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COMPANY

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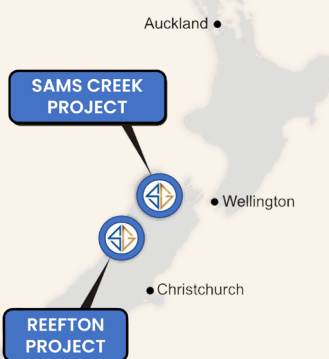
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PROJECTS



Metallurgical Results and Process Plant Scoping Study Update

Siren Gold Limited (ASX: SNG) (Siren or the Company) is pleased to provide an update on the current status of metallurgical testwork and progress to date in advancing a conceptual processing plant study for the Reefton Gold Project, in the South Island of New Zealand.

Highlights

- **Positive preliminary metallurgical testwork results** from samples from Alexander River and Big River Projects
- Total recovery of 90% to 93% is estimated if processed with POX
- Preliminary pressure oxidation of the flotation concentrate tests followed by cyanidation gave **gold extractions of 92- 98%**
- Scoping Study reflects the test results with a **conventional crush, grind, gravity and flotation flowsheet to produce a saleable concentrate**
- Sams Creek testwork (2004) indicates that a recovery of 90-95% could be achieved with flotation and POX and a similar flowsheet to Reefton would be applicable.
- Sams Creek recoveries achieved 89% to 96% by flotation and POX.
- Ore Sorting testwork indicates Reefton and Sams Creek samples are amenable to the technology.

Background

Siren has engaged **GR Engineering Services Limited (GRES)** to complete a scoping study to examine the possibility of establishing a processing facility at the Company's Reefton Gold project located on the South Island of New Zealand (refer to announcement 28 October 2021).

The study is based on metallurgical testwork and the construction of a centrally located multipurpose gold processing facility, examining the likely optimum treatment route and plant locations. The study is based on the potential for the treating of various mineralisation from **Alexander River** and **Big River**, as well as potentially treating material from other historical mines on the **Reefton Goldfield**.

This work has been extended to allow for a detailed site visit and additional works, including a review of the potential for processing of mineralisation from the recently acquired **Sams Creek Project**, as well as further test work to be conducted on stibnite related gold and antimony recovery from the various Reefton projects.

Study works have been successful to date, are progressing steadily and will be ongoing over the coming months.

Introduction

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 orogenic gold deposits like Bendigo, Ballarat and Fosterville in Australia and the Reefton and Lyell Goldfields in New Zealand.

Siren holds a large, strategic package of tenements along the under-explored 40km long Reefton and Lyell Goldfields, with permits covering a further 40kms of buried unmined Greenland Group rocks that potentially host gold mineralisation to the south of the Blackwater mine.

Key projects include Alexander River, Big River, Auld Creek, Cumberland and Lyell.

The Reefton Goldfield was discovered in 1866 and produced +2M oz of gold at an average recovered grade of 16g/t from 84 historic mines, plus an estimated alluvial gold production of 8Moz. Most underground mining ceased by 1942, with the famous Blackwater mine closing in 1951, when the shaft failed after producing ~740koz of gold down to 710m below surface.

Federation Mining is planning to extract over 700koz of gold down to 1,500m below surface by developing 3.2km twin declines to intersect unmined ore around and below the high-grade historic Blackwater mine.

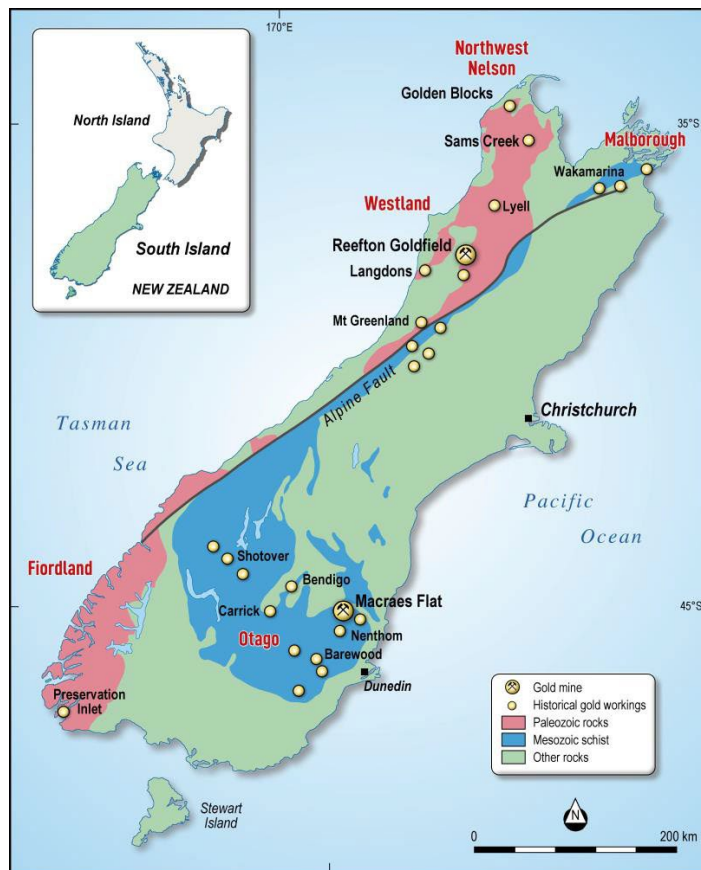


Figure 1 Fold belt Paleozoic rocks at the top of the South Island

The Lyell Goldfield is the northern extension of the Reefton Goldfield located 40kms north (Figure 2). At Lyell the historic Alpine United mine produced ~80koz of gold at an average recovered grade of ~17g/t between 1874 and closing in 1912.

There are two distinctive sub-types of orogenic gold mineralisation in Victoria. The deeper (6-12kms) mesothermal deposits that formed almost all the significant gold deposits in the Bendigo and Stawell zones, and the shallower (<6km) epizonal gold and stibnite deposits in the Melbourne zone and eastern Bendigo zone, including the Fosterville and Costerfield mines. The latter gold mineralising event in Victoria is characterised by arsenopyrite / pyrite hosted refractory gold and stibnite associated gold, which is very similar to the Reefton and Lyell mineralisation.

The Sams Creek Gold Project is located 100kms NE of Lyell (Figure 1). The Sams Creek Dyke (SCD) is up to 60m thick and can be traced for over 7kms along strike and over 1km down dip. The porphyry dyke generally dips moderately to the north and has been folded into a series of NE plunging anticlines and synclines. The anticlines are variably gold mineralised and have a combined Inferred and Indicated Mineral Resource Estimate (MRE) of 8.9Mt @ 2.82g/t Au for 808koz of contained gold at a 1.5g/t cut-off.

