

**ASX RELEASE**

17 November 2022

**COMPANY**

**ASX:** SNG  
**ACN:** 619 211 826

**CAPITAL STRUCTURE**

**Shares:** 116,925,475  
**Options:** 14,293,262

**BOARD**

**Brian Rodan**  
Chairman & Managing Director

**Paul Angus**  
Executive Technical Director

**Keith Murray**  
Non-Executive Director

**Sebastian Andre**  
Company Secretary

**CONTACT**

Level 2  
41-43 Ord Street  
West Perth WA 6005  
t: +61 6458 4200  
e: admin@sirengold.com.au  
w: sirengold.com.au

**PROJECTS**



## Sams Creek Mineral Resource Estimate exceeds 800,000oz at higher grade

Siren Gold Limited (ASX: SNG) (Siren or the Company) is pleased to announce an updated JORC (2012) Mineral Resource Estimate (MRE) for the Sams Creek Gold Project in New Zealand completed by **Measured Group (MG)**.

### Highlights

- Updated **Sams Creek Mineral Resource Estimate (MRE) of 807,772 ounces at 2.82g/t Au**, representing a 37.4% increase in contained ounces and a 16% increase in grade.
- This includes the **Maiden MRE** for the **SE Traverse** prospect of **1.28Mt @ 3.56g/t Au for 146koz**.
- At a higher cut-off of 1.85g/t Au, the Sams Creek MRE is now 7.07 million tonnes grading **3.10g/t Au for 705,729 ounces of contained gold**.
- **Sams Creek is open in all directions** and has significant potential for increased gold resources from additional exploration drilling. The new MRE supports Siren's strategy to develop a large tonnage, bulk mechanised underground mining operation.
- **Global Resource now stands at 938koz Au at 3g/t Au** (on a 100% basis) or 739koz at 3g/t Au for Siren's relevant interest.
- **Alexander River updated MRE is due in December**.
- Siren will target further Resource growth at Sams Creek in 2023 with multiple high-priority targets identified.

**Table 1: Updated Sams Creek Resource estimate**

Prospect	Status	Cut-off (g/t)	Tonnes (Mt)	Au (g/t)	Ounces (koz)
Main Zone	Indicated	1.5	3.29	2.80	295.6
Main Zone	Inferred	1.5	3.79	2.71	330.0
SE Traverse	Inferred	1.5	1.28	3.56	146.1
Carapace	Inferred	0.5	0.54	2.06	36.0
<b>Total</b>			<b>8.91</b>	<b>2.82</b>	<b>807.8</b>

Tonnages are dry metric tonnes and minor discrepancies may occur due to rounding. Tonnes and grades are reported using a 1.5 g/t cut-off.

**Table 2: Global Resource estimate (100% basis)**

Project	Status	Cut-off (g/t)	Tonnes (Mt)	Au (g/t)	Ounces (koz)
Sams Creek*	Indicated	1.5	3.29	2.8	295.6
Sams Creek*	Inferred	1.5	5.61	2.9	512.1
Alexander River**	Inferred	1.5	1.00	4.1	131.0
<b>Total</b>			<b>9.90</b>	<b>3.0</b>	<b>938.7</b>

\* Siren Gold has 81.9% relevant interest in Sams Creek.

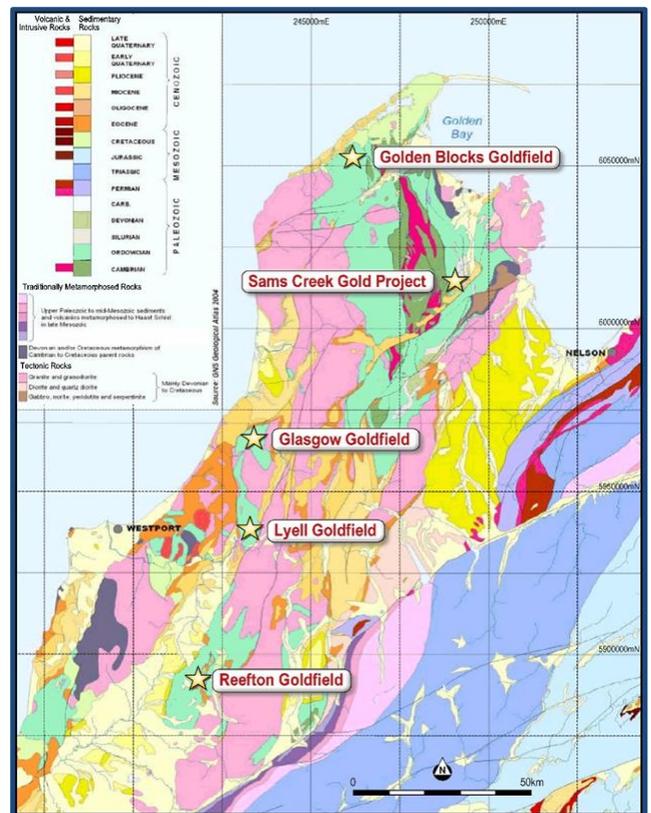
\*\* Refer to ASX Announcement dated 20 July 2022.

## Background

Siren holds a large, strategic package of tenements in the Reefton, Lyell and Sams Creek Goldfields in the South Island of New Zealand. Western New Zealand was originally part of Gondwana and lay adjacent to eastern Australia until around 80 Ma ago. The NW of the South Island of New Zealand comprises an area of predominantly early Paleozoic rocks in broad northerly trending belts which terminate at the Alpine Fault (Figure 1). The Paleozoic sequence is divided into the Buller Terrane, Takaka Central and Takaka Eastern Belts. These belts are interpreted to correspond with the Western, Central and Eastern belts of the Lachlan Fold Belt. The Buller and Western Lachlan belts contain the orogenic gold deposits like Bendigo, Ballarat and Fosterville in Australia and the Reefton and Lyell Goldfields in New Zealand.

The Sams Creek porphyry dyke deposit is located in the Eastern Takaka Terrane, which is equivalent to the Eastern Lachlan belt that hosts porphyry copper-gold deposits like Cadia and Ridgeway.

The Sams Creek Gold Project is located 140kms NE of Reefton and 100kms NE of Lyell (Figure 1). The Project comprises two exploration tenements: EP 54454, which is 100% held by Sams Creek Gold Limited (SCGL) a wholly owned subsidiary of Siren, and EP40338, which is 81.9% held by SCGL under a joint-venture agreement with New Zealand’s largest gold miner, Oceana Gold Limited (OGL), who own the remaining 18.1% interest.



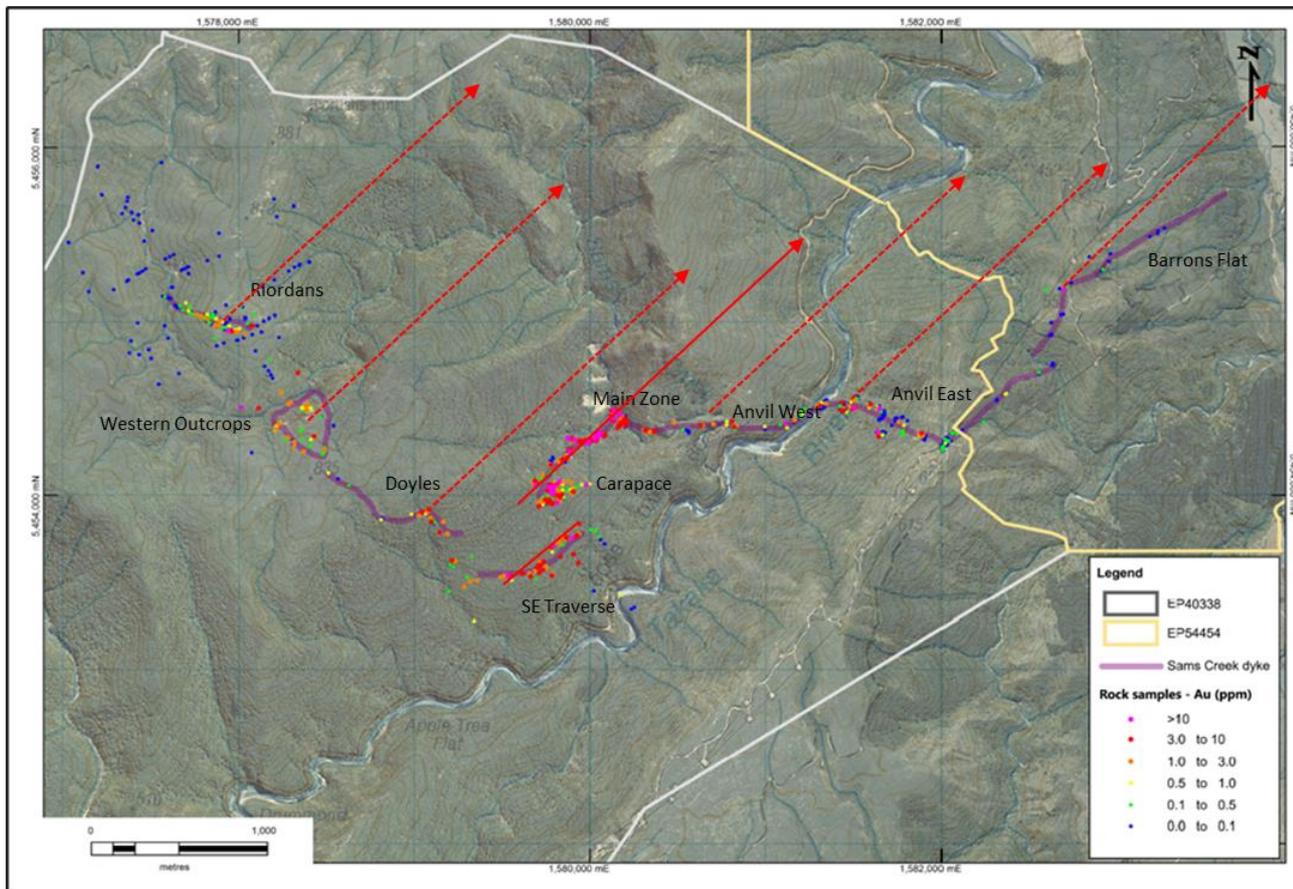
**Figure 1: Top of the South Island, geology showing Paleozoic rocks in green.**

Siren believes there is significant potential at Sams Creek for a large underground mining operation. The Sams Creek Dyke (SCD) is up to 60m thick, can be traced for over 7kms along strike, has a vertical extent of at least 1km and is open at depth. Drilling to date has focused on a 1km section of the dyke from the Carapace to the Main Zone (Figure 2). Topography is very steep, with the SCD outcropping from 800m-200m above sea level and it has been intersected in drillholes to -200m. The SCD has been folded into gentle NE plunging folds, with the gold veins preferentially forming in the fold hinges, resulting in NE plunging mineralised shoots as shown in Figure 2. To date around 127 diamond holes have been drilled in this zone.





