	<p>All resources are within granted mining leases that include:</p> <ul style="list-style-type: none"> <li>• Mount Elliott leases ML2454 and ML2736</li> <li>• SWAN leases ML2736 and ML2735</li> </ul> <p>Chinova also hold the exploration permit that surrounds these mining leases (EPM 10783), along with a number of other nearby mining leases.</p>
<i>Exploration done by other parties</i>	<p>Mount Elliott was discovered in the late 1880s and mining of the gossan commenced in 1901 as a small open-cut operation and ceased operations by 1920. From 1920 to 1952, exploration activities in the area were limited to surface mapping and examination of mine workings. From 1952 to 1989 sporadic exploration consisted of minor drill programs. In 1989 Cyprus Mines Corporation acquired the project and through combined RC and diamond drilling confirmed significant mineralisation around the old workings and at depth. Mining re-commenced in 1993 by Australian Resources Ltd with operations suspended for a second time in March 1999. Selwyn Mines Ltd continued mining through to 2003 prior to being acquired by Chinova in 2003. The bulk of the exploration drilling was completed in 1993-1999 (31% of drill meters) by Australian Resources Ltd and in 2003-2013 (44% of drill meters) by Chinova.</p>
<i>Geology</i>	<p>Mineralisation in the Mount Elliott project area belongs to a single large iron oxide copper gold system. Mineralisation styles within each deposit appear to be controlled by host composition and textural variation. Mount Elliott is a copper-gold skarn like replacement of meta-basalts and is metasomatic in origin SWAN is hosted in banded to brecciated calc-silicates as replacement copper-gold mineralisation and is more disseminated within the broad calc-silicate.</p>
<i>Drill hole Information</i>	<p>Exploration results are not presented in this report.</p>
<i>Data aggregation methods</i>	<p>Exploration drilling aggregates are presented are length weighted averages.</p> <p>The resource estimate uses 2 m composites for Mount Elliott / Domain 81 and 4 m composites for SWAN, these are both length weighted averages.</p>
<i>Relationship between mineralisation widths and</i>	<p>Exploration results are not presented in this report.</p>

<i>intercept lengths</i>	
<i>Diagrams</i>	Exploration results are not presented in this report.
<i>Balanced reporting</i>	Exploration results are not presented in this report.
<i>Other substantive exploration data</i>	Resources are primarily defined by drilling and assaying. Geophysics and surface geochemistry are used in exploration but have not meaningful input to the resource definition.
<i>Further work</i>	Further work is concentrating on focusing on other deposits within the block model (SWAN deeps, Corbould and Mount Elliott).

**Section 3: Estimation and reporting of Mineral Resources**

<i>Database integrity</i>	<p>The project has been reviewed and audited in several occasions. Golder completed a database audit against available hard copy and digital information.</p> <p>Drill hole statistics were cross checked against resource estimates.</p>
<i>Site visits</i>	<p>John Horton has supervised all resource evaluation aspects and last visited site for 7 days in May 2013. All site work was found to be in order and original drilling records discovered for data verification.</p> <p>The Competent Person for the Mount Elliott deposit geology and data is the Chinova GM-Geology who has a good understanding of the deposit.</p>
<i>Geological interpretation</i>	<p>Geological interpretation of the lithology was based solely on the logged lithology captured in the drill hole database. The interpretations have evolved during several iterations of the resource estimation from Snowden in 2001, AMC in 2010 to Golder in 2013. Over that period the interpretations have not changed dramatically other than to either expand the shapes or adjust to capture additional mineralisation or to better reflect the complex geology. At Mount Elliott the confidence in the interpretation is high due to the high number of drill holes while at SWAN the interpretation is of lower confidence due to wider drilling. The large number of drill orientations has increased the complexity of the interpretations.</p> <p>Interpretation of the oxidation surfaces was based on copper sequential data and drill hole logging. The position of the base of the nontronite clay and base of oxide is well located while the placement of the base of transition is not very well constrained at SWAN and approximate at Mount Elliott.</p> <p>Mineralisation envelopes (at 0.3 and 0.5% ECu) were used in past estimates for SWAN but were not updated for this estimate as the mineralisation is largely constrained within the skarn and calc-silicate lithology domains. The exception being the mineralisation occurring along strike from Mount Elliott within basalt that was constrained using a 0.5% ECu shell. This mineralisation was not included in the Mineral Resource estimate. The use of locally varying anisotropy and appropriate search ellipse helped to further restrict grade estimates while allowing for grade smoothing to prevent introducing a high-grade bias.</p> <p>The geological interpretations (both lithology and oxidation) were used to define estimation domains for Mineral Resource modelling.</p>