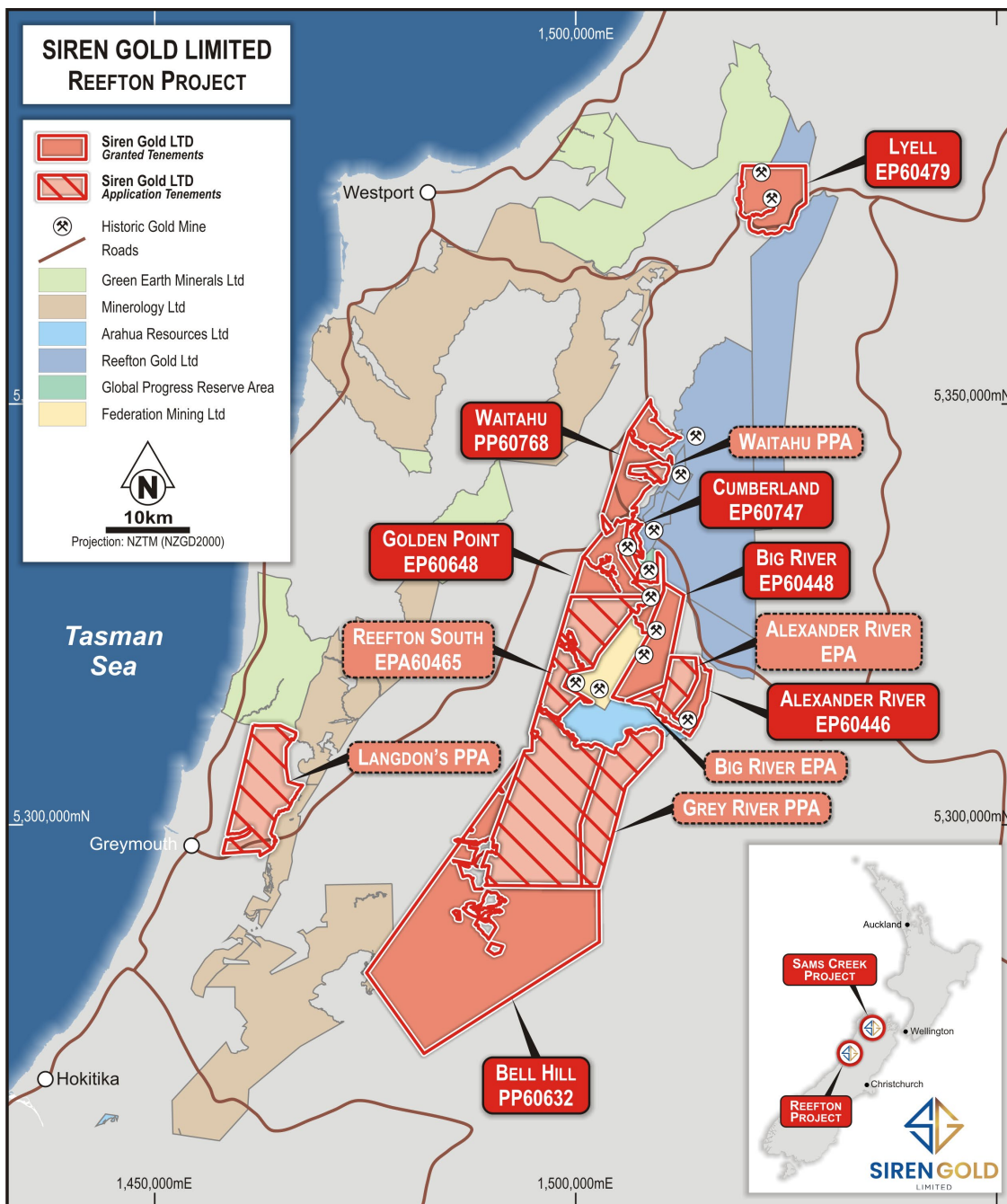


Figure 2: Reefton Tenement Map.

Reefton Metallurgical Testwork

Summary

Seven samples from the **Alexander River** and **Big River** projects were tested at the Bureau Veritas laboratory in Perth during 2022. As expected, the samples were all refractory in nature, with the Big River sample the most refractory at 6.4% easily cyanidable gold.

All samples produced good quality rougher flotation concentrates from 17 to 117g/t Au at high recoveries. The upgrade ratio of rougher concentrate grade to feed grade averaged 8.7.

| Sample | Head Grade | Rougher Concentrate | Flotation Recovery % | | Tailings |
|-----------|------------|---------------------|----------------------|------|----------|
| | g/t Au | | g/t Au | Au | |
| Reefton 1 | 2.88 | 19.1 | 88.7 | 97.7 | 0.37 |
| Reefton 2 | 2.54 | 17.7 | 86.7 | 90.9 | 0.38 |
| Reefton 3 | 3.82 | 40.7 | 95.2 | 95.1 | 0.20 |
| Reefton 4 | 3.23 | 26.1 | 95.8 | 95.9 | 0.14 |
| Reefton 5 | 3.57 | 28.6 | 95.6 | 96.3 | 0.18 |
| Reefton 6 | 15.8 | 116.8 | 87.2 | 95.8 | 1.60 |
| Reefton 7 | 4.18 | 21.0 | 96.9 | 93.7 | 0.09 |

Table 1: Rougher Flotation Test Results

Simple gravity tests were run using a 1kg sample passing through a Falcon centrifugal concentrator, followed by high-intensive leaching of the Falcon concentrate to determine the free gold component of the gravity concentrate.

Total combined gold recovery of gravity and flotation is in the range 91 to 93% as shown in Table 2 below.

| Sample | Head Grade Au g/t | Au Recovery by Gravity % | Au Recovery by Flotation | Total Gravity and Flotation Recovery % |
|----------------|-------------------|--------------------------|--------------------------|--|
| Reefton 1 to 5 | 3.26 | 32.2 | 59.0 | 91.2 |
| Reefton 6 | 12.6 | 48.9 | 44.5 | 93.4 |
| Reefton 7 | 3.32 | 24.4 | 68.0 | 92.4 |

Table 2: Combined Au Recovery

The flotation concentrate from a composite sample of Reefton 1-5 gave a cyanide leach extraction of 22.9% after ultra-fine grinding and **98.5%** after pressure oxidation (POX).

| Test | Head Grade Au g/t | Residue Grade Au g/t | Au Extraction % |
|------|-------------------|----------------------|-----------------|
| UFG | 21.65 | 16.7 | 22.9 |
| POX | 18.24 | 0.27 | 98.5 |

Table 3: Downstream Processing Test Results on Reefton 1-5 Composite Flotation Concentrate

In conclusion, the Scoping Study flowsheet of gravity recovery followed by flotation has been verified as an appropriate process. Based on the samples tested, gravity and flotation gold recoveries of 90-93% can be expected. If the flotation concentrate is treated with pressure oxidation followed by cyanidation a total gold recovery would be around 90%.

Samples

Seven composite metallurgical samples were collected from core from the Alexander River and Big River projects and sent to Bureau Veritas in Perth. The samples represented the Bull East, McVicar East, Loftus McKay and McVicar West shoots at Alexander River prospect and Shoot 4 at the Big River prospect (Table 4 and Figures 3 and 4) labelled Reefton 1 to 6 for Alexander River and Reefton 7 for Big River. Composite 6 represented quartz reef with visible gold.

| Sample No | Project | Hole Number | Shoot | Type | Interval (m) | Au (g/t) | As (ppm) | S (ppm) | Weight (kg) |
|------------|-----------|-------------|--------------|------|--------------|------------|--------------|--------------|--------------|
| Reefton001 | Alexander | AXDDH059 | Bull East | 1 | 5.6 | 2.8 | 2,714 | 1,394 | 15.7 |
| Reefton002 | Alexander | AXDDH066 | McVicar East | 1 | 7.8 | 2.6 | 2,326 | 2,151 | 37.2 |
| Reefton003 | Alexander | AXDDH050 | Loftus McKay | 1 | 24.6 | 4.3 | 2,846 | 3,914 | 24.6 |
| Reefton004 | Alexander | AXDDH065 | McVicar West | 1 | 5.0 | 2.8 | 2,665 | 3,127 | 17.3 |
| Reefton005 | Alexander | AXDDH063 | McVicar West | 1 | 7.1 | 3.4 | 3,943 | 1,840 | 18.5 |
| Reefton006 | Alexander | AXDDH064/7 | McVicar West | 2 | 3.9 | 12.4 | 3,102 | 1,611 | 8.0 |
| Reefton007 | Big River | BRDDH034a | Shoot 4 | 3 | 5.9 | 4.1 | 3,453 | 2,877 | 15.7 |
| | | | | | 8.6 | 4.6 | 3,007 | 2,416 | 137.0 |

Table 4: Metallurgical samples (Type 1 = disseminated acicular arsenopyrite, Type 2 = quartz with visible gold, Type 3 = quartz and host rock breccia).

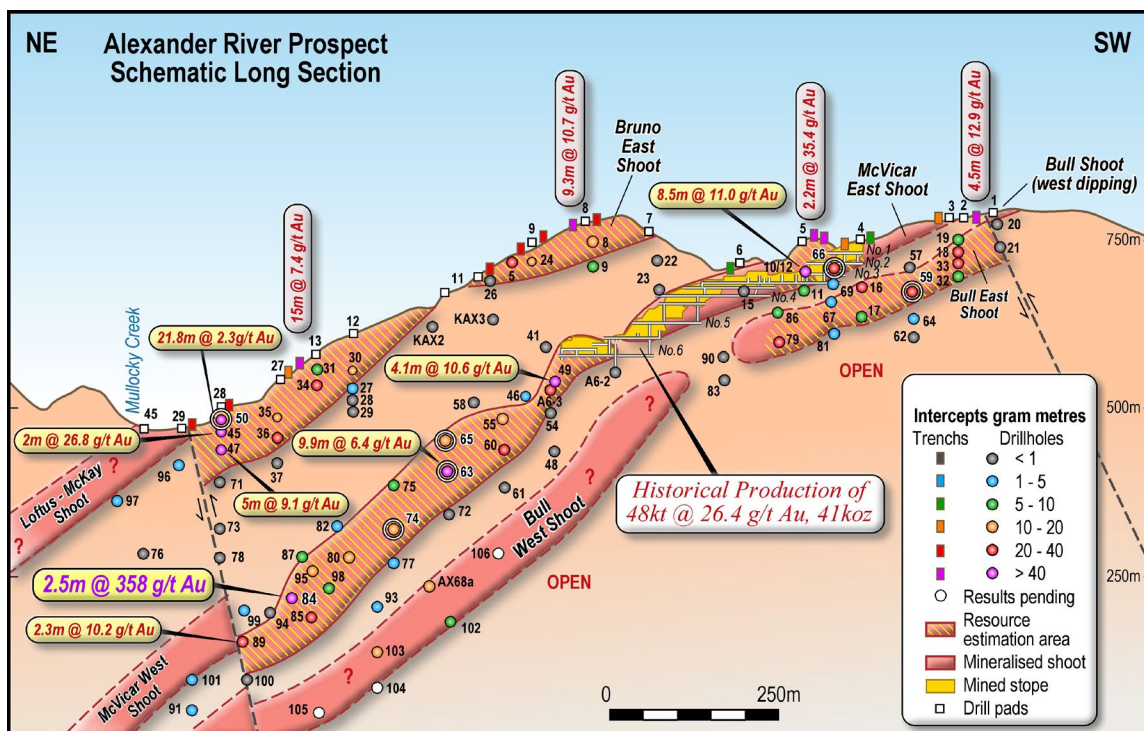


Figure 3: Alexander River Prospect Schematic Long Section with metallurgical sample locations identified (circled)