**ASX ANNOUNCEMENT**



**Figure 3. Rock chip samples along the SCD with potentially mineralised anticline hinges shown by red arrows.**

Golder completed a JORC Main Zone Resource estimate in 2013 for an open pit mining scenario and included large areas of low-grade mineralisation. An Indicated and Inferred Resource of 1Moz @ 1.54g/t Au at a 0.7g/t cut-off was estimated. At a 1.5g/t cut-off the estimate is 588koz @ 2.43g/t Au (Table 3 - refer to *Announcement dated 3 June 2022*). Siren considers that Sams Creek is a potential underground mine and believes the model could be improved for an underground mining scenario, by trimming some of the low-grade dyke, and using separate domains for the high-grade mineralisation along the fold hinges and lower-grade fold limbs.

The 2013 resource estimate does not include the SE Traverse prospect. The SE Traverse is an isolated section of dyke approximately 500m long and 200m wide that is interpreted to be a continuation of the anticline hinge that extends from the Main Zone for over 1.5kms and is open at depth. Drillhole intersections in the SE Traverse shown in Figure 2 confirm the continuation of the higher-grade mineralisation in the anticline hinge.

**Table 3. 2013 Resource estimate at a 1.5g/t cut-off.**

<b>2013 Sams Creek Mineral Resource Estimate</b>				
<b>Category</b>	<b>Cut-off</b>	<b>Tonnes (Mt)</b>	<b>Au g/t</b>	<b>Au (koz)</b>
Indicated	1.5	5.0	2.48	402
Inferred	1.5	2.5	2.33	187
<b>Total</b>		<b>7.5</b>	<b>2.43</b>	<b>588</b>

Tonnages are dry metric tonnes and minor discrepancies may occur due to rounding



## ASX ANNOUNCEMENT

### New Mineral Resource Estimate

Siren engaged MG to complete the MRE that includes the Main Zone, Carapace and SE Traverse, based on an underground mining scenario. The MRE, which is in accordance with the JORC 2012 Code, has utilised geological and assay data from 20,020 metres of diamond core drilling from 137 holes.

#### ***Geology and Geological Interpretation***

Sams Creek mineralisation is contained within a hydrothermally altered peralkaline granite porphyry dyke that intrudes Early Palaeozoic metasediments. The dyke is up to 60m thick and can be traced east-west along strike for over 7 kms. The dyke generally dips steeply to the north ( $-60^\circ$ ) 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 was largely contained within thin (1-15 mm) sheeted quartz-sulphide veins that crosscut the dyke which strike to the NE and dip predominantly to the SE at around  $50^\circ$ .

Geological interpretation is based on available field mapping data, structural mapping, drillhole lithology and grade data. Modelling was completed using Leapfrog Geo modelling software. Wireframing and geological modelling were carried out by MG and reviewed by Siren.

Gold mineralisation is contained exclusively within the porphyry dyke, however, there are extensive zones of very low-grade material in some drillholes within the Main Zone that have previously been included within the modelled wireframe due to the modelling process employed (hanging wall and footwall snapped to the first occurrence of an assay sample  $>0.1$  g/t Au).

Due to a renewed focus on optimisation for potential underground mining in the Main Zone, the modelling process worked on excluding large zones of low grade compared to the 2013 MRE wireframe to increase the overall grade of the resource estimate. Composite intervals of 0.75 g/t Au were used as a guide for the interval selection process, however, in places, the modelling Geologists' discretion was applied in excluding or including certain intervals in the wireframe, based on geological understanding and ore body continuity.

The western extent of the Main Zone wireframe is controlled by the Bobby Dazzler fault, which was modelled and provided to MG by Siren. The deposit is open at depth and along strike to the east.

Within the Carapace and SE Traverse, the mineralised intervals within the dyke are thinner and included much less internal waste so interval selection for wireframing was reasonably simple.

For the Carapace, due to it being an open-cut target, composite intervals of 0.25 g/t, and in the SE Traverse composite intervals of 0.75 g/t, were used to guide interval selection, however, the modelling Geologists' discretion was again applied in excluding or including certain intervals in based on geological understanding and ore body continuity.

The Carapace deposit is truncated to the north, east and south by topography. The dyke is thought to continue along strike to the west leading into the Bobby Dazzler and Doyles prospect areas.

The SE Traverse wireframe outcrops against topography to the south and is otherwise truncated by the SE Traverse slip plane on all other sides. This has been modelled based on drillhole intercepts and field mapping data.

#### ***Sampling and Analysis***

Selective sampling of drill core was completed where gold intercepts were geologically logged in the core. The intervals selected for sampling were photographed, cut into half (along the axis of the core) at 1m intervals and sampled, ensuring all orientation marks were retained. This methodology of sampling drill core is industry standard and deemed appropriate.



## ASX ANNOUNCEMENT

---

### ***Estimation Methodology***

For this resource estimate, MG has completed the following:

- Geological interpretation and wireframing in Leapfrog Geo;
- Hard boundary compositing in Leapfrog – Edge Module (Leapfrog Edge);
- Variography and Ordinary Kriging in Leapfrog Edge; and
- Block Model Estimation in Leapfrog.

Composites were based on 1m composites. Outlier grades were assessed by reviewing composite histograms of gold grade for each individual wireframe. Extreme outlier grades were not identified, and it was determined that no top-cut was required.

Estimation domains were created for each deposit area. The Main Zone deposit was split into two domain areas, East and West. The two Main Zone domains were set to have a soft boundary between the dyke in the two domains but a hard boundary for contact with the host rock. Carapace and SE Traverse were treated as hard boundary domains as they were picked from drilling assays.

Individual domain search distances, number of passes, and minimum and maximum sample numbers are outlined in the Sams Creek Mineral Resource Estimate Report.

Previous mineral resource estimates have been conducted on the Sams Creek project, including 2013 and 2021 estimates carried out by Golder Associates. These block models have been made available to MG during the resource estimate work. Previous resource estimates have used ordinary kriging estimation. To confirm the appropriateness of this technique both inverse distance and nearest neighbour were estimated as a comparison. Comparing these through Leapfrog's Swath Plots function, it was determined that the Ordinary Kriging showed the most representative estimator for the underlying composited data. Swath plots for each area are shown in the final Mineral Resource Estimate Report. Block model validation included block statistics review, swath plots and visual inspection of grade distribution against composites, as well as sensitivities to block size and estimation variable changes undertaken.

### ***Cut-off Grades***

The MRE has been reported at cut-off grades ranging from 1.0g/t Au to 1.85g/t Au, which Siren considers appropriate for an underground mining operation. The Carapace has been reported at a 0.5g/t Au cut-off, as this would be mined by an open-cut.

### ***Mining Factors***

The MRE has been completed with the assumption that it will be mined using either open-cut or underground mining methods. No other detailed assumptions have been made to date.

Metallurgical 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.



## ASX ANNOUNCEMENT

### **Classification of Mineral Resource confidence**

The Sams Creek Project mineral resources are classified by the independent Competent Person as 'Indicated' and 'Inferred' based on the current understanding of geological and grade continuity. The classification reflects the Competent Person's confidence in the location, quantity, grade, geological characteristics and continuity of the Mineral Resources. The Mineral Resource Estimate (MRE) has been classified as Indicated and Inferred based on the following relevant factors:

- Drillhole density;
- Style of mineralisation and geological continuity;
- Data quality and associated QA/QC and grade continuity;
- The consistency of the thickness and grade results from drillholes.

The resource classification accounts for all relevant factors. Two methods were used to determine the optimal drill spacing between boreholes for resource classification at the Sams Creek Project. These were:

- a) Variogram methodology which analyses the different proportions of the sill;
- b) An estimation variance methodology.

The data spacing and distribution are sufficient to establish geological and grade continuity appropriate for Mineral Resource estimation and classification and the results appropriately reflect the Competent Person's view of the deposit

The MRE at a 1.85g/t Au, 1.5g/t Au and 1.0g/t Au cut-offs are shown in Tables 4 to 6 and visually represented in Figure 4.