<i>Dimensions</i>	<p>Mount Elliott has an extent of about 500 m by 350 m dipping towards the local grid north at 70° and a width of 15 to 150 m. Higher grade internal zones can be both steep and shallower dipping and were targeted by previous underground mining.</p> <p>SWAN has an overall extent of 1300 m by 1300 m by 400 m dipping towards grid north at 70° and contains some unmineralised internal intrusives.</p>
<i>Estimation and modelling techniques</i>	<p>A block model was constructed from the geological interpretations and LiDAR topography with multiple cell dimensions. The cell size for Mount Elliott is 10 x 5 x 10 m, for SWAN it is 20 x 10 x 20 m and for the SWAN oxide it is 10 x 10 x 5 m. Ordinary kriging with locally varying anisotropy was used to estimate grades into the block model. Grades were estimated on a parent block basis using block discretisation of 4 by 4 by 4. A three pass search ellipse was used with search radii based on the variogram ranges. Dip and dip-direction were estimated into the block model, for variable anisotropy, from simplified wireframe surfaces based on the geological interpretation and interpretation of the internal orientation of the mineralisation. Copper and gold show good correlation and were estimated together.</p> <p>Outlier samples within the drill hole sample data were restricted by applying top-cut values determined from summary statistics. The top-cut values represent the 99.7 percentile of the data.</p> <p>The estimates were validated by: visual inspection of the model, construction of swath plots in easting, northing and RL comparing drilling with model estimates, discreet Gaussian change of support to compare the expected selectivity from the global drill hole distribution with the estimated model distribution and comparison of mean grades between the drill hole data, nearest neighbour estimates (declustered data), inverse distance estimates and the ordinary kriging estimates. The estimate was also compared with the previous Mineral Resource.</p>
<i>Moisture</i>	<p>All density samples are calculated on a dry basis and dry bulk density used for the resource estimate.</p>
<i>Cut-off parameters</i>	<p>The original cut-off grade of 0.5% ECu is used which is derived from the Osborne PEA for Starra 276 mill feed (SRK, 2011). It is calculated from initial metal prices of \$3.75/lb for copper and \$1300/oz gold, comparable recoveries around 85% and concentrate charges attributable to Cu of around 200\$/t concentrate, such that <math>ECu = Cu + 0.6 \times Au</math>.</p> <p>Based on recent improvements in gold price reporting from 2017 is based on <math>ECu = Cu + 0.8 \times Au</math>.</p>
<i>Mining factors or assumptions</i>	<p>Both open pit and bulk underground mining using open caving are considered for the Mount Elliott and SWAN deposits. Cell dimensions in the block model were selected on the basis of mining method with small blocks for the SWAN oxide and Mount Elliott likely to be mined by open pit and larger blocks for SWAN transition-fresh likely to be mined by open caving. The grade estimates were not diluted but the application of locally varying anisotropy and ordinary kriging introduces a degree of smoothing that is appropriate for the selectivity of the likely mining methods.</p>
<i>Metallurgical factors or assumptions</i>	<p>Transition and fresh zones have a high copper sulphide content that would be expected to offer high recovery (&gt;88%) in a floatation mill. Oxide zones are reported separately and will have lower floatation recovery or might be processed using heap leaching methods. SWAN oxide has a high nontronite clay content and has indicated poor metallurgical recoveries that might only reach 25%.</p>
<i>Environmental factors or assumptions</i>	<p>The project include two previous mining periods and do not indicate any major environmental issues. Historic issues identified include:</p> <ul style="list-style-type: none"> <li>• Moderate to high saline water from existing mining voids</li> <li>• Metal leachates from existing mining and smelter facilities</li> </ul>

	<ul style="list-style-type: none"> <li>Continued subsidence in two collapse zones over existing mining voids</li> </ul> <p>The earliest mining at Mount Elliott occurred between 1880 and 1920. Remnant smelter chimney, building ruins, old town site, old rail line and slag heap is entered into the Queensland Heritage Register in later 2011. Additional costs will be involved in allowing future surface mining to interfere with the archaeological sites.</p>
<i>Bulk density</i>	Density measurements using water immersion methods on drill core can be subject to sample selection bias and SWAN drill core exhibits porosity of around 5% and up to 10%. This porosity appears not to be interconnected and will only affect density measurement on the surface of the core. To offset these two small potential biases average drill core density has be decreased by 1.6% for fresh-transition, 5% for oxide and 20% for collapsed zones.
<i>Classification</i>	Classification of the resource model involved initially setting a classification based on the results of the Cu estimation followed by a smoothing routine to remove small isolated discontinuous areas in the classification. For the skarn and calc-silicate, estimates completed in the first search pass and estimates completed in the second search pass and where the kriging variance for Cu is less than 0.4 were assigned an initial classification of Indicated. This was downgraded to inferred in all SWAN oxide domains (depleted, clay and oxide) due to the poor copper leach recoveries discussed in the metallurgical factors or assumptions section. Mineralisation within the basalt and within the two collapsed zones at Corbould and Mount Elliott were removed from the estimate. The use of search pass and kriging variance account for sample spacing.
<i>Audits or reviews</i>	The Golder 2013 resource estimate and estimation process was review internally and by AMC Consultants.
<i>Discussion of relative accuracy/confidence</i>	<p>No statistical or geo statistical method (non-linear or simulation) was used to quantify the relative accuracy of the estimate within confidence limits. Accuracy of the estimate is strongly dependent on: accuracy of the interpretation and geological domaining (particularly for Domain 81), accuracy of the drill hole data (location and values), orientation of local anisotropy and estimation parameters which are reflected in the global resource classification.</p> <p>Total production during the period 1987 to 2003 from Corbould and Mount Elliott underground is reported at 5.06Mt @ 2.93% Cu 1.45g/t Au for 148,258t Cu and 235,984oz Au. From the block model the estimated total production is 5.04Mt @ 2.24% Cu 1.08g/t Au for 112,674t Cu 174,312oz Au. The lower grade reported by the model may indicate some risk of leakage of grade from areas already stope to estimated resource areas. This is an intrinsic risk in estimating remnant resources. This issue is not certain as the reported production for Mount Elliott may not account for the production sludge hole bias identified and corrected in the resource estimate.</p>