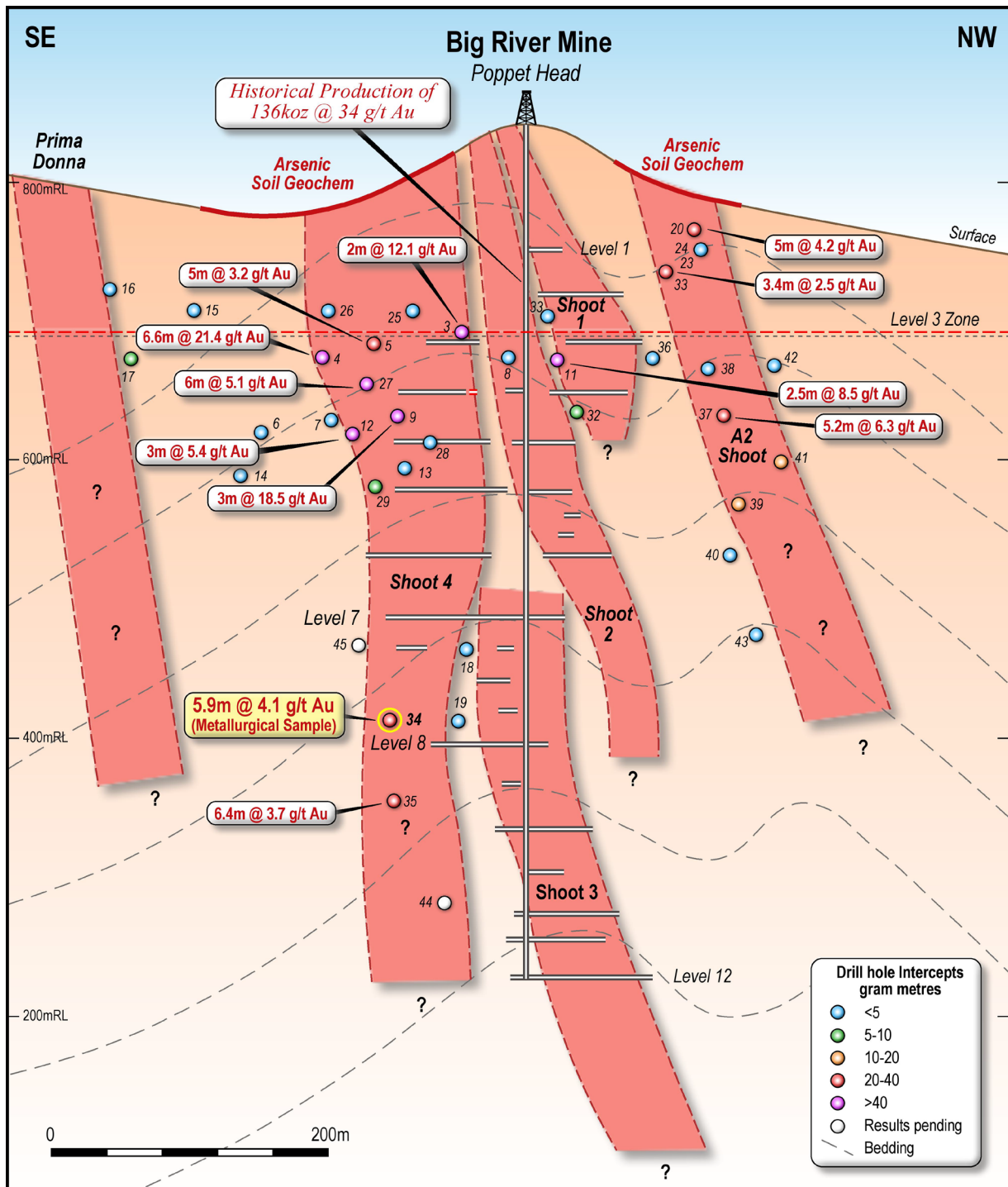


Figure 4: Big River Prospect schematic long section showing metallurgical sample location

Testwork

Historical reports on the treatment of ores in the Reefton district illustrate that a portion of the material is refractory and, as well as gravity recovery, roasting was employed to liberate gold prior to cyanidation. GRES completed part 1 of a scoping study in which a preliminary flowsheet of gravity gold recovery and flotation to produce a gold rich concentrate was the base case. Tests were planned to explore the validity of this approach.

The testwork program devised at Bureau Veritas included:

- Bulk Leach Extractable Gold (BLEG) Tests
- Flotation
- Gravity Testing
- Cyanidation
- Ultra-Fine Grinding UFG) followed by cyanidation
- Pressure oxidation (POX) followed by cyanidation

BLEG Tests

A BLEG test was conducted on each composite sample. This involves a 24-hour leach with a high concentration of cyanide and the addition of LeachWell accelerant to determine the readily soluble gold. Hence it is a measure of how refractory the sample is.

Table 5 shows the duplicate fire assays of each composite sample and the BLEG results. Reproducibility of the head assays was excellent. All the samples showed they were partially refractory, with Big River the most refractory, with only 6.4% of the gold readily soluble. Reefton 4 and 5 were the most refractory Alexander River samples at 18.5% and 19.8% readily soluble gold. Reefton 6, which was high grade and included visible gold, was the least refractory sample, with 75.7% readily soluble gold.

| Composite ID | Head Fire Assay Au (g/t) | | | BLEG Au (g/t) | | | | Average Head Assay Au (g/t) |
|--------------|--------------------------|-------|---------------|---------------|------------|---------------|--------------|-----------------------------|
| | FA1 | FA2 | Average Au FA | Au Extracted | Au Residue | Au Recovery % | Calc Head Au | |
| Reefton 1 | 2.88 | 2.88 | 2.88 | 1.66 | 1.23 | 57.4% | 2.89 | 2.89 |
| Reefton 2 | 2.54 | 2.52 | 2.53 | 1.06 | 1.57 | 40.3% | 2.63 | 2.58 |
| Reefton 3 | 3.82 | 3.76 | 3.79 | 1.24 | 2.80 | 30.7% | 4.04 | 3.92 |
| Reefton 4 | 3.23 | 3.17 | 3.20 | 0.56 | 2.47 | 18.5% | 3.03 | 3.12 |
| Reefton 5 | 3.57 | 3.57 | 3.57 | 0.70 | 2.83 | 19.8% | 3.53 | 3.55 |
| Reefton 6 | 15.80 | 14.90 | 15.35 | 11.38 | 3.65 | 75.7% | 15.03 | 15.19 |
| Reefton 7 | 4.18 | 4.38 | 4.28 | 0.16 | 2.33 | 6.4% | 2.49 | 3.39 |

Table 5: Gold Head Assays and BLEG Results

These results confirmed the assumptions made in the Scoping Study that the samples were partially refractory and a flotation stage would need to be a part of the flowsheet.

Flotation Tests

Each sample was ground to a sizing of 80% passing 75 microns. 50g/t of copper sulphate was used as an activator and 100g/t of potassium amyl xanthate was used as a collector. No attempt was made to optimise these reagent additions. Four rougher concentrates were collected at intervals of 1 minute, 2 minutes, 5 minutes and a further 5 minutes, giving a total flotation time of 13 minutes. The aim was to understand and provide information on:

- how well the sulphides and gold floated;
- whether the flotation tailings would be low enough in gold to be considered as final tailings; and
- how to expand the flotation testing to produce a concentrate suitable for sale or further downstream processing.

The rougher flotation results (Table 6) show that the Reefton samples are all amenable to flotation and gold can be recovered into a small concentrate weight at high gold recoveries. 13-minute rougher concentrates averaged 10.9% by weight and recovered, on average, 92.3% of the gold and 95.1% of the sulphides. Flotation tailings are generally low enough to be considered as final tailings. The higher gold grade of Reefton 6 tailings (1.60g/t Au) is probably the result of the high head grade and presence of free gold reported in the geology logs. Gravity recovery prior to flotation will likely reduce this flotation tailings grade.