**Table 4. 2022 MRE at a 1.85g/t cut-off.**

<b>Sams Creek Project <i>in situ</i> Mineral Resources November 2022</b>					
<b>Total Mineral Resources</b>					
<b>Zone</b>	<b>Category</b>	<b>Cut-off</b>	<b>Mt</b>	<b>Au g/t</b>	<b>Au koz</b>
Main Zone	Indicated	1.85	2.68	3.05	262.6
<b>Total</b>	<b>Indicated</b>		<b>2.68</b>	<b>3.05</b>	<b>262.6</b>
Main Zone	Inferred	1.85	2.68	3.10	266.5
SE Traverse	Inferred	1.85	1.17	3.72	140.5
Carapace	Inferred	0.50	0.54	2.06	36.0
<b>Total</b>	<b>Inferred</b>		<b>4.40</b>	<b>3.21</b>	<b>443.1</b>
<b>Total</b>	<b>Indicated + Inferred</b>		<b>7.07</b>	<b>3.10</b>	<b>705.7</b>

Tonnages are dry metric tonnes and minor discrepancies may occur due to rounding

**Table 5. 2022 MRE at a 1.5g/t cut-off.**

<b>Sams Creek Project <i>in situ</i> Mineral Resources November 2022</b>					
<b>Total Mineral Resources</b>					
<b>Zone</b>	<b>Category</b>	<b>Cut-off</b>	<b>Mt</b>	<b>Au g/t</b>	<b>Au koz</b>
Main Zone	Indicated	1.5	3.29	2.80	295.6
<b>Total</b>	<b>Indicated</b>		<b>3.29</b>	<b>2.80</b>	<b>295.6</b>
Main Zone	Inferred	1.5	3.79	2.71	330.0
SE Traverse	Inferred	1.5	1.28	3.56	146.1
Carapace	Inferred	0.5	0.54	2.06	36.0
<b>Total</b>	<b>Inferred</b>		<b>5.62</b>	<b>2.84</b>	<b>512.1</b>
<b>Total</b>	<b>Indicated + Inferred</b>		<b>8.91</b>	<b>2.82</b>	<b>807.8</b>

Tonnages are dry metric tonnes and minor discrepancies may occur due to rounding

**Table 6. 2022 MRE at a 1.0g/t cut-off.**

<b>Sams Creek Project <i>in situ</i> Mineral Resources November 2022</b>					
<b>Total Mineral Resources</b>					
<b>Zone</b>	<b>Category</b>	<b>Cut-off</b>	<b>Mt</b>	<b>Au g/t</b>	<b>Au koz</b>
Main Zone	Indicated	1.0	4.07	2.50	327.1
<b>Total</b>	<b>Indicated</b>		<b>4.07</b>	<b>2.50</b>	<b>327.1</b>
Main Zone	Inferred	1.0	6.01	2.17	418.9
SE Traverse	Inferred	1.0	1.41	3.34	151.8
Carapace	Inferred	0.5	0.54	2.06	36.0
<b>Total</b>	<b>Inferred</b>		<b>7.97</b>	<b>2.36</b>	<b>606.7</b>
<b>Total</b>	<b>Indicated + Inferred</b>		<b>12.04</b>	<b>2.41</b>	<b>933.8</b>

Tonnages are dry metric tonnes and minor discrepancies may occur due to rounding



**ASX ANNOUNCEMENT**

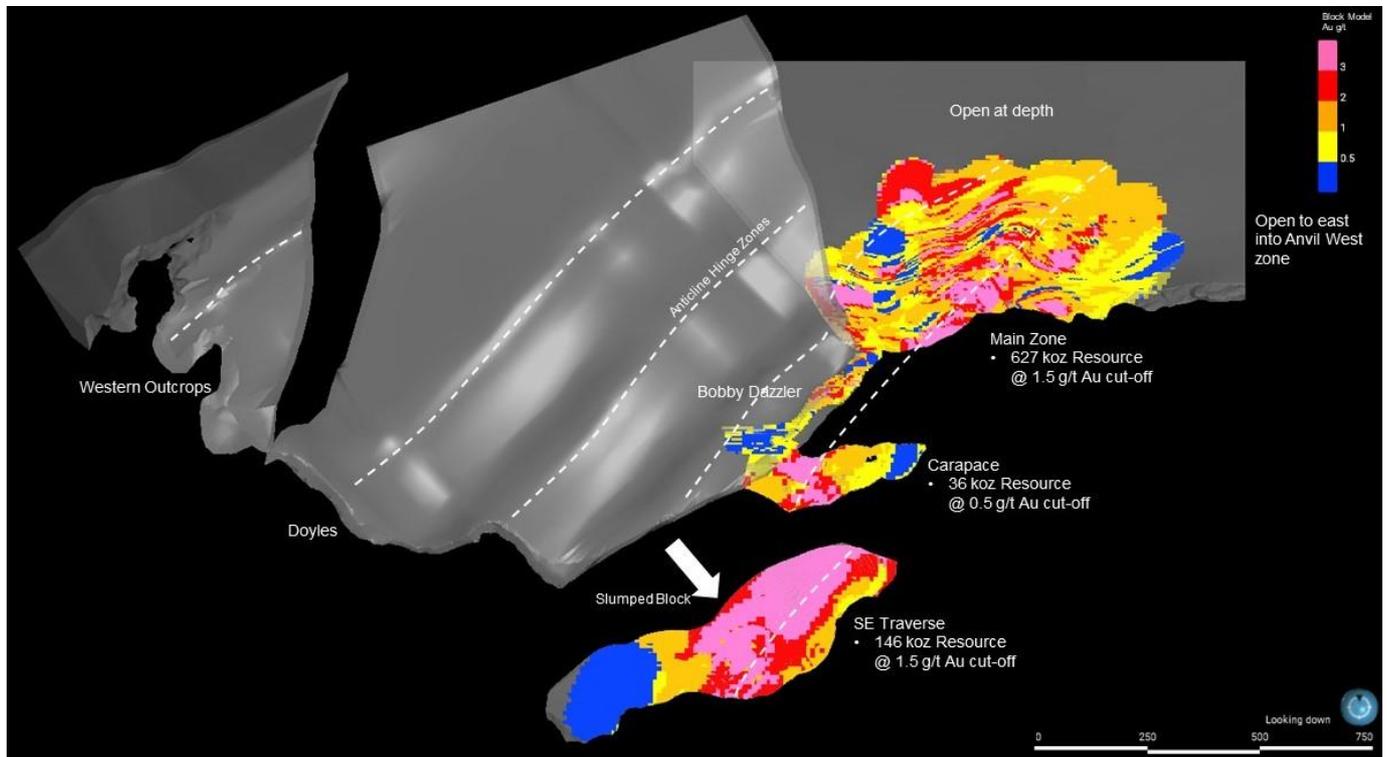


Figure 4. Plan view of undrilled SCD (grey) and new MRE block model (magenta high grade, blue low grade).

**Global Resources**

Siren’s global resource on a 100% basis is shown in Table 7 and depleted for Sirens 81.9% share of Sams Creek is shown in Table 8.

**Table 7: Global Resource estimate (100% basis)**

Project	Status	Cut-off (g/t)	Tonnes (Mt)	Au (g/t)	Ounces (koz)
Sams Creek	Indicated	1.5	3.29	2.8	295.6
<b>Total</b>	<b>Indicated</b>		<b>3.29</b>	<b>2.8</b>	<b>295.6</b>
Sams Creek	Inferred	1.5	5.61	2.9	512.1
Alexander River*	Inferred	1.5	1.00	4.1	131.0
<b>Total</b>	<b>Inferred</b>		<b>6.61</b>	<b>3.1</b>	<b>643.1</b>
<b>Total</b>	<b>Indicated + Inferred</b>		<b>9.90</b>	<b>3.0</b>	<b>938.7</b>

\* Refer to ASX Announcement dated 20 July 2022.

**Table 8: Global Resource estimate**

Project	Status	Cut-off (g/t)	Tonnes (Mt)	Au (g/t)	Ounces (koz)
Sams Creek*	Indicated	1.5	2.69	2.8	242.1
<b>Total</b>	<b>Indicated</b>		<b>2.69</b>	<b>2.8</b>	<b>242.1</b>
Sams Creek*	Inferred	1.5	4.59	2.9	419.4
Alexander River	Inferred	1.5	1.00	4.1	131.0
<b>Total</b>	<b>Inferred</b>		<b>5.59</b>	<b>3.1</b>	<b>550.4</b>
<b>Total</b>	<b>Indicated + Inferred</b>		<b>8.28</b>	<b>3.0</b>	<b>792.5</b>

\* Depleted to reflect Sirens 81.9% interest.

## Recent Exploration

The Barrons Flat permit expired on 26 September 2022 and Siren has applied for a 4-year extension, which is currently being assessed by NZPaM. As part of the work program requirement, four diamond holes were completed for a total of 282m. Drilling targeted an area that returned some high-grade rock chips and elevated arsenic soils, interpreted to be another NE trending fold hinge, 3kms to the east of the Main Zone (Figure 3). The drilling confirmed that the dyke is folded (Figure 5) and contains similar arsenopyrite veins that host the gold mineralisation at the Main Zone. Assay results show a higher-grade mineralised zone in the centre of the dyke with assays up to 8.4g/t Au (Table 7), which is encouraging.

**Table 9. Barrons Flat drilling results**

Hole ID	From (m)	To (m)	Interval	Gold (g/t)
BFDDH002	10	20	10	0.91
Including	18	19	1	5.63
BFDDH003	4	32	28	0.88
Including	4	5	1	8.39
Including	29	30	1	2.02
Including	31	32	1	8.13
BFDDH004	62	63	1	0.80

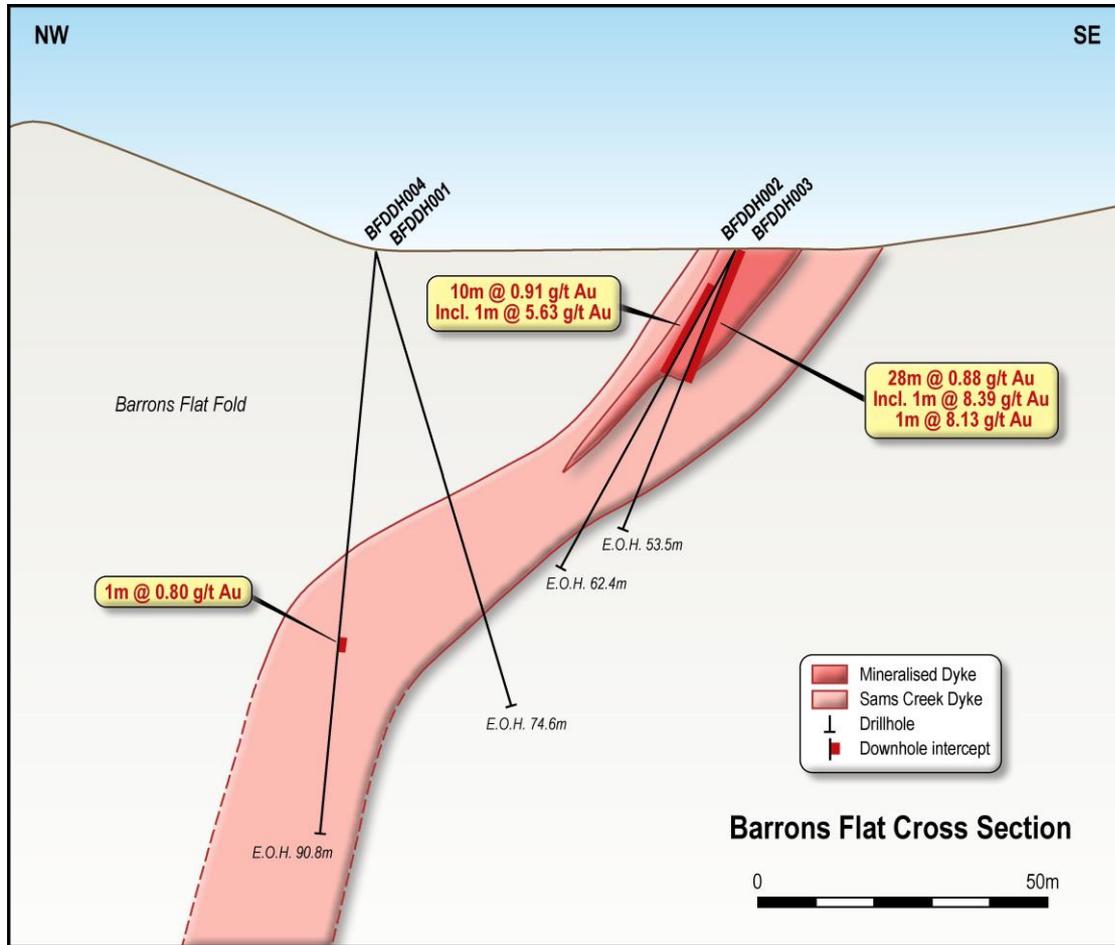


Figure 5. Schematic cross section of the SCD at Barrons Flat.

