

## MOD EARNS 60% OF SAMS CREEK GOLD PROJECT

MOD Resources Limited (ASX: MOD) is pleased to announce the Company has earned a 60% interest in the Sams Creek Gold Project in New Zealand from OceanaGold Corporation.

OceanaGold has accepted the increase of MOD's interest in Sams Creek from 40% to 60% after the successful completion of MOD's Stage 2 drilling program.

To earn 60%, MOD was required to complete an infill drilling program to convert at least 550,000oz of the 1Moz Inferred Mineral Resource at Sams Creek into the Indicated Mineral Resource category, supported by independent assessment of the Mineral Resource.

The Sams Creek Mineral Resource was independently estimated by Golder Associates following completion of the Stage 2 infill drilling program in July 2013.

The revised Stage 2 Mineral Resource estimate by Golder Associates includes a JORC compliant Indicated Mineral Resource of 575,000oz gold, based on 10 million tonnes @ 1.77g/t using a 0.7g/t cut-off grade. Golder Associates' Mineral Resource Statement (including a summary of the JORC Code assessment criteria) is attached to this announcement.

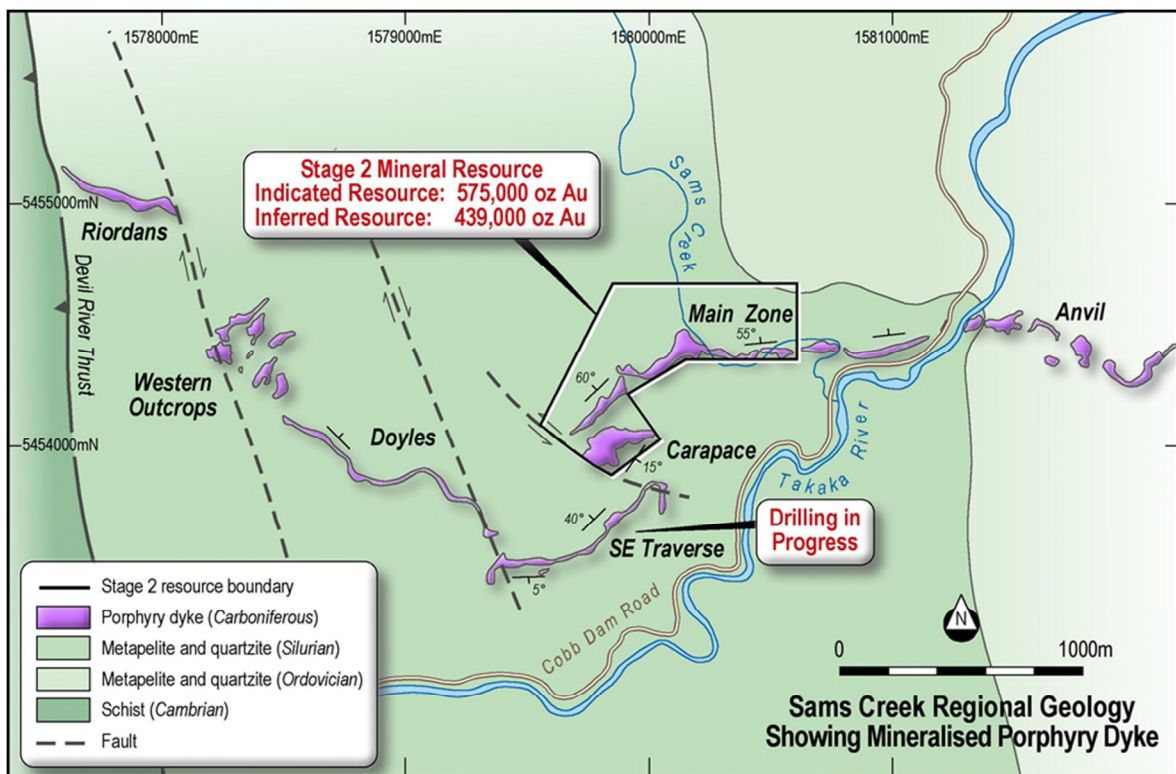


Figure 1: Geology of Sams Creek showing Stage 2 Mineral Resource within a 1km portion of the porphyry dyke

MOD's Stage 2 drilling program intersected several wide, high-grade gold zones including 19.6m @ 6.0g/t, 16.2m @ 5.2g/t, 31.1m @ 3.6g/t and 63m @ 2.4g/t including 11m @ 4.0g/t – all intersections reported as down hole widths (refer ASX Announcement 31 July 2013).