A composite sample of Reefton 1 to 5 was produced to give sufficient sample for cleaner flotation tests, gravity tests and downstream processing options.

| Sample | Head Grade | Rougher % weight | Flotation Recovery % | | Tailings |
|-----------|------------|------------------|----------------------|------|----------|
| | g/t Au | | Au | S | g/t Au |
| Reefton 1 | 2.88 | 13.0 | 88.7 | 97.7 | 0.37 |
| Reefton 2 | 2.54 | 12.2 | 86.7 | 90.9 | 0.38 |
| Reefton 3 | 3.82 | 8.6 | 95.2 | 95.1 | 0.20 |
| Reefton 4 | 3.23 | 10.5 | 95.8 | 95.9 | 0.14 |
| Reefton 5 | 3.57 | 11.7 | 95.6 | 96.3 | 0.18 |
| Reefton 6 | 15.8 | 8.5 | 87.2 | 95.8 | 1.60 |
| Reefton 7 | 4.18 | 11.7 | 96.9 | 93.7 | 0.09 |

Table 6: Rougher Flotation Test Results

Results in Table 7 show recovery to the cleaner concentrate is high at 87.0% and of high grade at 68.7g/t Au. In a commercial flotation circuit, where the cleaner tailings are recycled to the rougher circuit, a portion of the gold would report to the cleaner concentrate and an overall flotation recovery of 90% could be anticipated.

A sample of Reefton 7 (not treated by a Falcon concentrator) was treated by flotation to give a rougher concentrate for downstream processing by POX and cyanidation. Results are shown in Table 8 and the gold recovery to flotation concentrate is 95.4% at a grade of 33.8g/t Au.

| Product | %Wt | Au g/t | Au Dist'n % | %S | S Dist'n % |
|---------------------|------|--------|-------------|------|------------|
| Cleaner Concentrate | 4.1 | 68.7 | 87.0 | 11.4 | 88.7 |
| Cleaner Tail | 6.7 | 2.65 | 5.5 | 0.44 | 5.6 |
| Rougher Tail | 89.2 | 0.27 | 7.6 | 0.03 | 5.7 |

Table 7: Cleaner Test Results on Reefton 1-5 Composite

| Product | %Wt | Au g/t | Au Dist'n % | %S | S Dist'n % | %SiO ₂ | SiO ₂ Dist'n % |
|---------------------|------|--------|-------------|------|------------|-------------------|---------------------------|
| Rougher Concentrate | 7.9 | 33.8 | 95.4 | 6.52 | 92.0 | 45.8 | 5.0 |
| Rougher Tail | 92.1 | 0.14 | 4.6 | 0.05 | 5.7 | 69.5 | 91.9 |

Table 8: Rougher Test Results on Reefton 7 Composite

Gravity Tests

A gravity test was run on each of the Reefton 1-5 composite sample, Reefton 6, and Reefton 7. A 1 kg sample was run through a laboratory Falcon concentrator and produced a high-grade concentrate. The Falcon concentrate was intensively leached (ICL) to give an indication of the free gold in the Falcon concentrate (referred to as soluble gold in Table 9). The insoluble gold is refractory and joins the gravity tailings for flotation.

| Composite | Falcon Concentrate | | Soluble (Free) Gold | Insoluble Gold | Falcon Tails | |
|-------------|--------------------|--------|---------------------|----------------|--------------|-----------|
| | %Wt | g/t Au | % of feed | % of feed | g/t Au | % of feed |
| Reefton 1-5 | 0.8 | 279.1 | 32.2 | 27.0 | 1.55 | 40.8 |
| Reefton 6 | 1.0 | 793.7 | 48.9 | 14.0 | 4.73 | 37.1 |
| Reefton 7 | 1.4 | 136.4 | 24.4 | 33.1 | 1.43 | 42.5 |

Table 9: Gravity Test Results on Reefton Composites

Reefton 1-5 is estimated to contain 32.2% free gold, Reefton 6, 48.9% and Reefton 7, 24.4%. These figures demonstrate the requirement for gravity gold recovery in the Reefton flowsheet before flotation.

Downstream Processing

Whilst the early Study flowsheet envisaged recovering gold by gravity, followed by making a flotation concentrate for sale, the laboratory testing considered the potential recovery of gold from the flotation concentrate.

Two options were selected for testing based on literature studies and industry accepted applications, being:

- Ultrafine grinding followed by cyanidation
- Pressure oxidation followed by cyanidation

12 kg of the Reefton 1-5 sample was floated to produce a rougher concentrate. Two 400g samples of rougher concentrate were treated for gold recovery. The first sample via ultra-fine grinding (UFG) followed by cyanidation and the second sample by pressure oxidation (POX) followed by cyanidation. A bulk rougher concentrate from Reefton 7 was also prepared for POX testing.

Table 10 shows the comparison of the two downstream processing tests on the Reefton 1-5 flotation concentrate and the POX result for Reefton 7. The ultra-fine grind gave a gold extraction of 22.9%, and the POX test a **98.5%** extraction of the gold in the flotation concentrate. For Reefton 7 the cyanide gold extraction after POX was **91.7%**. These results demonstrate that the refractory gold is probably in solid solution and needs strong oxidation (or possibly roasting) to liberate the gold for cyanidation.

| Composite | Process | Feed Grade | Residue Grade | Cyanide Au Extraction |
|-------------|---------|------------|---------------|-----------------------|
| | | g/t Au | g/t Au | % |
| Reefton 1-5 | UFG | 21.65 | 16.7 | 22.9 |
| Reefton 1-5 | POX | 18.24 | 0.27 | 98.5 |
| Reefton 7 | POX | 23.04 | 1.92 | 91.7 |

Table 10: Downstream Processing Test Results on Reefton 1-5 and Reefton 7

In conclusion, the Reefton samples tested responded positively to a flowsheet of gravity recovery followed by flotation. Flotation concentrate is high grade and suitable for sale or could be treated by pressure oxidation and cyanidation. Based on the testwork results gold recoveries of **90-93%** could be achieved as shown in Table 11.

| Composite | Head Grade | Gravity Recovery | Flotation Recovery | Gravity + Flotation Recovery | POX Recovery | Gravity + Flotation + POX + cyanidation Recovery |
|-----------------|------------|------------------|--------------------|------------------------------|--------------|--|
| | g/t Au | % | g/t Au | % | % | % |
| Alexander River | 5.0 | 40 | 90 | 94 | 98 | 93 |
| Big River | 4.0 | 30 | 94 | 94 | 92 | 91 |

Table 11: Gold Recovery Estimates based on 2022 Test Results

Reefton District & Fosterville Metallurgy

Historical production from the Reefton goldfield (pre-1950) was based on high grade quartz reef ore using a combination of gravity recovery, followed by roasting on the gravity tailings and cyanidation. More recently Oceana Gold operated the Globe Progress open pit and processed ore with a head grade of approximately 1.4g/t Au using flotation and sending the concentrate to their Macraes operation and processed with pressure oxidation. The recovery to the flotation concentrate was 87.9% and recovery after POX and cyanidation was 94.5%, giving an overall recovery of 82.4%¹. Whilst this is lower than Siren's samples it is at a considerably lower mine head grade and had little to no gravity gold.

Blackwater ore was successfully processed at two different processing plants between 1908 and 1949. Records indicate that gold recovery was between 85% and 95% using a combination of gravity, flotation and cyanide leach processes. A Preliminary Economic Assessment considering re-opening of the Blackwater Mine reported ore processing would involve producing a high mass recovery gravity gold concentrate followed by fine gold flotation. This process was predicted to recover in excess of 97% of the gold into a high-grade concentrate. Intensive leaching of the concentrates and electro-winning was estimated to allow production of gold doré bars on site, with anticipated overall recovery in excess of 96%².

The Fosterville mine in Victoria has similar geology to the Reefton goldfield. The processing circuit has gone through a long development phase. The basic flowsheet from 2009 to 2015 involved flotation followed by bacterial oxidation (BIOX) to liberate gold, followed by cyanidation. From a head grade of 4.62g/t Au the flotation gold recovery was 96.0% and the cyanidation recovery 88.5%, giving an overall recovery of 84.0%. In 2016 the head grade increased to 6.11g/t Au and the flotation recovery improved to 96.6%. Post BIOX cyanidation recovery went to 92.9% and overall recovery was 88.5%. In 2017 a gravity circuit was added as the ore sources changed. 12.9% gold recovery was seen from the gravity circuit. The flotation recovery remained at 97% and the leach recovery increased to 93.6%, giving an overall recovery of 90.1%³. Since 2017 head grades have exceeded 20g/t Au. The similarities between Fosterville and Reefton support the testwork results on Reefton samples 1 to 7 and the proposed flowsheet.