### Next Steps

The updated resource model has shown that with a greater understanding of the fold geology and mineralisation continuity the grade of the resource increased significantly to around 3g/t Au, depending on the cut-off is used. The Sams Creek deposit is open in all directions and has significant potential for increased gold resources from additional exploration drilling. Siren is targeting a large tonnage bulk mechanised underground mining operation.

In 2023 Siren plans to drill test some of the interpreted fold hinge zones like Doyles, Anvil West and Anvil East that have not been previously drilled. These prospects cover 1-2kms either side of the current resource (Figure 3) and have significant high-grade rock chips and soil geochemical anomalies where the interpreted fold hinges outcrop.

The Main Zone mineralisation is also open at depth and will be further drill tested.

Siren has an Access Agreement with the Department of Conservation (DoC) that allows up to 100 drill sites with within EP40338.

Subject to results, additional drilling will be focused on infilling any new mineralised zones discovered, so an updated MRE can be completed, feasibility studies can be commenced and a mining permit application advanced in late 2024.



## ASX ANNOUNCEMENT

---

For further information, please visit [www.sirengold.com.au](http://www.sirengold.com.au) or contact:

**Brian Rodan** – Managing Director  
Phone: +61 (8) 6458 4200

**Paul Angus** – Technical Director  
Phone: +64 274 666 526

This announcement has been authorised by the Board of Siren Gold Limited.

### Competent Person Statements

The information in this announcement that relates to exploration results is based on, and fairly represents, information and supporting documentation prepared by Mr Paul Angus, a competent person who is a member of the Australasian Institute of Mining and Metallurgy. Mr Angus has a minimum of five years' experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a competent person as defined in the 2012 Edition of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results. Mr Angus is a related party of the Company, being the Technical Director, and holds securities in the Company. Mr Angus has consented to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Statements contained in this announcement relating to the Sams Creek Project Mineral Resource Estimation, are based on, and fairly represents, information and supporting documentation prepared by Mr Chris Grove, who is a member of the Australian Institute of Mining & Metallurgy (AusIMM), Member No 310106. Mr Grove is a full-time employee of the mineral resource consulting company "Measured Group", who were contracted by Sirens Gold Limited to prepare an estimate of the Mineral Resource at Sams Creek. Mr Grove has sufficient relevant experience in relation to the mineralisation styles being reported on to qualify as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Grove consents to the use of this information in this announcement in the form and context in which it appears.

## The following Table and Sections are provided to ensure compliance with the JORC Code (2012 Edition)

### Section 1 - Sampling Techniques and Data

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

Criteria	Explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <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 down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- CRA Exploration (CRAE), OceanaGold Limited (OGL), MOD Resources (MOD) and Sandfire Resources (SFR) have all used similar sampling techniques.</li> <li>- Diamond drilling core (DD) drilling was logged to obtain for geological and geotechnical data and samples for assaying and rock strength (unconfined compressive strength - UCS) and density.</li> <li>- Downhole geophysical logging wasn't undertaken.</li> <li>- DD drilling was used to obtain core samples. Mineralised core was cut in half with diamond 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 waste.</li> <li>- CRAE, OGL, MOD and SFR 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 DD with at least As, Ag and S analysed.</li> <li>- SFR rolled DD into plastic splits from the triple tube spilt at the drill rig and then placed into the core trays. This provided a far better quality core presentation with the preservation of structures and broken core with less handling of the core.</li> <li>- Field and core duplicates, pulp, and repeat analysis were completed by OGL, MOD &amp; SFR as well as checks on older CRAE data to test and ensure sample representativity.</li> <li>- CRAE completed trenching and channel sampling of exposed dyke outcrops.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- All DD drilling was helicopter supported.</li> <li>- DD diameters included PQ (96mm) and HQ (63mm), using a triple tube. NQ was a mixture of NQ (47.6mm) and NQ3 (45.1mm). Most of the drilling was HQ with PQ collars generally limited to depths less than 50m.</li> <li>- Earlier CRAE drilling was completed HQ and NQ sizes.</li> <li>- MOD used man-portable rig with drillhole ID's SCMDH**** which were drilled using NQ size core.</li> <li>- A 15-hole RC drilling program at Barrons Flat was using an 80mm (3.5 inch) face sampling hammer with 1m samples collected.</li> <li>- OGL has limited success with orientation spear system. MOD oriented their core using Coretell Ori Shot CNH100 - a digital core orientation system. SFR used Longyear True Core tool.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> </ul>	<ul style="list-style-type: none"> <li>- OGL, MOD &amp; SFR sample recovery was recorded by measuring the length of recovered core and comparing this with the drilled interval.</li> <li>- OGL re-logged all the CRAE core and recorded recoveries.</li> <li>- The core recovery for the Main Zone, historically, is approximately 96.6%.</li> </ul>

Criteria	Explanation	Commentary
	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- The Carapace had higher rates of core loss with the average of 76% recovered. These appears to have no material impact on the results.</li> <li>- Increased core loss is observed in the weathered mineralised dyke.</li> <li>- SE Traverse recoveries are 83 % in the dyke.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>- All drilling has 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.</li> <li>- MOD and SFR DD was oriented. Structural measurements were recorded during logging.</li> <li>- OGL relogged all the CRAE core.</li> <li>- Deeper interval has been logged for magnetic susceptibility (MS) using hand-held MS meters.</li> <li>- Logging intervals are based on geological boundaries or assigned a nominal length of one metre.</li> <li>- Mineralised zones were logged for type, alteration intensity, vein thickness, frequency, angle to long core axis, and mineralogy.</li> <li>- Summary geotechnical information was recorded.</li> <li>- All core trays were photographed prior to core being sampled.</li> <li>- All core is stored in core shed and containers on site in Takaka or in OGL core shed in Reefton, NZ.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <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></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>- OGL, MOD &amp; SFR DD sample intervals were physically marked on the core, which was sawn in half lengthways with a diamond core-cutting saw. The core cutting plane was randomly selected, not based on core orientation line or other factors. Where core was too broken to be cut, the broken core was split longways into two equal amounts from the core tray. The resulting half core was taken for the laboratory sample and the remaining core was archived.</li> <li>- OGL and MOD completed 5 m grind samples into the hanging wall and footwall to test for mineralisation and waste rock characterisation.</li> <li>- The field duplicates, laboratory duplicates and laboratory repeats were collected and assayed with laboratory duplicates. Repeats were found acceptable in comparison with regular laboratory samples. No major issues identified.</li> <li>- MOD &amp; SFR took field duplicates and are routinely submitted as half core. Field duplicates were originally DD 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.</li> <li>- The DD (2-3 kg) and channel (1-2 kg) sample sizes are considered appropriate to the grain and particle size for representative sampling.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- CRAE - DD samples were sent to Service Laboratories in Nelson and AAS analysis was carried out. OGL completed fire assay re-checks on drillholes DDH82SC09 and DDH82SC11 resulting in an average of 10% upgrade in the Au grades. No adjustment was undertaken for CRAE results. For CRAE drilling, the laboratories and methods used are insufficiently recorded in the logs, assay results and reporting. It is unknown if any assay or sampling quality control procedures were consistently undertaken by CRAE. No evidence of standards or blanks is available.</li> <li>- OGL DD samples were fire assayed and analysed by Aqua Regia digest for Au and LECO digest for sulphur by Amdel Ltd (Amdel) at their Macraes Flat Laboratory, New Zealand. A multielement</li> </ul>