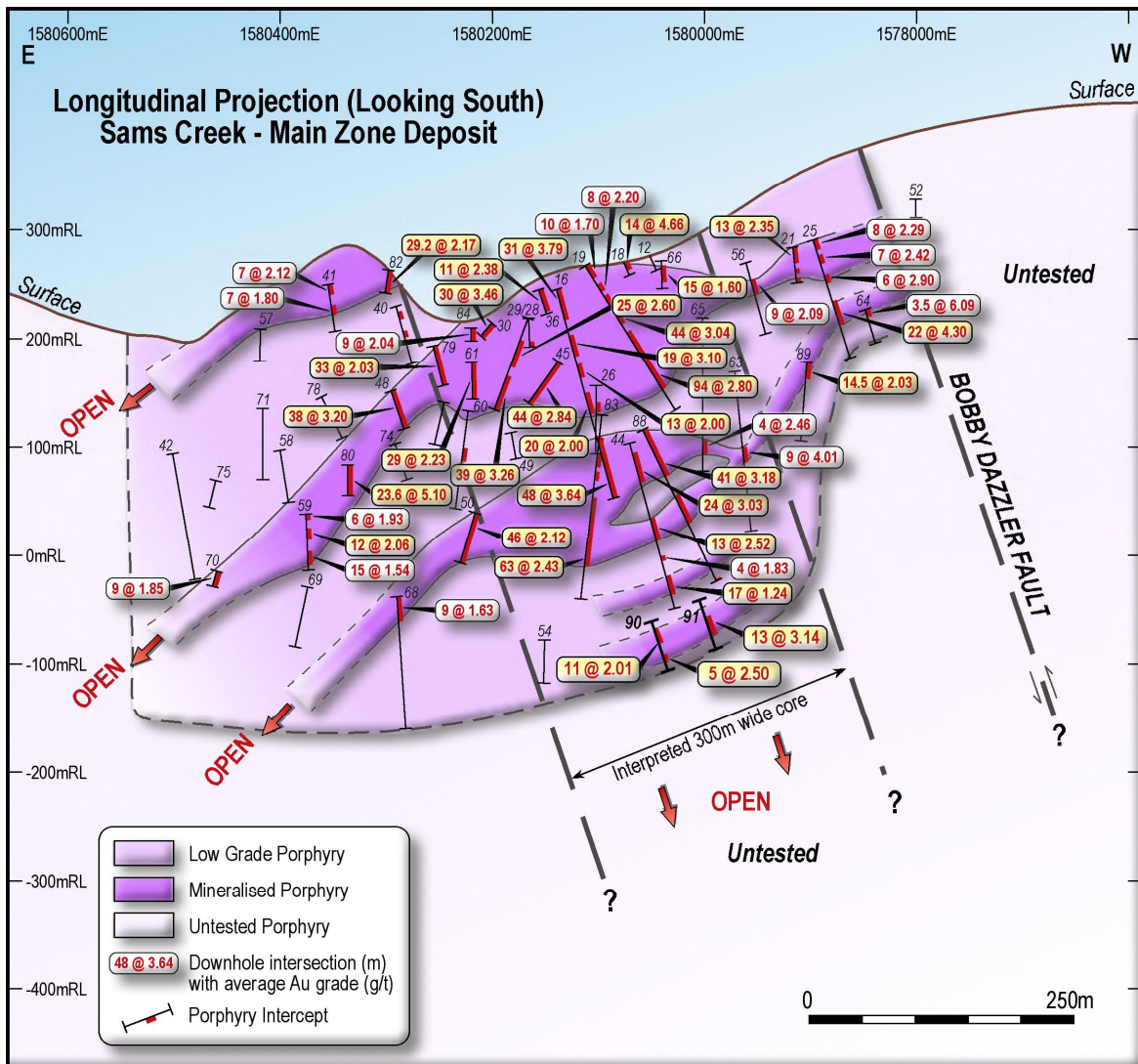


Figure 2: Longitudinal Projection of Main Zone deposit showing intersections (as down hole widths) from drilling to date

MOD Managing Director Julian Hanna said the Company’s 60% interest in Sams Creek has been submitted for consent to New Zealand Petroleum & Minerals and OceanaGold has lodged the formal transfer documents. Consent was obtained for the terms of earn-in agreement last year.

Mr Hanna said earning 60% of Sams Creek represented one of the most significant milestones for MOD since the Company negotiated its agreement with OceanaGold in October 2011 to earn up to 80% of Sams Creek by sole-funding staged exploration programs.

“Having earned 60% of Sams Creek we can now focus our efforts on the Stage 3 drilling program, which aims to test for extensions down-dip and along strike from the Main Zone gold deposit,” said Mr Hanna.

“The porphyry dyke which hosts the gold mineralisation at Sams Creek extends for about 7km over the Sams Creek and adjoining Barrons Flat permits, so we have only tested part of the potential of what could be a large gold system.”

As announced to the ASX on 19 September 2013, MOD has commenced its Stage 3 drilling program and this program has already been successful in extending the gold mineralisation at the Main Zone to approximately 350m below surface, with grades of up to 3.0m @ 7.27g/t. The Main Zone remains completely open along strike and at depth.

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**Competent Person's Statement**

The information in this announcement that relates to Mineral Resource Estimation, Geological Data and Exploration Results is based on information compiled by Mr Paul Angus, Project Manager of Sams Creek and a Director of MOD Resources Limited's subsidiary, Sams Creek Gold Ltd. Mr Angus is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the December 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Angus consents to the inclusion in this announcement of the matters based on his information in the form and context in which they appear.

**Forward Looking Statements and Disclaimer**

This announcement contains certain statements which constitute "forward looking statements". Examples of forward looking statements in this release are: "we can now focus our efforts on the Stage 3 drilling program, which aims to test for extensions down-dip and along strike from the known Main Zone gold deposit", and "we have only tested part of the potential of what could be a large gold system".

Such forward looking statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance achievements to differ materially from those expressed, implied or projected in any forward-looking statement. No representation or warranty, expressed or implied, is made by MOD Resources Limited that material contained in this announcement will be achieved or proved correct.

This announcement does not include reference to all available information on MOD Resources Limited or the Sams Creek Gold Project and should not be used in isolation as a basis to invest in the Company. Potential investors should refer to MOD Resources Limited's other public releases and consult professional advisers before investing in the Company.

4 October 2013

Document No. 137641037-003-L-Rev0

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## **SAMS CREEK – MINERAL RESOURCE STATEMENT**

Dear MOD

Golder Associates Pty Ltd (Golder AU) has completed a Mineral Resource Estimate of the Sams Creek porphyry gold deposit using all available drill data as of 29 July 2013. The Sams Creek deposit is located in Golden Bay, northwest of Nelson, New Zealand. MOD has formed a Joint Venture with OceanaGold Corporation (OGC) to explore this project. The resource estimate was classified in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012).

On your request, we have included additional resource tables at cut-off grades of 0.7 g/t Au, 1.0 g/t Au and 1.5 g/t Au.