¹ Technical Report for the Reefton Project 24 May 2013 Oceana Gold Limited

² Preliminary Economic Assessment of the Blackwater Gold Project 21 October 2014 Oceana Gold Limited

³ Updated NI 43-101 Technical Report Fosterville Gold Mine 1 April 2019 Kirkland Lake Gold Limited

Sams Creek Metallurgical Samples

A review of Sam’s Creek testwork conducted by GRD-Macraes in 2004 identified the potential for 84% gold recovery via whole of ore direct leach and 91% gold recovery with flotation, concentrate oxidation and cyanide leach. The testwork identified a promising response to flotation with 96-98% of the gold reporting to the concentrate at a mass pull of ~6%.

Mineralogical, petrographic and geochemical analysis supported the testwork findings that the gold is finely disseminated within a sulphide matrix, predominantly arsenopyrite, galena and chalcopyrite⁴. A flowsheet similar to that proposed for Siren’s Reefton resources would therefore be applicable.

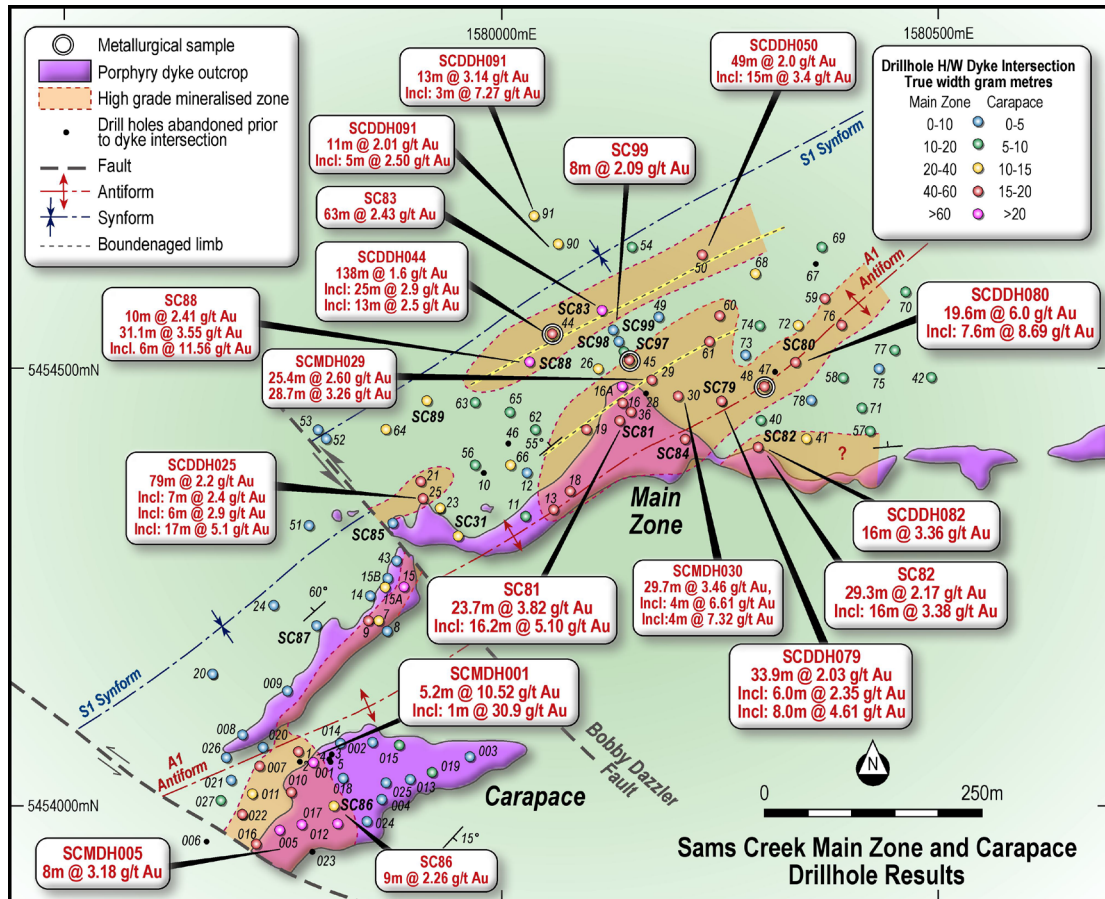


Figure 5: Location of the Sams Creek metallurgical samples

Sams Creek Metallurgy

In 2004 Laboratory test work was reported by GRD-Macraes on four composite samples from Sams Creek diamond core (Table 12). Direct leaching, flotation and leaching of the flotation concentrate were tested.

| Sample | Hole ID | From (m) | To (m) | Gold (g/t) |
|--------------|----------|----------|--------|------------|
| Sams Creek 1 | SCDDH044 | 180 | 259 | 1.91 |
| Sams Creek 1 | SCDDH044 | 259 | 318 | 1.38 |
| Sams Creek 1 | SCDDH045 | 65 | 112 | 2.52 |
| Sams Creek 1 | SCDDH048 | 190 | 228 | 3.14 |

Table 12: Sams Creek composite metallurgical samples.

⁴ Sams Creek Gold Project Client Data Review April 2013 Independent Metallurgical Operations Limited

Flotation

The four samples were each ground to an unspecified sizing but the report states the grind time was twice as long as the Macraes ore.

A flotation concentrate over 26 minutes was produced with high gold and sulphur recoveries as shown in the Table below. Gold recoveries ranged from 95.6% to 97.7% and sulphur recoveries from 92.6% to 94.4% (Table 13). Flotation tailings were low enough in gold for disposal.

| Sample | Head Grade | Rougher % weight | Concentrate Grade | | Flotation Recovery % | | Tailings g/t Au |
|--------------|------------|------------------|-------------------|------|----------------------|------|-----------------|
| | g/t Au | | g/t Au | %S | Au | S | |
| Sams Creek 1 | 1.91 | 6.0 | 32.4 | 21.6 | 95.6 | 92.6 | 0.10 |
| Sams Creek 1 | 1.38 | 5.4 | 29.9 | 20.2 | 97.4 | 93.5 | 0.05 |
| Sams Creek 1 | 2.52 | 7.2 | 33.2 | 15.2 | 97.7 | 93.7 | 0.06 |
| Sams Creek 1 | 3.14 | 7.7 | 40.1 | 16.3 | 97.1 | 94.4 | 0.10 |

Table 13: Flotation results

Leaching

Three sets of cyanide leach tests were reported. The first tests were leaches on the samples after grinding. As shown below gold extractions ranged from 79.3% to 87.5% (Table 14). The results demonstrate that there is a component of refractory gold present.

| Sample | Head Grade | Au Leach Extraction |
|--------------|------------|---------------------|
| | g/t Au | % |
| Sams Creek 1 | 1.91 | 79.3 |
| Sams Creek 1 | 1.38 | 82.4 |
| Sams Creek 1 | 2.52 | 87.5 |
| Sams Creek 1 | 3.14 | 86.6 |

Table 14: Direct leach results.

The second and third cyanide leach tests were on the flotation concentrate. One test leached the flotation concentrate as received and the other test conducted a nitric acid leach (effectively an oxidation step) followed by a cyanide leach.

The leaches on the flotation concentrate as received again confirm the presence of a refractory component which also floated, hence is presumably a sulphide. Three of the four acid (oxidation) leaches improved recoveries by 5% to 15% except for sample 4. There is no information in the test results to explain this result. Of note no gravity testwork was conducted.

In summary the Sams Creek samples exhibited a small degree of refractory gold. High gold recoveries were achieved by flotation and, after an oxidation step, gold extractions ranged from 88.6% to 95.5% (Table 15).

| Sample | Flotation Concentrate Leach | | | Cyanide after Acid pre-leach | | |
|--------------|-----------------------------|---------|------------|------------------------------|---------|------------|
| | Head | Residue | Extraction | Head | Residue | Extraction |
| | g/t Au | g/t Au | % | g/t Au | g/t Au | % |
| Sams Creek 1 | 38.1 | 7.26 | 80.9 | 29.9 | 1.66 | 94.4 |
| Sams Creek 1 | 31.9 | 5.39 | 83.1 | 31.9 | 1.66 | 94.8 |
| Sams Creek 1 | 42.8 | 4.23 | 90.1 | 42.8 | 1.91 | 95.5 |
| Sams Creek 1 | 45.0 | 5.99 | 86.7 | 44.2 | 5.05 | 88.6 |

Table 15: Total recovery after flotation, acid leach and cyanidation.

Stibnite

Stibnite (antimony sulphide) has been seen in significant quantities in the Reefton goldfield. Stibnite is generally associated with gold mineralisation and in various Au-Sb operations around the world, free gold is recovered by gravity, followed by the production of a stibnite flotation concentrate.

The Brunswick Processing Plant at the Mandalay Resources Costerfield Mine in Victoria has a flowsheet which is simple, conventional and a well-proven circuit, with more than 14 years of operation.