Criteria	Explanation	Commentary
	<ul style="list-style-type: none"> <li><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></li> </ul>	<p>suite comprising of Ag, As, Bi, Cu, Pb, Zn &amp; Mo was subsequently assayed by ICP-MS and AAS by Amdel in Adelaide, Australia. Grind samples were prepared and assayed at Amdel Macraes Flat. These were assayed for Au &amp; As only. OGL used standards, blanks, laboratory repeats which were recorded in their last drilling programme.</p> <ul style="list-style-type: none"> <li>- MOD &amp; SFR DD samples were sent to SGS Waihi, New Zealand, where they were assayed by 30g fire assay with AAS finish. MOD DD multielement analysis was completed by SGS up to SCDDH078. After SCDDH078, multi-element analysis was undertaken by ALS Townsville where a 48-element suite was determined via ICP-MS. ALS has a full QAQC program. 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 over limit arsenic samples (&gt;5000ppm) were then tested by XRF method. Drill holes SCDDH056 and SCDDH057 weren't tested for over limited As and recorded as 5000ppm.</li> <li>- No independent laboratory inspections were carried out during these phases of drilling, sampling and analysis.</li> <li>- For each MOD and SFR drill hole QA/QC included: <ul style="list-style-type: none"> <li>• <i>At least 2 Au certified Rocklab standards (CRM).</i></li> <li>• <i>Two blanks.</i></li> <li>• <i>At least one core duplicate (quarter core) and laboratory duplicate per drill hole or every 25 samples.</i></li> <li>• <i>Lab repeats are recorded.</i></li> </ul> </li> <li>- Standards, duplicates and blanks are checked after receiving the results. The QA/QC results have been deemed acceptable.</li> <li>- The same process for MOD channel and rock chip samples was used.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data</i></li> </ul>	<ul style="list-style-type: none"> <li>- CRAE drillhole SCDDH017 was twinned by MOD. The results for the two holes were similar suggesting that the CRAE Au results are acceptable.</li> <li>- During MOD and SFR drill programs mineralisation intersection data was inspected and verified independently by the project manager or senior project geologist. The project manager and visited the deposit on average weekly in support of the exploration program.</li> <li>- All laboratory assay results were received and stored in both CSV and laboratory signed PDF formats.</li> <li>- Data is stored in Microsoft Excel, Leapfrog and Vulcan.</li> <li>- Data storage system protocols are basic but robust.</li> <li>- All data is stored in a Data room as well as back up on Drop box.</li> <li>- The data and future work should be stored and managed on a commercial relational database with inbuilt validation protocols in the future.</li> <li>- Quarter core cuts are added together to get the same sample weights per sample interval.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine</i></li> </ul>	<ul style="list-style-type: none"> <li>- The drillhole collar coordinate (X, Y, Z) are referenced to New Zealand Transverse Mercator 2000 (NZTM). All holes up to SCDDH096 have been picked up by GPS methods and post processed by Golden Bay Surveyors to 0.1m accuracy.</li> </ul>

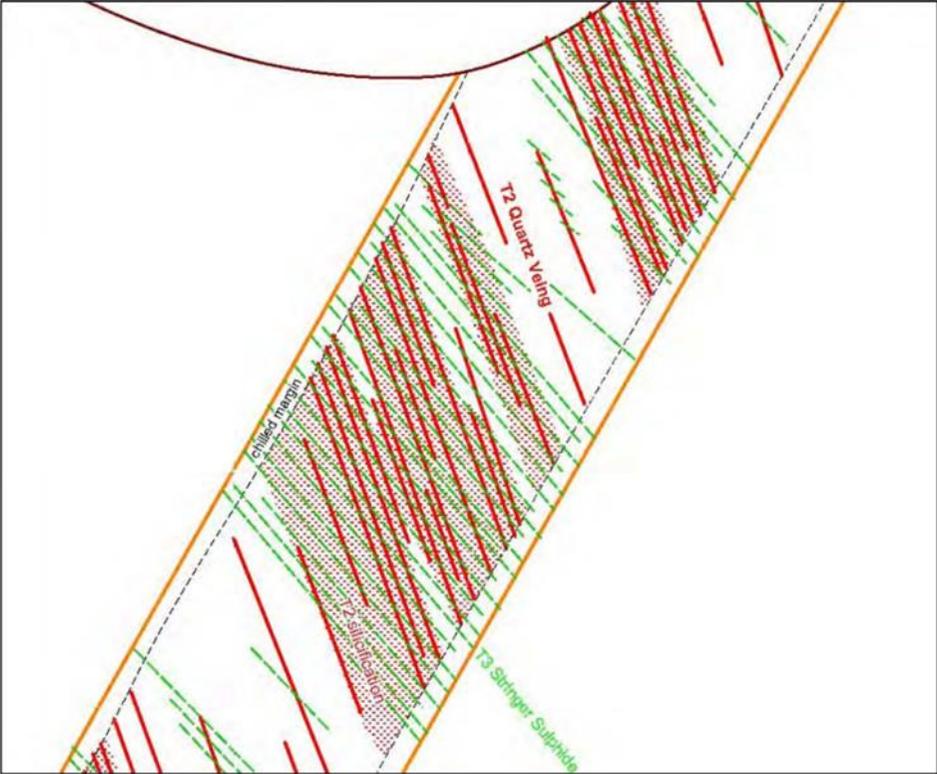
Criteria	Explanation	Commentary
	<p><i>workings and other locations used in Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>- SFR drilling from SCDDH097 to SCDDH103 have been picked by handheld GPS Garmin 64. SFR drillholes in the Main Zone are collared within 1m of previous drilling from the same drill pad.</li> <li>- A digital terrain model (DTM) was constructed based on LiDAR that was flown by NZ Aerial Surveys in 2011. All drill collars elevations were reconciled with the LiDAR.</li> <li>- Downhole surveys are not available for 19 out of 50 CRAE holes and one abandoned OGL hole SCDDH046. Except for one drillhole (DDH84SC16), all the unsurveyed drillholes are less than 120m deep. Hellman report (2007) noted that no significant deviation in azimuth and dip takes place in the first 120m of the surveyed holes. It was therefore considered reasonable to assume that these unsurveyed holes follow the collar Azimuth and dip orientation.</li> <li>- The correction used between magnetic north and true north (magnetic declination) was 22° East.</li> <li>- MOD and SFR surveyed on average every 30m using a digital downhole tool. SFR used Longyear true shot camera for down hole surveys.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <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></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Drilling in the Main Zone has generally been completed on a 75m spacing with ranges between 50m to 150m.</li> <li>- The drill spacing was suggested by drill hole density analysis (Golder, 2012) down to the 50mRL in the Main Zone.</li> <li>- Drilling directions and distances in the Main Zone 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.</li> <li>- The Carapace, with a much flatter terrain was drilled on 50m spacing with vertical holes.</li> <li>- SE Traverse spacing is approximately 100m.</li> <li>- Sample compositing was to 1m which is the dominant sample length.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- Many drill holes are collared in the hanging wall to the dyke and are drilled at high angles to the north dipping dyke. These drill holes are better for assessing the Sams Creek porphyry contact and true thickness, however, the holes are often drilled at low angle or sub-parallel to the mineralised sulphide veins that dip to the SE. Therefore, these intersections are sub-optimal for resource grade estimation. These drill holes provide more precise estimates of tonnage but do appear to introduce a grade bias due to the angle intersection with the mineralisation zones.</li> <li>- Most drill holes intercept at a low angle to the host porphyry and therefore drill down the porphyry 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 the core. These holes are sub-optimal for delineating the geometry of the porphyry. These holes are drilled from both hanging wall footwall of the dyke.</li> <li>- This relationship between drillhole orientation and expected benefits has been taken into consideration during drill hole design and implementation.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Drill samples were securely packaged on site and transported by a courier with "chain of custody" documentation, to SGS laboratory in Westport, New Zealand for crushing and sample preparation. Samples were stored in a locked coreshed until despatch.</li> </ul>

Criteria	Explanation	Commentary
Audits or reviews	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Golder completed an audit as part of the 2013 Mineral Resource Estimation (MRE). Hellman Scofield previously carried out an independent review of the sampling techniques and data. The results were satisfactory.</li> </ul>

## Section 2 - Reporting of Exploration Results

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- Sams Creek project is situated mostly in the Northwest Nelson Conservation Park which lies on the eastern edge of the Kahurangi National Park in northwest Nelson area.</li> <li>- The Exploration Permit EP 40338 expires on the 26 March 2025 and is subject to a joint venture with OGL with Siren Gold Ltd (SGL) owning 81.9%.</li> <li>- The eastern neighbouring permit EP 54454 expired on the 25 September 2022. This covers the eastern areas of the Sams Creek Dyke over Barron's Flat into the Waitui catchment. SGL is the sole permit holder of EP 54454. A four-year Appraisal Extension has been applied for.</li> <li>- A 1% Crown royalty would apply to EP 40338 and 2% Crown royalty to EP 54454. applicable for any gold or silver production once the Sams Creek permits are converted to mining permits.</li> <li>- The Sams Creek permit EP 40338 is also subject to an agreement between Royalco Resources Limited (Royalco) and OGL. Under this agreement, a royalty of 1% of gold produced is deliverable by OGL to Royalco.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>- All exploration results in drill holes up to SCDDH103 were produced by: CRAE (1980-1987), OGL (1996-2005), MOD (2010- 2017) and SFR (2019 to 2021).</li> <li>- CRAE completed trenching and soil sampling programs where MOD resources completed the CRAE soil sample pattern over Sams Creek and Barrons Flat.</li> <li>- MOD completed structural mapping program over Main Zone, Carapace, SE Traverse and Doyles as well channel sampling.</li> <li>- MOD completed an aerial magnetic geophysics program.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Sams Creek mineralisation is contained within a hydrothermally altered peralkaline granite porphyry dyke that intrudes Early Palaeozoic metasediments. The dyke is up to 60m thick and can be traced east-west along strike for over 7km. The dyke generally dips steeply to the north (-60°), including within the Main Zone, 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). Within the Carapace and SE Traverse areas the dyke is flat or only gently dipping. The relative positive and geometry of the SE Traverse deposit is thought to have been affected by movement along landslip planes which has displace the dyke to the south-east by ~250m.</li> <li>- Gold mineralisation is largely contained within thin (1-15 mm) sheeted quartz-sulphide (T3) veins that crosscut the dyke which strike to the NE and dip predominantly to the SE at around 50°.</li> </ul>

Criteria	Explanation	Commentary
		 <p data-bbox="1016 1015 2045 1070"><b>NW-SE section of the Main Zone of Sams Creek Porphyry Dyke showing T2 quartz veining, T3 sulphide veins (GOD 2010). The majority of the gold mineralisation is contained in the T3 veins.</b></p> <ul data-bbox="987 1082 2045 1249" style="list-style-type: none"> <li>- 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 sulphide 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 zones of lower grade gold mineralisation.</li> </ul>