Classification of the resource estimate was completed by Golder AU geologists, as described below, based principally on data density, geological confidence criteria and representativeness of sampling.

### **GEOLOGY**

Sams Creek mineralisation is contained within a hydrothermally altered peralkaline granite porphyry dyke that intrudes Early Paleozoic metasediments. The dyke is up to 60 m thick and can be traced east-west along strike for over 7 km. The dyke generally dips steeply to the north (~60°) with gold mineralisation extending down dip for at least 1 km and is open at depth. The geological and geochemical characteristics of the Sams Creek granite dyke indicate it is a member of the intrusion-related gold deposits (IRGD).

Gold mineralisation is largely contained within thin (1–15 mm) sheeted quartz-sulfide veins that cross cut the dyke which strike to the NE and dip predominantly to the SE at around 50°.

### **ASSUMPTIONS**

This Mineral Resource estimate was based on a number of factors and assumptions:

- A review of the QAQC data was completed and considered satisfactory for Inferred and Indicated Resources.
- Mineralisation domains were modelled in three dimensions by Golder Associates (NZ) Limited (Golder NZ). Mineralisation wireframes were constructed using the geology logging data and adjusted to 0.1 g/t Au cut-off grade. These models were subsequently used to define geological domains that were used to flag the sample data for statistical analysis and limit the resource estimation.
- Statistical and geostatistical analyses were carried out on the 1 m composites. This included variography to model spatial continuity relationships in the geological domains.



- The OK interpolation method was used for the estimation of Au, Ag and As using variogram parameters defined from the geostatistical analyses.
- Bulk densities were assigned to mineralisation and waste domains. The dry bulk densities were based on immersion measurements from 304 samples.

**MINERAL RESOURCE STATEMENT**

The Mineral Resource for the Sams Creek deposit shown in Table 1 is reported *in situ* using a 0.7 g/t Au cut-off grade. Resources are reported below the original topography based on available drilling data as at 29 July 2013. Table 2 shows the Mineral Resources by zone and weathering. The resource is based on the Ordinary Kriging interpolated block model *SC\_20130729\_OK1.bmf*. Figure 1 shows the Au grade distribution in plan view and Figure 2 shows the resource classification looking at the hanging wall.