The surface crushing and screening facility processes underground ore feed down to a particle size range suitable for milling through a two-stage, closed circuit ball milling circuit. Centrifugal style gravity concentrators are used on the combined primary milling product and secondary mill discharge to recover a gold-rich gravity concentrate. This is upgraded further over a shaking table and sold as a separate gold concentrate product, which is transported to local refineries.

Secondary milled products are classified according to size and processed through a simple flotation circuit comprising of rougher, scavenger and single stage cleaning. The flotation concentrate is dewatered through thickeners and with filtration to produce a final antimony-gold concentrate product, which is bagged, packed into shipping containers and shipped to customers overseas.

The feed to the plant during 2020 and 2021 was between 11.0 and 12.1g/t Au and 3.5 to 4.5% Sb. The gravity gold production varies but recoveries are typically around 40 to 50%. The 2021 end of year (EOY) reconciled plant recoveries were 94.6% Sb and 93% Au, with the gold not recovered by gravity reporting to the flotation concentrate ⁵.

Should Au-Sb resources be delineated at Reefton the metallurgical solution is anticipated to be a simple and straightforward process.

Processing Plant Details

Based on the testwork reported above, **GRES** reviewed the process design criteria and flowsheet that was presented in the phase 1 Scoping Study. Little change was required, and the key features of the process plant are as follows:

1. A nominal processing capacity of 1.25 million tonnes per annum, using a design head grade of up to 10g/t Au to cater for surges of high-grade ore.
2. Three stage crushing, With fine ore bin storage and emergency reclaim.
3. Single stage ball mill, with a flash flotation cell treating cyclone underflow.
4. Separate gravity concentrators to treat ball mill discharge and flash flotation concentrate to produce Doré bullion output of up to 80% of the gold in the feed, again to handle high grade surges.
5. Gravity plus flotation of approximately 93%, with an overall recovery estimated at approximately 90% with POX.
6. Concentrate dewatering utilising a thickener and a filter to produce a transportable concentrate.
7. Appropriate tailings handling facilities depending on plant location and underground paste fill requirements.
8. Steinert Ore Sorters to reduce waste from the mining cycle and increase mill feed head grade.

⁵ NI 43-101 Technical Report Mandalay Resources Costerfield Property 25 March 2022

A conceptual plant layout is shown in Figure 6.

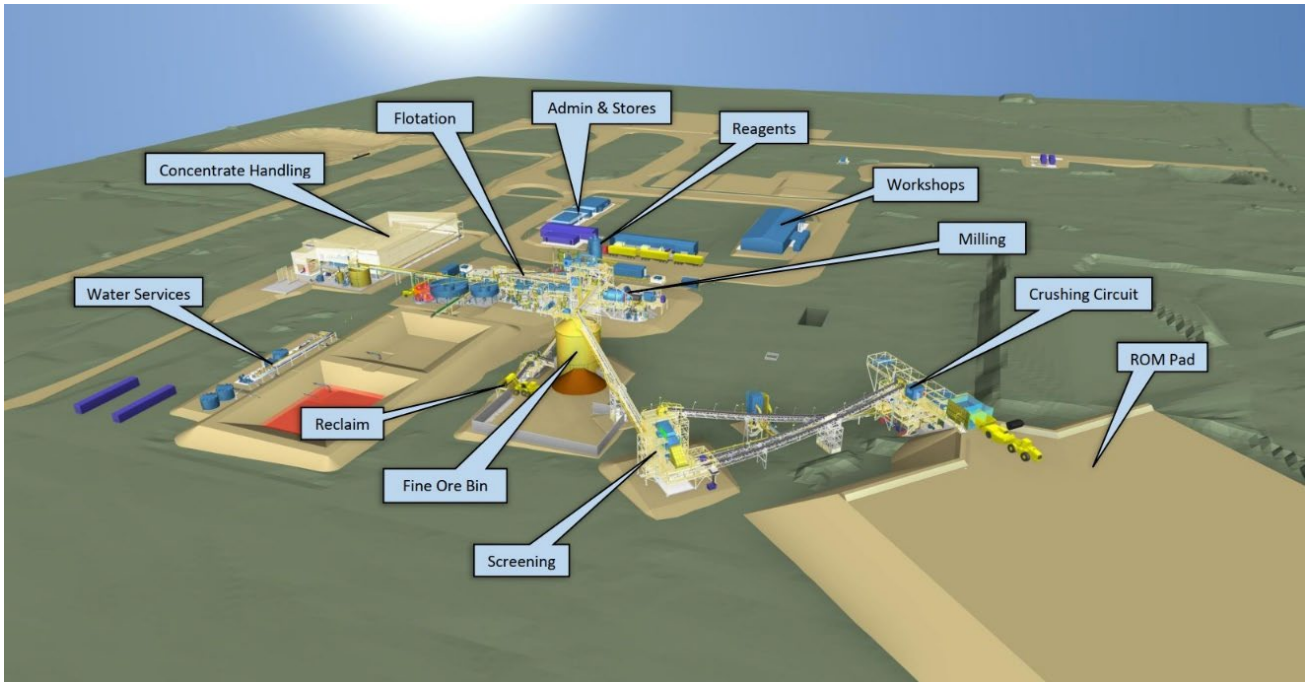


Figure 6: Siren Gold Reefton Processing Plant Facility Concept Layout

Steinert Ore Sorters reduce waste from the mining cycle, minimise transport costs and increase mill feed head grade. Samples from Alexander River and Sams Creek ore and waste are being tested by Steinert. Sensor Sorter Results from the theoretical sort have indicated potential for separation using STEINERT's combination Sensor Sorter.



Figure 7: KSS FLI XT Sensor Sorter at STAU's test facilities in Bibra Lake

Management Comment

Siren Gold Managing Director, Brian Rodan, commented:

"The positive and successful metallurgical test results are another significant milestone and another positive step forwards for Siren Gold in advancing and developing a major gold mining operation on the Company's Reefton and Sams Creek Gold Projects. These results indicate a standard flow sheet will yield strong recoveries with the potential to feed a central processing plant from Siren's existing high-grade resources. Siren Gold will continue to progress it's Scoping Study with the support of GR Engineering with the view of developing a significant gold mining operation in Reefton, New Zealand."

For further information, please contact:

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Paul Angus – Executive Director
Phone: +64 274 666 526

Competent Person Statement

The information in this report which relates to Metallurgy and Process Engineering Design Results is based on, and fairly represents, information compiled by Mr Graham Brock (BSc Eng, ARSM, who is a contract employee of the Company. Mr Brock does not hold any shares in the Company, either directly or indirectly. Mr Brock is a Fellow of the Australian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the processing of 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 Brock consents to the inclusion in the report of the matters based on this information in the form and context in which they appear.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

| Criteria | JORC Code Explanation | Commentary |
|-----------------------|--|--|
| Sampling techniques | <ul style="list-style-type: none"> • <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> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>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> | <ul style="list-style-type: none"> • Diamond core (DC) was used to obtain samples for metallurgical testwork. • DC core samples were split in half using a core saw at 1m intervals unless determined by lithology i.e. Quartz vein contacts. • Core samples were crushed and a sub-sample pulverised to >95% passing 75µm to produce a 30g charge for fire assay for Au. • Multi-element is now undertaken by pXRF on the returned Au pulps from SGS. • Metallurgical samples were sourced from the core sample coarse rejects (crushed core), returned from SGS. |
| Drilling techniques | <ul style="list-style-type: none"> • <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> | <ul style="list-style-type: none"> • Diamond drilling with DC diameters included PQ (96mm), HQ (63mm) and NQ (47.6mm) and are tripled tubed. • Drilling is helicopter supported. • The Reefton HQ and PQ core was orientated using Reflex orientation gear. The Sams Creek metallurgical samples were derived from GRD Macraes (GRD) core. GRD has limited success with orientation using a spear system. |
| Drill sample recovery | <ul style="list-style-type: none"> • <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> | <ul style="list-style-type: none"> • Full run and geotechnical logging with total core recoveries, RQD and core loss is recorded for each drill run. • Core loss occurs around old workings where there are voids. • Core recoveries for the program so far around 91 to 93%. Highly shattered rock around puggy fault gouge zones are the areas where core loss can |