Drill hole Information	<ul style="list-style-type: none"> <li>• 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:</li> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> <li>• 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</li> </ul>	Hole ID	Prospect	TD	mE NZTM	mN NZTM	RL	Collar Dip	Collar Azimuth
		DDH82SC01	Carapace	84.10	1579751.76	5454047.29	561.80	-45	121
		DDH82SC02	Carapace	117.25	1579745.88	5454046.20	562.99	-45	301
		DDH82SC04	Carapace	19.50	1579805.43	5454054.39	555.60	-45	066
		DDH82SC05	Carapace	8.35	1579803.67	5454053.63	555.90	-45	261
		SCDDH086	Carapace	15.40	1579983.75	5454350.66	329.18	-90	000
		SCMDH001	Carapace	8.80	1580030.78	5454375.62	289.54	-90	022
		SCMDH002	Carapace	9.70	1580062.49	5454313.14	336.10	-90	022
		SCMDH003	Carapace	20.10	1580142.15	5454430.99	244.39	-90	022
		SCMDH004	Carapace	20.20	1580142.15	5454430.99	244.39	-90	022
		SCMDH005	Carapace	21.14	1580142.15	5454430.99	244.39	-90	022
		SCMDH007	Carapace	20.00	1580142.15	5454430.99	244.39	-90	022
		SCMDH008	Carapace	57.40	1580066.92	5454350.72	311.20	-90	022
		SCMDH010	Carapace	12.50	1580120.96	5454360.59	287.89	-90	022
		SCMDH011	Carapace	22.90	1579861.26	5454417.15	398.50	-90	022
		SCMDH012	Carapace	25.00	1579947.31	5454269.16	399.11	-90	022
		SCMDH013	Carapace	25.90	1579947.56	5454268.69	399.10	-90	022
		SCMDH014	Carapace	19.80	1580102.56	5454509.75	231.69	-90	022
		SCMDH015	Carapace	15.00	1579492.30	5453580.20	495.70	-90	022
		SCMDH016	Carapace	17.70	1579702.20	5453605.20	461.00	-90	022
		SCMDH017	Carapace	14.10	1580144.52	5454430.15	244.05	-90	022
		SCMDH018	Carapace	18.40	1580144.52	5454430.15	244.05	-90	022
		SCMDH019	Carapace	14.00	1580328.24	5454452.07	326.99	-90	022
		SCMDH020	Carapace	23.00	1580333.01	5454451.76	326.86	-90	022
		SCMDH021	Carapace	26.00	1580548.95	5454370.76	226.23	-90	022
		SCMDH022	Carapace	28.10	1580103.91	5454507.11	232.01	-90	022
		SCMDH025	Carapace	22.60	1580102.81	5454510.59	231.08	-90	022
		SCMDH026	Carapace	25.00	1580331.48	5454451.19	327.58	-90	022
		SCMDH027	Carapace	30.30	1580145.59	5454649.07	244.64	-90	022
		DDH82SC11	Main Zone	98.30	1580145.24	5454649.52	244.40	-50	121
DDH83SC12	Main Zone	42.00	1580145.07	5454649.86	244.34	-50	151		
DDH83SC13	Main Zone	119.60	1579981.74	5454350.20	330.92	-53	331		
DDH84SC16	Main Zone	211.70	1580413.69	5454471.91	279.00	-55	331		

DDH84SC16A	Main Zone	32.90	1580411.80	5454472.91	279.00	-45	311
DDH84SC17	Main Zone	26.70	1580411.68	5454473.38	279.00	-90	061
DDH84SC17A	Main Zone	28.90	1580212.74	5454526.24	293.65	-70	331
DDH84SC18	Main Zone	62.40	1580212.60	5454525.94	293.65	-60	321
DDH84SC19	Main Zone	239.10	1579992.18	5454407.17	321.67	-45	331
DDH84SC21	Main Zone	200.40	1579992.05	5454407.57	321.93	-65	151
DDH84SC23	Main Zone	166.50	1579861.26	5454417.15	398.50	-60	331
DDH84SC25	Main Zone	250.15	1579992.00	5454408.00	322.13	-47.5	331
DDH85SC26	Main Zone	200.20	1579991.00	5454407.00	322.75	-90	061
DDH86SC35	Main Zone	16.80	1580304.83	5454606.87	394.88	-45	151
DDH86SC36	Main Zone	203.00	1580305.81	5454607.14	394.71	-45	151
DDH87SC40	Main Zone	195.80	1580411.65	5454473.39	281.12	-65	242
DDH87SC41	Main Zone	206.00	1580412.41	5454472.57	280.17	-67	152
DDH87SC42	Main Zone	288.00	1580327.38	5454517.53	360.77	-50	332
SCDDH044	Main Zone	329.30	1580216.03	5454526.78	292.77	-73	331
SCDDH045	Main Zone	148.85	1580324.51	5454519.41	361.02	-60	091
SCDDH048	Main Zone	248.70	1580413.06	5454473.04	279.80	-75	312
SCDDH049	Main Zone	352.65	1580411.29	5454472.18	281.18	-60	151
SCDDH050	Main Zone	316.70	1580449.57	5454445.29	239.09	-65	111
SCDDH054	Main Zone	410.85	1580411.28	5454471.66	281.06	-90	022
SCDDH056	Main Zone	173.75	1580258.40	5454468.30	289.25	-63	321
SCDDH057	Main Zone	155.70	1580331.90	5454453.30	328.05	-66	171
SCDDH058	Main Zone	274.30	1580142.40	5454432.20	244.00	-80	330
SCDDH059	Main Zone	344.00	1580331.70	5454450.70	327.50	-65	337
SCDDH060	Main Zone	289.60	1580105.80	5454507.40	230.55	-75	010
SCDDH061	Main Zone	203.00	1580204.10	5454416.20	211.50	-90	010
SCDDH062	Main Zone	155.00	1579815.10	5453977.90	537.10	-85	333
SCDDH063	Main Zone	338.30	1580103.80	5454505.30	232.30	-70	343
SCDDH064	Main Zone	305.00	1579863.00	5454418.00	398.35	-80	351
SCDDH065	Main Zone	315.30	1580106.00	5454503.00	230.50	-70	005
SCDDH066	Main Zone	110.50	1580105.50	5454502.50	231.50	-65	126
SCDDH068	Main Zone	596.00	1579859.00	5453759.00	462.90	-84	344
SCDDH069	Main Zone	542.15	1579799.00	5453635.00	430.38	-79	046

SCDDH070	Main Zone	385.50	1579574.00	5453562.00	481.85	-68	020
SCDDH071	Main Zone	241.45	1579384.00	5453560.00	487.00	-90	000
SCDDH072	Main Zone	353.10	1579837.00	5453799.00	494.00	-84	020
SCDDH073	Main Zone	238.00	1580105.50	5454502.50	231.50	-78	079
SCDDH074	Main Zone	328.30	1580105.50	5454502.50	231.50	-83	300
SCDDH075	Main Zone	280.00	1580105.50	5454502.50	231.50	-77	027
SCDDH076	Main Zone	287.40	1579782.00	5453730.00	483.00	-73	322
SCDDH077	Main Zone	253.10	1579715.00	5453665.00	481.00	-67	000
SCDDH078	Main Zone	203.20	1579620.00	5453630.00	493.00	-68	263
SCDDH079	Main Zone	170.60	1579520.00	5453625.00	506.00	-83	309
SCDDH080	Main Zone	299.20	1579766.67	5454045.66	559.24	-78	000
SCDDH081	Main Zone	49.40	1579854.36	5454071.29	543.58	-90	089
SCDDH082	Main Zone	126.40	1579965.34	5454056.71	509.17	-55	200
SCDDH083	Main Zone	308.00	1579864.92	5454005.83	536.78	-75	015
SCDDH084	Main Zone	21.00	1579748.53	5453972.24	551.46	-75	050
SCDDH088	Main Zone	278.30	1579724.23	5454045.42	567.53	-66	285
SCDDH089	Main Zone	326.00	1579704.12	5454080.48	579.09	-77	042
SCDDH090	Main Zone	391.70	1579762.60	5454015.29	559.03	-69	335
SCDDH091	Main Zone	734.40	1579718.72	5454012.05	566.97	-63	325
SCDDH097	Main Zone	171.30	1579814.31	5453979.10	537.50	-72	070
SCDDH098	Main Zone	165.80	1579898.58	5454029.57	533.86	-75	050
SCDDH099	Main Zone	201.70	1579816.30	5454069.46	551.60	-76	033
SCMDH028	Main Zone	53.80	1579882.48	5454067.22	530.23	-90	022
SCMDH029	Main Zone	93.60	1579719.86	5453957.02	554.00	-65	045
SCMDH030	Main Zone	45.20	1579774.60	5453980.71	547.66	-65	045
SCMDH031	Main Zone	91.00	1579821.33	5454028.89	544.74	-90	022
DDH86SC32	SE Traverse	91.20	1579922.45	5454037.28	525.88	-45	151
DDH86SC33	SE Traverse	118.20	1579730.39	5454066.94	567.04	-70	151
SCDDH092	SE Traverse	35.00	1579692.10	5454028.36	575.46	-80	150
SCDDH093	SE Traverse	19.00	1579705.06	5453989.10	566.42	-80	150
SCDDH094	SE Traverse	35.00	1579870.32	5454025.44	540.59	-80	150
SCDDH095	SE Traverse	40.10	1579684.70	5454050.00	579.20	-80	150
SCDDH096	SE Traverse	55.20	1579684.10	5454012.00	576.00	-80	150