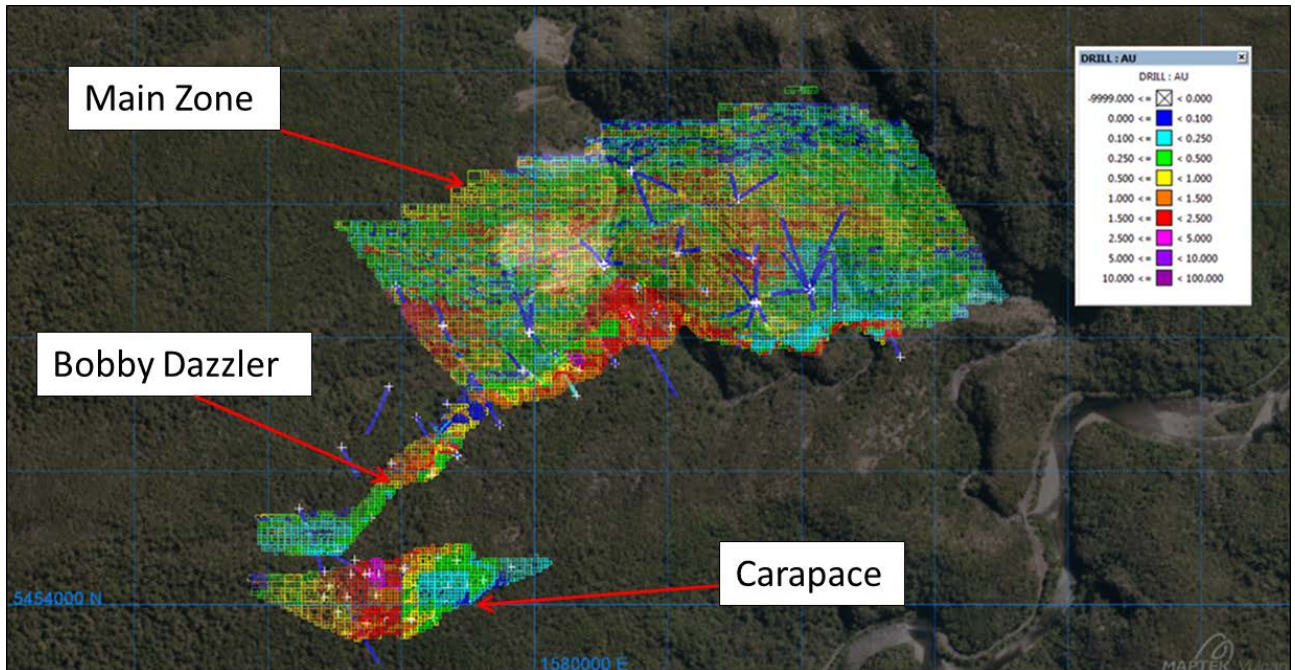


Figure 1: Plan View of the Block Model with LiDAR Overlay

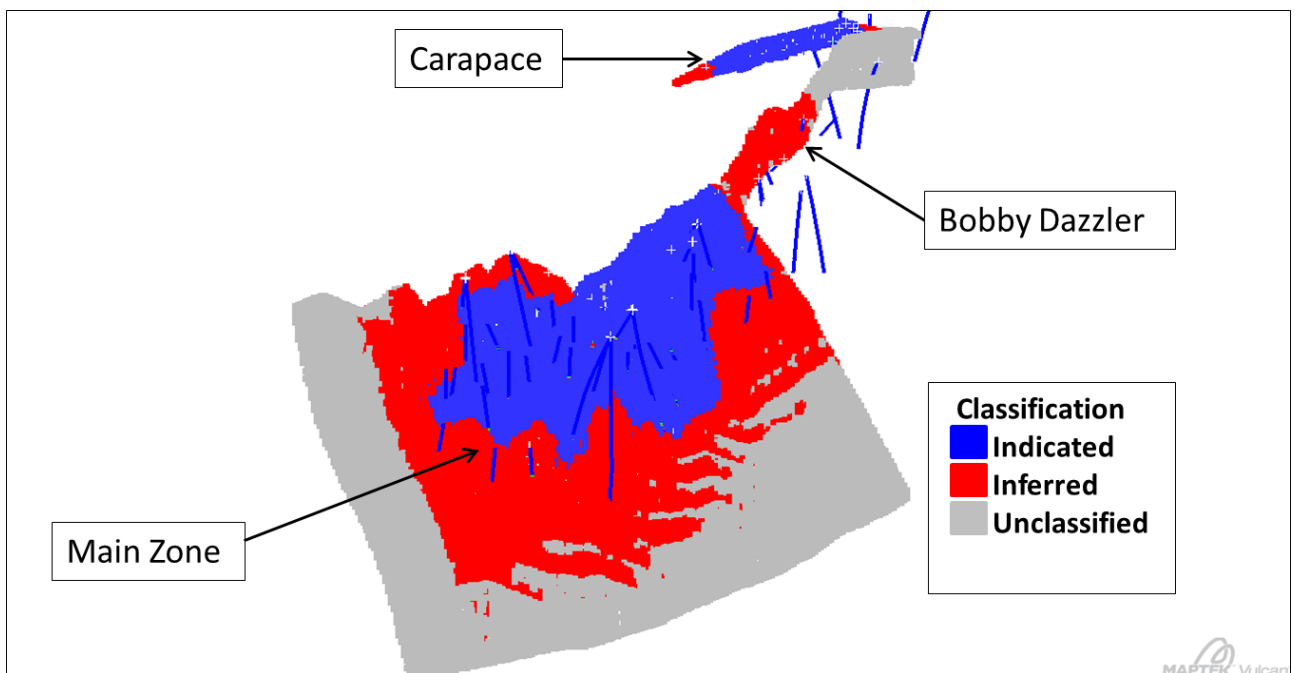


Figure 2: Block Model by Class Looking at the Hanging Wall (South)

**Table 1: Sams Creek *in situ* Mineral Resources**

Sams Creek Total Resources						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated	0.7	10.07	1.77	0.78	5174	575
Inferred	0.7	10.40	1.31	0.76	5048	439
<b>Grand Total</b>	<b>0.7</b>	<b>20.47</b>	<b>1.54</b>	<b>0.77</b>	<b>5110</b>	<b>1014</b>

**Table 2: Sams Creek *in situ* Mineral Resources by Zone and Weathering**

Main Zone – Fresh						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated	0.7	8.90	1.69	0.71	5248	485
Inferred	0.7	9.83	1.28	0.74	5155	405
<b>Grand Total</b>	<b>0.7</b>	<b>18.73</b>	<b>1.48</b>	<b>0.73</b>	<b>5199</b>	<b>890</b>

Main Zone – Oxide						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated	0.7	0.73	2.42	0.60	5437	57
Inferred	0.7	0.26	2.13	0.95	4736	18
<b>Grand Total</b>	<b>0.7</b>	<b>0.99</b>	<b>2.34</b>	<b>0.70</b>	<b>5251</b>	<b>75</b>

Bobby Dazzler – Transition + Fresh						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated						
Inferred	0.7	0.10	1.77	0.72	1690	6
<b>Grand Total</b>	<b>0.7</b>	<b>0.10</b>	<b>1.77</b>	<b>0.72</b>	<b>1690</b>	<b>6</b>

Bobby Dazzler – Oxide						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated						
Inferred	0.7	0.16	1.71	0.72	1970	9
<b>Grand Total</b>	<b>0.7</b>	<b>0.16</b>	<b>1.71</b>	<b>0.72</b>	<b>1970</b>	<b>9</b>

Carapace – Oxide						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated	0.7	0.44	2.31	2.40	3248	33
Inferred	0.7	0.05	1.37	3.05	2167	2
<b>Grand Total</b>	<b>0.7</b>	<b>0.49</b>	<b>2.22</b>	<b>2.46</b>	<b>3144</b>	<b>35</b>

The grade tonnage (Table 3) table presents the tonnages for Au at the following cut-offs: 0.7 g/t, 1.0 g/t and 1.5 g/t.

**Table 3: Grade-Tonnage Table Showing Variables at Various Au Cut-Off Grades for the Inferred and Indicated Resources at Sams Creek**

Sams Creek Grade-Tonnage by Cut-Off						
Category	Cut-Off	Million Tonnes	Au g/t	Ag g/t	As ppm	Au K Oz
Indicated	0.7	10.1	1.77	0.78	5174	575
Inferred	0.7	10.4	1.31	0.76	5048	439
<b>Total</b>	<b>0.7</b>	<b>20.5</b>	<b>1.54</b>	<b>0.77</b>	<b>5110</b>	<b>1014</b>
Indicated	1.0	7.9	2.03	0.84	5676	515
Inferred	1.0	5.8	1.70	0.86	5847	315
<b>Total</b>	<b>1.0</b>	<b>13.7</b>	<b>1.89</b>	<b>0.85</b>	<b>5749</b>	<b>830</b>
Indicated	1.5	5.0	2.48	0.95	6481	402
Inferred	1.5	2.5	2.33	0.96	6517	187
<b>Total</b>	<b>1.5</b>	<b>7.5</b>	<b>2.43</b>	<b>0.95</b>	<b>6493</b>	<b>588</b>