| Criteria | JORC Code Explanation | Commentary |
|--|---|--|
| | <ul style="list-style-type: none"> • <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>occur. No noticeable bias has been observed thus far in the mineralisation.</p> |
| Logging | <ul style="list-style-type: none"> • <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> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i> | <ul style="list-style-type: none"> • All DC are logged for lithology, weathering, bedding, structure, alteration, mineralisation, jointing, colour and grain size using a standard set of inhouse logging codes and template that is very similar to previous logging by OceanaGold Limited (OGL) exploration programs. The logging method is quantitative. • All core trays were photographed prior to core being sampled. |
| Sub-sampling techniques and sample preparation | <ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.</i> • <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> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> | <ul style="list-style-type: none"> • DC sample intervals were marked on the core, which was sawn in half lengthways with a diamond cutting saw. The resulting core was taken for the laboratory sample and remaining core was archived in the core box. • Field duplicates as quarter core, laboratory duplicates and laboratory repeats were collected and assayed. • The field duplicates are DC quarter cuts taken every 25 samples. • The DC (2-3 kg) sample sizes are considered appropriate to the grain and particle size for representative sampling. • Sample preparation of Reefton DC samples by SGS Laboratories in Westport comprises; drying, crushing, splitting (if required) and pulverising to obtain analytical sample of 250g with >95% passing 75 µm where Au is assayed by 30g fire assay by SGS Waihi. • 48 element suite completed by SGS Australia is undertaken using ICP-MS up to drillholes AX23 and BR24. For later drillholes and channel samples the pulps returned from the lab were analysed by Siren with a portable XRF (pXRF). • GRD DC 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 suite comprising of Ag, As, Bi, Cu, Pb, Zn & 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 & As only. OGC used standards, blanks, laboratory repeats which were recorded in their last drilling programme. |

| Criteria | JORC Code Explanation | Commentary |
|--|--|---|
| Quality of assay data and laboratory tests | <ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <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> <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> | <ul style="list-style-type: none"> DC samples are sent to SGS Westport and Waihi, New Zealand. SGS laboratories carry a full QAQC program and are ISO 19011 certified. For each DC drillhole the sampling includes: <ul style="list-style-type: none"> At least two Au certified Rocklab standards Two blanks. <p>At least one field duplicate and laboratory duplicate per drill holes or taken every 25 samples.</p> Lab repeats are recorded. Standards, duplicates and blanks are checked after receiving the results. The QAQC results so far has been acceptable The QAQC populations for the exploration program to date is not large enough to measure accuracy and precision of the sampling program. RRL has a full working pXRF protocol and QAQC procedures for operation of the pXRF for analysis of pulps and samples. PXRF standards and blanks for used as well duplicate data being taken every 25 samples. |
| Verification of sampling and assaying | <ul style="list-style-type: none"> <i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i> | <ul style="list-style-type: none"> All laboratory assay results were received by RRL stored in both CSV and laboratory signed PDF lab certificates. Data is stored in excel, GIS, Dropbox and Leapfrog. The data storage system is basic but robust. A logging and QAQC standard operating procedure are being constructed. No adjustments have occurred to the assay data. |
| Location of data points | <ul style="list-style-type: none"> <i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i> | <ul style="list-style-type: none"> A registered surveyor has been used to pick up drillholes and handheld GPS for placing drillhole collars as well as channel and rock chip sampling in New Zealand Transverse Mercator 2000 (NZTM). GPS accuracy was recorded. Reconciliation in GIS using NZ 50 topography map series and LINZ aerial (0.3m) series were also undertaken. LiDAR has been flown over all areas and used to confirm drillhole collars. |
| Data spacing and distribution | <ul style="list-style-type: none"> <i>Data spacing for reporting of Exploration Results.</i> <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> <i>Whether sample compositing has been applied.</i> | <ul style="list-style-type: none"> Drilling was on approximately 100 centres at Reefton and Sams Creek with drilling directions and distances being variable because of the terrain and orientation of the target mineralisation. Multiple drill holes are drilled off each drill pad. |

| Criteria | JORC Code Explanation | Commentary |
|---|--|--|
| Orientation of data in relation to geological structure | <ul style="list-style-type: none"> • <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> • <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> | <ul style="list-style-type: none"> • Drilling design is planned to intercept the mineralisation at high angles but steeper angled drilling with drilling multiple holes from a single heli-drill pad does intercept the mineralisation at a lower angle. Oriented core and intact DC around mineralisation assists in understanding contacts, thickness and mineralisation orientation. |
| Sample security | <ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> | <ul style="list-style-type: none"> • DC samples taken for the purposes of laboratory analysis were securely packaged on site and transported to the relevant laboratories by Reefton Resources Limited staff. • Samples were stored in a locked core shed until despatch. |
| Audits or reviews | <ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> | <ul style="list-style-type: none"> • A review of the Alexander drill sampling was undertaken by Entech as part of the Maiden Mineral Resource Estimate. A review of Sams Creek drill sampling was undertaken by Golder as part of the Mineral Resource Estimates. |

Section 2 Reporting of Exploration Results

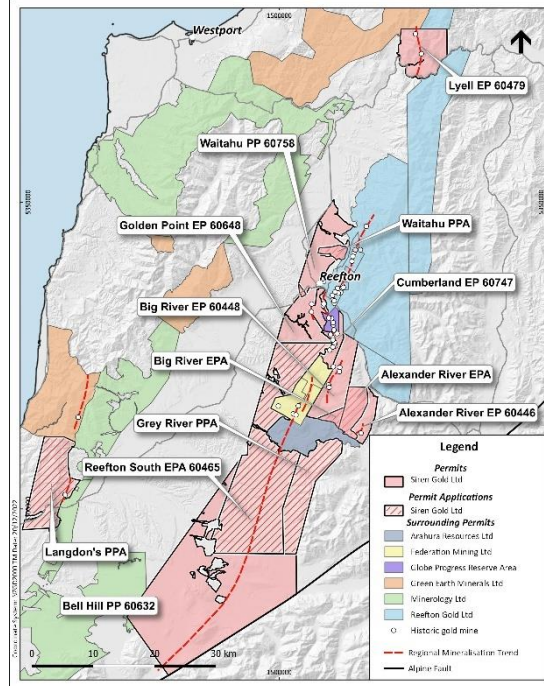
(Criteria listed in the preceding section also apply to this section.)

| Criteria | JORC Code Explanation | Commentary |
|---|--|---|
| Mineral tenement and land tenure status | <ul style="list-style-type: none"> • <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> • <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> | <ul style="list-style-type: none"> • At Reefton the Companies tenements both granted (7), and applications (3) are shown in the map below. All RRL tenements or applications are 100% owned by RRL. All the tenements are within the Department of Conservation (DoC) estate. Minimum Impact Activity (MIA) Access Agreements have been issued by DoC for Alexander River, Big River, Golden Point, Lyell and Sams Creek. A MIA application has been lodged for Cumberland. DoC Access Agreements (AA) that allow drilling, have been granted for Alexander River (47 drill pads), Big River (40 drill pads) and Golden Point (22 pads). An AA application has been applied for over 19 drill sites at Lyell and additional 20 sites at Auld Creek. Variations to the AA's are require for additional drill sites. |