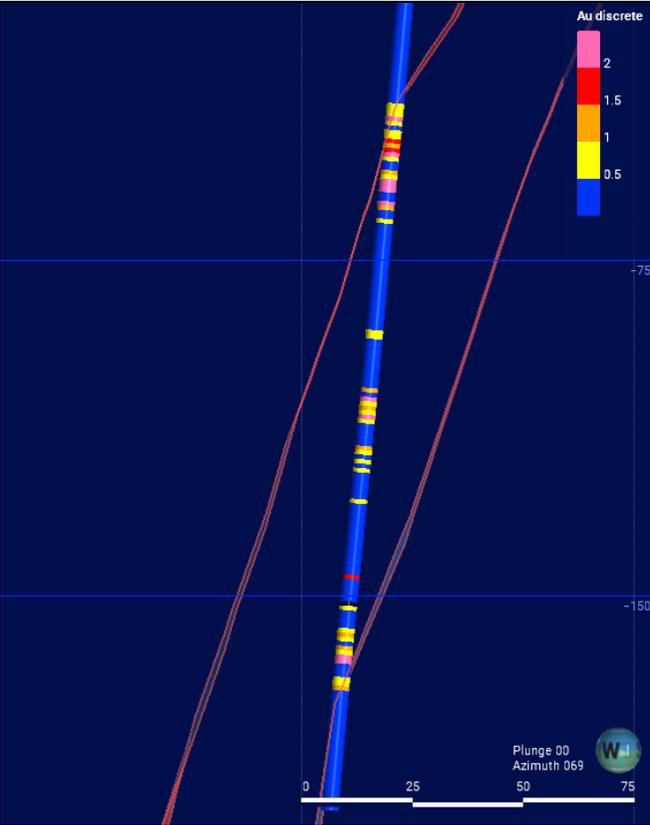
Criteria	Explanation	Commentary																																																																
		<table border="1"> <tr> <td>SCDDH100</td> <td>SE Traverse</td> <td>63.60</td> <td>1580153.30</td> <td>5454474.40</td> <td>220.75</td> <td>-90</td> <td>000</td> </tr> <tr> <td>SCDDH101</td> <td>SE Traverse</td> <td>54.70</td> <td>1580154.90</td> <td>5454474.70</td> <td>220.30</td> <td>-90</td> <td>000</td> </tr> <tr> <td>SCDDH102</td> <td>SE Traverse</td> <td>32.50</td> <td>1580178.80</td> <td>5454436.60</td> <td>219.85</td> <td>-90</td> <td>000</td> </tr> <tr> <td>SCDDH103</td> <td>SE Traverse</td> <td>82.90</td> <td>1579943.30</td> <td>5454313.80</td> <td>374.65</td> <td>-90</td> <td>000</td> </tr> <tr> <td>BFDDH001</td> <td>Barrons Flat</td> <td>74.6</td> <td>1582746.0</td> <td>5455264.0</td> <td>518.0</td> <td>-73</td> <td>192</td> </tr> <tr> <td>BFDDH002</td> <td>Barrons Flat</td> <td>62.4</td> <td>1582737.0</td> <td>5455219.0</td> <td>517.0</td> <td>-60</td> <td>330</td> </tr> <tr> <td>BFDDH003</td> <td>Barrons Flat</td> <td>54.8</td> <td>1582737.0</td> <td>5455218.0</td> <td>517.0</td> <td>-65</td> <td>330</td> </tr> <tr> <td>BFDDH004</td> <td>Barrons Flat</td> <td>90.4</td> <td>1582746.0</td> <td>5455263.0</td> <td>518.0</td> <td>-83</td> <td>015</td> </tr> </table>	SCDDH100	SE Traverse	63.60	1580153.30	5454474.40	220.75	-90	000	SCDDH101	SE Traverse	54.70	1580154.90	5454474.70	220.30	-90	000	SCDDH102	SE Traverse	32.50	1580178.80	5454436.60	219.85	-90	000	SCDDH103	SE Traverse	82.90	1579943.30	5454313.80	374.65	-90	000	BFDDH001	Barrons Flat	74.6	1582746.0	5455264.0	518.0	-73	192	BFDDH002	Barrons Flat	62.4	1582737.0	5455219.0	517.0	-60	330	BFDDH003	Barrons Flat	54.8	1582737.0	5455218.0	517.0	-65	330	BFDDH004	Barrons Flat	90.4	1582746.0	5455263.0	518.0	-83	015
SCDDH100	SE Traverse	63.60	1580153.30	5454474.40	220.75	-90	000																																																											
SCDDH101	SE Traverse	54.70	1580154.90	5454474.70	220.30	-90	000																																																											
SCDDH102	SE Traverse	32.50	1580178.80	5454436.60	219.85	-90	000																																																											
SCDDH103	SE Traverse	82.90	1579943.30	5454313.80	374.65	-90	000																																																											
BFDDH001	Barrons Flat	74.6	1582746.0	5455264.0	518.0	-73	192																																																											
BFDDH002	Barrons Flat	62.4	1582737.0	5455219.0	517.0	-60	330																																																											
BFDDH003	Barrons Flat	54.8	1582737.0	5455218.0	517.0	-65	330																																																											
BFDDH004	Barrons Flat	90.4	1582746.0	5455263.0	518.0	-83	015																																																											
Data aggregation methods	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated</i></li> </ul>	<p>Drilling results presented have used a weighted average when presenting drilling intercepts, hence, any potential sample length bias has been accounted for. Grades are not cut in the database or presenting results.</p>																																																																
Relationship between mineralisation widths and intercept length	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <ul style="list-style-type: none"> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- All drill hole results are report as downhole intercepts.</li> <li>- In the Main zone with steep dipping dyke and drilling in steep terrain the drilling was designed to either intercept mineralisation at higher angle which mean some holes intercepted the dyke's contacts at a low angle or intercept the dyke at high angle and potential mineralisation at low angle.</li> <li>- Drilling into the flatter lying Carapace and SE Traverse with vertical holes appeared to intercept both the dyke contacts at high angles and the mineralisation to both delineate dyke's geometry and mineralisation.</li> <li>- True thicknesses have estimated from Leapfrog or Vulcan geology model which was updated as drilling progresses during MOD and SFR programmes.</li> </ul>																																																																
Diagrams	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Relevant diagrams have been included within the main body of the announcement.</li> </ul>																																																																
Balanced reporting	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be</i></li> </ul>	<ul style="list-style-type: none"> <li>- N/A</li> </ul>																																																																

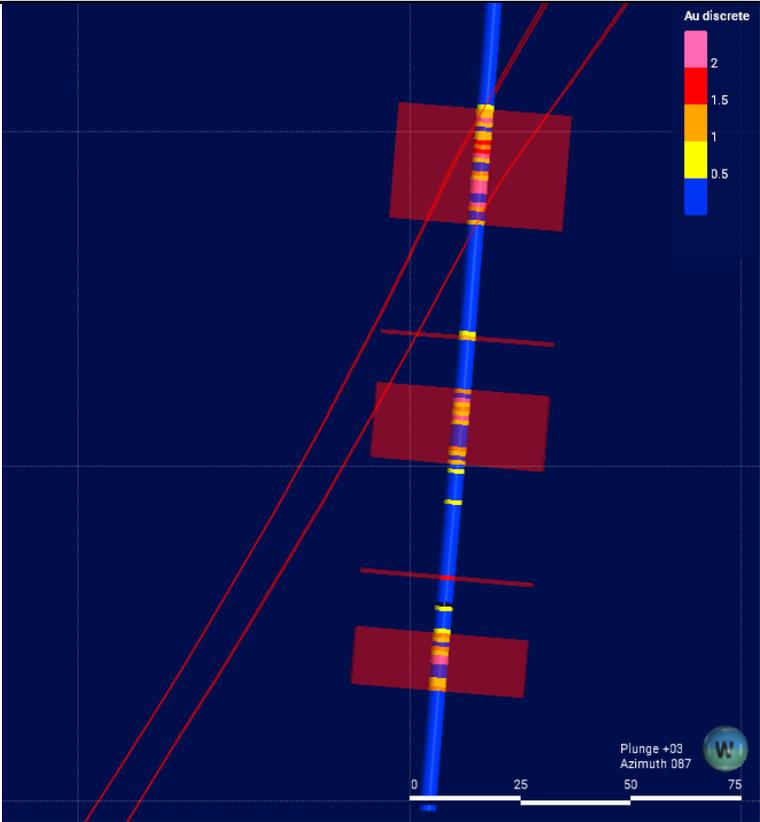
Criteria	Explanation	Commentary
	<i>practiced to avoid misleading reporting of Exploration Results.</i>	
Other substantive exploration data	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; 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.</i></li> </ul>	- N/A
Further work	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	- Recommendations for further work are included in the Sams Creek Mineral Estimate Resource report.

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

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

Criteria	Explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Database is stored Microsoft Excel which has been validated by Measured Group using software (Leapfrog Geo). Random spot checks were completed between database and hard copies.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Due to complications resulting from the Covid pandemic, the Competent Person was unable to visit the site in person. However, two MG geologists, including the lead technical director, visited the site in October 2022. The site visit included reviewing SGL core that was available on site as well as the ground over the mineral resource area which, involved spot checks on collar survey details and observations of mineralisation in the field. Core from known ore grade intercepts was inspected to confirm mineralisation style as well as inspected host rock material. Extensive notes were prepared</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Geological interpretation based on available field mapping data, structural mapping, drillhole lithology and grade data. Modelling was completed using Leapfrog Geo modelling software. Wireframing and geological modelling was carried out by Measured Group and reviewed by SGL.</li> <li>- Mineralisation is contained exclusively within the porphyry dyke, however there are extensive zones, particularly in the steeply dipping fold limbs of Main Zone, where extensive very low grade material is present within some drillholes that has previously been included within the modelled wireframe due to the modelling process employed (hanging wall and footwall snapped to first occurrence of an assay sample &gt;0.1 g/t Au).</li> </ul>

Criteria	Explanation	Commentary
		 <p data-bbox="1039 1043 2002 1070"><b>Golder 2013 MRE Main Zone wireframe showing extensive low grade Au intervals included</b></p> <ul data-bbox="1010 1121 2047 1318" style="list-style-type: none"> <li>- Due to a focus on optimisation for potential underground mining in the Main Zone, the wireframe modelling process worked on excluding some of the large zones of low grade Au compared to the 2013 MRE wireframe with the intention of increasing the overall grade of the resource estimate. Composite intervals of 0.75 g/t Au were used as a guide for the interval selection process, however in some areas where mineralisation was particularly patchy within drillholes, the modelling geologists discretion was applied in excluding or including certain intervals in the wireframe based on geological understanding and ore body continuity.</li> </ul>