## THE JORC CODE ASSESSMENT CRITERIA

The JORC Code (2012) describes a number of criteria, which must be addressed in the Public Report of Mineral Resource estimates for significant projects. These criteria provide a means of assessing whether or not parts of or the entire data inventory used in the estimate are adequate for that purpose. The resource estimate stated in this document was based on the criteria set out in Table 1 of that Code. These criteria are discussed as follows:

JORC Code Assessment Criteria	Comments
<p><b>Sampling Techniques</b></p> <p><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>CRAE, OceanaGold Corporation (OGC) and MOD Resources (MOD) have all used similar sampling techniques.</p> <p>Diamond core (DC) drilling was used to obtain samples for geological logging, UCS and assaying. Downhole geophysical logging wasn't undertaken.</p> <p>DC drilling was used to obtain core samples. For sampling, these were split in half, using a core saw, at 1 m intervals unless determined by lithology e.g. dyke contact areas. Sample length ranged from 0.2 m to 2.9 m. The core sampling included at least 5 m into the hanging wall and footwall.</p> <p>The core samples were pulverised to &gt;95% passing 75 µm to produce a 30 g charge for fire assay for Au. Various multi-element analyses were also undertaken from the DC with at least As, Ag and S analysed.</p>

JORC Code Assessment Criteria	Comments
<p><b>Drilling Techniques</b></p> <p><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.), and details (e.g. 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.).</i></p>	<p>DC diameters included PQ (96 mm) and HQ (63 mm), both were triple tubed. NQ was a mixture between NQ (47.6 mm) and NQ3 (triple tube, 45.1 mm). Most of the drilling is HQ, with PQ size collars generally limited to depths of less than 50 m.</p> <p>The earlier CRAE drilling was done by NQ core then moved onto HQ sizes. MOD used a man portable rig with drill hole ID's SCMDH***** which were drilled using NQ sized core.</p> <p>OGC had previous limited success using an orientation spear system. MOD has oriented their core using Coretell Ori Shot CNH100, a digital core orientation system.</p>
<p><b>Drill Sample Recovery</b></p> <p><i>Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	<p>MOD DC sample recovery was recorded by measuring the length of recovered core and comparing this with the drilled interval.</p> <p>OGC re-logged all of CRAE drill holes and recorded recoveries.</p> <p>The core recovery for the Main Zone is approximately 96.6%. While the highly to moderately weathered Carapace had higher rates of core loss, with an average recovery of 76%. Increased core loss is observed in the weathered mineralised dyke. There is also increased core loss in brittle high grade zones but these appear to have no material impact on the analytical results.</p>
<p><b>Logging</b></p> <p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.), photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged</i></p>	<p>All DC holes have been logged for lithology, weathering, bedding, structure, alteration, mineralisation and colour using a standard set of in-house logging codes. The logging method is quantitative.</p> <p>The deeper DC samples were logged for magnetic susceptibility (MS) using hand-held MS meters.</p> <p>For DC holes, mineralised zones were logged for type, intensities both in vein number and percentage, angle to long core axis and mineralogy.</p> <p>Summary geotechnical information was recorded for all DC holes. All core trays were photographed prior to core being sampled.</p> <p>The geological model is supported by visual grade trends and variography (preferred axes of continuity) and is the basis for geostatistical domaining. The geological logging and assays have been used to develop the geological interpretation.</p>
<p><b>Sub-Sampling Techniques and Sample Preparation</b></p> <p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p>	<p>DC sample intervals were physically marked on the core, which was sawn in half lengthways with a diamond core-cutting saw. The resulting half core was taken for the laboratory sample and the remaining core was archived.</p>



JORC Code Assessment Criteria	Comments
<p><i>If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>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.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>The field duplicates, laboratory duplicates and laboratory repeats were assayed and laboratory duplicates and repeats were found acceptable in comparison with regular laboratory samples, with no major issues identified.</p> <p>Field duplicates are routinely submitted as half core. Field duplicates were originally DC quarter cuts. This practice caused an issue with repeatability due to the smaller sample size and vein orientation. To address this issue, the remaining quarter core was sampled and the results for the two quarter cuts were average for comparison with the routine sample.</p> <p>The laboratory sample sizes, typically 2 kg to 3 kg for DC samples, are considered appropriate to the grain and particle sizes for representative sampling in respect of fundamental sampling error considerations.</p>
<p><b>Quality of Assay Data and Laboratory Tests</b></p> <p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></p>	<p>CRAE – Drill hole samples from 1982 all went to Service Laboratories in Nelson and AAS analysis was carried out. Fire assay checks on drill holes DDH82SC09 and DDH82SC11 were carried out resulting in an average of a 10% upgrade in the Au grades. During the subsequent CRAE drilling programs, the laboratory and methods used are insufficiently recorded in the logs, assay results and reporting. The samples from early 1983 drilling of DDH83SC12 to DDH83SC14 appear to have been sent to Service Laboratories in Nelson, with the Au results then re-analysed by fire assay but no laboratory was documented. Samples from holes DDH83SC18 to DDH85SC26 were sent to Service Laboratories in Nelson and the Au and As were then fire assayed with AAS finish. All the Au results in the 1986 to 1987 sample sets were from Fire Assay but the laboratory used is not identified. It is not known if any assay or sampling quality control procedures were consistently undertaken by CRAE. No evidence of standards or blanks is available.</p> <p>A CRAE drill hole SCDDH017 was twinned by MOD. The Au assay results for the two holes were similar suggesting that the CRAE Au assay results are acceptable.</p> <p>DC samples from the OGC drilling program were then fire assayed and analysed by Aqua Regia digest for Au and LECO digest for S by Amdel Limited (Amdel) at their Macraes Flat laboratory, New Zealand. A multi-element suite comprising Ag, As, Bi, Cu, Pb, Zn and Mo was subsequently assayed by ICP-MS and AAS for these samples by Amdel in Adelaide, Australia. Grind samples were also prepared and assayed at the Amdel Macraes Flat laboratory; these samples were assayed for Au and As only. Pulverising of samples to obtain &gt;95% passing 75 µm. Standards, blanks, laboratory repeats were recorded for the last OGC drill program.</p>