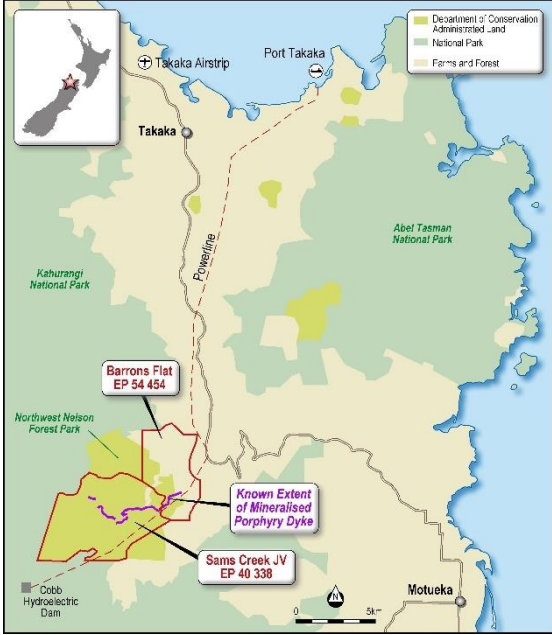
Criteria

JORC Code Explanation

Commentary

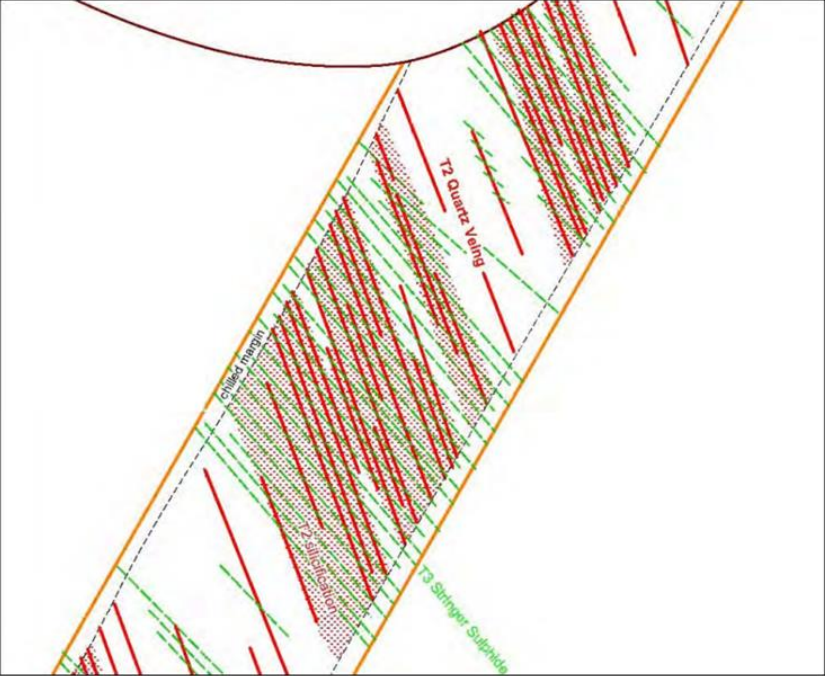


- At Sams Creek the Companies granted tenements (2), are shown in the map below. The Barrons Flat (EP 54455) is 100% owned by Sams Creek Gold Limited (SCG) which is a fully owned subsidiary of Siren. EP 40338 is a joint venture between Siren (81.9%) and Oceana Gold Limited (18.1%). All the tenements are largely within the Department of Conservation (DoC) estate. Minimum Impact Activity (MIA) Access Agreements have been issued by DoC for Sams Creek and Barrons Flat permits. A DoC Access Agreements (AA) that allow drilling, have been granted for Sams Creek (100 drill pads). Variations to the AA's are require for additional drill sites.

| Criteria | JORC Code Explanation | Commentary |
|--|--|--|
| | |  <p>The map displays the Takaka region in New Zealand. Key features include: <ul style="list-style-type: none"> Exploration Areas: Barrons Flat (EP 54 454) and Sams Creek JV (EP 40 338). Environmental Features: Kahurangi National Park, Abel Tasman National Park, Northwest Nelson Forest Park, and Farms and Forest. Infrastructure: Takaka Airstrip, Port Takaka, Takaka, and Motueka. Other Landmarks: Oobb Hydroelectric Dam and the Powerline. Geological Features: Known Extent of Mineralised Porphyry Dyke. </p> |
| <p>Exploration done by other parties</p> | <ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> | <ul style="list-style-type: none"> The drilling and metallurgical testwork at Sams Creek was conducted by GRD Macraes (precursor to Oceana Gold Limited). |

| Criteria | JORC Code Explanation | Commentary |
|----------|--|---|
| Geology | <ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> | <ul style="list-style-type: none"> • Reefton gold mineralisation in the Reefton Goldfield is structurally controlled; the formation of the different deposit types is interpreted to be due to focussing of the same hydrothermal fluid into different structural settings during a single gold mineralisation event, however, some of the deposits (e.g. Globe-Progress, Big River) appear to have been re-worked, with gold and sulphide mineral remobilisation having occurred during a later phase of brittle deformation. • In general, two end members of mineralisation styles exist, the “Blackwater Style” is comprised of relatively undeformed quartz lodes; whilst the “Globe-Progress Style” comprises highly deformed quartz - pug breccia material with a halo of disseminated sulphide mineralisation. • Three main structural deposit types appear to occur in the Reefton Goldfield. The Globe-Progress deposit occupies a distinct structural setting, where there is a clear break in the continuity and tightness of early folding. This break defines the east-west striking Globe-Progress shear zone. The fault splays off the Oriental-General Gordon shear zone. The geometry of the fault structure has allowed dilation and quartz vein deposition more or less contemporaneously with shearing, hydrothermal alteration, and low-grade mineralisation of the wall rocks. The broad disseminated mineralisation that now surrounds the Globe-Progress ore body is thought to have been formed by later movement on fault planes, in the presence of fluids, which led to some mobilisation and recrystallisation of metals and formed the halo of mineralised country rock. The Big River deposit shows similar paragenesis to Globe-Progress, except for the fact that the disseminated sulphide halo is not as extensive. • The second structural deposit type hosts most gold deposits i.e., Big River South, Scotia, Gallant and Crushington, however, these are typically small, narrow, steeply plunging and consequently generally sub-economic. These deposits have formed in reverse shear zones that are parallel or sub-parallel to cleavage and bedding. The attitude of these deposits has not allowed the formation of significant shear zones, dilatant zones or fluid channel ways and consequently the deposits formed tend to be small. Most mineralised zones occur as small-scale versions of the other two deposit types, formed in small, localised transgressive structural settings that are conducive to those deposit types. • The third deposit type occurs as steeply dipping transgressive dilatant structures, which are typically northeast trending (Blackwater). Gold mineralisation is interpreted to have formed when an earlier, favourably orientated shear zone became a zone of weakness under strike-slip movement. This dextral strike-slip movement created a locus for dilation and fluid channelling caused by periodic fluid pumping and over |

| Criteria | JORC Code Explanation | Commentary |
|----------|-----------------------|---|
| | | <p>pressuring during the hydrothermal mineralising event.</p> <ul style="list-style-type: none"> <p>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 displaced the dyke to the south-east by ~250m.</p> <p>Gold mineralisation is largely contained within thin (1-15 mm) sheeted quartz-sulphide (T3) veins that crosscut the dyke which strike to the NE. 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 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 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.</p> |

| Criteria | JORC Code Explanation | Commentary |
|-----------------------|--|---|
| | |  <p data-bbox="1196 978 2029 1059">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.</p> |
| Drillhole Information | <ul data-bbox="504 1106 1115 1380" style="list-style-type: none"> • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: • easting and northing of the drillhole collar • elevation or RL (Reduced Level - elevation above sea level in metres) of the drillhole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. | <ul data-bbox="1211 1139 2033 1193" style="list-style-type: none"> • See previous announcements for Alexander River, Big River and Sams Creek. Refer to Companies' website: www.sirengold.com.au. |

| Criteria | JORC Code Explanation | Commentary |
|--|---|---|
| | <ul style="list-style-type: none"> 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. | |
| Data aggregation methods | <ul style="list-style-type: none"> 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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. | <ul style="list-style-type: none"> Drilling results presented have used a weighted average when presenting drilling intercepts, hence, any potential sample length bias has been accounted for. When reporting drillhole intercepts generally a 1g/t cut-off is used. |
| Relationship between mineralisation widths and intercept lengths | <ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. 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'). | <ul style="list-style-type: none"> The true drillhole intercept thickness has estimated from sectional interpretation of the mineralised zone. |
| Diagrams | <ul style="list-style-type: none"> 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 drillhole collar locations and appropriate sectional views. | <ul style="list-style-type: none"> See Figures 3 to 5 included in this announcement. |
| Balanced reporting | <ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. | <ul style="list-style-type: none"> See previous announcements for Alexander River, Big River and Sams Creek. Refer to Companies' website: www.sirengold.com.au. |
| Other substantive exploration data | <ul style="list-style-type: none"> 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. | <p>Reefton Metallurgical testwork</p> <ul style="list-style-type: none"> Seven metallurgical composite samples were collected from Reefton drill core and the composite samples were subjected to: Bulk Leach Extractable Gold (BLEG) Tests. Gravity Testing. Flotation. Cyanidation. |

| Criteria | JORC Code Explanation | Commentary |
|--------------|---|--|
| | | <ul style="list-style-type: none"> • Ultra-Fine Grinding (UFG) followed by cyanidation. • Pressure oxidation (POX) followed by cyanidation. • Testing on the composites was completed by Bureau Veritas in Perth, Australia. • The Reefton samples tested responded positively to a flowsheet of gravity recovery followed by flotation with combined recoveries of approximately 94%. With downstream processing by POX overall Au recoveries of 90-94% could be achieved. • See details for Reefton metallurgical results in this announcement. <p>Sams Creek Metallurgical Testwork</p> <ul style="list-style-type: none"> • Four metallurgical composite samples were collected from Sams Creek drill core and the composite samples were subjected to: • Bulk Leach Extractable Gold (BLEG) Tests. • Flotation. • fine grinding of flotation concentrate followed by cyanidation. • Acid leach (to simulate POX) of the flotation concentrate followed by cyanidation. • Testing on the composites was completed by GRD Macraes in their Macraes mine lab in NZ. • The Sams Creek samples tested responded positively to flotation with average recoveries of approximately 97%. With downstream processing by acid leach (POX) and cyanidation, total recoveries range from 89-95%. • See details for Reefton metallurgical results in this announcement. • A flowsheet similar to that proposed for Reefton would be applicable. |
| Further work | <ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <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> | <ul style="list-style-type: none"> • Additional testwork on Alexander and Big River samples will be completed as drilling progresses. • Once drilling commences at Auld Creek, metallurgical samples of Au-Stibnite mineralisation will be collected for testwork. • When drilling re-commences at Sams Creek additional met samples will be collected and sent to Bureau Veritas in Perth. |