Criteria	Explanation	Commentary
		 <p data-bbox="1039 1038 1877 1066"><b>MG 2022 MRE Main Zone wireframe. Red intervals are 0.75 g/t Au composites</b></p> <ul data-bbox="1010 1082 2045 1536" style="list-style-type: none"> <li>- The Main Zone deposit was separated into 2 geological domains prior to estimation, East and West, cut by a pseudo-fault surface,</li> <li>- The western extent of the Main Zone wireframe is controlled by the Bobby Dazzler fault which was modelled and provided to MG by SGL. The deposit is open at depth and along strike to the east.</li> <li>- Within the Carapace and SE Traverse areas, the mineralised intervals with the dyke are generally thinner than Main Zone and include much less internal waste, so interval selection for wireframing was reasonably simple. For Carapace, due to it being an open-cut target, composite intervals of 0.25 g/t and in SE Traverse composite intervals of 0.75 g/t were used to guide interval selection, however the modelling geologists discretion was again applied in excluding or including certain intervals in based on geological understanding and ore body continuity.</li> <li>- The Carapace deposit is truncated to the north, east and south by topography. The dyke is thought to continue along strike to the west leading into the Bobby Dazzler and Doyles prospect areas.</li> </ul>

Criteria	Explanation	Commentary												
		<ul style="list-style-type: none"> <li>- SE Traverse wireframe outcrops against topography to the south and is otherwise truncated by the SE Traverse slip plane on all other sides, This has been modelled based on drillhole intercepts and field mapping data.</li> <li>- The drill spacing provided confidence in the interpretation and continuity of grade and geology.</li> </ul>												
Dimensions	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- The mineral resource is split into 3 areas; Main Zone, Carapace and SE Traverse. The relative wireframe dimensions and variability in terms of continuity of each deposit is characterised in the table below.</li> </ul> <table border="1" data-bbox="1043 488 1968 874"> <thead> <tr> <th data-bbox="1043 488 1211 560">Prospect</th> <th data-bbox="1211 488 1480 560">Dimensions (LxWxD expressed in metres)</th> <th data-bbox="1480 488 1968 560">Comments on variability</th> </tr> </thead> <tbody> <tr> <td data-bbox="1043 560 1211 667">Main Zone</td> <td data-bbox="1211 560 1480 667">950x590x80 striking 089° and dipping 55° to 359°</td> <td data-bbox="1480 560 1968 667">Open at depth and to the east</td> </tr> <tr> <td data-bbox="1043 667 1211 774">Carapace</td> <td data-bbox="1211 667 1480 774">425x100x10 striking 012° and dipping 14° to 102°</td> <td data-bbox="1480 667 1968 774">South Constitution shows good continuity from the drilling to date.</td> </tr> <tr> <td data-bbox="1043 774 1211 874">SE Traverse</td> <td data-bbox="1211 774 1480 874">830x240x10 striking 070° and dipping 5° to 340°</td> <td data-bbox="1480 774 1968 874">Super Hans Main Vein shows good continuity while all Sub Veins are shorter, disjointed vein interpretations.</td> </tr> </tbody> </table>	Prospect	Dimensions (LxWxD expressed in metres)	Comments on variability	Main Zone	950x590x80 striking 089° and dipping 55° to 359°	Open at depth and to the east	Carapace	425x100x10 striking 012° and dipping 14° to 102°	South Constitution shows good continuity from the drilling to date.	SE Traverse	830x240x10 striking 070° and dipping 5° to 340°	Super Hans Main Vein shows good continuity while all Sub Veins are shorter, disjointed vein interpretations.
Prospect	Dimensions (LxWxD expressed in metres)	Comments on variability												
Main Zone	950x590x80 striking 089° and dipping 55° to 359°	Open at depth and to the east												
Carapace	425x100x10 striking 012° and dipping 14° to 102°	South Constitution shows good continuity from the drilling to date.												
SE Traverse	830x240x10 striking 070° and dipping 5° to 340°	Super Hans Main Vein shows good continuity while all Sub Veins are shorter, disjointed vein interpretations.												
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> </ul>	<ul style="list-style-type: none"> <li>- For this resource estimate, MG has completed the following: <ul style="list-style-type: none"> <li>• <i>Geological interpretation and wireframing in Leapfrog Geo</i></li> <li>• <i>Hard boundary compositing in Leapfrog - Edge Module (Leapfrog Edge);</i></li> <li>• <i>Variography and Ordinary Kriging in Leapfrog Edge; and</i></li> <li>• <i>Block Model Estimation in Leapfrog.</i></li> </ul> </li> <li>- Composites were based on 1 m composites.</li> <li>- Outlier grades were assessed by reviewing composite histograms of gold grade for each individual wireframe. Extreme outlier grades weren't identified and it was determined that no top-cut was required</li> <li>- Estimation domains were created for each deposit area. The Main Zone deposit was split into two domain areas, East and West. The two Main Zone domains were set to have a soft boundary between the dyke in the two domains but hard boundary for the contact with the host rock. Carapace and SE Traverse were treated as hard boundary domains as they were picked from drilling assays.</li> <li>- Individual domain search distances, number of passes, minimum and maximum sample numbers are outlined in the Sams Creek Mineral Estimate Report.</li> <li>- Previous mineral resource estimates have been conducted on the Sams Creek project including 2013 and 2021 estimates carried out by Golder Associates. These block models have been made available to MG during the resource estimate work. Previous resource estimates have used ordinary kriging estimation. To confirm the appropriateness of this technique both inverse distance and nearest neighbour were estimated as comparison. Comparing these through</li> </ul>												

Criteria	Explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <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></li> </ul>	<p>Leapfrog's Swath Plots function it was determined that the Ordinary Kriging showed the most representative estimator for the underlying composited data. Swath plots for each area are shown in the final Mineral Estimate Report. Block model validation included block statistics review, swath plots, visual inspection of grade distribution against composites, as well as sensitivities to block size and estimation variable changes were undertaken.</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Arsenic is shown to be weakly to moderately positively correlated with gold grades and typical of refractory gold-pyrite-arsenopyrite mineralisation. No considerations were made for the estimation of deleterious elements at this stage until SGL has completed its recovery test work.</li> <li>- Block sizes for each of the model areas are: <i>10m x 10m x 5m with a subblock down to 1.25m x 1.25m x 0.625m</i></li> <li>- Each block model has no rotation or dip applied. Each of the estimation parameters for each wireframe within the deposits was applied to the parent block of that block model. A detailed summary of block model variables and dimensions is outlined in the Sams Creek Mineral Estimate Report.</li> <li>- As only gold is estimated in this mineral resource, no variables are correlatable.</li> <li>- The geological modelling of the dyke for each deposit were used as sub-block triggers within the block model to ensure the block model estimation was representing the 3D wireframes.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>• <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>- 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.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>• <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>- The resource model is constrained by assumptions about economic cut-off grades.</li> <li>- The Main Zone and SE Traverse resources are based on a 1.85 g/t Au cut-off grade.</li> <li>- Carapace resource is based on a 0.5 g/t cut-off grade.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>• <i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>- The resource has been estimated based on an assumption of underground mining for the Main Zone (sub-level open stoping or cut and fill) and SE Traverse (room and pillar) prospect areas.</li> <li>- Carapace is thought to potentially be a target for small scale open-cut extraction and resource estimation has been conducted based on that assumption.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• <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</i></li> </ul>	<ul style="list-style-type: none"> <li>- Cyanidation testwork completed on six oxide bulk samples by CRAE resulted in Au recoveries of 85-95%.</li> </ul>

Criteria	Explanation	Commentary
	<p><i>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>	<ul style="list-style-type: none"> <li>- Testwork was completed on fresh sulphide mineralisation at the start of 2004 by OGL to characterise the metallurgical behaviour of Sams Creek sulphide mineralisation.</li> <li>- The recoveries from this testwork are summarised as: <ul style="list-style-type: none"> <li>• <i>Direct Leach: 79-87% gold recovery</i></li> <li>• <i>Float and then leach: 73-86% gold recovery</i></li> <li>• <i>Float and acid leach: 83-91% gold recovery.</i></li> </ul> </li> <li>- 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.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- The Sams Creek project predominantly lies within the NW Nelson Forest Park administered by the Department of Conservation (DoC). The Reefton open cut gold mine 100 km to the SW, which has been successfully operated by OGL between 2007 and 2016 is also contained within a Forest 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. The current plan is to mine by underground methods with decline access from private land at Barrons Flat. Disturbance to the DoC estate would be limited to a small open pit at Carapace and vent raises which require a cleared area similar to a drill pad (10mx10m).</li> <li>- SGL has an Access Agreement with DoC which allows for 100 drill pads and several camps and helicopter landing sites.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Sams Creek density assignment is based on a density assessment completed in 2011-2013. Density samples are routinely collected during logging of diamond drill core. Specific Gravity (SG) is calculated using the following formula: <math>\text{Weight in Air} / (\text{Weight in Air} - \text{Weight in water}) = \text{SG}</math>.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>- The resource classification accounts for all relevant factors. Two methods were used to determine the optimal drill spacing between boreholes for resource classification at the Sams Creek Project. These were: <ul style="list-style-type: none"> <li>- Variogram methodology which analyses the different proportions of the sill;</li> <li>- An estimation variance methodology.</li> </ul> </li> </ul>

Criteria	Explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>- The data spacing and distribution is sufficient to establish geological and grade continuity appropriate for Mineral Resource estimation and classification and the results appropriately reflect the Competent Person's view of the deposit.</li> <li>-</li> </ul>
Audits or reviews.	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>- Internal audits by MG and company audits were completed</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>- The estimates made in this report are global estimates.</li> <li>- Local block model estimates, or grade control estimates, whose block grades are to be relied upon for selection of ore from waste at the time of mining will require additional drilling and sampling of blast holes.</li> <li>- Confidence in the relative accuracy of the estimates is reflected in the classification of estimates as Indicated and Inferred.</li> <li>- Variography was completed for Gold and used to influence the resource classification. The variogram models were interpreted as being isotropic along the plane of vein mineralisation, with shorter ranges perpendicular to this plane of maximum continuity.</li> <li>- Validation checks have been completed on raw data, composited data, model data and Resource estimates.</li> <li>- The model validations checked to ensure data honouring. The validated data consists of no obvious anomalies which are not geologically sound.</li> <li>- The mineralised zones are based on actual intersections. These intersections are checked against the drill hole data. Field geologist selections, and the Competent Person has independently checked laboratory sample data. The selections are sound and suitable to be used in the modelling and estimation process.</li> <li>- Where the drill hole data showed that no Gold existed, the mineralised zone was not created in these areas.</li> <li>- Further drilling needs to be completed to improve Resource classification of the Inferred Resource.</li> </ul>