JORC Code Assessment Criteria	Comments
	<p>DC samples from MOD drill programs were sent to SGS Waihi, New Zealand, where they were assayed by 30 g fire assay. All multi-elements were assayed at Waihi up to drill hole SCDDH078. SGS laboratories carry a full QAQC program and are ISO 19011 certified. Sample preparation of geological samples by SGS comprises of drying, crushing, splitting (if required) and pulverising to obtain an analytical sample of 250 g with &gt;95% passing 75 µm. Any samples with As concentrations over the laboratory limit of 5000 g/t were then tested by an XRF method. Drill holes SCDDH056 and 57 weren't tested for over limit As and over limit As results are recorded as 5000 ppm. No independent laboratory inspections were carried out during these phases of drilling, sampling and analysis. Certified Rock Laboratories Standards were submitted with every batch. Blanks, core duplicates, laboratory duplicates and laboratory repeats were used and recorded.</p> <p>After SCDDH078 the multi-elements were undertaken by ALS Brisbane where a 51 element suite ME-MS41 was used. ALS has a full QAQC program.</p> <p>The accuracy and precision for all the QAQC results are considered acceptable.</p>
<p><b>Verification of Sampling and Assaying</b></p> <p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>Mineralisation intersection data is inspected and verified independently by the project manager and Golder NZ. The project manager and two Golder NZ staff visited the deposit on average weekly in support of the exploration program.</p> <p>All laboratory assay results are received and stored in both CSV and laboratory signed PDF formats.</p> <p>Two twin DC drill holes by MOD have been completed and show overall good correlation of Au grades.</p> <p>Data is stored in Microsoft Excel and Vulcan that is managed by one Golder NZ geologist and the data is backed-up on the Golder New Zealand server system.</p> <p>Data storage system protocols are basic but robust and the system will be reviewed to upgrade it into a more certified database system with protocols in the near future.</p> <p>Quarter core cuts are added together to get the same sample weights per sample interval.</p>
<p><b>Location of Data Points</b></p> <p><i>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p>	<p>The exploration database includes surveyed drill hole collar coordinates (x, y, z) referenced to New Zealand Transverse Mercator 2000 (NZTM) picked up by GPS methods and post processed by Golden Bay Surveyors to 0.1 m accuracy.</p>

JORC Code Assessment Criteria	Comments
<p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>Downhole surveys are not available for 19 out of 50 CRAE holes and one abandoned OGC hole SCDDH046. With the exception of one drill hole (DDH84SC16) all the unsurveyed drill holes are less than 120 m deep. Hellman (2007) noted that no significant deviation in azimuth and dip takes place in the first 120 m of surveyed drill holes. It was therefore considered reasonable to assume that these unsurveyed drill holes follow the collar azimuth and dip orientation. The correction used between magnetic north and true north (magnetic declination) in the prospect area during 2012 was 22° east (positive). MOD used a digital downhole tool every 30 m.</p> <p>A digital terrain model (DTM) was constructed based on topographic mapping using LiDAR that was performed by NZ Aerial surveys in 2011. The drill hole collar elevations were reconciled with the DTM elevations at the collar coordinates for each drill hole.</p>
<p><b>Data Spacing and Distribution</b></p> <p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>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.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>Drilling in the Main Zone and Bobby Dazzler has mostly been conducted on average 75 m spacing with ranges between 50 m to 150 m. The drill spacing was suggested by drill hole density analysis (Golder, 2012) down to the 50 m RL in the Main Zone which is deemed reasonable for an open pit mining methodology.</p> <p>Drilling directions and distances are variable because of the terrain, orientation of the target dyke and the orientation of the mineralisation within the dyke. Multiple drilling orientations have been fanned off single drill pads to make most of pad sites due to access agreement restrictions and the steep and challenging terrain.</p> <p>The Carapace, with a much flatter terrain was drilled on 50 m spacing with vertical holes.</p> <p>Sample compositing was to 1 m which is the dominant sample length.</p>
<p><b>Orientation of Data in Relation to Geological Structure</b></p> <p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>If the relationship between 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.</i></p>	<p>Many drill holes are collared in the hanging wall to the dyke and are drilled at high angles (southward) to the Sams Creek porphyry contact and, as a consequence, appear to result in generally low intersection angles to the mineralisation structures, producing sub-optimal intersections for resource estimation. Conversely, these drill holes are better intercepts for assessing dyke thickness and geometry, leading to more precise estimates of tonnage. These drill holes appear to introduce a bias due to the low angle intersection with the mineralisation zones.</p>

JORC Code Assessment Criteria	Comments
	<p>Most drill holes intercept at a low angle to the host porphyry and therefore drill down the porphyry (drilled northward) but at a higher angle to the general orientation of the mineralisation. These holes appear to be more optimal to delineate grade and possible grade domains. However, with often poorly intact porphyry contacts recovered in their core, these holes are sub-optimal for delineating the geometry of the porphyry.</p> <p>Most low angle (northward) drill holes are drilled either straight into the dyke at surface or from the hanging wall into the dyke. Only occasionally are holes drilled from the footwall into the dyke.</p> <p>This relationship between drill hole orientation and expected benefits has been taken into consideration during drill hole design and implementation.</p>
<p><b>Sample Security</b></p>	
<p><i>The measures taken to ensure sample security.</i></p>	<p>Drill samples were securely packaged on site and transported to the Laboratories by a courier with “chain of custody” documentation.</p>
<p><b>Audits and Reviews</b></p>	
<p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<p>Golder AU carried out an independent review of the sampling techniques and data. The results were satisfactory.</p>
<p><b>Mineral Tenement and Land Tenure Status</b></p>	
<p><i>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.</i></p> <p><i>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.</i></p>	<p>Sams Creek is situated mostly in the Northwest Nelson Conservation Park which lies on the eastern edge of the Kahurangi National Park in northwest Nelson area.</p> <p>The Exploration Permit EP40338 expires on the 26 March 2017. The eastern neighbouring permit EP 54454 was applied for and granted for five years in 2012 and expires on the 25 September 2017. This covers the eastern areas of the Sams Creek Dyke over Barron’s Flat into the Waitui catchment. MOD is the sole permit holder of EP 54454.</p> <p>MOD whom have formed a Joint Venture OGC to explore this project. MOD currently holds 40% share of the project.</p> <p>The Crown royalty is not currently applicable to the Sams Creek Project but would become applicable for any gold or silver production once the Sams Creek tenements are converted to mining permits.</p> <p>The Sams Creek tenement is also subject to an agreement between Royalco Resources Limited (Royalco) and OGC. Under this agreement, a royalty of 1% gold produced is deliverable by OGC to Royalco.</p>
<p><b>Exploration Done by Other Parties</b></p>	
<p><i>Acknowledgment and appraisal of exploration by other parties.</i></p>	<p>All exploration results in drill holes up to SCDDH056 in this resource estimation were produced by CRAE (1980–1987) and OGC (1996–2005).</p>

JORC Code Assessment Criteria	Comments
<p><b>Geology</b></p> <p><i>Deposit type, geological setting and style of mineralisation.</i></p>	<p>Sams Creek mineralisation is contained within a hydrothermally altered peralkaline granite porphyry dyke that intrudes Early Paleozoic metasediments. The dyke is up to 60 m thick and can be traced east-west along strike for over 7 km. The dyke generally dips steeply to the north (~60°) with gold mineralisation extending down dip for at least 1 km and is open at depth. The geological and geochemical characteristics of the Sams Creek granite dyke indicate it is a member of the intrusion-related gold deposits (IRGD).</p> <p>Gold mineralisation is largely contained within thin (1–15 mm) sheeted quartz-sulfide veins that cross cut the dyke which strike to the NE and dip predominantly to the SE at around 50°.</p> <p>The Sams Creek dyke was deformed by a D3 event which resulted in gentle upright F3 folds plunging to the NE-ENE. A model is proposed whereby gold-bearing sulfide veins formed along F3 fold hinges and parallel boudin necks of extending fold limbs, perpendicular to the maximum shortening direction. The higher concentrations of veining in these two areas, results in NE plunging mineralised shoots up to 35 m wide and 100 m high separated by narrower zones of lower grade gold mineralisation.</p>
<p><b>Database Integrity</b></p> <p><i>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.</i></p> <p><i>Data validation procedures used.</i></p>	<p>Data is stored in Microsoft Excel by Golder NZ that includes numerous validation checks using in-house Golder software (Datacheck) prior to it being imported into Vulcan. Vulcan was also used as a secondary validation check. Random spot checks were also done between the database and hard copies.</p> <p>On loading the original data for modelling, Golder AU performed additional checks that validated the internal integrity of the data set provided.</p>
<p><b>Site Visits</b></p> <p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<p>Golder NZ have been working on the project since 2011 and have assisted in the design and implementation of exploration program including the resource definition drilling campaign.</p>
<p><b>Geological Interpretation</b></p> <p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></p> <p><i>Nature of the data used and of any assumptions made.</i></p>	<p>Geological interpretation based on field mapping, structural mapping, drill hole lithology and grade data which was completed on cross-sections using Vulcan© software. 3D (wireframe) geological modelling was carried out by Golder NZ and reviewed by MOD.</p> <p>The current drill spacing provides an increasing degree of confidence in the interpretation and continuity of grade and geology. The deposit was separated into three geological domains cut by faults. The grade domain then was trimmed from the geological domains.</p>

JORC Code Assessment Criteria	Comments
<p><i>The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation.</i></p> <p><i>The factors affecting continuity both of grade and geology.</i></p>	<p>The boundaries between the weathered, transitional and fresh rock were also defined.</p>
<p><b>Dimensions</b></p> <p><i>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.</i></p>	<p>The Sams Creek resources have the following maximum extents:</p> <ul style="list-style-type: none"> <li>■ Easting = 1200 m</li> <li>■ Northing = 850 m</li> <li>■ RL = surface (which varies from 600 m RL to 200 m RL. The deepest mineralisation extends to a vertical depth of about -150 m RL.</li> </ul>
<p><b>Estimation and Modelling Techniques</b></p> <p><i>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 estimation method was chosen include a description of computer software and parameters used.</i></p> <p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p> <p><i>The assumptions made regarding recovery of by-products.</i></p> <p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulfur for acid mine drainage characterisation).</i></p> <p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p> <p><i>Any assumptions behind modelling of selective mining units.</i></p> <p><i>Any assumptions about correlation between variables.</i></p> <p><i>Description of how the geological interpretation was used to control the resource estimates.</i></p>	<p>Mineralisation was defined by zones identified from downhole lithological and geochemical data.</p> <p>The block size is 25 m (X) by 50 m (Y) by 5 m (Z) or approximately ½ of the drill hole spacing in the x (east) and y (north) directions. The sub-block size is 5 m (X) by 5 m (Y) by 1 m (Z). High-grade restraining was applied based on the exploratory data analysis. The high grade samples were used only in the estimation of the closest blocks to the sample.</p> <p>Using parameters derived from modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades for Au, Ag, As.</p> <p>Unfolding was used in the Main Zone during variography and estimation to enable correlation of samples around the folded structure.</p> <p>The estimation was conducted in three passes with the search size increasing for each pass.</p> <p>The model was validated visually and statistically using swath plots and comparison to sample statistics.</p>

JORC Code Assessment Criteria	Comments
<p><i>Discussion of basis for using or not using grade cutting or capping.</i></p> <p><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></p>	
<p><b>Moisture</b></p> <p><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></p>	<p>All tonnages are based on dry bulk density measures. The median of the bulk density measures was assigned to the block by mineralisation and weathering domains.</p>
<p><b>Cut-Off Parameters</b></p> <p><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></p>	<p>The resource model is constrained by assumptions about economic cut-off grades. The fresh mineralisation is confined by a 0.1 g/t Au cut-off and tabulated resources are based on cut-off grade of 0.7 g/t Au.</p>
<p><b>Mining Factors or Assumptions</b></p> <p><i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution.</i></p> <p><i>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.</i></p>	<p>The Sams Creek dyke contains a number of medium to high grade mineralised shoots. The top of the resource has been drilled on a nominal 75 m by 75 m pattern sufficient to define the continuity of these zones but at deeper levels the drilling is too wide spaced for these zones to be sufficiently defined. As a result, no underground mining assessment has been completed at this stage.</p> <p>The block model has been built using a parent cell size of 25 m (X) by 25 m (Y) by 5 m (Z), primarily determined by data availability.</p>
<p><b>Metallurgical Factors or Assumptions</b></p> <p><i>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.</i></p>	<p>Cyanidation testwork completed on six oxide bulk samples by CRAE resulted in Au recoveries of 85–95%.</p> <p>Testwork was completed on fresh sulfide mineralisation at the start of 2004 by OGC to characterise the metallurgical behaviour of Sams Creek composite samples.</p> <p>The recoveries from this testwork are summarised as:</p> <ul style="list-style-type: none"> <li>■ Direct Leach: 79–87% gold recovery</li> <li>■ Float and then leach: 73–86% gold recovery</li> <li>■ Float and acid leach: 83–91% gold recovery.</li> </ul> <p>Testwork completed to date indicates that recoveries from 80 to 90% are achievable from Sams Creek material. The work completed at this stage is preliminary. Further test work is required.</p>

JORC Code Assessment Criteria	Comments
<p><b>Environmental Factors or Assumptions</b></p> <p><i>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 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.</i></p>	<p>The Sams Creek project predominantly lies within the NW Nelson Forrest Park administered by the Department of Conservation (DoC). The Reefton open cut gold mine 100 km to the SW, which has been successfully operating over the last six years by OGC is also contained within a Forrest Park administered by DoC. The area is generally covered with beech forest with native scrub and sub-alpine grasslands. Some of the beech forest has been logged, with other areas burned and grazed. Areas within the permit area and environs have been identified that could be used to store waste rock but have not been advanced sufficiently to consider any environmental impacts.</p>
<p><b>Bulk Density</b></p> <p><i>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.</i></p> <p><i>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.</i></p> <p><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<p>The dry bulk density values used in the resource model were assigned using the median values of the available data. The bulk density data was separated into the porphyry that hosts the mineralisation and other waste rock. These density values were then divided by oxide and fresh rock. A median of 2.70 t/m<sup>3</sup> and 2.59 t/m<sup>3</sup> were used for fresh and oxide porphyry respectively.</p>
<p><b>Classification</b></p> <p><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p><i>Whether appropriate account has been taken of all relevant factors, i.e. 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.</i></p> <p><i>Whether the result appropriately reflects the Competent Person(s)' view of the deposit.</i></p>	<p>Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).</p> <p>The classification of Mineral Resources was completed by Golder AU based on the geological complexity, estimation performance, number of drill samples, drill hole spacing and sample distribution. The Competent Person is satisfied that the result appropriately reflects his view of the deposit.</p> <p>Continuous zones meeting the following criteria were used to define the resource class:</p> <p><u>Indicated Resource</u></p> <ul style="list-style-type: none"> <li>■ Drill spacing up to about 75 m by 75 m</li> <li>■ Estimation performance: Slope average above 0.45</li> <li>■ Evidence of geological and grade continuity: Surface mapping and channel sampling</li> </ul>



JORC Code Assessment Criteria	Comments
	<p><u>Inferred Resource</u></p> <ul style="list-style-type: none"> <li>■ Drill spacing wider than 100 m by 100 m</li> <li>■ Estimation performance: Slope average below 0.45, blocks estimated in the third pass</li> <li>■ Limited number of drill holes</li> <li>■ Greater geological complexity indicated by interpretation uncertainty in location of features like faults and folds</li> </ul>
<p><b>Audits or Reviews</b></p> <p><i>The results of any audits or reviews of Mineral Resource estimates.</i></p>	<p>This Resource Estimate is an independent estimate from the previous estimate from the 2012 Golder NZ Resource estimation.</p> <p>Golder AU work has been internally reviewed by the stakeholders Golder NZ and MOD.</p> <p>No external independent reviews of the Mineral Resource estimate have been conducted to date.</p>
<p><b>Discussion of Relative Accuracy/Confidence</b></p> <p><i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or 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.</i></p> <p><i>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.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	<p>The relative accuracy is reflected in the resource classification discussed above that is in line with industry acceptable standards.</p> <p>This is a global resource estimate with no production data.</p>

## COMPETENT PERSON'S STATEMENT

The Competent Person responsible for the geological interpretation, Mineral Resource estimation and classification of The Sams Creek gold deposit is Alan Miller, who is a full-time employee of Golder Associates Pty Ltd and a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Miller 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 Miller consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

### GOLDER ASSOCIATES PTY LTD



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